

FILED SEP 27 1972

IN THE
Court of Appeals of Maryland

SEPTEMBER TERM, 1972

No. 35 (Adv.)

POTOMAC SAND AND GRAVEL COMPANY,
Appellant,

v.

GOVERNOR OF MARYLAND, ET AL.,
Appellees.

APPEAL FROM THE CIRCUIT COURT FOR ANNE ARUNDEL
COUNTY (MATTHEW S. EVANS. Judge)

JOINT RECORD EXTRACT

JAMES J. DOYLE, JR.,
JOHN B. JASKE,
SHERBOW, SHEA & DOYLE,
VICTOR H. LAWS,
Attorneys for Appellant,
FRANCIS B. BURCH,
Attorney General,
HENRY R. LORD,
Deputy Attorney General.
WARREN K. RICH,
Assistant Attorney General,
For Appellees.

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JOINT RECORD EXTRACT

(R. 4-26)

BILL FOR DECLARATORY JUDGMENT AND
INJUNCTIVE RELIEF

(Filed June 30, 1971)

In The
Circuit Court for Anne Arundel County

Potomac Sand and Gravel Company,
a District of Columbia Corporation,
Plaintiff,

v.

Marvin Mandel, Governor of the State of Maryland, et al.,
Defendants.

Potomac Sand and Gravel Company, a District of Columbia Corporation, by Sherbow, Shea & Doyle, its attorneys,

sues Marvin Mandel, Governor of the State of Maryland, John C. Hancock, State's Attorney for Charles County, Francis C. Garner, Sheriff for Charles County and Thomas S. Smith, Superintendent of the Maryland State Police, Defendants.

1. This Bill is brought for a Declaratory Judgment pursuant to Article 31 of the Annotated Code of Maryland (1957 Ed., 1971 Replacement Vol.).

2. Plaintiff is engaged in the business of dredging sand and gravel from two locations, one in Maryland and one in Virginia. The material thus dredged is delivered to certain of Plaintiff's customers and is also taken to Plaintiff's principal place of business located in the District of Columbia where it is sold to various contractors and other persons engaged in the building and construction business. At the three locations from which Plaintiff presently conducts its business, it employs approximately 106 persons.

3. In Maryland, plaintiff is owner of record and has title to three separate parcels of real property, each of which was purchased on December 30, 1960, as follows:

a. Four contiguous tracts of land, hereinafter referred to as the Mattawoman Tract, consisting of approximately 1300 acres conveyed by deed to Plaintiff by the Grantor, The Smoot Sand & Gravel Corporation, in fee simple and recorded in the land records of Charles County in Liber 152 at Page 37, et seq.

b. Two contiguous tracts of land, hereinafter referred to as the Greenway Tract, consisting of a strip of land ninety feet wide and a second strip five feet wide conveyed by deed to Plaintiff by Grantor, The Smoot Sand & Gravel Corporation, in fee simple and recorded in the land records of Charles County in Liber 152 at Page 37, et seq. The deed conveying the Mattawoman Tract and the Greenway Tract is attached hereto, made a part hereof and marked "Exhibit A" (*Infra*, E. 336).

c. One tract of land, hereinafter referred to as Craney Island, constituting an island in the Potomac

River containing approximately 20 acres of land conveyed by deed to Plaintiff by the Grantors, Lewis E. Smoot and Ann H. Smoot, his wife, in fee simple and recorded in the land records of Charles County in Liber 152 at Page 43, et seq. A copy of the deed conveying Craney Island is attached hereto, made a part hereof and marked "Exhibit B", (*Infra*, E. 347).

4. On March 6, 1964, Plaintiff acquired an additional parcel of land consisting of approximately 84 acres which was contiguous to and became a part of the Mattawoman Tract by deed from the Grantors, George P. Jenkins and Mary B. Jenkins, his wife, and Frank A. Susan and Clarece Susan, his wife, in fee simple which was recorded in the land records of Charles County in Liber 167 at Page 733, et seq. A copy of the deed conveying this tract is attached hereto, made a part hereof and marked "Exhibit C" (*Infra*, E. 349).

5. Each of these three properties is riparian land in that each borders on a navigable body of water within the State of Maryland. The Mattawoman Tract borders on the Mattawoman Creek, a navigable stream in Charles County, Maryland. The Greenway Tract borders on and Craney Island lies entirely within the Potomac River, a navigable river which passes through and constitutes one boundary of Charles County, Maryland.

6. All of the land owned by Plaintiff in Charles County, Maryland, was purchased by Plaintiff solely for the purpose of extracting deposits of sand and gravel as a source of supply for its customers. These deposits not only lie in the bed of the navigable stream which abuts the Mattawoman Tract and in the bed of the navigable river which abuts the Greenway Tract and Craney Island, but further deposits also lie in the marshlands and fast lands which comprise the real property owned by Plaintiff in Charles County.

7. Up to 1967, there were no restrictions on dredging sand and gravel deposits in Maryland. The only requirement prior to instituting a dredging operation existed in

connection with the conduct of such an operation in a navigable body of water. Where dredging was to take place in a navigable stream or river, it was necessary to obtain a permit to do so from the United States Army Corps of Engineers, whose only concern was to assure that the operation did not adversely affect navigation. Plaintiff obtained such a permit in connection with its dredging operation on the Greenway Tract and it has, in fact, conducted its dredging activities under the authority granted by this permit.

8. Subsequent to 1967, until July 1, 1970, legislation enacted in Maryland also required a permit from the Maryland Department of Water Resources to dredge in tidal waters of the State. The purpose of this permit was primarily designed to insure compliance with the water quality standards required by Maryland, although other interested departments of the State of Maryland consulted with the Department of Water Resources in connection with issuing such permits. Plaintiff sought and obtained permits from the Maryland Department of Water Resources to dredge on the Mattawoman Tract, the Greenway Tract and Craney Island. Dredging has actually been conducted on the Greenway Tract under the authority granted by this permit.

9. While in the process of attempting to obtain permits from the United States Army Corps of Engineers to dredge the Mattawoman Tract and Craney Island, and before final disposition of the applications, the Maryland General Assembly enacted and Defendant, Marvin Mandel, signed into law, Chapter 241, Laws of Maryland, 1970 (Art. 66C, Sees. 718-731, Annotated Code of Maryland <1970 Replacement Vol.)), titled "Natural Resources", sub-titled "Wetlands" (hereinafter called the Wetlands Act). This Act, inter alia, distinguished between state wetlands and private wetlands and set out the procedures to be followed in connection with obtaining permits for the institution of dredging operations in either type of wetland. Plaintiff promptly instituted proceedings to obtain permits to dredge the state wetlands at

the Mattawoman Tract and Craney Island. Hearings have been held, but no disposition has been made of either application. At the present time, the Maryland Secretary of Natural Resources has not determined whether a permit will be necessary before Plaintiff will be allowed to dredge its private wetlands, but in the event it is determined necessary to obtain a permit. Plaintiff avers it intends to make application for such permits promptly.

10. While Plaintiff was awaiting disposition of its applications for dredging permits from the United States Army Corps of Engineers and the State of Maryland, the Maryland General Assembly enacted and Defendant, Marvin Mandel, signed into law Chapter 792, Laws of Maryland, 1971 (Art. 9, Code of Public Local Laws of Maryland (1969 Ed.), Sec. 337A), titled "Charles County", sub-titled "Regulation of Dredging Operations." That section provides as follows:

"(a) It shall be unlawful to dredge for sand, gravel or other aggregates or minerals, in any of the tidal waters or marshlands of Charles County, providing that this section shall not conflict with any necessary channel dredging operation for the purposes of navigation.

"(b) Any persons violating the provisions of this section shall, upon conviction thereof, be punished by a fine of not less than five hundred dollars (\$500.00) nor more than twenty-five hundred dollars (\$2,500.00), providing further that each day such offense continues shall be a separate violation of this Section and subject to penalties thereof."

This criminal statute, unless enjoined, becomes effective July 1, 1971.

11. Plaintiff is the only company which operates a sand and gravel dredging operation in Charles County, Maryland. There are companies doing business elsewhere in Maryland that dredge either sand, gravel or other aggregate. In addition, there are in Charles County and elsewhere in Maryland companies that conduct businesses

which excavate sand and gravel from land pits. But since the prohibition and criminal sanction imposed by Chapter 792 are applicable solely and locally to dredging operations in Charles County, it will only affect Plaintiff's operation in Charles County.

12. In the event Chapter 792 takes effect and is enforced, the result will be to terminate completely Plaintiff's Maryland operations and cause it substantial, permanent and irreparable harm and damage. In its existing dredging operation at the Greenway Tracts, and in its contemplated dredging operation at the Mattawoman Tract and Craney Island, Plaintiff does or will employ personnel sufficient to operate the dredging equipment necessary to remove the sand and gravel deposits, irrespective of where on its land those deposits are located. The material thus obtained is then placed on barges and towed either to various customers of Plaintiff or to its plant in the District of Columbia. Plaintiff is the largest source of sand and gravel for building and construction purposes in the District of Columbia.

13. Plaintiff has an annual sales volume of over 800,000 tons, its projected volume for 1971 being 842,000 tons. Denial to Plaintiff of the opportunity to dredge sand and gravel deposits contained in, on or around its real property in Charles County by enforcement of Chapter 792 will curtail that projected volume by approximately 120,000 tons. Predicated upon a gross revenue \$2,023,000 and a projected gross profit of \$423,000 for 1971, the illegal termination of Plaintiff's Maryland operation by enforcement of Chapter 792 would cut Plaintiff's gross revenue by \$290,000 and its gross profit by \$205,000. Moreover, because Plaintiff's customers purchase sand and gravel from Plaintiff under requirements contracts as needed, the inability of Plaintiff to supply sufficient material from its Maryland deposits would cause those customers to seek new and permanent sources of supply which would further add to the substantial and irreparable harm and damage Plaintiff will sustain if Chapter 792 is enforced.

14. Chapter 792, Laws of Maryland, 1971, and its enforcement are invalid, unlawful and illegal in that:

E. 7

a. The Act and its enforcement deprive Plaintiff of its property without due process of law in violation of Section 1 of the 14th Amendment to the Constitution of the United States and in violation of Article 23 of the Declaration of Rights of the Constitution of Maryland.

b. The Act and its enforcement subject Plaintiff to criminal prosecution under a penal statute the terms of which are so vague and indefinite as to be uncertain in their meaning and therefore constitute a denial of due process of law in violation of Section 1 of the 14th Amendment to the Constitution of the United States and in violation of Article 23 of the Declaration of Rights of the Constitution of Maryland.

c. The Act does not apply to persons who dredge sand, gravel or other aggregates or minerals elsewhere in the State of Maryland, nor does it apply to persons who remove sand, gravel or other aggregates or minerals from land pits in Charles County and therefore the Act and its enforcement deny to Plaintiff the equal protection of the laws in violation of Section 1 of the 14th Amendment to the Constitution of the United States.

d. The Act and its enforcement subject Plaintiff to criminal prosecution under a penal statute that discriminates between persons and classes of persons similarly situated and therefore denies Plaintiff equal protection of the laws in violation of Section 1 of the 14th Amendment to the Constitution of the United States.

e. The Act and its enforcement injure Plaintiff and its property without providing Plaintiff a remedy at law in violation of Article 19 of the Declaration of Rights of the Constitution of Maryland.

f. The Act and its enforcement constitute an attempt by Charles County, Maryland, to take private

property of Plaintiff for public use without just compensation in violation of Article III, Section 40 of the Constitution of Maryland and without due process of law in violation of Section 1 of the 14th Amendment to the Constitution of the United States and in violation of Article 23 of the Declaration of Rights of the Constitution of Maryland.

15. The Act and its enforcement are further invalid, unlawful and illegal in that:

a. The Act does not prescribe fair, reasonable, ascertainable and objective standards and criteria for the determination of the conduct prohibited.

b. The Act does not provide for just compensation for the denial to Plaintiff of the use and enjoyment of its property.

16. Plaintiff is without legal remedy in the premises, and by reason of the acts and circumstances alleged above, will suffer irreparable injury and damage and is threatened with additional and continuing irreparable injury and damage if the Act is permitted to become effective on July 1, 1971, and is thereafter enforced.

Wherefore, Plaintiff prays:

a. This Court issue a judgment declaring the provisions of Chapter 792, Laws of Maryland, 1971, are invalid and unenforceable in that the Act and its provisions violate the Constitution of the United States and the Constitution of the State of Maryland.

b. Pursuant to Rule B B70, et seq. of the Maryland Rules of Procedure, an order be passed temporarily enjoining Defendants and each of them during the pendency of this action, from taking any action or proceeding against Plaintiff, its officers, agents, servants or employees, for allegedly violating Chapter 792, Laws of Maryland, 1971, or any provision thereof.

c. Pursuant to Rule B B70, et seq. of the Maryland Rules of Procedure, Defendants and each of them be permanently restrained and enjoined from taking any action or proceeding against Plaintiff, its officers, agents, servants or employees, for allegedly violating Chapter 792, Laws of Maryland, 1971, or any provision thereof.

d. It may have such other and further relief as this Court may deem just and equitable.

(Signatures omitted).

[Exhibits A, B and C hereto introduced into evidence as Plaintiff's Exhibits 1, 2 and 3 (E. 336-350)].

(R. 27-28)

O R D E R

(Filed July 12, 1971)

Upon agreement of counsel for all parties, it is this 12th day of July, 1971, by the Circuit Court for Anne Arundel County,

ORDERED that:

1. During the pendency of this action and until a final decree or order is entered by this Honorable Court, neither Defendants, jointly or severally, nor their agents or representatives will seek to enforce Chapter 792, Laws of Maryland, 1971 (Article 9, Code of Public Local Laws of Maryland (1969 Ed.), Section 337A), titled "Charles County", subtitled "Regulation of Dredging Operations" against Plaintiff, its officers, directors, agents, servants or employees.

2. During the pendency of this action and until its final conclusion, Plaintiff for itself and its officers, directors, agents, servants and employees agrees it will not intensify or increase its dredging operations in Charles County beyond those production schedules which it achieved in

the months of July, August, September and October for the years 1969 and 1970. Plaintiff asserts that its total dredging production in tons for each months was as follows:

	1969	1970
July	82.028	90.794
August	81.624	71.594
September	89.235	48.164
October	98.245	58,888.

MATTHEW S. EVANS,

Judge.

(R. 29-35)

ANSWER OF RESPONDENTS FOR DECLARATORY
JUDGMENT AND INJUNCTIVE RELIEF

(Filed July 23, 1971)

Now come the Respondents, Governor of Maryland, State's Attorney of Charles County, Sheriff of Charles County and Superintendent of Maryland State Police, by their attorneys, Francis B. Burch, Attorney General, Henry R. Lord, Deputy Attorney General, and Warren K. Rich, Special Assistant Attorney General, Department of Natural Resources, in answer to the Bill for Declaratory Judgment and Injunctive Relief, and each and every paragraph thereof, and say:

1. That they admit the allegations contained in paragraph 1 of said Bill.

2. That they admit that Petitioner is engaged, *inter alia*, in the business of dredging sand and gravel from two locations, one in Maryland (the so-called "Greenway Tract") and one in Virginia, but are without knowledge and information sufficient to form a belief as to the truth of the remaining allegations contained in paragraph 2 of said Bill.

3. That they are without knowledge and information sufficient to form a belief as to the truth of the allegations contained in paragraph 3 of said Bill, except that they admit that Petitioner's title to the three tracts described (Mattawoman, Greenway and Craney Island) is derived from the two deeds referred to in said paragraph 3 and that the references to the grantors, dates of deeds and land records references are accurate.

4. That they are without knowledge and information sufficient to form a belief as to the truth of the allegations contained in paragraph 4 of said Bill, except that Petitioner's title to the parcel described is derived from the deed referred to in said paragraph 4 and that the references to the grantors, date of deed and land records reference are accurate.

5. That they admit the allegations contained in the second and third sentences of paragraph 5 of said Bill but are without sufficient information to form a belief as to the truth of the allegations contained in the first sentence because of the vagueness of the phrases "properties" and "riparian land."

6. That they are without sufficient information to form a belief as to the truth of the allegations contained in paragraph 6 of said Bill.

7. That they admit the allegations contained in the fourth sentence of paragraph 7 of said Bill, except that they point out that the permit from The United States Army Corps of Engineers was obtained by Petitioner's predecessor in title on January 23, 1956, and was renewed from that date for successive three-year periods and that, additionally, a permit for waterway construction (pursuant to Article 96A, Section 12 of the Maryland Code) was issued by the Maryland Department of Water Resources on June 16, 1969. That they deny the allegations contained in the first and second sentences of said paragraph 7 and, as the basis for this, point out the provisions of then Article 27, Section 485 of the Maryland Code. That they neither admit nor deny the allegations contained in

the third sentence of said paragraph 7 and suggest that the Rivers and Harbors Act of 1899, as amended to date, and the regulations promulgated thereunder set out the responsibilities and concerns of the United States Army Corps of Engineers.

8. That they admit the allegations contained in the third and fourth sentences of paragraph 8 of said Bill, deny the allegations contained in the first sentence of said paragraph 8 i Article 96A, Section 12 of the Maryland Code as amended to become applicable to Petitioner's dredging operation was in effect from July 1, 1967 until August 31, 1970, when declared unconstitutional for defective titling by the Circuit Court for Worcester County in *Larmar Corporation v. Board of Public Works*) and deny the allegations in the second sentence of said paragraph 8 and suggest that said permit was "primarily designed" to assure the physical and structural soundness of machinery operating in the waters of the State.

9. That they admit the allegations contained in the first, second and third sentences of paragraph 9 of said Bill, are without information sufficient to form a belief as to the truth of the last two phrases of the fourth sentence of said paragraph 9 and, with respect to the remaining clauses of said fourth sentence, neither admit nor deny the allegations but suggest that the Secretary of Natural Resources is now conducting inventory, county by county, of the private wetlands in the State of Maryland and is not now addressing himself to the problem of permits upon private wetlands.

10. That they admit the allegations contained in paragraph 10 of said Bill.

11. That they admit the allegations contained in the third sentence of paragraph 11 of said Bill but are without knowledge sufficient to form a belief as to the truth of the allegations contained in the remaining sentences of said paragraph 11 and intend to require strict proof of said allegations from the Petitioner.

12. That they are without knowledge sufficient to form a belief as to the truth of the allegations contained in

paragraph 12 of said Bill and intend to require strict proof of said allegations from the Petitioner.

13. That they are without knowledge sufficient to form a belief as to the truth of the allegations contained in paragraph 13 of said Bill and intend to require strict proof of said allegations from the Petitioner.

14. That the allegations contained in paragraph 14 of said Bill state legal conclusions and require no response.

15. That the allegations contained in paragraph 15 of said Bill state legal conclusions and require no response.

16. That they deny the allegations contained in paragraph 16 of said Bill.

Further answering:

17. That they state that the statute in question serves a valid ecological purpose, namely, to preserve the northernmost area in the Potomac watershed which has not as yet become degraded. The tidal waters and marshlands of Charles County are biologically active in fostering the spawning of anadromous species of fish and constitute an important resting place for said species. These areas contain the proper balance of salinity and fresh water necessary to encourage the spawning process. The waterways and marshes of Charles County constitute an important roosting and nesting area for numerous species of waterfowl and other birds, including certain endangered species. One of the reasons for this is the availability in the shallow waters of food for diving and wading birds.

18. That they state that the dredging operation of the Petitioner, and all others who may seek to undertake a similar course of action, in the tidal waters and marshlands of Charles County will have a severe and permanent impact upon the ecology of this area as described in paragraph 17, *supra*. Such operations will destroy the existing wetlands, a valuable natural resource of the State of Maryland with important scenic value for the public at large: will change the area from a shallow water to a deep water habitat with the consequent effect

of reducing or eliminating the present shelter, vegetation and benthic organisms for feeding purposes on the river and creek bottoms. The noise, motion and agitation necessarily accompanying a dredging operation is destructive to the spawning, roosting and nesting habitats of the fish and wildlife presently found in the area.

19. That they state that the fish and Crustacea found in the tidal waters and marshlands of Charles County constitute a valuable natural resource of the State of Maryland and that the loss would result in severe economic hardship upon the fishermen and watermen of the State of Maryland.

20. That they state that Chapter 792 of the Laws of Maryland of 1971 constitutes a valid and reasonable exercise of the State's police power through the legislative process, that this statute is relevant to the achievement of State objectives and is integrally related to the accomplishment of legitimate State interests; that there is no unconstitutional taking of Petitioner's property without compensation, rather that there is merely a specific use to which Petitioner's property may no longer be placed; that this use restriction is not so burdensome as to constitute a *de facto* taking; and that said statute is clear in all respects and is not void for vagueness.

21. That they state that the title of the Petitioner to the tracts in question has been challenged by James Louis Hancock (Route 1, Box 42C, Indian Head, Maryland 20640) in a letter dated April 27, 1971, addressed to John R. Capper, Deputy Director of Chesapeake Bay Affairs.

22. That they state that Petitioner's predecessor in title conducted a dredging operation in the Potomac River in Prince George's County between Fox Ferry and the Woodrow Wilson Bridge and that Petitioner on June 16, 1969, was granted a permit by the Department of Water Resources to continue such dredging.

Wherefore, Respondents pray that this Honorable Court deny to the Petitioner each and every aspect of

relief sought by it in the Bill for Declaratory Judgment and Injunctive Relief and that an order be entered by this Honorable Court upholding the constitutionality of Chapter 792 of the Laws of Maryland of 1971, with the entire costs of this proceeding to be borne by the Petitioner.

iR. 36-42)

MOTION FOR LEAVE TO APPEAR AS AMICI CURIAE
(Filed September 1, 1971)

Maryland Environmental Defense Center, Inc., by Lloyd M. Gerber, Robert M. Nied, Thomas B. Eastman and Anthony M. Carey, its attorneys, and Maryland Conservation Council, National Audubon Society, Southern Maryland Audubon Society, Mason Neck Citizens Association, Isaak Walton League of America, Inc., Virginia State Division, and Great Falls Conservation Council, by Timothy J. Bloomfield. George W. Wise and Alvin Ezrin, their attorneys, move for leave to appear in this action as amici curiae. The grounds of the motion are as follows:

1. This action raises important legal questions in the field of environmental law, namely the right of the State of Maryland by public local law to make it a criminal offense to dredge in the tidal waters and marshlands of a particular county of the State, and more particularly the constitutionality of Chapter 792, Laws of Maryland, 1971 <Art. 9, Code of Public Local Laws of Maryland (1969 Ed. >, Sec. 337 A) titled "Charles County", sub-titled "Regulation of Dredging Operations".

2. Movant Maryland Environmental Defense Center, Inc. is a non-profit organization which has been recently formed to participate in appropriate administrative and judicial proceedings for the purpose of representing the interest of the public in preserving the ecological balance and general quality of Maryland's natural environment. One of Movant's organization purposes is to serve as a vehicle through which the viewpoints of concerned members of the scientific, legal and lay communities may be brought to bear

upon questions, the resolution of which like those involved in this action, may pose clear and substantial threats of environmental abuse and degradation.

3. Movant Maryland Conservation Council, Inc., a non-profit organization which was formed in April, 1969, is composed of numerous conservation organizations in the State of Maryland (a list of the council's members is attached). The Council's function is to provide a continuing coordinating structure for its members to work for the conservation, preservation, and appreciation of Maryland's natural and historic resources by taking appropriate action and participating in all matters, including judicial and administrative proceedings, which could affect Maryland's environment.

4. Movant National Audubon Society is a non-profit organization which was founded in 1905. Individual memberships are in excess of 70,000 and there are more than 250 affiliated groups. The Society's major purpose is to advance public understanding of the value and need of conservation of wildlife, plants, soil, and water, and the relation of their intelligent treatment and wise use to human progress. Appropriate action is taken by the Society in judicial, administrative, and legislative actions which could have an effect on conservation of the nation's natural resources.

5. Movant Southern Maryland Audubon Society, a non-profit chapter of the National Audubon Society, was created in June, 1971. Its functions and activities are the same as those of the National Audubon Society.

6. Movant Mason Neck Citizens Association is an organization of property owners and residents in the Mason Neck area of Virginia. The Association was created in September, 1953 and has been active in furthering desirable community standards and conditions and in coordinating community-related activities of various civic groups in the Mason Neck area. Since Potomac Sand & Gravel Company wishes to dredge at Craney Island which is in Charles County, Maryland and which is located near the Mason

Neck recreation and wildlife complex, the Association has a vital interest in this law suit inasmuch as dredging at Craney Island would have a significant ecological impact on the Mason Neck region.

7. Movant the Isaak Walton League of America, Inc., Virginia State Division, is a local component of the Isaak Walton League of America, Inc., a non-profit Illinois Corporation which was formed in 1923 and which has a long history in conservation matters. Movant, which has a membership of 6,200, has been chartered, among other educational functions, to foster and to promote public appreciation of marine and marine-related natural resources and environment and to actively engage in programs for their protection. Such work has involved dealing with all branches of both State governments and the federal government.

8. Movant Great Falls Conservation Council is a non-profit organization which was formed on July 7, 1965. It is composed of approximately 200 members who are residents and non-residents of the Great Falls area of Virginia. The Council is active in the protection of the environment not only in the Great Falls area of Virginia but in other areas of Virginia as well.

9. The constitutional and environmental questions involved in this action deserve a full and complete presentation to this Honorable Court prior to its decision; Movants, with their background of specialization and interests in environmental matters, may be in a position to assist in the development of such a full and complete presentation of the facts and legal issues involved.

Members
of

Maryland Conservation Council, Inc.

Audubon Naturalist Society of the Central Atlantic States, Inc.

Baltimore Campers Association, Inc.

Better Air Coalition
Canoe Cruisers Association
Casual Garden Club
Chesapeake Environmental Protection Association
Citizens Committee for Soldiers Delight
Committee for Maryland Trail Riding
Committee to Preserve Assateague
Cylburn Wildflower Preserve and Garden Center
Deer Creek Watershed Association, Inc.
Ecology Action, Inc.
Evergreen Garden Club
The Federated Garden Clubs of Maryland, Inc.
Frederick County Sportsman's Council
Isaak Walton League of America, Inc. Maryland State
Division
The Junior League of Baltimore, Inc.
League of Maryland Horsemen, Inc.
League of Women Voters of Maryland
Maryland Ornithological Society, Inc.
Maryland Wetlands Committee
Maryland Wilderness Association
Mountain Club of Maryland
Moyaone Association
U.S.NOL Fishing Club
Potomac Appalachian Trail Club
Potomac River Association of St. Mary's County
Sierra Club, Southeast Chapter

Soldiers Delight Conservation, Inc.
Western Maryland Wildlife Federation
Wilderness Society
Wildlands Committee
Zero Population Growth

iR. 43-44)

ANSWER TO MOTION FOR LEAVE TO APPEAR AS
AMICI CURIAE

(Filed September 4, 1971)

Plaintiff, Potomac Sand and Gravel Company, by Sherbow, Shea & Doyle, its attorneys, answers the Motion of Maryland Environmental Defense Center, Inc., Maryland Conservation Council, National Audubon Society, Southern Maryland Audubon Society, Mason Neck Citizens Association, Isaak Walton League of America, Inc., Virginia State Division, and Great Falls Conservation Council, for Leave to Appear as Amici Curiae as follows:

1. Plaintiff denies the allegations of Paragraph 1 of the Motion except that it admits that the Constitutionality of Chapter 792, Laws of Maryland, 1971 (Art. 9, Code of Public Local Laws of Maryland Sec. 337 (A) (1969 Ed.), Titled "Charles County" Subtitled "Regulation of Dredging Operations" is an issue in this case.

2. Plaintiff is without knowledge or information sufficient to form a belief as to the truth of the allegations contained in Paragraphs 2-8 of the Motion.

3. Plaintiff denies the allegations contained in Paragraph 9 of the Motion.

Further answering, Plaintiff says:

4. Movants' basis for asking leave to appear as amici curiae is that Chapter 792, Laws of Maryland, 1971, is an environmental law. The Act in question does not show, on its face, that it is an environmental law.

5. The Act in question is clear and unambiguous and may not be construed as being an environmental law.

6. Because the Act in question is unambiguous and does not refer to any environmental purpose, there are no issues of environmental law relevant to this case.

Having fully answered the Motion for Leave to Appeal as Amici Curiae, Plaintiff, Potomac Sand and Gravel Company, Inc. requests that the same be denied.

(R. 49-50)

MOTION TO STRIKE

(Filed September 14, 1971)

Plaintiff, Potomac Sand and Gravel Company, by Sherbow, Shea & Doyle, its attorneys, moves this Court, under Rule 301 (j) of the Maryland Rules of Civil Procedure, to strike Paragraphs 17, 18 and 19 of the Answer filed by the Defendants in this case, as those Paragraphs are unnecessary, irrelevant and improper for the following reasons:

A. Paragraphs 17, 18 and 19 of the Defendants' Answer allege, in substance, that Chapter 792, Laws of Maryland, 1971, "serves a valid ecological purpose."

B. This allegation, and the related allegations in those paragraphs, are irrelevant, unnecessary and improper, as they are unrelated and unresponsive to the allegations made in the Plaintiff's Declaration; are an attempt to introduce issues into this case which are unnecessary to a determination of the constitutionality of Chapter 792, Laws of Maryland, 1971; and are inflammatory and prejudicial.

C. Chapter 792, Laws of Maryland, 1971, is clear and unambiguous, and cannot be construed or interpreted to be in furtherance of an ecological purpose. The only purpose of the act is to prohibit dredging.

D. This Motion is filed in conjunction with an Answer filed by Plaintiff to a Motion for Leave to Appear as Amici Curiae of the Maryland Environmental Defense Center, Inc., Maryland Conservation Council, National Audubon

Society, Southern Maryland Audubon Society, Mascn Neck Citizens Association, Isaak Walton League of America. Inc., Virginia State Division, and Great Falls Conservation Council, which is also based on the contention that Chapter 792, Laws of Maryland. 1971, is an environmental law.

iR. 61-65)

SUPPLEMENTAL MOTION FOR LEAVE TO APPEAR
AMICI CURIAE

(Filed October 12, 1971)

Conservation Council of Virginia, Inc. and Northern Virginia Conservation Council, Inc. by Timothy J. Bloomfield, George W. Wise, and Alvin Ezrin, their attorneys, move for leave to have their names added as Amici Curiae to the organizations which filed a Motion for Leave to Appear as Amici Curiae on August 31, 1971.

1. Movant Conservation Council of Virginia, Inc. is a non-profit organization formed in May 1969 with a present membership of 44 organizations (approximately 175,000 individuals) in the state of Virginia. The Council's purpose is to provide an effective and continuing coordinating structure in working for the conservation, preservation, wise use, and appreciation of Virginia's natural and historic resources, as related to the total environment, through a program of cooperative action for the cultural, scientific, educational, physical, mental, spiritual, and economic benefit and well-being of Virginia's citizens and Virginia's visitors. A list of the Council's members is attached.

2. Movant Northern Virginia Conservation Council, Inc. is a non-profit volunteer citizens organization of approximately 400 individual organizations representing the counties of Fairfax, Prince William, Arlington, Fauquier, and Loudoun and the cities and towns in the vicinity of these counties. The Council is an information and action group dedicated to the wise use of land and water resources, the preservation of historical and cultural landmarks, natural park areas, and open space and the overall protection of Virginia's environment.

Members of the
Conservation Council of Virginia, Inc.

Alleghany Crusade for Clean Air

Association for the Preservation of Virginia Antiquities

Canoe Cruisers Association

Citizens Against Pollution (Hampton Roads)

Citizens Committee for the Virginia Outdoors Plan

Citizens Committee for Virginia State Parks

Citizens Council for a Clean Potomac

Citizens League for Environmental Protection Now

Council for Environmental Quality (Hampton Roads)

ECOS

Fairfax County Federation of Citizens Associations

Great Falls Conservation Council

League of Women Voters of Virginia

Metropolitan Washington Coalition for Clean Air

North River Riparian Association

Northern Virginia Conservation Council

Northern Virginia Student Environmental Council

Potomac Chapter, American Society of Landscape Architects

Rappahannock League for Environmental Protection

Reclaim the James

Richmond Scenic James Council

SCOPE

Southeast Chapter, Sierra Club

The Garden Club of Virginia

Upper New River Valley Association

Virginia Anglers Club
Virginia Chapter, American Institute of Architects
Virginia Chapter, American Institute of Planners
Virginia Chapter. The Nature Conservancy
Virginia Citizens Planning Association
Virginia Division, American Association of University
Women
Virginia Division. Izaak Walton League
Virginia Farm Bureau Federation
Virginia Federation of Garden Clubs
Virginia Federation of Women's Clubs
Virginia Outing Club Association
Virginia Region, National Speleological Society
Virginia Society of Ornithology
Virginia Subsection, Society of American Foresters
Virginia Trails Association
Virginia Wilderness Committee
Wilderness Society
Wise County Conservation Council
Zero Population Growth of Virginia

(R. 66-67)

ANSWER TO SUPPLEMENTAL MOTION FOR LEAVE
TO APPEAR AS AMICI CURIAE

(Filed October 12, 1971)

Plaintiff, Potomac Sand and Gravel Company, by Sher-
bow, Shea & Doyle and Victor H. Laws, its attorneys, an-
swers the Supplemental Motion of Conservation Council
of Virginia, Inc. and Northern Virginia Conservation Coun-
cil, Inc., for Leave to Appear as Amici Curiae as follows:

1. Plaintiff is without knowledge or information sufficient to form a belief as to the truth of the allegations contained in Paragraphs 1 and 2 of the Supplemental Motion.

Further answering, Plaintiff says:

2. Movants' basis for asking leave to appear as amici curiae is that Chapter 792, Laws of Maryland, 1971, is an environmental law. The Act in question does not show, on its face, that it is an environmental law.

3. The Act in question is clear and unambiguous and may not be construed as being an environmental law.

4. Because the Act in question is unambiguous and does not refer to any environmental purpose, there are no issues of environmental law relevant to this case.

Having fully answered the Supplemental Motion for Leave to Appear as Amici Curiae, Plaintiff, Potomac Sand and Gravel Company, Inc. requests that the same be denied.

(R. 68-69)

MOTION FOR LEAVE TO FILE AMENDED BILL FOR
DECLARATORY JUDGMENT AND
INJUNCTIVE RELIEF

(Filed October 12, 1971)

Potomac Sand and Gravel Company, Plaintiff, by Sherbow, Shea & Doyle and Victor H. Laws, its attorneys, moves, pursuant to Maryland Rule 320(d) for leave to file an amended Bill for Declaratory Judgment and Injunctive Relief. The grounds of the Motion are as follows:

1. Plaintiff's original Bill for Declaratory Judgment and Injunctive Relief alleged that Chapter 792, Laws of Maryland, 1971 violates several provisions of the United States Constitution and the Constitution of Maryland.

2. In the course of further research and preparation Plaintiff has determined that Chapter 792, Laws of Maryland, 1971 also violates Article III, Section 33 of the Constitution of Maryland, which provision was not referred

to in Plaintiff's Bill for Declaratory Judgment and Injunctive Relief.

3. Attached hereto is a copy of Plaintiff's proposed amended Bill for Declaratory Judgment and Injunctive Relief which further alleges that Chapter 792, Laws of Maryland, 1971 violates the provisions of Article III, Section 33 of the Constitution of Maryland.

(R. 103)

ORDER

(Filed October 13, 1971)

Upon the foregoing Motion for Leave to Appeal as Amici Curiae, no Answer thereto having been filed by any of the parties to this action, it is this 13th day of October, 1971,

ORDERED by the Court that Maryland Environmental Defense Center, Inc., Maryland Conservation Council, National Audubon Society, Southern Maryland Audubon Society, Mason Neck Citizens Association, Isaak Walton League of America, Inc., Virginia State Division, and Great Falls Conservation Council may appear as amici curiae to participate in arguments and file briefs, but not to examine witnesses or offer evidence. Counsel for amici curiae shall furnish a copy of their briefs to counsel for all parties, and counsel for all parties shall serve upon counsel for amici curiae copies of all pleadings, motions, or briefs hereafter filed.

/s/ MATTHEW S. EVANS,
Judge.

(R. 104)

ORDER

(Filed October 13, 1971)

Upon the foregoing Motion it is this 13th day of October, 1971.

ORDERED, that the Plaintiff is given leave to file an Amended Bill for Declaratory and Injunctive Relief in the form attached.

/s/ MATTHEW S. EVANS,
Judge.

(R. 105-114)

AMENDED BILL FOR DECLARATORY JUDGMENT
AND INJUNCTIVE RELIEF

(Filed October 13, 1971)

Potomac Sand and Gravel Company, a District of Columbia Corporation, by Sherbow, Shea & Doyle, its attorneys, sues Marvin Mandel, Governor of the State of Maryland, John C. Hancock, State's Attorney for Charles County, Francis C. Garner, Sheriff for Charles County and Thomas S. Smith, Superintendent of the Maryland State Police, Defendants.

1. This Bill is brought for a Declaratory Judgment pursuant to Article 31A of the Annotated Code of Maryland (1957 Ed., 1971 Replacement Vol.).

2. Plaintiff is engaged in the business of dredging sand and gravel from two locations, one in Maryland and one in Virginia. The material thus dredged is delivered to certain of Plaintiff's customers and is also taken to Plaintiff's principal place of business located in the District of Columbia where it is sold to various contractors and other persons engaged in the building and construction business. At the three locations from which Plaintiff presently conducts its business, it employs approximately 106 persons.

3. In Maryland, Plaintiff is owner of record and has title to three separate parcels of real property, each of which was purchased on December 30, 1960, as follows:

a. Four contiguous tracts of land, hereinafter referred to as the Mattawoman Tract, consisting of approximately 1300 acres conveyed by deed to Plaintiff by the Grantor, The Smoot Sand & Gravel Corporation, in fee simple and recorded in the land records of Charles County in Liber 152 at Page 37, et seq.

b. Two contiguous tracts of land, hereinafter referred to as the Greenway Tract, consisting of a strip of land ninety feet wide and a second strip five feet wide conveyed by deed to Plaintiff by Grantor, The

Smoot Sand & Gravel Corporation, in fee simple and recorded in the land records of Charles County in Liber 152 at Page 37. et seq. The deed conveying the Mattawoman Tract and the Greenway Tract is attached hereto, made a part hereof and marked "Exhibit A" (*Infra*, E. 336).

c. One tract of land, hereinafter referred to as Craney Island, constituting an island in the Potomac River containing approximately 20 acres of land conveyed by deed to Plaintiff by the Grantors, Lewis E. Smoot and Ann H. Smoot, his wife, in fee simple and recorded in the land records of Charles County in Liber 152 at Page 43, et seq. A copy of the deed conveying Craney Island is attached hereto, made a part hereof and marked "Exhibit B" (*Infra*, E. 347).

4. On March 6, 1964, Plaintiff acquired an additional parcel of land consisting of approximately 84 acres which was contiguous to and became a part of the Mattawoman Tract by deed from the Grantors. George P. Jenkins and Mary B. Jenkins, his wife, and Frank A. Susan and Clarece Susan, his wife, in fee simple which was recorded in the land records of Charles County in Liber 167 at Page 733, et seq. A copy of the deed conveying this tract is attached hereto, made a part hereof and marked "Exhibit C" (*Infra*, E. 349K).

5. Each of these three properties is riparian land in that each borders on a navigable body of water within the State of Maryland. The Mattawoman Tract borders on the Mattawoman Creek, a navigable stream in Charles County, Maryland. The Greenway Tract borders on and Craney Island lies entirely within the Potomac River, a navigable river which passes through and constitutes one boundary of Charles County, Maryland.

6. All of the land owned by Plaintiff in Charles County, Maryland, was purchased by Plaintiff solely for the purpose of extracting deposits of sand and gravel as a source of supply for its customers. These deposits not only lie in the bed of the navigable stream which abuts the Mattawoman

woman Tract and in the bed of the navigable river which abuts the Greenway Tract and Craney Island, but further deposits also lie in the marshlands and fast lands which comprise the real property owned by Plaintiff in Charles County.

7. Up to 1967, there were no restrictions on dredging sand and gravel deposits in Maryland. The only requirement prior to instituting a dredging operation existed in connection with the conduct of such an operation in a navigable body of water. Where dredging was to take place in a navigable stream or river, it was necessary to obtain a permit to do so from the United States Army Corps of Engineers, whose only concern was to assure that the operation did not adversely affect navigation. Plaintiff obtained such a permit in connection with its dredging operation on the Greenway Tract and it has, in fact, conducted its dredging activities under the authority granted by this permit.

8. Subsequent to 1967, until July 1, 1970, legislation enacted in Maryland also required a permit from the Maryland Department of Water Resources to dredge in tidal waters of the State. The purpose of this permit was primarily designed to insure compliance with the water quality standards required by Maryland, although other interested departments of the State of Maryland consulted with the Department of Water Resources in connection with issuing such permits. Plaintiff sought and obtained permits from the Maryland Department of Water Resources to dredge on the Mattawoman Tract, the Greenway Tract and Craney Island. Dredging has actually been conducted on the Greenway Tract under the authority granted by this permit.

9. While in the process of attempting to obtain permits from the United States Army Corps of Engineers to dredge the Mattawoman Tract and Craney Island, and before final disposition of the applications, the Maryland General Assembly enacted and Defendant, Marvin Mandel, signed into law, Chapter 241, Laws of Maryland, 1970 (Art. 66C, Sees. 718-731, Annotated Code of Maryland (1970 Replacement

Vol.)), titled "Natural Resources", subtitled "Wetlands" (hereinafter called the Wetlands Act). This Act, inter alia, distinguished between state wetlands and private wetlands and set out the procedures to be followed in connection with obtaining permits for the institution of dredging operations in either type of wetland. Plaintiff promptly instituted proceedings to obtain permits to dredge the state wetlands at the Mattawoman Tract and Craney Island. Hearings have been held, but no disposition has been made of either application. At the present time, the Maryland Secretary of Natural Resources has not determined whether a permit will be necessary before Plaintiff will be allowed to dredge its private wetlands, but in the event it is determined necessary to obtain a permit. Plaintiff avers it intends to make application for such permits promptly.

10. While Plaintiff was awaiting disposition of its applications for dredging permits from the United States Army Corps of Engineers and the State of Maryland, the Maryland General Assembly enacted and Defendant, Marvin Mandel, signed into law Chapter 792, Laws of Maryland, 1971 (Art. 9, Code of Public Local Laws of Maryland (1969 Ed.). Sec. 337A), titled 'Charles County', sub-titled "Regulation of Dredging Operations." That section provides as follows:

"(a) It shall be unlawful to dredge for sand, gravel or other aggregates or minerals, in any of the tidal waters or marshlands of Charles County, providing that this section shall not conflict with any necessary channel dredging operation for the purposes of navigation.

"b) Any persons violating the provisions of this section shall, upon conviction thereof, be punished by a fine of not less than five hundred dollars (\$500.00) nor more than twenty-five hundred dollars (\$2,500.00). providing further that each day such offense continues shall be a separate violation of this Section and subject to penalties thereof."

This criminal statute, unless enjoined, becomes effective July 1, 1971.

11. Plaintiff is the only company which operates a sand and gravel dredging operation in Charles County, Maryland. There are companies doing business elsewhere in Maryland that dredge either sand, gravel or other aggregate. In addition, there are in Charles County and elsewhere in Maryland companies that conduct businesses which excavate sand and gravel from land pits. But since the prohibition and criminal sanction imposed by Chapter 792 are applicable solely and locally to dredging operations in Charles County, it will only affect Plaintiff's operation in Charles County.

12. In the event Chapter 792 takes effect and is enforced, the result will be to terminate completely Plaintiff's Maryland operations and cause it substantial, permanent and irreparable harm and damage. In its existing dredging operation at the Greenway Tracts, and in its contemplated dredging operation at the Mattawoman Tract and Craney Island, Plaintiff does or will employ personnel sufficient to operate the dredging equipment necessary to remove the sand and gravel deposits, irrespective of where on its land those deposits are located. The material thus obtained is then placed on barges and towed either to various customers of Plaintiff or to its plant in the District of Columbia. Plaintiff is the largest source of sand and gravel for building and construction purposes in the District of Columbia.

13. Plaintiff has an annual sales volume of over 800,000 tons, its projected volume for 1971 being 842,000 tons. Denial to Plaintiff of the opportunity to dredge sand and gravel deposits contained in, on or around its real property in Charles County by enforcement of Chapter 792 will curtail that projected volume by approximately 120,000 tons. Predicated upon a gross revenue of \$2,023,000 and a projected gross profit of \$423,000 for 1971, the illegal termination of Plaintiff's Maryland operation by enforcement of Chapter 792 would cut Plaintiff's gross revenue by \$290,000 and its gross profit by \$205,000. Moreover, because Plaintiff's customers purchase sand and gravel from Plaintiff under requirements contracts as needed, the inability of Plaintiff to supply sufficient material from its Maryland

deposits would cause those customers to seek new and permanent sources of supply which would further add to the substantial and irreparable harm and damage Plaintiff will sustain if Chapter 792 is enforced.

14. Chapter 792, Laws of Maryland, 1971, and its enforcement are invalid, unlawful and illegal in that:

a. The Act and its enforcement deprive Plaintiff of its property without due process of law in violation of Section 1 of the 14th Amendment to the Constitution of the United States and in violation of Article 23 of the Declaration of Rights of the Constitution of Maryland.

b. The Act and its enforcement subject Plaintiff to criminal prosecution under a penal statute the terms of which are so vague and indefinite as to be uncertain in their meaning and therefore constitute a denial of due process of law in violation of Section 1 of the 14th Amendment to the Constitution of the United States and in violation of Article 23 of the Declaration of Rights of the Constitution of Maryland.

c. The Act does not apply to persons who dredge sand, gravel or other aggregates or minerals elsewhere in the State of Maryland, nor does it apply to persons who remove sand, gravel or other aggregates or minerals from land pits in Charles County and therefore the Act and its enforcement deny to Plaintiff the equal protection of the laws in violation of Section 1 of the 14th Amendment to the Constitution of the United States.

d. The Act and its enforcement subject Plaintiff to criminal prosecution under a penal statute that discriminates between persons and classes of persons similarly situated and therefore denies Plaintiff equal protection of the laws in violation of Section 1 of the 14th Amendment to the Constitution of the United States.

e. The Act and its enforcement injure Plaintiff and its property without providing Plaintiff a remedy at law in violation of Article 19 of the Declaration of Rights of the Constitution of Maryland.

f. The Act and its enforcement constitute an attempt by Charles County, Maryland, to take private property of Plaintiff for public use without just compensation in violation of Article III, Section 40 of the Constitution of Maryland and without due process of law in violation of Section 1 of the 14th Amendment to the Constitution of the United States and in violation of Article 23 of the Declaration of Rights of the Constitution of Maryland.

g. The Act is a special law on a subject for which provision has been made by an existing general law, the Wetlands Act, in violation of Article III Section 33 of the Constitution of Maryland.

15. The Act and its enforcement are further invalid, unlawful and illegal in that:

a. The Act does not prescribe fair, reasonable, ascertainable and objective standards and criteria for the determination of the conduct prohibited.

b. The Act does not provide for just compensation for the denial to Plaintiff of the use and enjoyment of its property.

16. Plaintiff is without legal remedy in the premises, and by reason of the acts and circumstances alleged above, will suffer irreparable injury and damage and is threatened with additional and continuing irreparable injury and damage if the Act is permitted to become effective on July 1, 1971, and is thereafter enforced.

Wherefore, Plaintiff prays:

a. This Court issue a judgment declaring the provisions of Chapter 792, Laws of Maryland, 1971, are invalid and unenforceable in that the Act and its pro-

visions violate the Constitution of the United States and the Constitution of the State of Maryland.

b. Pursuant to Rule BB70, et seq. of the Maryland Rules of Procedure, an order be passed temporarily enjoining Defendants and each of them during the pendency of this action, from taking any action or proceeding against Plaintiff, its officers, agents, servants or employees, for allegedly violating Chapter 792, Laws of Maryland, 1971, or any provision thereof.

c. Pursuant to Rule BB70, et. seq. of the Maryland Rules of Procedure, Defendants and each of them be permanently restrained and enjoined from taking any action or proceeding against Plaintiff, its officers, agents, servants, or employees, for allegedly violating Chapter 792, Laws of Maryland, 1971, or any provision thereof.

d. It may have such other and further relief as this Court may deem just and equitable.

(R. 160-161)

STIPULATION

(Filed December 17, 1971)

It is agreed and stipulated by counsel for the parties in the above entitled case as follows:

1. During the pendency of this action and until its final conclusion in this Court, neither Defendants, jointly or severally, nor their agents or representatives will seek to enforce Chapter 792, Laws of Maryland, 1971 (Art. 9, Code of Public Local Laws of Maryland (1969 Ed.), Sec. 337A), titled "Charles County", subtitled "Regulation of Dredging Operations" against Plaintiff, its officers, directors, agents, servants or employees.

2. During the pendency of this action and until its final conclusion in this Court, Plaintiff and its officers, directors, agents, servants and employees agree it will not intensify or increase its dredging operations in Charles County beyond the lesser of the production figures achieved for the

months of November and December for the years 1969 and 1970. Plaintiff asserts that its total dredging production in tons for each month was as follows:

	1969	1970
November	85,815	51,846
December	79,305	44,066

/s/ HENRY R. LORD,

Deputy Attorney General.

SHERBOW, SHEA & DOYLE,

By /s/ JAMES J. DOYLE, JR.

(R. 162)

STIPULATION

(Filed January 14, 1972)

It is agreed and stipulated by counsel for the parties in the above entitled case as follows:

1. During the pendency of this action and until its final conclusion in this Court, neither Defendants, jointly or severally, nor their agents or representatives will seek to enforce Chapter 792, Laws of Maryland, 1971 (Art. 9, Code of Public Local Laws of Maryland (1969 Ed.), Sec. 337A), titled "Charles County", subtitled "Regulation of Dredging Operations" against Plaintiff, its officers, directors, agents, servants or employees.

2. During the pendency of this action and until its final conclusion in this Court, Plaintiff and its officers, directors, agents, servants and employees agree it will not intensify or increase its dredging operations in Charles County beyond the sum of 34,000 tons for the month of January, 1972.

HENRY R. LORD,

Deputy Attorney General,

Attorney for Defendants.

SHERBOW, SHEA & DOYLE,

JAMES J. DOYLE, JR.

(R. 163-164)

ORDER

(Filed February 3, 1972)

Upon agreement of counsel for all parties, it is this day of February, 1972, by the Circuit Court for Anne Arundel County,

ORDERED that:

1. During the pendency of this action in this Court and until a final decree or order is entered by this Honorable Court, neither Defendants, jointly or severally, nor their agents or representatives will seek to enforce Chapter 792, Laws of Maryland, 1971 LArticle 9, Code of Public Local Laws of Maryland (1969 Ed.), Section 337AL titled "Charles County", subtitled "Regulation of Dredging Operations", against Plaintiff, its officers, directors, agents, servants or employees.

2. During the pendency of this action in this Court and until its final conclusion. Plaintiff for itself and its officers, directors, agents, servants and employees agrees it will not intensify or increase its dredging operations in Charles County beyond those production schedules which it achieved in the month of February, 1970, namely, 58,231 tons.

/s / MATTHEW S. EVANS,
Judge.

(R. 165-187)

OPINION

(Filed February 25, 1972)

Plaintiff, Potomac Sand and Gravel Company, a District of Columbia Corporation (hereinafter referred to as Potomac Company) authorized to do business in Maryland, seeks to have this court issue a declaratory judgment pursuant to Article 31A, Annotated Code of Maryland (1957 Edition, 1971 Replacement Volume) declaring Chapter 792, Laws of Maryland (1971), Article 9, Code of Public Local Laws of Maryland (1969 Edition), §337A (herein-

after referred to as Chapter 792) unconstitutional; and further, to have this court issue an injunction pursuant to Maryland Rules BB70 et seq., prohibiting the Attorney General or other State officers from enforcing Chapter 792.

The Maryland Legislature on 28 May 1971 enacted Chapter 792 as a public local law of Maryland limited to the geographical boundaries of Charles County. Chapter 792 took effect 1 July 1971 and reads:

"(a) It shall be unlawful to dredge for sand, gravel or other aggregates or minerals, in any of the tidal waters or marshlands of Charles County, providing that this section shall not conflict with any necessary channel dredging operation for the purposes of navigation.

(b) Any person violating the provisions of this section shall, upon conviction thereof, be punished by a fine of not less than five hundred dollars (\$500.00) nor more than twenty-five hundred dollars (\$2,500.00), providing further that each day such offense continues shall be a separate violation of this Section and subject to penalties thereof.

Potomac Company is engaged in the business of dredging sand and gravel found in Maryland and Virginia. The sand and gravel is removed from deposits found in land owned by the plaintiff and from the beds of tidal waters surrounding that land. It is floated on barges to the District of Columbia where it is sold for use primarily in the construction industry.

Potomac Company is the owner of three parcels of land, the uses of which are at issue in the case at bar. All three parcels are located in Charles County, Maryland, and all three are adjoined to or surrounded by State wetlands. State wetlands are all lands under the navigable waters of the State below the mean high tide, which are affected by the regular rise and fall of the tide. Article 66C, §719(a), Annotated Code of Maryland (1970 Replacement Volume),

also known as the Wetlands Act of 1970. All three parcels are within the proscription of Chapter 792.

1. The Mattawoman tract is an area of about 1015 acres on Mattawoman Creek. Dredging is proposed for 300 of these 1015 acres. Of the 300 acres, 70% are below mean high tide, or in other words are State wetlands. Article 66C, §719(a). Annotated Code of Maryland; *Bd. of Pub. Works v. Larmar Corp.*, 262 Md. 24. The depth of the dredge sites at Mattawoman Creek is presently between two and twelve feet. Potomac Company proposes to dredge to an overall depth of fifty feet.

Mattawoman Creek is one of ten main spawning streams supporting anadromous fish in the drainage system of the Potomac River. It is one of the finest freshwater marshes in the Upper Potomac Estuary, and is the *only* area along the Maryland shores where the rare native lotus (water-lily) and *aneilema keisak* (wild rice) are to be found. Its aquatic plants act as a rinsing agent by absorbing and using in their biological process pollutants, suspended dirt particles, and other inorganic materials that, in excessive amounts, cause conditions of aquatic overfertilization. The vegetation is an important source of dissolved oxygen, food, and protection necessary for anadromous fish which utilize the marshes for resting and spawning each spring.

Mattawoman Creek is a spawning area for yellow perch, white perch, striped bass and herring; in addition, sunfish, pike, shad, and catfish can be found there. It is also a habitat for the bald eagle, black duck, mallard duck, deer, rabbit, mink, otter, beaver, and has one of the larger wood duck roosts.

Potomac Company paid a total of \$1126 property taxes in 1970 for its interests in the Mattawoman Creek property. It is estimated that there are 10 million tons of sand and gravel in Mattawoman Creek which Potomac Company seeks to dredge.

2. Craney Island, the total size of which alters due to the ebb and flow of the Potomac River, is located entirely

within the Potomac River. While Potomac Company's deed recites Craney Island to be thirty acres (aerial photographs [State's Exhibit C-6] indicate a few trees protruding from the center of the Potomac River), Potomac Company acknowledges in its memorandum that actually no more than one acre of Craney Island is usually above water. Potomac Company paid taxes in 1970 on .26 acre — a total of \$48.53 property taxes for its interests in the Craney Island parcel. The dredge site claimed by Potomac Company is 1400 acres. Of these 1400 acres, 700 acres are proposed to be actually dredged. All 700 proposed acres are below mean high tide, or in other words are State wetlands. Article 66C, §719(a), Annotated Code of Maryland; *Bd. of Pub. Works v. Larmar Corp.*, *supra*.

The Craney Island area is the habitat of diving ducks which dive beneath the water's surface to retrieve food. Perch, shad, herring and bass fish are also found in the area of Craney Island.

3. The Greenway Flats tract consists of two strips of land bordering on the Potomac River, one of which is ninety feet wide and the other five feet wide. Together they are 1.8 miles long. The proposed dredge site is 1000 acres, all of which are below mean high tide, again constituting State wetlands as defined in Article 66C, §719(a). Annotated Code of Maryland; *Bd. of Pub. Works v. Larmar Corp.*, *supra*. Potomac Company paid \$177.00 property tax in 1970 for its interest in this land. It has dredged approximately 7.7 million tons of sand and gravel out of this site, leaving it 90% dredged. The area has been dredged from a depth of ten feet to a depth of fifty feet below mean low water, a depth which Potomac Company intends, if so permitted, to dredge all three areas. The Greenway Flats tract is the only site presently being dredged by Potomac Company, and this is being done pursuant to a temporary order of this court.

It is significant that in Potomac Company's deed of the Greenway Flats tract it is referred to as "Greenway Fishing Shore" and "Greenway Fishery" (Plaintiff's Exhibit No. 3).

MARYLAND LAW RE: RIPARIAN RIGHTS AND
RIGHTS TO SAND AND GRAVEL

Prior to 1862 the rights of owners of riparian land in Maryland regarding the dredging, taking and carrying away of sand and gravel from the beds of navigable waters were primarily controlled by the common law. The common law provided that navigable waters were vested in the public:

"Rivers or streams within the ebb and flow of tide, to high water mark, belong to the public, and in that sense are navigable waters; all the land below high water mark, being as much a part of the 'jus publicum', as the stream itself. The owners of adjacent ground had no exclusive right to such lands, nor could any exclusive right to their use be acquired, otherwise than by an express grant from the State." *Day v. Day*, 22 Md. 530, 537 (1865).

In 1862, the Maryland Legislature enacted Chapter 129, Laws of Maryland 1862, vesting riparian owners in Maryland "with rights and privileges not recognized by the common law", in particular the right to all accretions to riparian land by recession of water by natural causes or otherwise. *Day v. Day*, supra, page 537; Chapter 129, Laws of Maryland 1862.

Between 1862 and 1888, the common law's absolute prohibition on the taking of sand and gravel had deteriorated to the point that the Legislature of 1888 re-asserted its authority over the State's wetlands. It did so by enacting Chapter 362, Laws of Maryland 1888. Not at all dissimilar to Chapter 792, the validity of which is at issue in the case at bar, but broader in scope, Chapter 362 was a blanket prohibition against anyone from digging, dredging, taking and carrying away any sand, gravel or other material from the bed of the Potomac River, from its mouth to the uppermost boundary line of Prince George's County. Chapter 362, as does Chapter 792, provided criminal sanctions for violations, except that unlike Chapter 792 which im-

poses a fine only, Chapter 362 imposed a fine, confiscation of dredge, boat or vessel used in dredging, and imposed imprisonment of up to six months.¹

In 1900 the Legislature again slackened its absolute prohibition on the taking and carrying away of sand and gravel from the Potomac River by enacting Chapter 577, Laws of Maryland 1900. Chapter 577 excepted riparian owners on the Potomac River from Chapter 362's prohibition and permitted them to take and carry away sand and gravel from the river bed subject only to non-interference with navigation, oystering and fishing.² This exception was

¹ Section 1. Be it enacted by the General Assembly of Maryland, That it shall not be lawful for any person to dig, dredge, take and carry away any sand, gravel or other material from the bed of the Potomac river, from its mouth to the uppermost boundary line of Prince George's county, under a penalty of a fine not exceeding three hundred dollars, and confiscation of the boat, vessel, dredge and implements used in digging, dredging and carrying away such sand, gravel or other material, and imprisonment in the county jail for a period not exceeding six months, in the discretion of the court: one-half of said fine and one-half of the proceeds of the sale of such confiscated boat, vessel, dredge and implements to be paid by the sheriff to the informer, and the other half to the commissioners of public schools for the county.

Sec. 2. And be it enacted, That this act shall take effect from the date of its passage.

Approved April 4. 1888.

² 244. It shall not be lawful for any person to dig, dredge, take and carry away any sand, gravel or other material from the bed of the Potomac River, from its mouth to the uppermost boundary line of Prince George's County, under a penalty of a fine not exceeding three hundred dollars, and confiscation of the boat vessel, dredge and implements used in digging, dredging and carrying away such sand, gravel or other material, and imprisonment in the county jail for a period not exceeding six months, in the discretion of the Court: one-half of said fine and one-half of the proceeds of the sale of such confiscated boat, vessel, dredge and implements to be paid by the Sheriff to the informer, and the other half to the Commissioners of Public Schools for the county; provided, however, that it shall be lawful for any riparian owner of lands bordering on said Potomac River, or for any person or corporation with whom such owner shall have a contract in writing for the purpose, or for the agents, servants or employees of such person or corporation to dig, dredge, take and carry away sand, gravel or other material from the bed of said river opposite said lands from high water mark on the shore

extended in 1906, along with the 1888 prohibition, to apply to all navigable waters in the State of Maryland." The prohibition of 1888 and its exception and extension were codified in li;57 by Chapter 498, Laws of Maryland 1957, as Article 27, §485.

In 1970 the Legislature repealed Article 27, §485, and replaced it with Chapter 241, Laws of Maryland 1970, Article 66C, §718 et seq. <Wetlands Act of 1970). Under Section 721 of the Wetlands Act of 1970, it is unlawful for a riparian owner, without a license issued by the Board of Public Works, to dredge, take and carry away sand, gravel or other material from the bed of any of the navigable rivers, creeks or branches in Maryland. *Bd. of Pub. Works v. Larmar Corp.*, *supra*, page 53.

Most recently, the Legislature enacted Chapter 792. Chapter 792, as hereinbefore recited, is more restrictive than the permit procedure of the Wetlands Act of 1970, but less prohibitive in geographical scope than Chapter 362, Laws of Maryland 1888.

Potomac Company has filed application for the appropriate permits for dredging at the three named sites in compliance with the Wetlands Act of 1970. Hearings were held in December 1970 and April 1971. Decision is withheld, pending this litigation.

The basic conflict here is whether the Legislature by enacting Public Local Law, Chapter 792, may absolutely prohibit anyone, including Potomac Company, from dredging, taking and carrying away sand and gravel from the tidal waters or marshlands of Charles County.

bordering on said lands to the outer line of the channel nearest said shore, subject to the laws of the United States relating to navigation. And provided, further, that none of the provisions of this section shall be deemed to interfere in any manner with the provisions of any law of the State of Maryland relating to the taking and catching of fish and oysters.

"Sec. 2. And be it enacted, That this Act shall take effect from the date of its passage.

Approved April 7, 1900."

" Chapter 426, Laws of Maryland 1906.

ISSUES

The issues considered are: (1) whether Chapter 792 is unconstitutional as a taking of private property for a public use without just compensation, (2) whether Chapter 792 is a violation of equal protection by an arbitrary classification, (3) whether Chapter 792 is a violation of Article III, §33 is a special law for which a general law, the Wetlands Act of 1970, is already enacted, and (4) whether Chapter 792, as a penal statute, is unconstitutional as too vague and indefinite.

(1)

Chapter 792 is a legitimate exercise of the police power by the Legislature to regulate and restrain a particular use, that would be inconsistent with or injurious to the rights of the public, of property within the control of the State. Such regulation and restraint is not an unconstitutional taking of private property for public use without just compensation, as prohibited by the Fourteenth Amendment of the United States Constitution and Article 23 of the Declaration of Rights of the Constitution of Maryland.

An early Massachusetts case, *Commonwealth v. Tewksbury*, 11 Met 55 (1846) responds on point. In *Tewksbury*, the Legislature enacted a statute similar to Chapter 792:

"Any person who shall take, carry away or remove, by land or by water, any stones, gravel or sand, from any of the beaches in the town of Chelsea, excepting, ' & C,' shall, for each offense, forfeit a sum not exceeding twenty dollars, to be recovered, by complaint or indictment, in any court of competent jurisdiction."

This statute, as does Chapter 792, asserts an absolute prohibition on the taking, carrying away or removing of sand and gravel. Both are limited to single areas, Chelsea and Charles County respectively, and both apply penal monetary sanctions for violations. In addition, the facts in *Tewksbury* and the case at bar are similar in that in both cases the statutes challenged were mere revisions of former statutes on the same subject.⁴

* See Footnote 1 and comments referred to.

The riparian owners in *Tewksbury* raised two issues expressly decided upon by the Court. They asserted that as riparian owners in fee, the statute was not meant to apply to them. Secondly, the defendants alleged ". . . if the statute did so prohibit the owner, for any purpose of public benefit, from taking gravel from his own land, it was a taking of the land for the public use . . ." without compensation, in violation of the Massachusetts Declaration of Rights and that inasmuch as the statute did not make provision for compensation, it was unconstitutional and void. Page 55.

The Court denied both arguments, holding that the statute applied to "any person" in the absence of any ground to imply an exception, and that the statute was not a taking, but a just and legitimate exercise of the police power of the Legislature. Briefly, the Court found that whether or not the means adopted by the Legislature were proper or even constitutional, or within the powers of the Legislature, the unambiguous intent of the Legislature was to apply the statute to everyone.

In the case at bar, the language of Chapter 792(b) is clear that its prohibition applies to "any person" violating its provisions.

The Court in *Tewksbury* responded to defendant's contention that the statute was not a taking of property for public use:

"All property is acquired and held under the tacit condition that it shall not be so used as to injure the equal rights of others, or to destroy or greatly impair the public rights and interests of the community; under the maxim of the common law, *sic utere tuo ut alienum non laedas*. When the injury is plain and palpable, it may be a nuisance at the common law, to be restrained and punished by indictment. As where one bordering on a navigable river should cut away the embankment on his own land, and divert the water-course so as to render it too shallow for navigation. But there are many cases where the things done in particular places, or under a particular state of facts, would be injurious, when, under a change of circum-

stances, the same would be quite harmless. As the use of a warehouse for the storage of gunpowder, in a populous neighborhood, or for the storage of noxious merchandise, or the use of buildings for the carrying on of noxious trades, dangerous to the safety, health or comfort of the community. Whereas, in other situations, there would be no public occasion to restrain any use which the owner might think fit to make of his property. In such cases, we think, it is competent for the legislature to interpose, and by positive enactment to prohibit a use of property which would be injurious to the public, under particular circumstances, leaving the use of similar property unlimited, where the obvious considerations of public good do not require the restraint. This is undoubtedly a high power, and is to be exercised with the strictest circumspection, and with the most sacred regard to the right of private property, and only in cases amounting to an obvious public exigency. Still, we think, the power exists, and has long been exercised in cases more or less analogous." Pages 57-58.

A change of circumstances as hypothecated in *Tewksbury* prompted the Maryland Legislature to enact Chapter 792. Dredging which has been prohibited and permitted at various times and to differing degrees in Maryland is now prohibited by Chapter 792 in a manner which the Legislature deemed necessary to protect the public welfare. This court does not question the Legislature's wisdom. *Cohen v. Bredehoeft*, 290 F. Supp. 1001, 1005 (1968) and cases cited therein.

Since *Tewksbury* was decided in 1846, the Supreme Court has refined the limits of the police power and fashioned appropriate tests. In *Cohen v. Bredehoeft, supra*, the Court said, at page 1005:

"An exercise by the State of its police power is presumed to be valid when it is challenged under the due process clause. *Bibb v. Navajo Freight Lines*, 359 U.S. 520, 529, 79 S. Ct. 962, 3 L. Ed. 2d 1003 (1959). A

party attacking an ordinance on this basis has the burden of establishing its invalidity beyond reasonable doubt. *Standard Oil Co. v. City of Gadsden*, 263 F. Supp. 502 (1967 i.)"

In due process questions in which there is an alleged taking without compensation, the first consideration is whether the statute is a taking by eminent domain requiring compensation, or a regulation of use under the State police powers.

Chapter 792 is a regulation of use under the State police powers. In *Goldblatt v. Town of Hempstead*, 369 U. S. 590, 82 S. Ct. 987, 8 L. Ed. 2d 130 (1962), the Supreme Court analyzed a fact pattern similar to that of the case at bar, except that it entailed pit excavation and dredging rather than dredging of State wetlands. In *Goldblatt*, the Court held that eminent domain was inapplicable. Citing *Mugler v. Kansas*, 123 U.S. 623, 668-669, 8 S. Ct. 273, 31 L. Ed. 205 (1837), the Court said that a prohibition simply upon the use of a property for purposes that are declared by valid legislation to be injurious to health, morals or safety of the community, cannot be deemed a taking or an appropriation of property for public benefit. The Court went on to say that the owner could continue to use his property lawfully and that the owner could sell his property. The Court admitted that there were possible situations where regulation is so severe that it constitutes a taking, but that the burden is on the challenger of the statute, and the burden had not been met.

Potomac Company cites *State v. Johnson*, 265 A. 2d 711 Maine (1970), as a case in which, under the Maine Wetlands Act, the Court held that denial to a dredging company of a permit to fill marshlands was an unconstitutional taking of private property without compensation. Potomac Company reasons that if denial of a permit is a taking, then absolute prohibition certainly is a taking.

State v. Johnson is inapplicable. The Court limited its holding to the "facts peculiar to the case". The case at bar is not concerned with a legislative sanction of dredging in

Charles County with an administrative permit procedure. Rather, the case at bar is a legislative prohibition. Chapter 792 was enacted less than a year after the Wetlands Act of 1970, and was intended to be more restrictive than the Wetlands Act of 1970. Finally, *State v. Johnson* is not the law in Maryland. *Bd. of Pub. Works v. Larmar Corp.*, *supra*, pages 54-55.

Looking to the language of Chapter 792, it is a prohibition limited to dredging sand, gravel or other aggregates or minerals. This is a limitation upon a use of a property, not a taking. Chapter 792 is a valid exercise of the police powers. It is within the purview of the police powers for the State to preserve its exhaustible natural resources.

In *Zabel v. Tabb*, 430 F. 2d 199, 203-204 (1970), a case involving the right of the Army Corps of Engineers to deny a permit to fill tidelands in Boca Ciega Bay in St. Petersburg-Tampa, Florida, the U. S. Court of Appeals, Fifth Circuit, discussed the importance of the environment and the effects of dredging:

"In this time of awakening to the reality that we cannot continue to despoil our environment and yet exist, the nation knows, if the Courts do not, that the destruction of fish and wildlife in our estuarine waters does have a substantial, and in some areas a devastating, effect on interstate commerce. Landholders do not contend otherwise. Nor is it challenged that dredge and fill projects are activities which may tend to destroy the ecological balance and thereby affect commerce substantially."⁵

In *U. S. v. Moretti, Inc.*, 331 F. Supp. 151, 156-158, D.C., Florida (1971), the Court explains the importance of wetlands to the sustenance of wildlife, fish and local vegetation. It then discusses the devastating effects upon them by the dredging of those wetlands. The opinion recites Justice Holmes in *State of New Jersey v. State of New York*, 283 U. S. 336, 342, 51 S. Ct. 478, 75 L. Ed. 1104, 1106 (1931):

⁵ While this is a commerce clause argument, the Court's recognition of the importance of environmental protection is impelling.

"A river is more than an amenity, it is a treasure."

The U. S. District Court, sitting in Maryland in *Corsa v. Tawes*, 149 F. Supp. 771, 774 (1957). a case prior to the recent increase of public recognition of the degradation of our environment, has said:

"It is said that natural factors, beyond the control of man. such as weather, currents, and salinity, predominantly determine the abundance of fish, and it is the plaintiffs' insistence that the amount of menhaden withdrawn by fishing, regardless of the means employed, is *infinitesimal* in relation to the present menhaden population. Though there doubtless are differences of opinion among experts as to this and as to the need for an effectiveness of specific conservation measures, we cannot close our eyes to the manifold illustrations of experience, where man's over-exploitation has sharply diminished or even extinguished the supply of natural resources, wild game, and fish.""
(Emphasis added, i

A few paragraphs later the Court went on to hold: "That a natural resource is subject to injury by causes beyond man's control is not a sufficient reason for us to require the State to refrain from such measures as may reasonably be taken to prevent unnecessary depredations by man."

The current trend is for courts to consider the preservation of natural resources as a valid exercise of the police powers. To determine the validity of a statute as an exercise of the police powers, the Supreme Court in *Goldblatt, supra*, page 134, citing *Lawton v. Steele*, 152 U. S. 133, 14 S. Ct. 499, 38 L. Ed. 385, 388 (1894)s set forth a three-pronged rule (1) that the interests of the public generally, as distinguished from those of a particular class, require such interference; (2) that the means are reasonable

⁶ *Corsa* dealt with the prohibition of the use of purse nets to catch menhaden fish. It is strikingly similar inasmuch as Potomac Company argues that its dredging sites are infinitesimal in relation to the rest of the Potomac River.

necessary for the accomplishment of the purpose; and (3) that the means are not unduly oppressive upon individuals.

Chapter 792 is not in violation of the *Lawton* rule. Chapter 792 does not benefit a particular class; rather, it benefits all citizens of Maryland. The means utilized are reasonably necessary in light of the potential harm as testified to at trial by experts for both parties.

It has already been noted that the sites in question support such species of fish as herring, American shad, hickory shad, striped bass, white perch and el perch, among others. These fish are sources for commercial fishing and sport fishing throughout Maryland. The testimony is undisputed that dredging would irreparably destroy the immediate marsh habitat, converting it into a deep-water habitat. Consequently, those anadromous fish which spawn in shallow waters and which instinctively return each year to the same spawning areas would be deprived of such spawning areas with a concomitant loss of the benefits of their reproductive process.

There was testimony that rare native vegetation at Mattawoman Creek would be destroyed by these particular dredging operations. Dredging increases the water's turbidity. Turbidity is the suspension of dirt particles in the water. A high turbidity reduces the amount of sunlight which reaches aquatic plants, which through photosynthesis produce oxygen for fish. The plants themselves are a food source for fish which would be reduced both due to the failure of plants to reproduce and by the smothering of plants by dirt particles.

Testimony also showed that Mattawoman Creek supports a declining but still substantial wildlife which would be frightened away by dredging noises as well as driven away by a loss of an accessible food supply. At Craney Island the diving ducks would be unable to readily retrieve their food fifty feet below the surface.

Potomac Company argues that the Wetlands Act of 1970's permit procedure is a less drastic protective step which would fully protect the State's interests, and that

Chapter 792 deprives it of a procedural hearing. The Legislature has declared, by Chapter 792, that the State's interests are best protected by a total prohibition of dredging of the State wetlands of Charles County. This court will not pass upon the Legislature's wisdom. *A & H Transp., Inc. v. Baltimore*, 249 Md. 518, 528 (1968) and cases cited therein; *Cohen v. Bredehoeft*, *supra*.

Potomac Company argues that Chapter 792 is unduly oppressive in that the loss it will sustain — the right to conduct a lawful business and the right as owners in fee to use its non-tidal lands and marsh freely, subject only to reasonable restrictions — is too great a loss in relation to the public benefits protected by Chapter 792.

This argument is without merit. Chapter 792 only restricts dredging in tidal waters or marshlands of Charles County, subject to necessary channel dredging for navigation. Tidal waters and marshlands are statutorily defined as State wetlands. By virtue of the Wetlands Act of 1970 and *Bd. of Pub. Works v. Larmar Corp.*, *supra*, page 56, riparian owners are now in the same position as they were at common law, except that they may resort to the permit provisions of the Wetlands Act of 1970. Under the common law, the riparian owner could not himself, nor could he grant a right to another to take sand and gravel from the waterfront or shore of his land below high water mark. *Potomac Co. v. Smoot*, 108 Md. 54, 63-64; *Day v. Day*, *supra*, page 337. In other words, Chapter 792 prohibits what the common law prohibited: dredging, taking and carrying away sand, gravel or other aggregates or minerals from State wetlands.

Testimony and evidence demonstrate that all the proposed dredge sites except 30% within Mattawoman Creek are State wetlands. It is the law in Maryland that unused riparian rights are not entitled to constitutional protections so long as they remain unexercised prior to the Legislature's revocation. *Bd. of Pub. Works v. Larmar Corp.*, *supra*, page 50. Thus the State may regulate State wetlands which it is charged to protect, *Kerpelman v. Bd. of Public Works*, 261 Md. 436, 445; and the loss to Potomac Company

is the 30% of potential sand and gravel at Mattawoman Creek. This loss is not of such magnitude as to justify a finding that Chapter 792 is an invalid exercise of the State police power.

(2)

Potomac Company argues that Chapter 792 is a denial of equal protection in that it prohibits dredging of sand and gravel from wetlands but does not prohibit the taking of sand and gravel from inland pit excavations in Charles County, and also in that it prohibits dredging sand and gravel in Charles County but not in neighboring counties.

Chapter 792 is not violative of the Equal Protection Clause of the Fourteenth Amendment. In *Allied American Company v. Comm'r.*, 219 Md. 607, 623, the Court of Appeals, adopting the test established by the Supreme Court in *Lindsley v. Natural Carbonic Gas Co.*, 22 U. S. 61, 78, 79, 55 L. Ed. 369, 377 (1911), said:

"Except where discrimination on the basis of race or nationality is shown, few police power regulations have been found unconstitutional on the ground of denial of equal protection, which may be what prompted the Supreme Court to call the equal protection clause the 'usual last resort of constitutional argument.'" (citing *Buck v. Bell*, 274 U.S. 200, 208, 71 L.Ed. 1000)

Rephrasing the Supreme Court in *Lindsley*, the Court then declared:

"The constitutional need for equal protection does not shackle the legislature. It has the widest discretion in classifying those who are to be regulated and taxed. Only if the grouping is without any reasonable basis, and so entirely arbitrary, is it forbidden. Abstract symmetry or mathematical nicety are not requisites. The selection need not depend on scientific or marked differences in things or persons or their relations. If any state of facts reasonably can be conceived that would sustain a classification, the existence of that

state of facts as a basis for the passage of the law must be assumed. The burden is on him who assails a classification to show that it does not rest on any reasonable basis. *Wampler v. LeCompote*, 159 Md. 222, 225; *Maryland Coal and Realty Co. v. Bureau of Mines*, 193 Md. 627; *Tatelbaum v. Pantex Mfg. Corp.*, 204 Md. 360. 370." (Citations supplied.)

In addition to the cases cited by the Court, more recent cases include, among others, *McGowan v. Md.*, 366 U. S. 420. 69 L. Ed. 2d 393. 81 S. Ct. 1101 (1961); *Rebe v. State's Attorney*, 262 Md. 350; *Director v. Daniels*, 243 Md. 16, 49-50; *Creative School v. Bd.*, 242 Md. 552.

Chapter 792 has an ecological purpose. As has been shown, the protection of exhaustible natural resources is a valid exercise of the police powers. The prohibition of anyone from dredging sand, gravel or other aggregates or minerals in the wetlands of Charles County is a rational regulation in light of the potential and real harm caused by dredging as testified to by experts for both parties.

To substantiate its first argument, Potomac Company asserts that the case at bar is analogous to the facts in *Beauchamp v. Somerset County*, 256 Md. 541, in which the Court of Appeals invalidated a Maryland statute exempting from taxes or assessments one of three American Legion Posts in Somerset County.

Chapter 792 prohibits all dredging in the wetlands of Charles County by anyone, except necessary channel dredging for navigation. Chapter 792 was enacted to protect the wetlands of Charles County; it was not enacted to discontinue the taking of sand and gravel if such taking does not endanger the protected valuable wetlands of Charles County. Thus, the different facts in *Beauchamp* distinguish it from the case at bar.

In response to Potomac Company's second argument, that Chapter 792 prohibits in Charles County what is not prohibited in a neighboring county, the Supreme Court in *McGowan v. Md.*, *supra*, page 400, reiterated what it has previously held: that "the Equal Protection Clause relates

to equality between persons as such, rather than between areas, and that territorial uniformity is not a constitutional prerequisite."

The burden being upon the party who assails a classification, Potomac Company has failed to show that Chapter 792 does not rest on any reasonable basis. Both arguments put forth by Potomac Company are dismissed.

(3)

Related to Potomac Company's equal protection argument is its assertion that Chapter 792 is a special law on a subject for which general legislation has been enacted and, therefore violates Article III, §33 of the Constitution of Maryland. The general legislation Potomac Company refers to is the Wetlands Act of 1970.

In *Beauchamp v. Somerset County*, *supra*, page 548, the Court of Appeals, citing *Norris v. Mayor & C. L. of Baltimore*, 172 Md. 667, 681-682, defined a public local law as a statute dealing with some matter of governmental administration local in character, in which persons outside of that locality have no direct interest. A special law is defined as a special law for a special case. The Court cited *Montague v. State*, 54 Md. 481, 489 (1880) for the proposition that Article III, §33 ". . . was to prevent or restrict the passage of special, or what are more commonly called private Acts, for the relief of particular named parties, or providing for individual cases."

In *State v. County Comm'rs. of Balto. Co.*, 29 Md. 516, 520, the Court of Appeals declared:

"The special laws contemplated by the Constitution, are those that provide for individual cases. Local laws of the class to which the Act under consideration belongs, on the other hand, are applicable to all persons, and are distinguished from Public General Laws, only in this that they are confined in their operation to certain prescribed or defined territorial limits, and the violations of them must, in the nature of things, be local."

See also *Cole v. Secretary of State*, 249 Md. 425.

While these definitions are not definitive, Chapter 792 resembles a public local law more than a special law. It does not provide relief of a particular named party. It is true that Potomac Company may be the only party affected by Chapter 792, but if others wished to dredge the wetlands of Charles County, they too would be prohibited from doing so. Chapter 792 is applicable to all persons, but is limited to Charles County because the wetlands sought to be protected by Chapter 792 are located in Charles County. Chapter 792 is a valid public local law and is not in violation of Article III, §33 of the Maryland Constitution.

(4)

Potomac Company argues that as a statute imposing criminal sanctions for violations, the terms of Chapter 792 are unconstitutionally vague and indefinite. This argument is rejected.

The standard established by the Supreme Court in *U. S. v. Harriss*, 347 U.S. 612, 617-618, 98 L. Ed. 989, 996-997, 74 S. Ct. 808 (1954) is: "The constitutional requirement of definiteness is violated by a criminal statute that fails to give a person of ordinary intelligence fair notice that his contemplated conduct is forbidden by the statute." The Court goes on to say that if the general class of offenses to which the statute is directed is not plainly within its terms but can be made constitutionally definite by a reasonable construction of the statute, the Court is under a duty to give the statute that construction. In *McGowan v. Md.*, *supra*, page 400, the Supreme Court declared "people of ordinary intelligence" to be those in the position of the challenging parties applying a reasonable investigation or ordinary commercial knowledge.

Potomac Company limits its challenge to the use of the word "marshlands" in Chapter 792, arguing that "marshlands" has not been used in any Maryland statute except Chapter 792. However, "marshlands" is used repeatedly without confusion in *Kerpelman v. Bd. of Public Works*,

261 Md. 436, 439. It is not stretching the matter too far to construe the words of Chapter 792, "tidal waters or marshlands" as tidal waters or tidal marshlands, which are those lands "affected by the regular rise and fall of the tide", or "wetlands", as defined in the Wetlands Act of 1970, §719(a).

Potomac Company has been dredging sand and gravel at least since 1960. Applying the rules of *Harriss* and *McGowan*, Potomac Company is in a position to know and understand with fair notice of what lands constitute tidal marshlands. Chapter 792 is not unconstitutionally vague or indefinite.

For the foregoing reasons, the Court will sign a Decree, when submitted, declaring that Chapter 792 is a constitutionally valid public local law.

/s/ MATTHEW S. EVANS,
Judge.

(R. 188)

DECREE

(Filed March 3, 1972)

Testimony having been presented by all parties, and after final arguments and briefs have been considered and an Opinion of this Court having been rendered, it is, this 3rd day of March, 1972, by the Circuit Court of Anne Arundel County, Maryland,

ORDERED AND DECREED That Chapter 792 of the Laws of Maryland, 1971, is constitutional and hence is in full force and effect. Plaintiff shall bear the costs of this proceeding.

MATTHEW S. EVANS,
Judge.

(R. 190-191)

ORDER

i Filed March 10, 1972)

It is the 101 h day of March, 1972, ordered that the Defendants, their agents, servants and employees are restrained from enforcing Chapter 792 of the Laws of Maryland, 1971, until either a per curiam decision or opinion is rendered in the appeal taken by Plaintiff to the Court of Appeals of Maryland, or that appeal is otherwise disposed of, and it is further ordered that during the pendency of that appeal Plaintiff shall only be allowed to dredge in and on the edges of previously dredged areas of the Greenway permit area. Plaintiff shall not remove from this area more than the following amounts of aggregate per month:

March, 1972.....	40,000 tons
April, 1972.....	60,000 tons
May, 1972.....	69,000 tons
June, 1972.....	50,000 tons

Within ten (10) days after the end of each month Plaintiff shall certify to Defendants that amount dredged in the previous month. Plaintiff shall have the right only within the month of April, 1972 to dredge the amount of 60,000 tons plus any difference between the amount dredged in March and the allowable total of 40,000 tons.

Further, Plaintiff shall file with the Clerk of this Court a bond in customary form, collateral or security approved by the Court in the amount of \$300.00 guaranteeing payment by Plaintiff of the costs of an appeal in the event that the Decree of this Court dated March 3, 1972, is affirmed on appeal or the appeal is disposed of by the Court of Appeals without a decision having been rendered. Plaintiff shall also file with the Clerk of this Court a bond or security collateral acceptable to the Court in the amount of \$10,000.00 guaranteeing payment of \$10,000.00 to the State of Maryland in the event that the Decree of this Court dated March 3, 1972, is affirmed on appeal by either per

curiam decision or opinion or the appeal is disposed of without a decision of the Court of Appeals having been rendered.

Said bond shall not be deemed payment in full or settlement or compromise or complete compensation for loss of natural resources to the State of Maryland and shall not prejudice in any way the rights of the State of Maryland to claim additional compensation or payment.

/s / MATTHEW S. EVANS.

Judge.

(T. 1) PROCEEDINGS

Before Hon. Matthew S. Evans.

October 13 and 14, 1971.

(T. 3) (Court) No. 20,430 Equity, Potomac Sand and Gravel Company v. Gov. Marvin Mandel, Governor of Maryland, et al. Are counsel ready to proceed?

(Mr. Doyle) Yes, Your Honor. The plaintiff is ready.

(Mr. Eastman) Your Honor, on behalf of the Amici, Mr. Ezrin is on his way from Washington. He has not arrived as yet.

(Court) Well I think we have on or two preliminary things here we can dispose. First would be, I think there is a motion to strike—

(Mr. Doyle) That's the plaintiffs' motion to strike certain portions of the answer, yes, sir.

(Court) Yes.

(Mr. Doyle) And filed with that was the motion, or the answer opposing the intervention by the Amici.

(Court) Correct.

(Mr. Doyle) Those two matters were before Your Honor, and an order I believe was signed but the—

(Court) What happened on that, I was getting ready to go on vacation the following day and usually when a motion to intervene is filed, such a motion you have fifteen days to answer, and eleven days had expired and nothing had been filed and I was leaving the next day, so I filed the order and I had no sooner filed it when I received a phone call (T. 4) from both sides, and I indicated to — well, to both sides that I would not file the order, but I would hold it and give the other side time to answer the motion and I would hear, and I had planned to dispose of those motions today before proceeding on the trial of the merits.

(Mr. Doyle) I assumed that to be the case, and since that time, I think relevant to these pending pleadings is the fact that some of the counsel for the intervenors have sent the court a letter, and also a pretrial brief. So we answered that letter and hand delivered it to Your Honor yesterday.

(Court) Yes. Well I have not read the brief. It is here but I haven't read it.

(Mr. Doyle) Our position is that we tactically, and we believe legally properly so, wish to keep ecology and environment out, and I suspect, as your indicate, there may be some preliminary disposition of that now or the court may indicate, wish to hear us on the matter, or wish to advise us as to how we should proceed with the case. As the plaintiff in the case it was my intention not to introduce any testimony with regard to ecology and environment, and if in fact the court ultimately permits such testimony from other sources then I would hope to (T. 5) have the opportunity, of course, to rebut it with proper testimony, but it's our position at this time, both in support of the motion to strike and the answer to the petition to intervene, this case does not involve ecology, and for that reason evidence regarding those issues should be withheld from the record. We have also, and I might just make a comment about it, so that counsel is apprized. We filed yesterday a motion to amend the pleadings, amend the

declaration or the bill of complaint. That motion is not a substantive factual request. It has to do solely with the fact that in our research preparatory to this case we found another Section of the Maryland Constitution which we would like to call to the court's attention, and at the proper time make legal arguments in connection with that Section of the Constitution.

(Court) Yes. Well I think we can dispose of that preliminarily also.

(Mr. Doyle) Alright, fine.

(Mr. Rich) Your Honor, I represent the State of Maryland. The Deputy Attorney General is not here yet this morning. He is with the Attorney General but will be here in approximately a half hour. I don't know if you want to hear arguments opposing the motion (T. 6) at this time by Mr. Doyle.

(Court) Well if you all would like to speak to the motion I'll be glad to hear you, but I think it has to be disposed of before we can proceed with the case on its merits.

(Mr. Rich) Yes, Your Honor.

(Mr. Doyle) Well since it is my motion I suspect I'm under the gun to at least give the court some reason why I believe ecology should not be—

(Court) Yes. Are you prepared to—

(Mr. Rich) Yes, I am prepared to respond to Mr. Doyle, Your Honor. I would prefer Mr. Lord being here but I don't want to take the court's time. I could suggest to the court that, not to shift the emphasis but the questions of the Amici is totally related with the motion to strike, and in fact the motion to strike was made because of the opposition to the Amici intervention, but—

(Court) I think I am aware of that. That's obvious, I should say.

(Mr. Rich) But if the court would prefer to go ahead with the motion opposing the Amici first, that might be better.

i Court) Well as I understand counsel for — isn't here either.

(T. 7) (Mr. Eastman) Well Your Honor, I am one of the counsel for the Amici so I am ready to answer that issue right now. If you want you can proceed on that but I would point out that issues are very closely interrelated and it would appear that as the court decides one issue it would likewise decide the other one as well. So the two are tied very much together.

(Court) Yes. I realize it. Are you gentlemen ready to proceed?

(Mr. Rich) Yes, Your Honor.

(Court) You seem to be the ones that don't have your cohorts here with you.

(Mr. Doyle) The plaintiff is ready, Your Honor.

(Court) Well suppose we proceed with the motions then.

(Mr. Doyle) Alright, sir.

(Court) Let me get your names straight now. Your name?

(Mr. Doyle) James J. Doyle, D-o-y-l-e of the Baltimore Bar. My associate here is Mr. John Jaske, and we are both of the law firm of Sherbow, Shea & Doyle in Baltimore. I have with me, and I would like to formally introduce to the court, Mr. Clyde Slease, who is a member of the Pennsylvania Federal and (T. 8) State Bars and also a member of the Bar of the Supreme Court of the United States.

(Court) Nice to have you with us.

(Mr. Eastman) Your Honor, I am Thomas B. Eastman of the Baltimore Bar of the Baltimore firm of Ober, Grimes and Shriver.

(Mr. Rich) Your Honor, my name is Warren Rich. I am a Special Attorney General for the State of Maryland, and with me is Henry Lord.

(Court) He will be here.

t Mr. Rich) He will be here.

(Court) Well Mr. Doyle, I will be glad to hear you.

(Mr. Doyle) Thank you, Your Honor. May it please the court in this case, when it was filed, the bill of complaint was, we hope, carefully drawn to attack the constitutionality of House Bill 1192, or as it may otherwise be referred to. Chapter 792 of the Acts of 1971. It was carefully drawn in the sense that the bill specifically avoided references to ecology and environment and that was not happenstance. It was studied on our part. When the petition to intervene was filed, a review of that petition and the law supporting it, suggests that the thrust of that petition to intervene is solely and completely environment and ecology, and when (T. 9) the answer to the bill was filed, while it did precede the motion to intervene, it contained in it references to ecology and environment. As the court has already eluded to, we did not at that time file a motion to strike that portion of the answer because we felt we would meet that issue here in the courtroom, but when the petition to intervene was filed we, of course, then felt we had to draw the issue in the form of pleadings which we did. Now the question here is. and we have filed in support of the motion to strike and the answer opposing the intervention, a memorandum of points and authorities which we think may be of assistance to the court, but the thrust of it is this. Any reference at all to House Bill 1192, and we have here the enrolled copy of the bill which we will introduce into the evidence, but if court wishes it we can perhaps agree to introduce that now. Any reference at all to House Bill 1192 shows not one reference, not one mention, not one specific allusion to ecology or an environment. In fact when the counsel for the various opposition parties suggest that this is a matter involved in the bill they do it solely by infer-

ence and solely by implication. It's our position that it's this (T. 10) court's prerogative, and indeed responsibility to try to conclude what the legislative intent of this bill was, and I would agree with counsel for the opposition that if the court finds any legitimate legislative purpose for the Bill then you have at least gotten over the threshold question as to whether the bill was properly enacted or not. Now it's our position that in trying to find the legislative purpose of that bill, you must look to the legislative history such as exists in order to glean that legislative intent. Well as Your Honor knows much better than I. in Maryland there is no formal legislative history. We don't have records of the hearings. We don't have a congressional record such as exists in Washington, so we can not go to any formal proceeding of the legislature, either in the House or Senate to glean that intent. We have got to look elsewhere for it. Nor can we, and I would like to make reference to this right now, because in the brief that was filed with you by the intervenor. an affidavit was attached signed by the two delegates of the Charles County delegation stating what they considered the legislative intent to be. It's our position, and since this was just filed yesterday, we have no brief on it but we will (T. 11) be happy to submit cases to you. It's our position that the law is completely clear, not only in Maryland but elsewhere, that no legislator may either by direct testimony from the stand or by affidavit as was tried here, no legislator may testify as to what the legislative intent is or was, and I think that's obvious. In every one of these cases you would have a parade of 185 different people coming in here telling you what they thought their intent was when they acted on the bill. So it's our position that the only thing you can look to in order to glean the meaning of this Bill is the Bill itself and other legislative actions that took place surrounding this Bill and which may have some impact on it, and it's for that reason if the court please that we assert as forcibly as we can that ecology is not a part of this Bill. First off reference to the Bill makes no mention of ecology or environment when in fact had the legislature desired to do so could well have included a

preamble, as they do many, many times, to the effect that this was the meaning and real purpose of the Bill. Now coincidentally with that, I think the court should take notice, and can in fact take notice of this (T. 12) chronology of events. At the very time this Bill was being debated in the legislature the overall wetlands act, the big act which controls wetlands throughout the State, had just been signed by the Governor, not six months before, and in fact that Bill, and I can — the preamble to the Bill clearly states that the purpose of the entire Wetlands Act was indeed to put the State in the business of striking proper ecological balances, and the theory and the thrust of that Bill was that it put the ecological controls in the State for the entire State. Now it's our position that absent any declaration in this Bill that ecology was in fact the thrust of the Bill, the court certainly can take judicial notice of the fact that there was no need, no need at all on an ecological basis for 1192 because the State had completely acted in the Wetlands Act, and that covered Charles County as well as any other County. Beyond that, and Mr. Lord is not here but I believe Mr. Rich may recall our agreement, House Bill 1271 in the 1971 session of the legislature, the one that just passed. It was introduced on March 15th, 1971 when House Bill 1192 was, I believe introduced, three or four days earlier. House Bill 1271 did not pass, but in fact House Bill 1271, which I proffer now and intend (T. 13) to offer, is a Bill introduced by the Charles County delegation, the same sponsors of the Bill that we are under attack here, sent to the Committee on environmental matters and involved exactly, identically the same subject matter, that is dredging sand and gravel in Charles County. That Bill, quite contrary to the thrust of 1192, says in effect it's O.K. to dredge sand and gravel in Charles County as long as you pay the County or the State, who ever it is, so much a ton for the material you take out. So that in fact if you are talking and looking for whether or not ecological motivations involved any of these Bills we think you have this chronology that you can look to to deny ecology to 1192. First the existence

of the over riding Wetlands Bill, which was designed and which in its preamble says it is the State's prerogative and we will cover it for everybody including Charles County. Secondly, the absolute absence in any regard of ecology, or mentions of it in House Bill 1192, and finally, the companion measure introduced by the same sponsors of a bill which in essence says, the thrust of the Bill is. it's O.K. to dredge—

(Court) That Bill was defeated.

(T. 14) (Mr. Doyle) Yes, sir, it was. and I am not suggesting that it had passed. I am only suggesting it as some evidence by which you can try to determine legislative intent with regard to a companion measure that was put in. Absent any mention of ecology in 1192 certainly, reading the intent of the sponsors together, it seems certain that 1271 says in effect, "We are not too concerned about ecology in so far as sand and gravel dredging in Charles County is concerned because we will permit it if you pay us ten cents a ton." Now, the combined weight of these three factors, it seems to me, absent any specific mention of the phrase in 1192 permits the court to conclude that 1192, whatever its purpose was, did not involve ecology or environment, and it is for that reason that we urge the court to deny any evidence in this case on those subjects.

(Mr. Rich) Your Honor, in sticking directly to the words of the Statute it appears that Mr. Doyle strayed somewhat far afield. He has referred to two other Bills, one which is the law of the State, the general wetlands law, and a Bill which I am not familiar with and which did not pass last year. I would say that in support of Mr. Doyle's position he has cited a number of cases which all go to the (T. 15) question of statutory construction, and in fact in his argument he stated that if we want to glean the meaning of the Bill we must stick to the words of the Bill itself. The point of the matter is this is not a case of pure statutory construction. This is a case filed by Potomac Sand and Gravel on due process provisions of the Constitution and on equal protection clauses. It is a case where we have to

go back, and it's the burden to show if there is a classification, if Charles County was carved out, what is the reason for that classification. It's an equal protection case. If there's a denial of due process what is the State's interest? What is the State taking in fact in the public interest, and what is it denying to the private corporation? This is a constitutional case. Not a statutory interpretation case. I think that that point is very important. Secondly, I would say that if the words in the statute itself, tidelands and marshes — let me refer to it. Tidewaters and marshlands, just those two words connote an ecological purpose, because if you are going to prevent dredging in tidelands or marshlands, there's an absolute purpose behind that Bill, and the purpose is for certain reasons, and one of the (T. 16) reasons is for ecology. Now I would also refer the court to all the cases that I know of which have arisen under Section 403 of the Rivers and Harbors Act, or Section 10 which does not refer to any ecological purpose. So in almost every dredging case that I know of the question of ecology is brought up. The question of whether or not in order to get an Army Corp permit you can go forward with your burden to show the necessity for dredging. Now there's no verbatim citation to ecology. It's a question of what is in the public interest and what is not, and it's all part of the same law.

(Court) Was there anything you wanted to say?

(Mr. Eastman) Your Honor, I have, on behalf of Amici I would echo what Mr. Rich has said, that Mr. Doyle has on the one hand said that you must merely look at the law on its face, and then proceeds to recite and refer to several cases which go beyond, behind the statute, and he is attempting to do the same thing that he says that we can not do. I would point out that this statute was referred to the environmental matters committee, and the intention of it in just reading it over is clearly to protect the ecology of the area, and just (T. 17) as a matter of the obvious affect of the dredging and why there was an attempt to stop the dredging, the obvious attempt was not to deprive Mr. Doyle's client of a right to take the sand and gravel

from there, but in deed to protect the very delicate environmental and ecological balance in this area. Your Honor. I would have nothing further to add. but I would like to introduce to the court, Mr. Alvin Ezrin, who is a member of the Washington, D. C. bar, and also a member of the New Jersey bar, and is associated with the Washington firm of Hogan and Hartson.

(Court) Mr. Ezrin, it's nice to have you with us.

(Mr. Ezrin) Thank you, Your Honor.

(Mr. Doyle) If it please the court, just a very brief rebuttal. Perhaps I — it's obvious I am not making myself clear at least to my opponents at the other end of the table. I am not suggesting that what I cited in my memorandum I am trying to depart from now. The fact of the matter is that the law does say that you must look to the Bill, and you must find a legislative purpose for that Bill. As I understand the law when we attack this statute there are two prongs to the problem that we face here as the attackers, on the offense. Number one, (T. 18) the question of the legislative purpose, if any. for the enactment of this statute, and then once we get past that, a review or a critique or a dissection of the Bill to see whether or not what was done for whatever purpose the court finds, was done in a framework that wasn't arbitrary or in excess of the police powers of the legislature. Now what I am saying is simply this, that if the Bill itself is silent in the question of ecology and if the court has to go to inferences insofar as the wording is concerned, what tidal waters mean and what marshlands mean, the court can equally well look at other legislative pronouncements to determine whether in fact the legitimate legislative purpose for this Bill did in fact involve ecology, because there may well be other reasons for enactment of such a Bill like this. For example, there may for all I know be a nuisance with regard to the noise of the operation. I don't know. All I am saying is if the Act itself isn't clear, doesn't clearly suggest ecology, then the court can look to wetlands. It can look to other legislative endeavors and activities in order to determine whether or not ecology should properly

be in the case. Now the Rivers and Harbors Act is (T. 19) not at issue here and we are not attacking it, so I can't comment on what happens there. We are attacking this Bill, and insofar finally as the Committee on Environmental Matters is concerned getting this Bill, and that in turn meaning that it means environment and ecology, there are any number of Bills introduced into the Committee on Environmental Matters. I just grabbed a handful of them this morning. Here's a premarital test for marriage, abortions, a bill requiring uniform charts of accounts at hospitals. I understand the wholesale produce market in Baltimore was sent to environmental matters. So that reference certainly is of no help to the court in trying to determine the legislative purpose of 1192. But certainly the existence of the Wetlands Act, a brand new Act, where the ink on the Governor's signature wasn't even dry yet, is some indication as to whether or not the legislature intended to—

(Court) Yeah, but by doing this you are looking outside of the Bill to the act—

(Mr. Doyle) Well I am only looking through what the legislature did and try to glean legislative intent of this Bill. If — I agree with the court. If in fact you can look at this Bill and see clearly (T. 20) that ecology is there, then there's no need to look beyond it. But what I am suggesting is that you can't look at 1192 and see ecology there. You have got to look elsewhere. The counsel suggest that one of the places you should look is to the committee that the Bill was assigned to to decide what its purpose was, and if in fact — it need not be, there may be many purposes for such a Bill as this. It's a criminal enactment. I don't know of any ecological basis for suggesting the enactment of, or the protection of the ecology resolves solely and completely around the enforcement of a criminal law. The Wetlands Act is not criminal. It's regulatory, and this is not a regulatory Bill. It's a criminal Act, and it seems to me if you are going to talk in terms of ecology and criminal law together, ecology ought to be well spelled out in the Bill so the people who are subject to that Bill know in fact

that that's what they are dealing with. The Bill is not that clear and I say you can look beyond it to what the legislature did elsewhere for guidance as to what that Bill meant.

(Court) Well I am going to deny the motion to strike. I think that here, as pointed out by — I think in your argument you looked outside of the Bill itself. (T. 21) You are saying the court should just look at the Bill but you are referring to everything outside of the Bill. We get into due process, classification and a number of other situations here that the court is going to have to consider, and I agree from — indetermining whether it's a valid or constitutional Act as to — if it's not ambiguous you look to the terms of the Bill, true, but I think the court where it's something of great public interest as this is, the court has the — not the right, the duty to look why the legislature passed this, the purpose of it. I think it can look outside of the Bill and in the argument you have done this. So I will deny the motion to strike. Now we get to the other half of this which is really the right of, the petition of these various societies that have filed to appear as Amici Curiae to the court, and they are asking not to participate in the — present testimony or cross examination or examination of witnesses, but for the purpose of argument at the end and also submitting briefs. Is there anything you would like to say to that?

(Mr. Doyle) No, sir, I suspect that I have to concede that the thrust of the objection there was the (T. 22) same as the motion to strike.

(Court) Yes, is there anything you wish to say, sir.

(Mr. Eastman) No, sir.

(Court) So I will also permit them to intervene.

(Mr. Doyle) I take it that intervention is in conformity with the Order that they do not participate in the trial.

(Court) Yes, not to participate in the trial of the case. That is, at the end they may present any argument or brief

they wish to, but not participate in the examination of witnesses.

(Mr. Eastman) Your Honor, we have sent to you a brief and can this be filed at this time or would Your Honor prefer to have it filed at the completion of the case.

(Court) Well I am not going to have a chance to read it right now so it really won't make much difference if you file it now or later.

(Mr. Eastman) Thank you, Your Honor.

(Court) We are now at the position where we are ready to proceed with the trial of this case on the merits.

(Mr. Doyle) That's correct. May I ask the court one question before we get into the actual trial—

(Court) Certainly.

(T. 23) (Mr. Doyle) —and it relates to the position I now am in in view of the court's ruling. Had the matter been deferred or had I prevailed on those motions it was not my intention to introduce affirmatively ecological type testimony, but rather to await the State's introduction of that evidence and then present in rebuttal, my evidence with regard to that. Now in view of that, the court's ruling I'm obviously — my rights are preserved in connection with that ruling, and I now find — I would like some direction from the court as to whether you feel I should now in view of that ruling present that ecological testimony in the case in chief or may I still await and — to see whether or not the State intends to pursue those issues and rebut—

(Court) Does the defense have any feelings in regard to—

(Mr. Rich) Well Your Honor, I think in light of your ruling Mr. Doyle should proceed the way he would try any case. I don't think it is incumbent upon the State to present their ecology proof and then have Mr. Doyle have the right to rebut it. I think that he has the burden. He is the plaintiff in this case, and I would just suggest to him that (T. 24) we proceed as we would proceed in any other case.

(Mr. Doyle) My burden, of course, is to present that evidence which I think is relevant to my case and the set back on the motions doesn't necessarily mean my tactics are being changed and I just would like to get some indication from the court that if I choose tactically not to present that evidence and if in fact it comes in in the defense aspect of the case whether I will be permitted to rebut.

(Court) Well I would think, there hasn't been any delay after ruling on the motion, but I think the better practice would be to present your case in chief.

(Mr. Doyle) Alright.

(Court) One other thing we didn't dispose of. You filed a motion also to amend your declaration. We haven't disposed of that.

(Mr. Doyle) Yes, sir, that motion, if the court will review it or look at it, does only one thing. We made certain allegations with regard to the reasons why we believe this Act to be unconstitutional. In subsequent research we felt that the court also should consider the effect of Article 3, Section 33 of the Constitution of Maryland, which has to do with the enactment of special statutes in areas (T. 25) where there is already an existing general law. It in no way involves a factual change. It no way puts the defense, the defendants in an unfair position. It merely means that at such time as we file briefs in this case, if the court permits us to do so, that in addition to the denial of due process and equal protection argument, we would also make an argument with regard to that Section of the Maryland Constitution.

(Court) Do you have any opposition to that?

(Mr. Rich) I haven't seen it, Your Honor, but if he would give us a copy I don't think we will object to it.

(Mr. Doyle) We should have hand — we did in fact hand deliver a copy of the motion to amend and the amended bill of complaint to the State, and the only thing it changes, we add one paragraph on page 9 of the bill of complaint, subsection g.

(Court) On page 9?

(Mr. Doyle) Yes, sir.

(Court) Would you like to see this copy, the court copy?

(Mr. Doyle) I can show him mine. As I say, it's just the reference to that one Section of the Maryland Constitution.

(Court) And that's the only change?

(T. 26) (Mr. Doyle) Only change, yes, sir. In fact it won't require any difference in either the presentation of the case or in the defense to it.

(Mr. Rich) Well Your Honor, as long as we are given adequate time to prepare a brief on that point—

(Court) Oh, yes.

(Mr. Rich) Fine. We don't want to hinder Mr. Doyle unduly.

(Court) Well after the case is concluded either side, if they wish to present any further briefs they will be given time to do so.

(Mr. Doyle) And finally one more preliminary matter if I might, if the court, please, just submit this—

(Court) I will sign that order right now.

(Mr. Doyle) Alright, thanks.

(Court) Yes?

(Mr. Doyle) The other question, just in order that the record be complete, I did in the argument on behalf of my pleadings which the court has just ruled on, not the motion to amend, but the motion to strike and the answer to the petition to intervene, I alluded both to House Bill 1192 and to the unsuccessful House Bill 1271. I would like to make those a part of the record so that if in fact there is any further need to consider that issue those two (T. 27[^]) documents will be considered part of the attempt to get the motions granted.

(Court) You may file them.

(House Bills 1192 and 1271 filed herewith marked Plaintiff's Exhibits 1 and 2 on the Motion).

(Court) Now that's only as to the motion?

(Mr. Doyle) Yes, sir, that's only as to the motion and my intention would be to reintroduce plaintiff's 1 which is the Bill we are here discussing in the case in chief.

* Opening Statements of Counsel)

(Mr. Doyle) If the court please, prior to calling the first witness I would just like to indicate that there will be ecological testimony adduced by the plaintiffs which will in essence be completely opposite to the suggestions Mr. Lord just gave you in that area, and with the court's permission I would now like to call the first witness.

(Court) You may.

(Mr. Doyle) Mr. Green, please.

(T. 28) LLOYD F. GREEN, a witness of lawful age, being first duly sworn, deposes and says:

(Clerk) Would you please state your full name and address? A. Lloyd F. Green, 2133 North Troy Street, Arlington, Virginia, 22201.

DIRECT EXAMINATION

By Mr. Doyle:

1. What's your occupation, Mr. Green? A. I am vice president and general manager of Potomac Sand and Gravel Company.

2. Just very briefly what is your educational background and what, if any, degrees do you hold? A. I graduated in 1939 from Case Western Reserve University with a degree of bachelor of science in civil engineering. 1941 from Lehigh University, master of science in civil engineering.

3. And subsequent to that education have you been employed by the same entity? A. Yes, upon graduation from Lehigh I went to work for Dravo Corporation and worked with them ever since.

4. Where is Dravo Corporation headquarters? A. Offices are in Pittsburgh, Pennsylvania.

5. And have you had various assignments in the engineering field with Dravo since that time? A. Yes.

6. Are you presently in any way connected with Potomac Sand and Gravel Company, the plaintiff in this case? (T. 29) A. Vice president and general manager.

7. And how long have you held that assignment? A. Since 1963.

8. And you have been in charge — you are the top officer at Potomac and have been since then? A. Yes, sir.

9. Do you have anyone to whom you report? A. Yes, sir, I report to the vice president, materials, of Dravo Corporation.

10. And he is who and where is he— A. He is Mr. Edward ft. Hyde and his office is in Pittsburgh, Pennsylvania.

11. By whom are you paid? A. Potomac Sand and Gravel Company.

12. Alright, now can you tell me when Potomac Sand and Gravel Company was first formed? A. Potomac Sand and Gravel Company was acquired from the Smoot Sand and Gravel Corporation and the company was formed January 1, 1961 and named Potomac Sand and Gravel Company.

13. Are you indicating it was acquired from Smoot or it was formed in 1961? A. No, acquired from Smoot, purchased.

14. Potomac Sand and Gravel was in existence? A. Yes, sir.

15. You say — I am a little puzzled. You say Potomac was pur- (T. 30) chased from Smoot? A. Yes, sir.

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16. I think you may be confused. Are you indicating that — let me ask you this way. Are you aware of Smoot Sand and Gravel Company? A. Yes.

17. And what is or what was Smoot Sand and Gravel? A. Smoot Sand and Gravel Company dredged sand and gravel in the Potomac River and sold it in the District of Columbia and northern Virginia.

18. And for how long did they operate in that area if you know? A. According to the records that we have researched from approximately 1905.

19. Until when? A. Until we took over in 1961.

20. And when you say we took over, who was that? A. Dravo Corporation.

21. And in what guise did Dravo Corporation take over? A. They set the Potomac Sand and Gravel up as a subsidiary of Dravo Corporation.

22. So what you are testifying is that Potomac took over Smoot Sand and Gravel in 1961, is that correct? A. Yes, sir.

23. Alright. Now are you aware or familiar with the way in which the Smoot Sand and Gravel Corporation conducted its operations in Maryland here? (T. 31) A. Yes, I am.

24. And could you briefly describe how they conducted those operations? A. Well they dredged sand and gravel from the Potomac River using floating dredging equipment, loaded it in barges and distributed it to their marketing area.

25. And when the take over occurred in 1961 by Potomac what, if any, change occurred in the way in which you operated? A. We changed nothing.

26. Now you say that there was a purchase effected in 1961, is that correct? A. Yes, sir.

27. What was it that Potomac purchased? A. Potomac purchased all the floating equipment, lands, properties, dis-

tribution plants related to the sale and production of sand and gravel, and the people, all the people that were occupied doing this thing.

28. And what was the purchase price? A. Five million dollars.

29. Five million dollars? A. Yes, sir.

30. Alright, now in connection with the acquisition of Smoots properties could you please tell me what property rights, I am talking now about real property rights, Potomac acquired in that purchase? (T. 32) A. You mean all the property?

31. Yes, sir. A. Well we acquired a distribution plant in Washington in the Georgetown area. We acquired a distribution plant site in Washington on the Anacostia River. The Oxon Hill property—

32. Before you go further, in connection with those two properties were they dredging sites or were they just distribution centers? A. These were merely distribution plants.

33. No material dredged processed there? A. No, sir.

34. Alright, now let's go to the dredging areas that were acquired in that purchase, will you identify each of those please? A. There's the area we call the Oxon Hill area which consists of approximately 80 acres. The—

35. Where is Oxon Hill located? A. Oxon Hill is located at — where the Beltway intersects Virginia shore and our property is just north of this intersection in an area known as Fox's Ferry.

36. Which State is in it? A. Maryland.

37. What County? A. Prince George's.

38. Does it border on any navigable stream or river? (T. 33) A. It borders on the Potomac River.

39. And how sizeable was that— A. Approximately 80 acres.

40. Alright, now what was the next piece of property that you acquired? A. The Greenway flats area.

41. Where is that located? A. That's located approximately 2 miles below Marshall Hall on the Maryland side of the River.

42. In what County? A. Charles County.

43. And could you describe the extent of that property acquisition please? A. That property acquisition consists of a strip of land 90 feet wide — I don't have how long it is. It is several thousand feet long, and another strip 5 feet wide, approximately seven or eight thousand feet long. The total length is about 2 miles.

44. And do those strips border on any body of water? A. The Potomac River.

45. Now did you obtain any other property in this acquisition? A. We obtained, acquired Craney Island area.

46. And would you describe please where Craney Island is located? A. Craney Island is located in the Potomac River on the Virginia side of the channel, off Mason's Neck.

(T. 34) 47. At the time of the acquisition what size property did Potomac acquire? A. Our records show this to be a 20 acre piece of property.

48. 20 acres? A. Yes, sir.

49. In actuality is it in fact 20 acres? A. You mean—

50. If I went out there today would I see 20 acres of—
A. No.

51. What would I see? A. A couple of trees sticking out of the River.

52. And what County is that in? A. Charles County.

53. Alright, now what other property did you acquire? A. We acquired what we call the Mattawoman tract which is up the Mattawoman Creek approximately 6 river miles from the mouth of the Mattawoman Creek.

54. Now how sizeable is that tract? A. Well it's about 1100 acres now.

55. And does it border on any navigable stream or river? A. Mattawoman Creek.

56. What County does it lie in? A. Charles County.

57. Now did you acquire any other property in this acquisition? A. No, sir.

58. Well isn't it a fact, just to complete the record, you also (T. 35) got property in Virginia, or certain dredging rights in Virginia? A. Dredging rights in Virginia but there were no property ownerships there.

59. Now at the present time is there any dredging activity being undertaken at Oxon Hill? A. No, sir.

60. What is the situation there insofar as dredging sand and gravel is concerned? A. That area is — has been pretty well dredged out. There is some fine sand remaining in the area but it's of a type that is not marketable in our present market so we haven't bothered to take it out.

61. So if — and that lies where? A. In Prince George's County just at the Woodrow Wilson bridge.

62. Now as I understand your testimony, Mr. Green, the Potomac then has land holdings, three land holdings in Charles County, is that correct, sir? A. Yes, sir.

(Mr. Doyle) May it please the court, at this time I would like, just so the record is complete, to introduce Deeds to those three Charles County tracts. I understand the originals of those Deeds are in the files in Pittsburgh. I have attached those to the Bill of Complaint. (T. 36) I have here photostatic copies of the Deeds showing the ownership in the tracts at Greenway, Mattawoman and Craney Island, and I would only introduce them for the purpose of showing the ownership. I don't believe they are at issue in any degree and I would hope the State would stipulate that I can introduce the photostats.

(Mr. Rich) Your Honor, we can't stipulate that there's no issue involved in the tract. There is an issue that has

been called to our attention, and we can not stipulate to ownership, especially with regard to the Mattawoman tract.

(Mr. Doyle) Well may I ask, sir, are you contesting our entire ownership of Mattawoman?

(Mr. Rich) No, I am not. I am contesting 423 feet of your waterfront but I would say to the court that they certainly can be introduced for the purpose or the fact that these are the Deeds that were received by Potomac Sand and Gravel. We would stipulate to that. We do not stipulate to the efficacy of the Deeds themselves.

(Mr. Doyle) I think you will find that this is the (T. 37) difference without a distinction, Your Honor. The fact of the matter is, I believe the State would concede too, that notwithstanding the question of this particular tract, Mr. Rich calls into account here, the fact of the matter is that the factual and legal issues in connection with the constitutionality of House Bill 1192 can be resolved without having to go into the question of the title to that one tract of land, isn't that so? At least I understood that to be so the other day.

(Mr. Rich) Well Mr. Doyle, I agree to that but we are not going to stipulate to ownership.

(Mr. Doyle) I am not asking you to. I just want to put these Deeds in to show that we do have ownership of land—

(Court) He said he was willing to stipulate that these Deeds are the ones you received for the property, is that correct?

(Mr. Rich) Yes, sir, I just want to avoid any—

(Court) Do you wish to mark the ones you have filed with the bill?

(Mr. Doyle) Yes, sir, I would prefer that.

(Court) You are offering what, two?

(T. 38) (Mr. Doyle) I am offering three Deeds really. One Deed dated December 30th, 1960 between Smoot Sand and Gravel, grantor, and Potomac Sand and Gravel, grantee. A second Deed dated March 6, 1964 between George P. Jenkins and Mary B. Jenkins and Frank A. Susan and Clarece Susan, grantors, and Potomac Sand and Gravel, grantee. Those Deeds evidence the ownership at Mattawoman and at Greenway flats. I would introduce a third Deed dated December 30, 1960 between Louis E. Smoot and Ann H. Smoot, grantors, to Potomac Sand and Gravel, grantees, and that evidences the claim of ownership at Craney Island. In connection with the title dispute, the question of title that has been raised here I would only ask the court that if in fact it becomes relevant to the issues that you are asked to decide I will at that time introduce whatever evidence that is necessary to attempt to clear that up. I don't want to start to try a title case here though—

(Court) I don't think that probably will be necessary. This would either just increase or decrease the amount of land, is that correct?

(Mr. Doyle) Exactly, Your Honor. Yes. The total amount—total land holding at Mattawoman (T. 39) is some eleven hundred acres. This dispute would increase or it would decrease that perhaps as much as four hundred front feet but only some eight acres, and the fact of the matter is the type of holding would be the same—

(Court) I don't think the question of title is going to come into it. I — at least I don't think so at this point.

(Mr. Doyle) I hope not, sir. If it does I will then introduce whatever evidence the court thinks is necessary.

(Deed dated 12/30/60 filed herewith marked Plaintiff's Exhibit No. 1.)

(Deed dated 3/6/64 filed herewith marked Plaintiff's **Exhibit No. 2.**)

(Deed dated 12/30/60 filed herewith marked Plaintiff's Exhibit No. 3.)

63. Now in connection with your properties, particularly those lying in Charles County, Mr. Green, would you describe for me the situation insofar as dredging is concerned, dredging of sand and gravel, that now prevails at Greenway Flats? First of all, do you still own that tract? A. Yes.

64. And has that tract been dredged over the years? (T. 40) A. Yes, it has.

65. When did you begin dredging there? A. Well we — that had been dredged before we came here by the Smoot Company, and we have been dredging there pretty regularly since 1961.

66. And can you estimate roughly how much material you have removed from Greenway in that time? A. From '61 to the present time we have moved about — removed about 7.7 million tons of material.

67. Is there any estimate at the present time of the reserves of sand and gravel at Greenway Flats? A. We estimate that there's a million tons left there.

68. A million tons? A. Yes, sir.

69. And assuming existing production volume how long would it take to exhaust that million tons at Greenway? A. Rule of thumb we sell a million tons a year.

70. So if you— A. If we worked there and only there it would be exhausted in approximately a year.

71. Now let's review the situation that prevails at Mattawoman tract. Do you still own that tract? A. Yes, sir.

72. Has there ever been any dredging undertaken at Mattawoman? A. Yes, sir, there has.

73. When was that? (T. 41) A. Let's see. We dredged over there in 1964 and a little bit in '65.

74. And how much, approximately how much material was removed at that time? A. Approximately 345,000 tons.

75. Since then has there been any dredging conducted in your tract there? A. No, sir.

76. What reserve of sand and gravel do you estimate exists there? A. We estimate about 10 million tons there.

77. Now insofar as Craney Island is concerned do you still own that? A. Yes, sir.

78. And has that ever been dredged? A. I understand Smoot had dredged in there before we were here. The time and the amount I have no idea.

79. But insofar as Potomac Sand and Gravel is concerned you have never done any dredging there? A. No, sir.

80. Have you ever attempted to make an estimate of the reserves there? A. Yes, our geological estimate of the reserves there is approximately five and a half million tons.

81. Now these holdings that you have testified Potomac owns in Maryland are those holdings taxed by any State or local (T. 42) subdivisions? A. Yes, sir.

82. And how are they taxed, in what way? A. Well we pay County taxes on the property. We pay a corporation State income tax in Maryland, Virginia, and D. C. Federal income tax and personal property taxes.

83. And has Potomac paid those taxes as they are levied? A. Yes, sir.

84. Now just so the record will be clear and the court will have some grasp of the situation can you tell me what the 1970 tax bill was for Greenway? A. \$176.67.

85. And what was the 1970 tax bill for Mattawoman?⁹ A. \$1126.61.

86. And the tax bill at Craney Island? A. \$48.53.

87. Are those representative of the tax bills in prior years essentially? A. Well percentage wise the taxes increased considerably from — in the ten years we have been there.

88. Is it fair to say those would be the maximum figures that have been assessed in taxes on these various properties? A. Yes, that is the maximum.

89. Alright, now Mr. Green, could you please describe to the court the size of Potomac, its operational size, the number (T. 43) of employees, things of that kind? A. Well we employ about 105 employees. We operate two floating dredges. Coupled with those dredges we operate approximately 70 barges, and we generally operate three tug boats to transport our material by water, and then we have, plus a distribution plant in Washington.

90. Can you break down for me please, in rough estimates if that's the best you can do, how those 105 employees are distributed between your various locations? I am talking now between Maryland and the District of Columbia and Virginia, can you in any way estimate how many you have at each place? A. Well we have one dredge working in Maryland which employs 12 people, and another dredge working in Virginia which employs 9 people and then the remaining employees are operating the tug boats in and out of Maryland and the District of Columbia, and then the remainder in the distribution plants and our offices, the salaried personnel.

91. Alright now since — as I understand it in 1961 you also took over whatever floating equipment that Smoot was then operating. Did you continue to operate that equipment? A. Yes, we just continued to operate things as they were.

92. And in the ensuing years have you made any changes in that equipment? A. Oh yes, sir.

93. And what have the nature of those changes been, can you tell us, (T. 44) so far as the dredging equipment is concerned? A. Well the floating dredging equipment that we acquired from Smoot was very old, wooden hulled equipment, of course which is not much good this day and age, and being as old as they were it was hazardous equipment. So we — our first aim at Potomac was to modernize or replace that elderly wooden hazardous float-

ing equipment. So we first introduced a second hand dredge, although it was a similar type dredge to those which Smoot operated. It was steel hulled and much more workable in the Potomac River. Then in '65, and that allowed us to get rid of one of their dredges. Then in '65 we built another floating processing plant or dredge of a different type. This was more modern. I mean, we dieselized this and this became — it was diesel electric, a floating steel hull with modern equipment, and this allowed us to retire the remaining Smoot floating dredging equipment, and now we move along with these two pieces of equipment.

94. In connection with these equipment replacements, what, if any, effect did that replacement have on the noise level at which the dredges operate? A. Well in going to the clam shell type dredge one of our considerations was the noise level because the bucket, in this bucket type thing the clanking of the chains has been one of the complaints that we have been getting, so we were able to eliminate that particular complaint by going into a clam shell (T. 45) type, and secondly by going to oil instead of coal which we had on the other dredges why we eliminated the smoke problem with our new piece of equipment, and since that time we have also eliminated the coal from the other piece of equipment and converted it to oil fired, so we have eliminated that problem.

95. Alright, now Mr. Green, I have asked you to bring with you and I suggest that you refer to whatever records you have there, can you give us what the production volume of Potomac would be, the projected production volume for 1971 in both tonnage and in dollars? A. Well our latest projection for '71 shows that we should have a gross revenue of \$2,111,000.00. We should sell \$769,000 tons of sand and gravel, and 91,000 tons of stone, the combination of those products making up this gross revenue.

96. And for comparison purposes would you please testify as to what the actual production figures were in 1970? A. The actual production figures in 70, our gross revenue,

\$1,870,000.00. Production tons, 740,000 tons of sand and gravel, and 81,000 tons of stone.

97. There is some discrepancy there. Is there any explanation for why '70 was lower than 71? A. '70. sir. was the lowest year we have had since we have operated this company because of the economic situation in the area.

(T. 46) 98. Is it your testimony then that 1971 is a more normal type year? A. Yes. 1971 is back about — around '69, and moving more at what we consider our normal market in this area.

99. Now I would like to elicit from you some testimony concerning the affect on your operation, if Chapter 792 is put in effect. As you know the law was supposed to have taken effect on July 1 of this year, and the effective date was stayed by a special order of this court pending the outcome of this litigation. In those — first off, what are your peak production months insofar as dredging of sand and gravel is concerned? A. Generally July through August are our peak sales months.

100. Through August or through October? A. Through October, I am sorry. July through October.

101. Alright, now would you look at your production figures and tell us what your production was during the months of July through October of this year? A. At Greenway or—

102. I am talking about your present dredging operation in Charles County? A. In July we produced from the Greenway area 68,000 tons of sand and gravel. August, 73,000, and September, 55,000 tons of material.

(Court) 55? (T. 47) A. 55.

103. You don't have the October figures available yet? A. No, sir.

104. Alright what was the total production then for those three months? A. That would be about 196,000.00.

105. Tons or dollars? A. Tons.

106. Alright, now insofar as gross revenue is concerned, what gross revenue would that have meant to Potomac had it been lost? A. I would estimate approximately \$475,000.00.

107. And are you able to estimate in any way the gross profit that would have meant? A. No, sir, I can't do that here.

108. Who would do that? A. Our comptroller would do that.

109. Alright, now Mr. Green, you have as I understand it been active in the Potomac operation since 1963. Are you generally aware of the dredging business in Maryland insofar as sand and gravel is concerned, and the sand and gravel business in general? A. Generally so.

110. Can you tell me whether or not there are any other dredgers of sand and gravel presently operating in Charles County? (T. 48) A. There are no other dredgers of sand and gravel in Charles County.

111. Do you know of any other dredgers of sand and gravel in the State of Maryland? A. No, sir, I do not.

112. Do you know of any companies which dredge any aggregate or material in Maryland? A. Yes.

113. Can you tell me what that company is and what it dredges? A. The C. J. Langenfelder Company dredges oyster shells.

114. Do you know where they dredge? A. Somewhere in the Chesapeake Bay. I don't know—

115. Alright, now insofar as the sand and gravel business is concerned are there any sand and gravel companies operating in Charles County other than yours? A. Yes, there are.

116. And what are the nature of those companies? A. Those companies all operate **ashore**, dry **land pit** operation.

117. And how would they obtain their material? A. They would dig it from the banks, process it ashore and deliver it to their market by truck.

118. How many of those companies are there in Charles County? A. Well I know of two.

119. What are they? A. Charles County Sand and Gravel and Buffalo Sand and (T. 49) Gravel Company.

120. And insofar as the State in general is concerned are you of your own knowledge aware of other sand and gravel companies operating in the State? A. Oh, yes, sir.

121. It's your testimony that they all operate out of land pits? A. Yes, sir.

122. Can you estimate roughly how many such companies there are? A. I would say twenty, twenty five probably. I don't know really.

123. Now you have testified about the production levels for the three months of this year, have you ever in the course of your years in the business experienced an inability to supply customers? A. Yes, we have.

124. And can you please tell us what the effect of that inability to supply the customers is insofar as your company is concerned?

(Mr. Rich) Your Honor, I object to that question. We are dealing here with many causes of their inability to supply. I don't see how that is at all relevant to the case before us.

(Court) I think you would have to qualify why — what the inability was.

125. Alright, for what reasons were you otherwise unable to supply (T. 50) customers? A. Well we might have had a major breakdown. We might have had weather problems that meant we couldn't dredge and during this period why our surge piles would be eliminated.

(Mr. Doyle) If the court please, I am just trying to develop the fact that if the Statute goes into effect and they are — for that reason as opposed to any other reason unable to supply customers what happens to those customers insofar as the company is concerned. Just to show that there's a continuing loss. When they lose the customer he is gone.

(Mr. Rich) Your Honor, the market conditions at the time that he is speaking of play a very important part. The market, of course, is a fluctuating thing. What happened two years ago when there was a failure to supply has absolutely no relevance, only what happened in 1971. The markets differ. The man just testified that in 1970 that the market was different than it was in 1971, nor does the man qualify for an economist.

(Court) I think you have gone far enough in that. I mean, the court is aware that if they are blocked from operating in Charles County they (T. 51) certainly can't get any sand and gravel from Charles County.

126. Now Mr. Green, you testified that the Oxon Hill property was completely dredged, is that correct? A. Yes, sir.

127. When was that dredging completed? A. '63.

128. And is it not a fact, sir, subsequent to '63 you did seek from the State authorities dredging permits in that area? A. Yes, sir.

129. And when were those dredging permits sought? A. Oh, '69.

130. So that there will be no misunderstanding as to why that occurred could you please describe why it was you sought dredging permits in the area where it had been completely dredged? A. Yes, sir. We had been trying to sell that property for the last several years and during that period of time we **had** had a number of inquiries on the property, all of which had not developed in a sale for **one reason** or **another**. **So we** thought we would go ahead

and apply for a dredging permit and attract some attention to this property and possibly have a potential purchaser come forward.

(Mr. Doyle) If the court please, I only offer this testimony because in prior, in preparation for the (T. 52) case the State evidenced some interest in the renewal of the dredging permit after the area had been dredged.

131. Now Mr. Green, since you have been in charge of the Potomac Sand and Gravel in 1963. have you received complaints with regard to your operation? A. Yes, we have.

132. Over that period of time? A. Yes, we have.

133. Can you please describe the nature of the kind of complaints that you have gotten? A. Well we have received noise complaints, smoke complaints and a complaint relative to break away equipment.

134. Now with regard to the noise complaints how often do you received those complaints? A. Oh, I would judge two to five a year.

135. Over the course of time from '63? A. Yes.

136. And insofar as the smoke complaints you received how many of those would you estimate that you received? A. They were not nearly as frequent as the noise. Maybe one a year. Some years none.

137. Alright, now in connection with the equipment break away how many instances of that were there? A. I recall one back in '64 or '65.

(T. 53) (Mr. Rich) Your Honor, this is self serving testimony. I think Mr. Doyle should establish a base for the knowledge.

(Mr. Doyle) He can cross examine on all of this, Your Honor.

(Court) Well he is president, or vice president and manager I imagine he should know.

(Mr. Rich) Alright, excuse me, Your Honor.

138. Now other than those sources of complaints have you received any others with regard to the general operation and any adverse effect it may or may not have had on the ecology of rivers or the streams? A. Not that I recall, sir.

(Mr. Doyle) Witness with you.

(Mr. Rich) I think, Your Honor, if I might, I think it would clarify a lot of the issues here, I have a map prepared and I can refer to it. It's a quad sheet with penciled areas in it which you can see exactly what we are talking to.

(Court) You have it prepared?

(Mr. Rich) Yes, it's all prepared.

(Mr. Doyle) Your Honor, the plaintiff has no objection to that as it appears.

(T. 54) CROSS EXAMINATION

By Mr. Rich:

1. Now Mr. Green, I am a little bit confused about the area in Prince George's County. How many areas in Prince George's County have you dredged? A. This Oxon Hill area, one.

2. And that is north of the Woodrow Wilson Bridge? A. Yes.

3. Did you ever dredge south of the Woodrow Wilson Bridge? A. We haven't.

4. Who dredged there? A. Our predecessors have dredged that area.

5. And when was that? A. It was before I was there. I don't know what date it was.

6. And when did you say you dredged the area which I point to here and is identified as P.G. 1 by Mr. Parker dur-

ing his deposition? If you want to come over here you can.

(Mr. Doyle) If the court please, when I agreed to that exhibit, it was used at a deposition of Mr. Parker, another witness, and Mr. Parker marked on these certain locations. I think in fairness to Mr. Green he ought to look at those markings and see whether they agree—

(Court) Yes, you may step down and go over to the map.

(T. 55) 7. Mr. Green, does that demarcation P.G. 1 represent to you the Fox Ferry area? A. Yes.

8. And you say that you dredged that area when? A. '61 and '63.

9. And how much tonnage did you take out of there?

(Mr. Doyle) Mr. Green, you had better come back to the stand so the reporter can hear you.

A. 306,000 tons.

10. Then in 1963 it's your testimony that it was exhausted? There was no more reserve underneath the waters in Prince George's County? A. I said it was exhausted except for a quantity of fine sand which is not merchandisable in our present market.

11. You have the breakdown figure as to the price that you paid for that area, the land adjacent to that area? A. No, sir, I don't.

12. But you did purchase that from Smoot? A. Yes, sir.

13. And in 1969 you applied to the Department of Water Resources for a permit to dredge sand and gravel, isn't that correct? A. That's right.

14. And the reason that you expressed for the application was to keep the interest in the property alive? A. Yes, sir.

(T. 56) 15. And how would that be, you were going to sell to another company that produces sand and gravel? A. No, sir.

16. Well how would you be keeping interest alive by getting permits— A. Well we are willing to sell it to anyone who might be interested in it.

17. Your testimony, Mr. Green, is that you applied for a permit and received a permit to dredge sand and gravel in order to keep interest alive in that property. A. Well let me clarify it. We applied for the water resources permit. We received it in '69. It automatically expired a year later in '70 and we did nothing about it since then.

18. It expired in 1970? A. Yes, it was automatic one year expiration date on that permit provided you don't go in and do anything.

19. You sure it is not three years? A. No, sir. Three years would be Corp of Engineers. Maryland Department of Water Resources one year.

20. I have here a copy which I hand to you—

(Mr. Doyle) Let me see it, Mr. Rich.

21. I have here a copy of a permit which was received on June 16th of 1969. Will you identify it and see if that is your signature? A. Yes, sir.

22. And you received that permit to dredge for sand and gravel? (T. 57) A. Well this permit did not allow us to dredge for sand and gravel yet, sir. This was merely going through the Department of Water Resources. Upon receipt of this permit then we had to go to the U.S. Corp of Engineers and this was a prerequisite requirement, and then we would have to go to the Corp of Engineers and then finally get a permit to dredge. This is only step one.

23. Right, in order for you to dredge for sand and gravel? A. Yes.

24. It is now your testimony that there is no sand and gravel underneath that area? A. Well essentially not, no.

25. Essentially not? A. Well I told you there is some sand there. Paragraph 2 pertains to what I referred to, right there.

24. Now Mr. Green, you say that you paid five million dollars for the assets from Smoot Sand and Gravel? A. Yes, sir.

25. I would like to have a break down as to the property adjacent to the dredge area in Greenway Flats if you have that? A. Well can I tell you why I can't give it to you?

26. Yes. A. Well this was a lump sum purchase type agreement and Mr. Smoot had asked for five million dollars cash. The Dravo Corporation came in and they brought in a team of engineers and they (T. 58) appraised the property by checking out the reserves which we were mainly interested in, of course, looking at the equipment and agreed to pay five million dollars. This is the history of the thing as it was explained to me.

27. Well didn't you register the Deed in the courthouse in Charles County? A. I presume so.

28. And when you registered the Deeds didn't they include revenue stamps on them? A. I suppose so. I don't know.

29. You are the president of Potomac Sand and Gravel? A. Vice president.

30. Vice President.

(Court) Well there are copies of the Deeds in here and they speak for themselves.

A. I wasn't here in '61. I am telling, the benefit of whatever knowledge I have from my predecessor.

31. Alright, if I tell you that the Deed stamps indicate that the total consideration for Greenway Flats—

(Mr. Doyle) Objection. As the court said the Deeds speak for themselves. I don't think this witness even necessarily is qualified to testify as to what the Deed stamps mean.

(Mr. Rich) Well Your Honor, a—

(Mr. Doyle) A person can take whatever he wants from (T. 59) the Deed stamps. It's common knowledge among lawyers and judges what those stamps mean and he can do his own calculation.

(Court) First you had better find out if he understands about it before you ask him questions in regard to it.

(Mr. Rich) Alright.

32. Do you understand the fact that when you register a Deed in the courthouse you have to pay certain costs of transferring residents? A. Yes, sir.

33. And those, they place stamps on the Deed in order to indicate consideration paid? A. Yes, I have bought several houses. I am quite familiar with the—

34. You are familiar with it? A. Yes, sir.

35. And if I tell you that yesterday I made a check in the courthouse in Charles County and that the total consideration paid for Greenway Flat area is in the neighborhood of ten thousand dollars. I can't give you the exact figure, you would not choose to oppose that, would you? A. No, sir.

(Mr. Doyle) Your Honor, I would object to—

(Court) I think it's obvious they are not going to (T. 60) put stamps on it for five million dollars, on each one.

(Mr. Doyle) Certainly not, and that's the basis for my objection.

(Court) Well I think that's obvious.

(Mr. Rich) Well the point is, Your Honor, that part of this case is, is in fact, they are claiming a denial of due process. We are taking their valuable property—

(Court) Well the Deeds will speak for themselves.

(Mr. Rich) Alright.

36. Now Mr. Green, do you actually dredge or dig on the fastland in the Greenway Flat area? A. No, sir.

37. How far away from the fastland do you actually dredge? A. Well it depends upon the deposit location. We have been probably as close as six, seven hundred feet and all the way out toward the channel.

38. You know the extent of the acreage dredged in the Greenway Flat area? A. No, I don't know offhand.

39. Would you say that all the area dredged is below mean high tide? A. Yes, sir.

(Court) Well let me get this clear in my mind. As I understand the fastland is the dry land. (T. 61) A. That's what I consider it.

(Mr. Doyle) Yes.

(Court) Well how do you dredge those? You can't—

(Mr. Rich) You dig them.

(Court) What?

(Mr. Rich) You can dredge or dig them.

(Court) How do you get the dredge up on dry land?

(Mr. Rich) You can dredge out a section, Your Honor, and then you go into it and then you can clam shell it out.

(Court) I see.

40. You stated that you received a certain number of complaints as a result of your dredging operations? A. Yes, sir.

41. How often do you visit these sites? A. Oh, I get down there once or twice a month.

42. And is it during those times that you receive these complaints? A. No, they come by telephone, sir.

43. And how often did you say they come? A. I estimated noise two to five times a year. Smoke once occasionally. Haven't even had one of those every year.

44. Do you instruct your employees to notify you whenever there is a complaint? A. Yes, sir.

45. And to the best of your knowledge you are always notified? (T. 62) A. To the best of my knowledge.

46. How often do you speak to your employees on the site? A. What we do we have all our supervision into our office once a month at which time we discuss with them any problems that we have had during the past month, and it's really a training session, and then we develop among them how we should have handled these problems and what we should do to eliminate them, and it's also designed to be a safety program with us, and then these supervisors are in daily contact with our employees, and this is the method we are using to transmit any of these things that come to our attention and try to get them to all the employees rapidly with proper answers as developed by us through our supervisors.

47. You have stated you have certain mineral rights in the State of Virginia? A. Yes, sir.

48. Can you describe these please?

(Mr. Doyle) If the court please, I am going to object to any inquiry with regard to the operations in Virginia. The fact of the matter is insofar as this law suit is concerned and the attack on this statute, whether or not Potomac operates elsewhere successfully or unsuccessfully is not relevant to the situation that prevails with their operation in Maryland.

(T. 63) (Court) Is there anything you want to say—

(Mr. Rich) Well Your Honor, it's absolutely relevant. This man is saying they are going out of business. Part of their claim is that they are going out of business within—

(Court) Going out of business in Charles County.

(Mr. Rich) They are going out of business. They make the statement in the bill of complaint that they are going out of business.

(Mr. Doyle) I think it says in Maryland.

(Court) If it says going out of business it may be relevant but if it's just in Charles County I don't think it would be.

(Mr. Doyle) I am willing to stipulate that we certainly would be going out of business in Charles County and that's why we are here. We don't want to go out of business in Charles County. The bill of complaint does admit that the company operates elsewhere but I don't believe that's relevant to what would happen if this statute is enforced in Charles County.

(Court) Alright, I'll sustain the objection.

49. How soon do you expect to go out of business in Charles County if you do not get permission to dredge the Craney Island or the Mattawoman Creek area?

(T. 64) (Mr. Doyle) May I ask that that question be clarified? Is he assuming the enforcement of the statute or the striking of the statute? I think there's a distinct—

(Mr. Rich) I am assuming the exhaustion of the Greenway Flat area.

(Mr. Doyle) No, but I am worrying about the statute. If the statute goes into effect we are going out of business right away. Now if he is asking how long—

(Court) I think you would have to — because I have signed an order extending until this case is decided. Of course, if I hold that the statute is constitutional they are out of business whatever day I decide it. You mean if they were permitted to continue at Greenway how long would it take to exhaust the supply or the reserve?

(Mr. Rich) Yes, that was my question.

(Court) You may answer that.

A. Well as I say there's approximately a million tons of aggregate remaining in Greenway and our annual sales is approximately a million tons, so consequently if we put all our equipment in Greenway, one year. If we put half our equipment it would be approximately two years. It's

a matter of judgment as to (T. 65) how we would work it.

50. Well if your annual sales are approximately a million tons is any part of that annual sale made up with your deposits or your sand and gravel area in Virginia? A. Sure. At the present time, yes. Last year we were doing it all in Greenway, all at Greenway, and we got involved in this court order we couldn't do that, so I had to move the equipment over into Virginia.

51. What percentage of your total volume is taken up with your Virginia deposits?

(Mr. Doyle) Objection.

(Court) I will sustain the objection. The court is not particularly interested in that, because, for example, last year he was all in Greenway and now this year because of this case he is going back partly to Virginia, so it's going to vary day to day or week to week. You would have to—I mean, I don't think it would be helpful.

52. Do you know where Langenfelder dredges? A. No, sir.

53. You stated he dredges in the Bay. A. I have heard this is where he dredges.

54. Have you ever heard that he dredges in Charles County? A. No, sir.

(T. 66) 55. In large measure, Mr. Green, isn't it true the amount that you dredge is dependent upon the demand? A. Yes, we operate very close to our demand. We don't have great surge piles so within a few percent our annual production is equivalent to our annual sales.

56. And when you say surge piles what do you mean by that? A. Well in our industry a surge pile is an area where — a stock pile, does that mean something to you?

57. Yes. A. Stock piles so in case of a major break down or weather conditions why we can continue to supply our customers from the surge and then later rebuild it up.

58. And what's the extent of these stock piles, one weeks inventory or one weeks reserve? A. Yeah, we may be able to go two weeks. One to two weeks. It depends upon the market demand and the different sizes of material and this thing gets rather—

(Court) How much would you say in tons? A. Oh, about fifteen to twenty thousand tons in the summer. See our business varies greatly. I mean, during July, August, September, October, we operate a two and a half to three times sale, two and a half to three times what they might be in January and February. If we get a very rough winter, iced in, cold, why we might have a January where we might sell ten thousand tons vs. a hundred thousand tons in October. We are (T. 67 > real peak and valley.

59. Mr. Green, aside from the real estate taxes that you pay in Charles County do you pay a tax or something akin to a highway charge for use of the water between Charles County and the District of Columbia? A. No, there is no toll charges or whatever you might call them on the Potomac River.

60. You — do you pay any royalties for dredging this sand and gravel? A. We are not paying any royalties at the present time.

61. Do you have a break down as to your costs per ton of sand and gravel? First instance, give a price that you sell a ton of sand and gravel. A. Yeah.

62. What is that price? A. Well—

(Mr. Doyle) Object, Your Honor. I don't see the relevance of this. Perhaps Mr. Rich has some purpose for it but what they sell it for doesn't seem to be relevant to what we are trying to do here. We admit we sell it and try to get the best price for it, but I can't see why that price, whatever it is, would be relevant to this, constitutionality of this bill.

(T. 68) (Court) I think he has given some gross figures as to their income on direct.

(Mr. Rich) Your Honor, the point of my examination is to go into the cost factor for transportation involved. I wanted to see exactly what is saved and what part of the cost per ton is used for transportation costs.

(Court) Well what would that show?

(Mr. Rich) This company has put itself in the position where it's wholly dependent upon the waters as a mode of transportation. It pays no taxes, highway taxes or anything akin to that. Their claim is that they are being discriminated against because they are the only company which is or a denial of equal protection. They are the only company which is in this position, and I want to see exactly what this position entails, why they are in the position, what the cost factors are, and what the effect of this reduction in cost for delivery has on the cost that he charges his vendees in the District of Columbia.

(Court) Well it would be the same on anybody that is in this type of business.

(Mr. Rich) I want to know what the cost for transportation is of a ton of sand and (T. 69) gravel.

(Court) Well I don't see how that would pertain to the constitutionality of this—

(Mr. Rich) If they are claiming a denial of equal protection, Your Honor, they are claiming they are the only sand and gravel corporation in the State of Maryland—

(Court) Any sand and gravel company could do this. They are the only ones doing it but that doesn't say anybody else is stopped from doing it.

(Mr. Rich) That's true. But they are contending that they are being discriminated against because they are the only ones doing it. It's their claim.

(Court) They are the only ones doing it but they are not being discriminated against because that — they are the only people being stopped. Anybody could get out and do this. Any corporation that wanted to go into this type of business. So they are not being discriminated against

as Potomac Sand and Gravel, it is just against anybody that wants to operate this type of business. So I will sustain the objection.

(T. 70) (Mr. Rich) I have no further questions.

REDIRECT EXAMINATION

By Mr. Doyle:

1. Just one, Mr. Green, on redirect, if the court pleases. You were asked whether you pay royalties and you said you did not. Why don't you pay any royalties? A. Because we are working on our own properties.

2. Are any royalties charged by anybody or any official body of the State? A. There is — well if we were working on somebody else's property why we would—

3. I understand that, but under the circumstances under which you operate are you subject to the payment of any royalties charged by anybody? A. No, sir.

(Mr. Doyle) Alright, that's all.

REXCROSS EXAMINATION

By Mr. Rich:

1. Mr. Green, is that your property that you are dredging in Greenway Flats now? A. We are on the shore line.

2. Do you own the property that you are dredging? A. In the Greenway Flat area, riparian ownership wise.

3. You are not answering my question. I am asking you if you own that property in the Greenway Flat area? A. I really don't understand your question.

(Court) Are you asking for a legal opinion?

(T. 71) (Mr. Rich) I am asking him whether or not he thinks he owns that property?

(Court) Well now you are changing the question.

4. Alright, do you think that you own that property in the Greenway Flats area, the river bottom?

(Mr. Doyle) Well now Your Honor, we are getting further afield. It is a legal conclusion and now he is asking, he is conjecturing with this witness. I think—

(Court) You will have to get this through some other witness that's qualified to answer it.

5. Alright, are you going to own the entire area that you propose to dredge in Craney Island?

(Mr. Doyle) Objection.

(Court) I will sustain the objection. I don't think this man is qualified to answer that question. I don't think he is qualified to give a legal opinion as to title.

(Mr. Rich) Yes, Your Honor. No further questions.

(Mr. Doyle) No further redirect, if the court please. Your Honor, I haven't practiced before you before. I don't know what your procedure is but my next witness will run quite sometime and I don't know whether you would prefer to keep going or to stop—

(T. 72) (Court) We usually recess around 12:30 and it is twenty after, so if the next witness is going to take some length of time we can recess at this point, and let's see — we will recess for an hour. We will recess until one twenty.

(T. 73) DAVID A. PARKER, a witness of lawful age, being first duly sworn, deposes and says:

(Clerk) Please state your full name and address. A. David A. Parker, 1507 Walden Drive, McLean, Virginia 22101.

DIRECT EXAMINATION

By Mr. Doyle:

1. By whom are you employed, Mr. Parker? A. I am employed by the Potomac **Sand and Gravel** Company.

2. In what capacity? A. I am the engineering manager of the company.

3. And in connection with your position as engineering manager do you have any educational background relevant to that job? A. I was graduated with a professional engineers degree in geological engineering from the Colorado School of Mines.

4. And thereafter what did you engage in in the way of professional activities? A. I served with the United States Corp of Army Engineers for two years until 1957 at which time I was employed by the Smoot Sand and Gravel Corporation as an engineer geologist and was employed by them until 1961 when I was employed by the Potomac Sand and Gravel Company in that same capacity.

5. What are your present responsibilities with Potomac? A. My responsibilities include exploration for sand and gravel deposits, maintenance of dredging equipment and design of new equipment. Maintenance and design of plant equipment, and the securing of permits in order to dredge.

(T. 74) 6. In connection with your obligations with regard to dredging equipment are you familiar with the method of operation that Potomac employs and the way it conducts its business? A. Yes, I am.

7. So the record is clear will you please describe succinctly as possible the nature of the operation, how it works, and just what it is that Potomac does? A. We operate two dredging machines in the Potomac River. One of them is a clam shell type dredge and the other is a ladder dredge. The clam shell dredge simply digs the material, the sand and gravel from the bed of the river by the means of a clam shell bucket and dumps the material into a hopper on a floating processing plant which separates the material, washes it, crushes it and in other ways processes it and loads it on the barges. The ladder type dredge is essentially the same with the exception the material is taken from the bottom of the river by means of a continuous bucket chain and deposited into a hopper from where it is processed and loaded on the barges. These

barges are then towed by a tug boat or a tow boat to our distribution plant in Washington and to our various barge customers along the river.

8. Are these customers primarily contractors and builders? A. The customers are primarily firms which are in the ready mix concrete business or in the concrete production business.

9. Now you have indicated also that you are responsible for trying (T. 75) to locate new areas within which Potomac can carry on its dredging operation, is that correct? A. That's correct.

10. What, in essence, do you do in order to locate these areas? How do you go about it? A. We select likely areas or areas we think there may be sand and gravel deposits in the bed of the river on the basis of prior knowledge of geological assessment of the river and make preliminary exploration of these deposits by means of a sounding rod to determine whether or not there might be sand and gravel there.

11. When you find that there seems to be a commercially suitable deposit of sand and gravel what steps do you then undertake? A. We would have to obtain the permission — necessary permissions either from property owners or from various agencies in order to take that material out.

12. Well in connection with the property owners what is the general nature of the permission that you obtain¹? A. In prior years it would either be an outright purchase of the riparian property involved or payment of a royalty or a contract of some sort.

13. Now in connection with those instances where you bought the property, the riparian land as you indicated, in prior years what rights did that give you with regard to the minerals there? A. In prior years that gave us the right to remove the sand and (T. 76) gravel from the bed of the river in the riparian area. That is to say the area bounded by the navigation channel and lines drawn from

the intersection of the property lines normal to the navigation channel.

14. Am I also to understand that in those prior years it was possible too for riparian owners who did not wish to dispose of their land to make other arrangements with you for the extraction of those minerals? A. That would be correct, yes.

15. And how was that done? A. It would have been done by means of a royalty arrangement whereby we pay the property owner on a basis, on a per ton basis for material taken out. However, we have never done that.

16. Alright, now after you — aside from the question of finding it and making whatever arrangements are necessary with the owner of the land do the Federal and State authorities have any interest in and control over whether or not you dredge for sand and gravel? A. Yes, they do.

17. And would you please trace for us the various controls that are imposed on such operation, giving the dates when they became effective? A. Well prior to approximately 1961 the only permit which we were required to obtain was a permit from the Corp of Engineers, (T. 77) and this permit was issued for all intents — well solely on the basis of whether the operation would adversely affect navigation. In 1961, or thereabouts, the Corp of Engineers began to require, in our case, or at least in cases in Maryland, the approval of the Maryland Board of Public Works before such a permit would be issued. In obtaining this approval of the Board of Public Works it was customary for the Board of Public Works to ask for comments from various State agencies that might have an interest in this. In, about 1964 or '65 the Department of — no, I am sorry. In 1967 the Department of Water Resources in the State of Maryland required a permit issued by them for operations of this nature in the river.

18. At that point then were there two separate permits that were necessary? A. Yes, there were two separate permits necessary at that stage.

19. Describe the procedures followed in each instance to get the permit from the agency involved. A. The procedure for obtaining a Corp of Engineer permit involved simply writing a letter requesting the permit, describing the operation and the Corp would then issue the permit after public notice and approval from the Board of Public Works. In the case of the Department of Water Resources permit—

20. Before you go there were there any other Federal Agencies (T. 78) interested in the or have anything to do with the grant or denial of the permit from the Corp of Engineers? A. Not specifically at that time, no.

21. Alright, go ahead. A. Prior to 1967. The permit required by the Department of Water Resources required an application, a publication of a hearing, a public hearing on the permit application, and subsequent to this a permit was either issued or denied.

22. Alright, now what happened subsequent to 1967, if anything, in regard to permit procedures? A. In 1967 the Corp of Engineers entered into a memorandum of understanding with the Department of the Interior which required that the Corp obtain approval from the Department of Interior which involved approval from various agencies in the Department of the Interior such as the Bureau of Sports Fisheries, the Department of Fish and Wild Life, the Bureau of Recreation. Well those three I can name, requiring approval from these agencies and hence approval from the Department of Interior to the Corp of Engineers before they could issue a permit. In addition the permit required by the Department of Water Resources also required comment in 1967 from agencies within the State, such as the Department of Forest and Parks, the Department of Game and Inland Fish, the Department of Chesapeake Bay Affairs, any agency within the State which might have an interest in this operation.

(T. 79) 23. Did either of these procedures contemplate or encourage the participation of the general public or any of the political bodies of the subdivision? A. The Depart-

ment of Water Resources permit did. They required a publication of notice in the areas where the proposed operation would take place. They required notification of the County Commissioners of the County in which the operation was to take place.

24. Did the Corp of Engineers contemplate any public participation? A. The Corp procedure was to decide as to whether or not there would be a — they invited comment by means of a public notice which they send out, and the decision was made based on this comment as to whether there would be a public hearing held at the Corp level.

25. Now sometime subsequent to the procedure that you just described did the Maryland Department of Natural Resources become a part of this permit procedure? A. The Maryland Department of Natural Resources became a part of the permit procedure at the time that it was created which was around 1969.

26. And what, if any, impact did they have on the problem of getting a permit or permits. A. The—

(Mr. Rich) Your Honor, the question is unclear, what impact they had.

(T. 80) (Mr. Doyle) I will strike the question.

27. Did the Department of Natural Resources have any role in the obtaining of permits for dredging sand and gravel? A. The approval of the Department of Natural Resources and its subsidiary agencies, including the Department of Water Resources, was required at that time as a condition of approval by the Board of Public Works.

28. And this was the situation that prevailed in 1969, is that correct? A. That's correct.

29. Would you look at this chart please and tell me whether that graphically portrays the permit procedure that you have just testified to? A. Yes, it does.

(Mr. Doyle) I would like to offer that as plaintiff's exhibit No. 1, if the court please.

(Mr. Rich) Your Honor, I would like to know who prepared the chart and what it was taken from.

(Mr. Doyle) The witness just testified that this graphically portrayed what he testified to. I don't know that the authorship in any way affects that plat.

(Mr. Rich) Your Honor, we are dealing with a Federal permit system here and the witness is (T. 81) not a lawyer. He is an engineer for the plaintiff corporation here. We want to know if this is a representation of something that he did or whether it was an official document from the Department of Interior or from—

(Court) From what I understand it's just a graph of what he has testified to. I don't know who prepared it. Is that correct.

(Mr. Doyle) Yes, sir. I will ask the question.

30. Do you know who prepared this? A. Yes, I do.

31. Who did it? A. I did.

(Mr. Doyle) Fine. Do you still object?

(Mr. Rich) No.

(Mr. Doyle) I offer this as plaintiff's exhibit 1, if Your Honor please.

(Clerk) 4.

(Mr. Doyle) 4? Oh, that's right I had three Deeds.

This will be 4, you are right.

(Graph filed herewith marked Plaintiff's Exhibit No. 4.)

32. Now as I understand it, Mr. Parker, this graph portrays the situation that prevailed in 1969? A. That's correct.

33. Have there been any subsequent legislative changes that alter (T. 82) this procedure and if so what are they? A. In 1970 the Wetlands Bill was passed which altered

this procedure as far as the State requirements were concerned.

34. And what alterations took place? A. It required an additional permit under the Wetlands Act for dredging of sand and gravel in the State owned Wetlands.

35. And that is the Act presently that is in effect now? A. That's correct.

36. Did that Act supersede this graph or is it supplemental to it? A. It is supplemental to it.

37. In what respect? A. In the respect that the approvals stated on that graph are still required to my knowledge by the Board of Public Works. There is some question in my mind with respect to the Department of Water Resources permit at this stage.

38. How about the Corp of Engineers? A. The Wetlands Act did not in itself change anything with relation to the Corp of Engineers.

39. Now testimony has been up to now that the Potomac Sand and Gravel Company has three areas in Maryland which they either are dredging or wish to dredge, is that correct? A. That's correct.

40. I would like you first to address your remarks in connection with Greenway, is that the tract which presently is being (T. 83) dredged? A. That's correct.

41. And it has been dredged for some years? A. It has been dredged.

42. Would you please describe what permits and from what agencies you sought permits and what, if any, permits still exist with regard to dredging on that tract?

(Mr. Rich) Your Honor, I would stipulate that they are operating now under a permit which was issued by the Department of Water Resources and that they are also operating under a Corp permit. The question is not the history of the permits but the law which we are talking about at this point.

(Mr. Doyle) If the court please, the purpose of, the intended purpose of this testimony is simply this that you ultimately must decide whether or not this was a legitimate reasonable — House Bill 1192 was a legitimate reasonable exercise of the police power. If in fact you find that the public was properly and completely protected in other areas you may well find that this is an improper exercise and I want to show exactly what this company has done and must do in order to utilize this property for (T. 84) dredging purposes. I think it is relevant to show the background, the framework within which you must decide this issue.

(Court) Well is that shown on this chart?

(Mr. Doyle) No, sir. That chart unfortunately is just the general situation that prevailed in connection — in a period of time beginning prior to '67 up to '69, and I wanted to show—

(Court) Wasn't Greenway before—

(Mr. Doyle) Yes, sir, it was in operation before '67 and it has been in operation subsequent to '67 and subsequent to '69, and in connection I might as well, since we are going to air this now, I expect to ask similar questions with regard to the attempt to get permits and the successful attempts in some cases to get permits in connection with the other two tracts to show that there has been complete protection here throughout insofar as the use of this property is concerned.

(Court) Alright, I will let him proceed.

(Mr. Doyle) Thank you, sir.

43. Now will you address your self to Greenway tract, Mr. Parker, and indicate what types of permits you obtained over the years and which permits, if any, you are presently operating under? (T. 85) A. Up until 1968 we operated under, solely under a permit from the Corp of Engineers. That permit, the existing permit in 1968 expired at the end of 1968 at which time we applied for a renewal which is in essence getting a new permit.

44. When you indicate expired is the Corp permit one of a permanent or a temporary nature? A. Standard is an issuance for a three year period.

45. And it must be renewed every three years? A. That's correct.

46. Alright, proceed. A. We made application to the Corp of Engineers in November of 1968 and in March of 1969 we made application then to the Department of Water Resources for a permit from them.

47. What action, if any, did they take? A. A hearing was held by the Department of Water Resources on this permit in April, 1969.

(Court) '69 or— A. '69, and the permit was granted in June of 1969. Subsequently the Corp of Engineers issued a permit in November of 1969, and that permit expires of — at the end of 1972.

48. So those are the permits you are presently dredging under? A. That's right.

49. What, if any, impact did the passage of the Wetlands Act have on the permits and your operation at Greenway? A. It had none.

(T. 86) 50. Why? A. Because provisions in the Wetlands Act allow operations existing under existing permits to continue to operate under those permits.

51. Alright, now in connection with Mattawoman will you please describe the attempts both successful and unsuccessful to obtain permits and from agencies those permits were sought? A. We applied for a renewal of the Corp permit at Mattawoman Creek which had been in effect until that time in October of 1967. No action was taken on that application and in March of 1969 we applied to the Department of Water Resources for a permit from them.

52. What happened to that application? A. The hearing was held in April of 1969 and the Department of Water Resources denied the application in September of 1969.

53. And what, if any, action did you thereafter take? A. We took an appeal to their decision to the Board of Review of the Department of Natural Resources and a hearing was held on that appeal in December of 1969. The Board of Review made a decision reversing the position of the Department of Water Resources in February of 1970.

54. Did the Board of Review issue an opinion in connection with that reversal? A. Yes, they did.

55. Do you have a copy of that opinion? (T. 87) A. Yes, I do.

(Mr. Doyle) I would like to offer that as plaintiff's exhibit 5, if the court please.

(Opinion of Board of Review filed herewith marked Plaintiff's Exhibit No. 5.)

56. Alright, you may continue. What other activities did you engage in with regard to Mattawoman and permits? A. After the Board of Review opinion in February of 1970 the Department of Water Resources issued the permit for dredging in Mattawoman Creek in June of 1970. In December of 1970 we were notified by the Department of Chesapeake Bay Affairs that that permit was held invalid under the Wetlands Act, and we were required then to undergo another hearing under the Wetlands Act in December of 1970, and that hearing was continued until April of 1971 at which time the hearing was completed. There has been no further action.

57. That matter is still pending? A. That matter is still pending.

58. Alright now sir, address yourself to Craney Island and trace the permit procedures that you followed there. A. At Craney Island we made application to the Department of Water Resources in April of 1970 for a permit to dredge, and a hearing was held in May of 1970 and a permit was issued by the Department of Water Resources in July of 1970. We then made application to the Corp of Engineers for a permit to dredge (T. 88) also in July of

1970 and in December no action had — well, there has been no action taken on that permit request to Corp as of this time. In December of 1970 we were notified that the Department of Water Resources permit which was issued was invalid under terms of the Wetlands Act and we reapplied for a permit under the Wetlands Act in January of 1971. A hearing was held on that permit in April of 1971 and that action is still pending.

59. Now in connection with the hearings that you attended held by the Department of Natural Resources what were the nature of those hearing? Can you describe them please? A. It was an administrative hearing for the purpose of obtaining information regarding the project and obtaining public comment on the proposed project.

60. Was there any inquiry by the administrative officer into the area of ecology and environment? A. Yes, there were.

61. Was there any expert testimony in connection with those subjects? A. Yes, there were.

62. And the decisions were made in light of all that testimony? A. That's correct.

63. Now insofar as your hearing held under the Wetlands Act can you describe the nature of those hearings? A. They were similar in nature. The hearings were of an administrative nature and testimony was solicited by expert witnesses (T. 89) and by the general public for the purposes of obtaining information on which to base a decision.

64. Were environmental and ecological considerations weighed in the testimony? A. Yes, they were.

65. Then as I understand it there have been no final decision in either case with regard to the Wetlands hearings? A. That's my understanding.

(Mr. Doyle) Alright, witness with you, Mr. Rich.

CROSS EXAMINATION

By Mr. Rich:

1. Mr. Parker, if I could just go over to the map that we discussed the other day— A. You want me to go over there?

2. Yes. Let's deal directly with the areas in Charles County. Could you identify the area in Greenway Flats⁰? A. This area here which I delineated on the map and marked as C 1 is the area at Greenway Flats.

3. And have you also delineated the fastland that is owned by Potomac Sand and Gravel roughly on that map? A. Very roughly, yes, along the shore.

4. Do you have an idea of the amount of acreage involved in the dredging area delineated as C 1? A. Approximately a thousand acres.

5. Is that all below mean high tide? A. Yes, sir.

(T. 90) 6. I draw your attention now to a figure marked C 2, what does that represent? A. The area marked C 2 on the map is the delineation of the permit area at Craney Island.

7. And is Craney Island on that map? A. Yes, it is.

8. You know the extent of the proposed dredge area marked C 2? A. The area in the permit area is approximately fourteen hundred acres.

9. And would it be fair to say that the entire area with the exception of Craney Island is below mean high tide⁹? A. Yes.

10. Now we have not — because the map is not specific enough we have not gone into Mattawoman Creek, is that correct? A. That's right.

(Court) Have not what?

(Mr. Rich) Gone into the question of Mattawoman Creek on this map. Your Honor, I move, and I think it has been **agreed that this will be State's exhibit 1.**

(Court) Well according to our Rules any maps put on the board automatically becomes part of the record.

(Potomac River Map filed herewith marked Defendant's Exhibit A.)

(T. 91) 11. Do you know the approximate extent of the fastland that is owned by the company in the Greenway Flats area? A. It's a strip five feet wide and approximately eight thousand feet long and a strip ninety feet wide and approximately twenty five hundred feet long.

12. Can you hazard a guess as to the acreage? A. Oh, I could figure it up if you like.

13. Well I don't want to take the time at this moment. I hand you a copy of a figure. Can you identify it? A. As to content or as to—

14. What that represents. A. This is a representation of the area which we own at Mattawoman Creek.

15. Did you draw some lines on that figure at one point? A. Yes, I did.

15. And what does the lined delineation indicate?

(Mr. Doyle) Are you going to offer that as an exhibit?

(Mr. Rich) Yes.

A. The cross hatched area on this indicate areas which we did not or do not intend to dredge.

16. Then the area that is not cross hatched is the area you propose to dredge? A. The area that is enclosed within the numbered circles or the numbered area so delineated.

(T. 92) (Mr. Rich) If we could have this introduced as State's exhibit 2.

(Clerk) B.

(Mr. Rich) B.

(Deposit Location Drawing filed herewith marked Defendant's Exhibit B.)

17. Then the area that is not cross hatched do you have an approximate estimation of the amount which you propose to dredge at Mattawoman Creek A. The amount of what?

18. The area that you propose to dredge. A. Our proposal is about three hundred acres.

19. And of that three hundred acres could you estimate the percentage which is below mean high tide? A. It is particularly difficult to estimate since mean high tide is not really delineated on this map or any other map that I have seen of the area.

20. Well you are familiar with the area? A. Yes, I am.

21. You have investigated the deposits in the area, from your familiarization with that area could you estimate what percentage of the total is within mean high tide? A. Is below mean high tide?

22. Below it. A. I would estimate approximately seventy percent.

(T. 93) 23. Now the area that's cross hatched is for the most part located on what is known as fastland? A. For the most part yes.

24. Is it possible to — for someone to dig out the deposits in that area? A. It would be physically possible, yes, to remove that sand and gravel.

25. And is there access to those areas? A. There is access to one of them.

26. Could access be made available to the other? A. Yes.

27. Has the Company ever contemplated leasing out to other corporations the sand and gravel rights in those fastland areas? A. No, we have not.

28. Now let me go back to Greenway Flats just briefly. What is the depth that you dig sand and gravel in that area? To what depth do you dig? A. We dig approximately fifty feet below mean low water in that area.

29. Would you — would that be an average depth for that entire area? A. That would be a maximum depth to which we dredge in that area.

30. And what was the depth of that area prior to you beginning dredging there? (T. 94) A. It varied from two to three feet near the shore out to ten to twelve feet close to the edge of the channel.

31. Are you familiar with the term overburden? A. Yes.

32. And what is overburden? A. Overburden is any material which lies on top of the sand and gravel deposits.

33. Now based upon your experience in that area what is the extent of overburden in that area, in the Greenway Flat area? A. The overburden in the Greenway Flat area was extremely variable. It varied anywhere from three to four feet in some places up to twenty five, thirty feet. In some places there was no sand and gravel at all, just all what we would term overburden.

34. What is done with that overburden if you dig it up with the ladder or the clam? A. It's returned to the river.

35. Returned from the— A. From the dredge to the river.

36. From the dredge to the river. In order to dredge out to a depth of fifty feet, let's take one square acre within the Greenway Flat area, which is being dredged — take one square acre, and let's assume that the depth is approximately ten feet in that area, could you advise me as to what the actual tonnage within that square acre would be that is moved in order (T. 95) to get the sand and gravel out?

(Mr. Doyle) I don't know that I really object. I—

(Court) You mean, you are speaking of ten feet — feet of overburden or what?

(Mr. Rich) Ten feet of overburden.

(Mr. Doyle) And that I take it further presumes that the entire — it's one square acre totally filled with sand and gravel, I suppose.

(Court) Well what are the dimensions of the one square acre.

(Mr. Rich) It's a square acre and—

(Court) I know but you—

(Mr. Rich) And you are going to dig it down to fifty feet as the testimony is, you dig it down to the extent of fifty feet, is that correct? A. That's correct.

37. Now let's further assume that there is approximately ten feet of overburden, what is the tonnage actually disturbed in order to dig out that square acre?

(Mr. Doyle) Your Honor, I hate to bother this witness again, but I don't know what he means when he says — I am not familiar with the phrase, what is the tonnage actually (T. 96) disturbed. I don't know whether now he is trying to get at actually the product pulled out and shipped for production or is he trying to get at that which falls back into the river or is he trying to get at both.

(Mr. Rich) The total. The total amount disturbed. Both.

A. I would have to make that calculation based on the perimeters that you gave me just now.

38. Can you make that? I asked you the same question, Mr. Parker. A. No, I am sorry, you didn't.

39. Well a similar question and you made that calculation in a short period of time. Can you make that calculation? A. Sure. If I understand your question correctly you are asking me how many tons there are in an area of one acre by, or in a volume of one acre by fifty feet, is that correct?

40. Yes. A. There are approximately 108 thousand tons,

(Court) Well you said the overburden would only be what's covered. The overburden represented what's on **top of the sand and gravel.**

(Mr. Rich) We are assuming that we are going to dig down fifty feet. Your Honor, and part of that would be overburden.

(Court) You want the total of both?

fT. 97) (Mr. Rich i Right.

(Court) Sand and gravel and overburden.

(Mr. Rich) And overburden.

41. What was that figure? A. Approximately 108 thousand tons.

42. Now lets go on to Craney Island, what is the present depth at Craney Island now? A. Our test borings there shows that the material runs to a depth of about fifty feet below mean low water.

43. And what is the present depth of that digging there? A. It varies from two feet to seventeen, eighteen, twenty feet.

44. And the area that you propose to dig, excuse me, dredge in Mattawoman Creek what is the present depth in the general area? A. That varies from fastland above or plus elevations down to six to eight feet of water in the channel itself in the creek.

45. What is the draft of your dredges? A. Our dredges draw approximately ten feet.

46. And what is the draft of a barge loaded and unloaded? A. A barge loaded draft is six feet and light the draft is about fourteen inches.

47. How much aggregate or how much sand and gravel does a barge carry? A. A standard barge carries approximately 250 tons.

48. How many barges are presently being used in the Greenway Flats (T. 98) operation? A. We have — I don't think I can answer the question the way you want it answered to tell you the truth.

49. You can answer it anyway you want? A. We have seventy barges approximately in our barge fleet and all of them are used at one time or another in the Greenway Flats operation.

50. What you are saying is you don't have any real record of how many barges there are at a given moment or a given day at the Greenway Flats area? A. Well we have a record of how many barges are there every day but it varies from day to day.

51. How many barge loads do you take out on a daily basis from the Greenway Flats area? A. Approximately eight to ten on a full day.

52. And they are towed by a tug? A. Yes, or a tow boat.

53. And what is the drafts of a tow boat and a tug? A. A tow boat draft is approximately six feet and the tugboats are about four feet.

54. Just a couple of other questions. You were present at the hearings you referred to, the Wetlands hearings last April? A. Yes, I was.

55. Was there any discontent voiced during those hearings? A. Quite a bit of it.

(T. 99) 56. And this is true for both the Craney Island proposal and the Mattawoman Creek? A. Yes.

57. Were there complaints about the present Greenway Flats operation? A. Some, yes.

58. What were those complaints? A. The complaints of noise. Complaints of equipment breaking loose. Complaints of unsightliness. You know, the lack of attractiveness of our equipment.

59. Complaint of noise by so-called environmentalist, fishermen, bird watchers and that type of person? A. Well I don't know whether they would come under the heading of complaints. There were some statements made by some people qualified and some people unqualified, I am sure, to those — addressed to those subjects, yes.

60. One other clarification I would make, you referred to a letter from the Chesapeake Bay Affairs stating that the water resources permit was invalid under the Wetlands law in your direct examination? A. Yes, that's right.

61. Do you mean it was invalid under Judge Prettyman's decision in the Larmar case?

(Mr. Doyle) If he knows. I don't know whether he is qualified to answer that. That's strictly (T. 100) a legal question.

(Court) What are you asking for, a legal opinion now, or what are you asking him?

(Mr. Rich) No, I am asking him if he knows if that was part of the letter, Your Honor.

A. To my recollection, now that you mention it, the letter stated, as best as I can recall, the Section of Article 96a under which the permit was issued was declared unconstitutional.

(Mr. Rich) Thank you.

REDIRECT EXAMINATION

By Mr. Doyle:

1. Mr. Parker, what determines the depth and the scope of any area which you dredge? A. The location and depth of the deposit.

2. In other words you dredge to the extent necessary to remove the deposits, is that correct? A. Yes, or in the case of extremely deep deposits we dredge to the limitations or the capability of our machine to get to a depth.

3. Which is what? A. In the case of the ladder dredge we are limited to fifty to fifty five feet of depth, and in the case of the clam shell dredge we are not quite so limited. It has a wider, a deeper capability than that.

4. Now do these deposits run in veins or do they run in accumulated groups? How, can you describe how they run?

(T. 101) A. The deposits in the bed of the river are generally of a lenticular shape, that is lens like of a very irregular configuration. They vary not only in overall shape but in percentages of sand to gravel to overburden to other materials in the deposit from area to area within the deposit itself.

5. Now in connection with that hypothetical question you were asked and your answer mathematical was there was a 108 thousand tons. I just want to be clear. Does that refer to total product plus overburden or just total product or what? A. The 108 thousand tons is an estimate of the tonnage of material, assuming it to be sand and gravel and overburden, in a cubic volume of one acre by fifty feet.

6. And what did you say — how did you say these generally run? What was the fancy word you use? A. Lenticular.

7. What does that mean? A. That it would be highly unlikely that you would find a block of material fifty feet deep and one acre square or anything approaching that.

8. Now you indicated earlier in some cross examination that the permit area, for example, that you seek in Craney Island is fourteen hundred acres. A. That's correct.

9. How much of that — could you estimate roughly whether Potomac would dredge all that fourteen hundred acres or some lesser portion of it? (T. 102) A. We would dredge a lesser portion of it.

10. When you were questioned with regard to that Craney Island request and asked to make certain markings on the map, would you go over and take a look at the markings you made, and would you describe what markings are there in connection with Craney Island? A. I outlined the permit area and I outlined a buffer zone within the permit area that we have been requested to include in the permit area, and I also outlined approximatley to my best ability based on the information we had of the area, the general outline of the actual sand and gravel deposit.

11. Now is the outer perimeter — the line of the outer perimeter what you called the permit area, the outer line, and that you say is about fourteen hundred acres? A. That's right.

12. You — could you make any kind of estimation as to how much less than that fourteen hundred acres the actual dredge area would encompass? A. I would estimate that the actual dredge area would be something approximately half of the total permit area.

13. Seven hundred acres? A. Seven hundred acres, in that vicinity.

14. As I understand your testimony that dredging area is completely within the bed of the Potomac River? A. That's right.

i T. 103) 15. Is there any way that you or anybody else could estimate what percentage of the total bed of the Potomac River seven hundred acres amounts to?

(Mr. Rich > Your Honor, that's—

(Court) Amounts to in tons—

fMr. Doyle) No, I am talking — the reference here, or I think the thrust, one of the suggestions that are going to be made, that the dredging operation is going to be a very large intrusion into the Potomac River, and it seems to me we ought to get some idea in proportion how much seven hundred acres, which they are going to dredge in that area, bears to the total river bed of the Potomac River. I want to show in effect, I guess, an ecological equivalent to de minimis.

'Mr. Rich) Your Honor, the point to be made, that a great percentage of the Potomac River has already been dredged, and if he wants to limit that question to the percentage of—

'Court) Well I think what he is trying to show is the area, that's all.

'Mr. Doyle) Exactly, and what it bears to the total area of the Potomac.

(Court) Well I don't know about the whole river.
'T. 104 > That runs pretty—

(Mr. Doyle > I think there may be some suggestion that we are going to ruin the whole river as a result of this dredging and I just wanted to see what the two areas— what areas the two relate to.

< Mr. Rich) I think, Your Honor, that that doesn't corre forward at this point. I think that he is anticipating something that is not—

i Court i Well is the permit area of fourteen hundred acres delineated on the map?

'Witness > Yes, sir.

i Court) And what you are going to dredge would *he* half of that?

'Witness i Approximately, that's right.

< Court> Approximately. Well I mean that — can you show, delineate within the permit area where that seven hundred acres would most likely be?

< Witness > It's already outlined,

i Court i Of the seven hundred?

< Witness i The deposit area itself.

< Court > Alright, I think that's sufficient.

16. Alright, now in connection with the request at Mattawoman you indicated in your testimony that you proposed to dredge about (T. 105 > three hundred acres of land there. A. Correct.

17. Defendant's exhibit B refers to several — has several areas outlined on it. Can you look at that and indicate to me whether the dredge area — I mean the permit area is shown there? A. No. the permit area is not shown here.

18. What are those delineated areas, the circles, the irregular circles? A. The irregular circles are delineations of the deposit locations within the property lines.

19. And if you subtract the cross hatched areas where you indicated you would not dredge that total about three hundred acres? A. Approximately.

20. And could you describe for me whether those three hundred acres are both above and below the mean high water or mean high tide*?

i Mr. Rich > Your Honor, he has already answered that question.

A. Yes. both—

* Court i That was on cross.

21. Both above and below⁰. A. Both above and below mean high water.

¹ Mr. Doyle) Alright, no further redirect.

¹ Mr. Rich i I have a couple of questions.

|T. 106 • (Mr. Doyle i Pardon me. May I have just a minute. Your Honor.

<Court> Yes.

•Mr. Doyle^ May I ask just one or two other questions on redirect if the court please?

'Court' Yes.

22. In cross examination there was reference to the draft of your boats and vessels. Were you with Potomac at the time the dredging took place at Mattawoman in 1965^o. A. Yes. I was.

23. And do you recall how much material was dredged out of there? A. About — approximately thirty five hundred tons. Thirty five thousand tons, excuse me.

24. Whatever it was did you take that material out the same way you dredge elsewhere? A. Yes, we did.

25. Was it necessary for you to prepare any channelization or to do any introductory dredging to get your vessels in and out? A. We dug a small basin at the location where

the dredge was to commence operation. Other than that we dredged no channel to gain access to the—

26. How did you get your vessels in and out? A. We towed it in on high tide. We towed the dredge in on a high tide.

(T. 107) 27. And out the same way? A. And out the same way.

(Mr. Doyle) That's all.

RE-CROSS EXAMINATION

By Mr. Rich:

1. This proposed new area — by the way, what was the total acreage that you dredged in in Mattawoman Creek before? A. I don't know what the acreage was. We don't have any records on that.

2. Didn't you at one time testify that it was approximately twenty acres?

(Mr. Doyle) What page, Mr. Rich?

(Mr. Rich) Well I am asking him if he testified—

3. Does that refresh your recollection? A. No, it does not refresh my recollection at all. I am sorry.

4. You have no idea of the total area that you dredged in Mattawoman Creek? A. No, I don't.

5. Before? A. No.

6. Were you the supervisor on that job before? A. No. I was—

7. Were you in your present capacity? A. Essentially, yes.

8. And you knew where the deposit areas were? A. That's right.

(T. 108) 9. Were they upstream or downstream from this area? A. From which area?

10. The proposed area in Mattawoman Creek now? A, It was within the area.

11. Could you mark it on this exhibit B? A. Surely.

12. That circle — could you fill that circle in so it could be—

i Mr. Doyle) Let me see that please

<Mr. Rich i Excuse me.

i Mr. Doyle i I want to see where he put it so I will know what he is talking about.

13. You can fill that in so it will be more easily discernible and put your initials on it.

(Witness marks Exhibit i

14. And that's the area that was dredged previously⁰. A. This is approximately the area that was dredged previously, or rather I should say it's the location of the dredge when ji was dredging there.

15. This fastland area in Mattawoman Creek is it economically feasible for your company to mine that area?

(Mr. Doyle > Objection.

(Court) What do you mean, mine it?

(Mr. Rich) Dig it out.

(Court) By dredge"?

(Mr. Rich > Or in any other means.

(T. 109) (Court) Well you mean come in by truck?

(Mr. Rich) Yes.

A. There are—

(Mr. Doyle) Wait a minute, Mr. Parker. I have raised the objection on the grounds that I don't know how he could estimate it and I don't know what relevance it has to the constitutionality of this Act. What may be economically feasible under one set of circumstances may not be under another.

(Mr. Rich) Your Honor, this man is in charge of their mining operations.

(Court) This doesn't say — this Law says it shall be unlawful to dredge.

i Mr. Rich > Your Honor, my question pertains to the fact that he can otherwise use that property. It goes to the due process argument specifically. It goes to the fact of whether or not they have to go out of business in Charles County or the State of Maryland.

i Court) Alright, I will overrule the objection.

16. Now you — is it economically feasible for your company to mine that in any manner? A. Which areas are you speaking of now. You referred to the fastland areas. There are several fastland—

17. Alright, I will refer to them piece by piece. Fastland area i T. 1101 delineated as area 1 that you cross hatched. A. No, it would not be economically feasible for us to mine that area by conventional land mining techniques.

18. And what is the reason for that? A. The extent of the deposit is not great enough to justify the investment it would require to take the material out in the first place. and in the second place assuming things as they stand now we would have no means by which to get this material to our market area other than by truck, which would be out of the question economically.

19. From an economic standpoint? A. That's right.

20. Now go to area number 3 which you cross hatched and I ask you the same question. A. The same answer applies.

21. And go to the other area, area 5 that is? A. It would not even be physically feasible to mine this by any dry land means because they are not dry land areas.

22. May I assume that your answer would be the same for section 6? A. That's correct.

23. Alright, so the answer to the question is it's not economically feasible for your company to mine the fastland areas?⁹ A. Well the answer to the question is it would not be economically feasible for our company to mine these fastland areas. Now there are fastland areas in this deposit which it would be i T. III i economically feasible for us to mine or to dredge. I assume when you say mine you mean take out by any means.

24. I am talking about digging. I am talking about fastland areas. A. To the exclusion of dredging?

25. Yes.

i Mr. Doyle> And this is again why I would like to repeat the objection because the Statute under scrutiny here doesn't go to fastland digging as opposed to dredging.

i Court) Well I am going to let him answer for the purpose, just for the information.

A. It would not be economically feasible for my company to mine by conventional dry land methods any of the fastland deposits in this area.

26. Let me ask you another question. If — let me give you a hypothetical. Let's assume that there was a huge or very substantial and significant deposit on fastland within that area would it then be feasible for your company from an economic standpoint to mine it?

¹ Mr. Doyle • Objection.

(Court > Well actually, not on that basis, but we are on re — recross. This was not really brought up, any of this on redirect. So actually—

<T. 1121 (Mr. Richi He went into those areas, Your Honor. In particular he spoke of the—

< Court) Not as to fastlands. He went into what you had brought up on cross examination and expanded a little bit, but he didn't get into the fastlands. So I will have to sustain the objections and strike out the other part also.

(Mr. Rich) Let me just ask one further question on this point.

27. These areas that I have just spoken to in your opinion are they classified as tidelands or marshlands?

<Mr. Doyle> Objection,

<Court> Well now when we get into these words tidelands or marshlands. What do you mean by that?⁹

(Mr. Rich) What this man supposes from his knowledge in the trade. Your Honor.

(Court) I am asking you so I will know what you mean.

(Mr. Rich) I mean areas which are subject to tidal action.

(Court) In other words they are under tide water?

(Mr. Rich) Yes, or subject to it.

(Court) What do you mean by that?

(T. 113) (Mr. Rich) At some time during the year they are subject to tidal action. There are different types of tide. Your Honor.

28. Those cross hatched areas are they designated as either tide land areas or marshland?

(Mr. Doyle) I am going to object again, and to be more specific in the objection, I think it is probably true that there can be some agreed upon definition of tidal waters. I haven't heard anybody yet, and I am anxiously waiting here for somebody to define to me what they mean by marshland.

(Mr. Rich) Well Your Honor—

(Court) That's why I was asking.

(Mr. Rich) — I will withdraw that question and I will ask him whether these areas that you cross hatched are subject to tidal waters or are within the jurisdiction of tidal waters?

i Mr. Doyle > Objection. I don't know what that means, within the jurisdiction of.

i Court • What do you mean—

i Mr. Rich > Let me withdraw that question.

29. Are these cross hatched areas subject to tidal—

(Court) On your plat exhibit B⁹

30. On my plat exhibit B, subject to tidal action.⁰

(T. 1141 (Mr. Doyle) Your Honor. I object. His testimony is that those cross hatched areas are fastlands.

i Court) That's what you brought out a few minutes ago.

(Mr. Rich > I know^r, Your Honor. I just would like a reply to that. I think it's evident.

i Court > You think it's what?

(Mr. Rich) I think the answer is evident. I think the answer to my question is evident.

'Court) Well remember we are on recross now, and I don't know what — you are getting afield from what was brought out on redirect.

¹ Mr. Rich > Alright, thank you, Your Honor,

i Mr. Doyle > No further re-redirect,

i Court) Step down.

(Mr. Doyle» Mr. Gross.

<T. 115) ALFRED C. GROSS, a witness of lawful age, being first duly sworn, deposes and says:

'Clerk) Would you please state your full name and address? A. Alfred Christopher Gross, Route 1, Box 141 F, Hymesville, Maryland.

DIRECT EXAMINATION

By Mr. Doyle:

1. Mr. Gross, what is your occupation? A. I am a research ecologist.

2. And can you be more definitive, what is a research ecologist? A. It can be a catch-all term. It means—

3. I am sorry, I didn't hear that. What's that? A. It can be a catch-all term. It means in my particular instance that I specialize in relation of plants and animals with their environment and with people.

4. Go ahead. A. And to the same I conduct studies of interrelationships between natural communities, rivers, mountains, lakes. Natural communities to the animals and plants within them.

5. Now will you state your educational background, please? A. I have a bachelors' degree from Wabash College in botany which is always a minor. A master's degree—

6. When did you obtain that degree— A. 1964. A master's degree in 1966 from Connecticut College in ecology. Beyond that I was employed by the Army as a military man and I worked at Fort Dietrich in biological warfare (T. 116) which included some work in environmental biology.

7. Before you went in the Army did you have any practical experience during your college years insofar as your disciplines are concerned? A. Yes. My thesis was written on tidal salt marsh on the coast between Rhode Island and Connecticut.

8. Did you also work in any capacity in that area or in the area of ecology as a research assistant? A. Oh, yes. I studied several other marshes for my nature professor.

9. When was that? A. In 1965-66.

10. Alright, now you indicated you went into the Army when? A. 1967.

11. And how long did you stay there?⁹ A. Three years.

12. And what was your assignment?⁰ A. I was — official title was biological scientist's assistant. I was special assistant to the director of biological science labs at Fort Detrick, Frederick. Maryland.

13. And in that capacity what were your duties?⁹ A. I can say — I can only say so much. I originally was involved in laboratory work. Then got into information, semination, report writing and—

14. Well I am more interested in what, if any, field you study or (T. 117) work you engaged in the what you'd broadly be called the ecology field. A. I was limited ~~to~~ some field work in plant pathology, and I am afraid I really can't tell you much more about my activities there.

15. Alright, subsequent to your discharge have you engaged in this discipline? A. Yes. I have.

16. And when and where and tell us some of the details.⁰ A. Shortly after discharge I became employed with WAPORA. Incorporated—

(Court) What?⁹ A. WAPORA, Incorporated, based in Washington, D. C.

17. What is WAPORA, Incorporated? A. We are consultants in pollution control. The name is an acronym for Water Pollution Research and Applications. Incorporated, but it became a little bit too much to say.

18. During your employment since 1970 with WAPORA what, if any, ecological activities have you engaged in? A. I have been field leader, technical leader in approximately seven ecological programs, that have varied from studies of dredging in the Virgin Islands to the effects of thermal discharges on the Ohio River. Thermal discharges on the Wabash River. Presently engaged in dredging studies on South River, and I conducted four studies for Potomac Sand (T. 118) and Gravel in the Potomac River and Mat-tawoman Creek.

19. Now in connection with the studies undertaken in the Potomac River and Mattawoman Creek were those studies done by you alone or were you part of a survey team? A. I was part of a survey team, involved. I guess about eight people.

20. Who was the head of that team? A. The head of the whole report procedure was Dr. Gerald Lauer.

21. Is Dr. Lauer here today? A. Yes, he is.

22. What was your responsibility in connection with this study? A. I was responsible for getting the field work done.

23. And what did that entail in general before we get into the actual field work you did? A. I was organizing the people to be in the right places at the right times and get out and get the proper measurements and samples taken, and to, with Dr. Lauer, to prepare the course of study that we were going to follow.

24. And was it Dr. Lauer who suggested to you the types of tests to run and where to run them? A. Yes.

25. And what, if anything, did you do with the data that you collected as a result of these tests and studies? A. We collected the data, wrote it up, and then with Dr. Lauer's consultation, have turned out two final reports, two drafts.

(T. 119) 26. Alright, now directing your attention to Craney Island in the Potomac River—

(Mr. Rich) Excuse me. Your Honor, is this man being offered as an expert witness? Is he going to testify as to his expert opinion?

(Mr. Doyle) I am glad you asked that question. No, sir, he is not. I offer this witness merely to show the extent of the tests that were taken, the way they were taken, the way the data was collected and collated, and at the conclusion of the foundation this witness lies I will call Dr. Lauer as our expert witness.

27. Directing your attention, Mr. Gross, to the study undertaken at Craney Island, will you tell us when that study was undertaken? A. Well this first started about December, end of December 1970, January of 1971.

28. And — you may use your notes to refresh your recollection. What studies did you take, what tests did you run? Describe in essence what you did there insofar as the Craney Island site was concerned. A. We began by surveying the area in general just to see the type of river that was going to be involved, the marshlands surrounding it, the island itself. After doing this we decided (T. 120) that there were several areas that should be investigated. We would like to have investigated the whole ecology of the whole river but unfortunately there were time limitations on this, and there was a requirement for a report to be gathered for a previous hearing, so that many of the fields that should have been gone into at the time, like fish spawning, couldn't be done. We managed to cover those later, we'll get into later. So at the time we were limited by weather conditions. It was frightfully cold. We took bottom samples to investigate the benthic populations.

29. Now you are going to have to help me here. What's benthic populations mean? A. Benthic populations are those — those are invertebrates, bugs, insect larvae, worms which live on the bottom of the river. We took samples of these via clam shell dredge, very much smaller than that used by Potomac Sand and Gravel. These are then sorted out and the organisms found within those samples are identified and counted.

30. Can you indicate where specifically you made those tests, over what period or stretch of the river, how often you made them, how many tests there were? A. We ran a series of transects which is just individual samples taken in a straight line. They radiated from Craney Island to the west towards the Masons Neck marsh, east towards Maryland, towards the north towards, I think that's Hallowing Point, (T. 121) Sycamore Point to the north, and then towards the south towards, in the direction of Indian Head.

That gave us a picture of the area, of the benthic populations around Craney Island. Then in addition—

(Mr. Rich > Excuse me, Your Honor. I think the question was also when he did this. I would like to get this for my notes.

A. These first samples were taken January through March, I believe. Benthic populations are generally quiescent and not so tend to move around.

31. Proceed. A. We in addition had available to use the Greenway Flats site at which dredging was taking place, so we attempted to find out what effect dredging was having on resident benthic populations in the area. So we took a series of samples in old dredging holes. They were approximately one years old, although we never could be sure of the exact age here. It might vary one or two years. It's hard to tell because of the method in which they move around with their dredge, and we took some samples also from undisturbed sites nearby.

32. Did you also count and sort these tests out insofar as number and the type of organisms was concerned? A. Exactly the same procedure.

33. Insofar as count and type is concerned did you note any significant differences?

(T. 122i (Mr. Rich) Your Honor, I don't understand that question, differences.

34. Well I assume if you counted fifty at one place and twenty five at another the difference was twenty five and if he saw four species at one place and two at another the difference was two?

< Mr. Rich) Well I don't know what places he is speaking of. Your Honor.

(Mr. Doyle) Well I am asking him to compare all the areas where he took his tests.

(Court) He can answer that.

A. The benthic population of the Potomac River seems to shift as you go downstream with it. We also have — actually I would rather wait until we get all of our studies in before I go into the benthic population.

35. Alright, I will strike that question and you proceed with the tests and studies you made. A. O.K. Aside from benthic populations I then did a reconnaissance of the Mason's Neck Marsh to determine the vegetations] patterns we could find there.

36. Now where is Mason's Neck Marsh in connection with any of these properties? A. Mason's Neck Marsh is approximately. I think it was due west of Craney Island, about three quarters of a mile or a mile away from Craney Island to the west.

IT. 123) 37. What led you to perform tests in that area? A. There had been some concern that perhaps the noise of the dredge may scare birds off the marsh, that sediments created by dredging would make it to the marsh and then some way foul the marsh, so I decided to take a look at it and see the type of vegetation growing on it and see if the sediment could make — if the level could be raised.

38. Alright, what other tests and studies did you make? A. We couldn't examine fish because of the time of the year that was involved, so we tried to find out from local experts at Chesapeake Biological Laboratories, for instance. University of Maryland, what was known about fish in that area of the Potomac River. As it turned out there was very little published information any more recent than about 1965, so we couldn't do much with it. We got some opinions from some people but they, they couldn't say that this is what the condition is today. So fish had to be left alone because of the seasonal aspects of the work. To determine the path of sediment flows which might be raised by the dredge affluent, we ran a dye tracer test, injecting a bright red dye called rhodamine BX into the water which can then be picked up by using an instrument called a fluorometer which measures the fluorescent properties of the dye when it is struck by light. We injected this a

distance southwest of Craney Island and fairly close to the Virginia shore by on incoming tides with (T. 124) southwest wind, wind blowing from — no, from southeast to northwest, figuring that this would be a worst possible case, that with the wind blowing and the tide moving up, if there was anytime that the sediment was going to make it to the marsh it would be during this time. It did not happen. The plume from my dye injection carried more or less in a straight line between Hallowing Point and Sycamore Point, and we did not follow it beyond Sycamore Point.

39. What other tests or studies have you made? A. We studied, did some work on toxic metals as found in the bottom of the Potomac River for two purposes. One, to see what toxic materials might be there, and for another to find out what happens to them when they are put in suspension during the dredging. We found, our samples of the bottom were surface samples, and to shorten this it turns up that the surface muds contained varying amounts of toxic metals. Mercury was quite high, but it varied. One place would be high and one place would be low. You would find pockets of it. So we ran an analysis of the dredge effluent itself to let it — we captured a dredge effluent just as it left the dredge before it entered the river.

40. Where was that? A. This was now at Greenway Flats. The Greenway Flats also had mercury on the bottom, and we let the effluent stand for five days, as the figure, then measured mercury within the (T. 125) supernath and within the settled materials.

41. Supernath being what? A. Supernath is the clear portion above the settled materials of the mud which touches off the bottom. Now the object being to find out — well when the dredge puts out its washing effluent it discharges through the water the heavier particles are settled out quite rapidly to the bottom, and we wanted to find out if by this it was going to be putting mercury into the water rather than have it settle to the bottom. It turned out that almost all of the mercury present settled to the bottom. A very small percentage was still left in the water.

42. Alright, what other tests and studies, if any, did you conduct? A. It was a bad time of the year to do it but we looked for any rooted aquatic vegetation we might see at the time and there was none.

43. And why do you say it was a bad time to do it? A. Well it normally appears during the spring and summer months and the fall months, and during the winter time they will die back and spring up the next spring. We took measurements of turbidity with the simple expedient of a secchi disk which gives you a quick idea of the water transparency as affected by the dredge or in comparison to ambient river waters that are not affected by the dredge. During the winter, in the early Spring the natural turbidity of the Potomac River was such that you <T. 126> had a maximum reading of two to four inches. Translating this to looking at your hand under the water it means you could see your hand approximately two to four inches under the water. We found that the natural turbidity being such that the dredge did not lower the transparency of the water in any way, the dredging effluent.

44. Did you take any other tests or studies, make any studies? A. That was about it for that as far as Craney Island.

44. Did you do anything in the field of coagulation? A. Oh, yes we did do work, coagulation work, to try to determine if coagulants could be added to the dredge effluent to reduce its, the time which the effluent would stay suspended in the water before it settled out. The tests showed that a couple of coagulants could be used. Laboratory tests now, but people a lot more conversed in the field of coagulation than I know very well that trying to transfer a laboratory evaluations studies to the field is not always, doesn't always work the first time. You have to play around with it. It was more or less just to see if this might be one way they could reduce it.

45. Alright, were they the extent of the tests and studies you ran in the Craney Island and Masons Neck area at that time? A. At that time, yes, they were.

46. And am I also to understand at that same time some comparison studies were made at Greenway? A. Yes.

iT. 127) 47. Alright, now did you also at some point in time make field tests and studies in connection with Mattawoman Creek? A. Yes, we did.

48. Would you please recount what those studies and tests were and how you conducted them? A. The studies at Mattawoman Creek were conducted over the period January through April, I believe. They were done very much the same way as those at Craney Island. We took samples of benthic organisms, your bottom creatures again, from a point about a mile below the proposed dredging site all the way up to Route 225 where it crosses over Mattawoman Creek.

49. How far is that above the dredging site approximately? A. I guess maybe two miles. That's a guess because it meanders considerably and the Creek splits several times before it makes the bridge.

50. Do you know how many test sites there were between the upper and the lower reaches of your testing site? A. I believe there were eleven, in that neighborhood. Ten or eleven.

51. Did any of them have any particular significance insofar as dredging is concerned? A. Well there was a sequence of species found. The upper region of it—

52. First off let me ask you this. Did you conduct any test sites at or near old dredging areas? (T. 128) A. Yes. We ran the bottom samples before we found out that there had been dredging occurring there previously, or before we knew where the sites were, that had been taken. We found that three of the samples had numbers of organisms higher than those found in surrounding but similar areas, or in surrounding areas. I think I will leave it at that. I later found out that these areas which we sampled in which we found those higher counts had been previously dredged in 1965.

53. How many testing areas did you run in the areas that had been previously dredged? Do you recall how many of your test sites were conducted in previously dredged areas in the Mattawoman tract? A. Three of them.

54. And there were eleven altogether? A. Yes.

55. Would you please then recount for me each of the tests and studies you ran in that Mattawoman tract and relate what, if any, differences or similarities occurred in the three tests run on old dredged areas as opposed to the others that were not dredged areas? A. I will have to refer to some memos.

56. You may refer to whatever records you have there. A. Yes, there was eleven sites investigated. The most up-stream site was a mud bottom fairly shallow pool, clear water, subject to almost no tidal influence. It had about thirty (T. 129) five oligochaete worms and around twenty two dipterans, which are insects larvae, immature stages of flying insects. Moving downstream across some riffled areas, now remember this again in the early spring and, late winter, some sand bottom riffles, nothing was there. You would expect to find something there in the summer time.

57. Would these findings that you are recounting now basically refer to the benthic organisms that you talked about? A. These are about the benthic organisms, yes. As we came further down stream we approach — a little further down stream yet we came across about thirty five dipterans, your insect larvae again. Now we get into the dredge holes, the old dredge holes, which we noticed were also deeper. They are running about twenty feet as the surrounding area was maybe ten feet. Now I was later informed that they had originally been dredged approximately forty feet so in the last seven years they have filled in to about half their original dredged depth. We got into the dredge holes and counts of dipterans went up to sixty in one case and seventy-five in another. Oligochaete worms for some reason fell off to about twenty two in one case

and three in the other. Now as we moved further downstream, dipterans, the number of dipterans fell off, and oligochaetes increased slightly. The reason for the dipterans falling off I wouldn't want to conjecture on. The bottom below that point though is consistently mud rather than any mixed in (T. 130) sand.

58. Go ahead. A. That's our benthic organisms in Mattawoman Creek. Mattawoman Creek we also tried to find out if local experts would have any fishing experience with it and we were told no. They could give some general ideas. People had ideas of what was spawning in there, so we talked to some local fisherman and they told us that it was a spawning area for many species of fish, and they were never specific about a particular area except — well they were specific about a couple. They could stand on one dock and watch the carp spawning off the end of it. but they said, "Oh, we know they are spawning up here somewhere." Aside from that we couldn't do any actual fishing work at that time.

59. Why? A. The weather.

60. Go ahead. A. We did a flow study with dye tracers once again in Mattawoman Creek. Because of this worry about it being a spawning area to determine how far sediments from the dredge might be carried up into the headwaters of the Creek, we picked as an arbitrary reference point, injection point, the old dredging hole since we gathered that that's where dredging might take place, most likely might take place. We found on incoming tide that the dye tracer was picked up only — well it had (T. 131) died out. We did not find any more less than half a mile — at any greater distance than half a mile above the point of injection. We then, at the request of the State, dumped a considerable amount of the dye into the water and came back two days later to try to find out how it had dispersed throughout the Creek and could not find a bit of it left so we couldn't tell what the dispersion patterns were. We had nothing to gauge its measurement against. We did do an analysis of toxic materials on the bottom in Mattawoman Creek and they all fell within DPA's latest standards, but

it does appear to be fairly clean on the bottom. No accumulated toxic materials. Turbidity during the winter was -- fluctuated considerably. It might run from about the same as you would find in the Potomac, two to four inches or it might go as much as a foot, which is still not particularly clear water. We at the same time, each time we were out, noted any birds that were seen, their numbers and something about where they were. However, we were just sort of interested in seeing what sort of birds were there. I analyzed the marsh areas again and the nearby upland vegetation to see the type of vegetation that might be disturbed by dredging, and noted once again that there was no emergent vegetation growing from the bottom of the river, which again you wouldn't expect. There were stumps and roots down by the mud flats but no emergent vegetation other than dead cat tail stems which (T. 1321 were broken to the end, and that would about cover our study program in Mattawoman Creek.

61. Alright now the results of those studies were collated and reported back to Dr. Lauer. is that correct⁰. A. Right.

62. Alright, now subsequent to that study in Mattawoman Creek did you conduct any further studies in this area? A. Yes, all the original studies were done at an inopportune time of the year so we conducted during the spring time a study of fish spawning in the area of the Potomac River and Mattawoman Creek, but we had to limit it to a reasonable distance around Craney Island. Fish spawning, a study of fish spawning is pretty difficult because the fish tend to move around. They will appear at one time at one place, skip that same place for a few days and come back a few days later again, but it seems to be largely dependent on water temperature. It's known that various species of fish will only spawn, or normally will spawn between certain given range of temperatures. In some cases it seems the water currents may have an effect on them. In other cases it seems that they prefer dark over light conditions. So finding individual instances of spawning is largely hit or miss operation. You can stand out—well if any of you are fishermen, you can stand out two

weeks and you won't get yourself a fish, but if you are there just the right night or the right time the (T. 133) surface will be jumping with them. So with this in hand we set up a program in which we actually spent one thirty six hour period camped on Craney Island. During this time we found spawning.

63. When was this now specifically? A. This was the end of May, last two weeks in May. I can look up the exact date if you would like it.

64. Alright, go ahead. A. Look it up?

65. No. go ahead unless somebody asks you the question. go ahead. A. We did find spawning around Craney Island of American Shad, but it was limited to an area within a radius of three hundred yards. It did not extend beyond that for some reason. That area right around Craney Island is also the shallowest area. At that same time White Perch were noted to be spawning. In conjunction with the actual observation of spawning which was a hit or miss proposition we set out nets in various places to try to catch adult and fertile potentially spawning fish which we did. The nets were hoop nets and gill nets, and we caught potentially spawning fish. They were ready to spawn. We caught that at Craney Island. With equipment problems and distance problems and this time problems we couldn't be at each suspected site each night, so we had to move around from one place to another. We did notice spawning around Craney Island two nights. We also iT. 1341 noticed it one night in Gunston Cove. But the night it was in Gunston Cove, it was not a Craney Island.

66. Where is Gunston Cove? A. Gunston Cove is around maybe a mile north of Craney Island on the western side of the Potomac River, in shallows along Gunston Cove. But it was only along one side of Gunston Cove and not on the other. These fellows are very particular. That was American shad. White perch spawn at any place and at anytime. Some of our observers had white fish eggs on their boots when they were standing in the water. The Potomac Sand and Gravel dredge has adhesive eggs from

white perch on it. On marker buoys in the channel, they seem to spawn any place, and they by the way lay adhesive eggs, which will stick to anything that they touch. The American shad and the striped bass, the other two fish most people seem to worry about, are planktonic spawners. They spread their eggs through the water and they tend to sink but it appears that their buoyancy is such that even a slight current will keep them suspended in the air and some people believe that disturbance is required for their successful hatching. We did not see any striped bass spawning itself. From — well aside from actual visual spawning and capturing the adults, physical adult ready to spawn type of fish, we towed an egg and fry net to capture eggs and fry, or young larvae stages of fish. We towed an area in individual short stops from (T. 135) near Fort Washington, which is approaching the bridge up there, to an area close to the mouth of Mattawoman Creek and up into Occoquan Bay at the same. This dredging — or this towing showed us that we had striped bass larvae and eggs from an area around Mt. Vernon to — well as far as we went downstream to Mattawoman Creek. These eggs and larvae were only found in the channel however. The American shad we never found any eggs of. Where they were I don't know. White perch were everywhere so we didn't worry about them too much. Found larvae, which are the young fry of the herring family, *aphididae*, were found scattered throughout the river. These can not be differentiated into American shad versus alewife and versus herring family because they are just too similar at young stages. So all we can say is that they are family *aphididae* and that that could include American shad. It could be alewife. It's hard to tell what they were, but we did find them scattered every place we sampled. Now it could very well be that the fish spawn further south of Mattawoman Creek but that was the southern limit of our investigations. Various people believe that the spawning range of the striped bass is perhaps forty miles, beginning at the upper limit of around Fort Washington, which is pretty close. We found it at Mt. Vernon, on down about forty miles, and I am not sure exactly where that would put

on the map. American shad spawn in many rivers aside from the (T. 136) Potomac River. But we never found any American shad eggs. Those can be identified. We never found any. We did find a section of mature fish at Craney Island, in the mouth of Mattawoman Creek, in Occoquan Bay and in the mouth of Piscata — no, Pomonkey Creek, are the areas we sampled.

67. Did that conclude the studies you ran with regard to fish spawning at that time? A. Yes.

68. Did you conduct any other investigations or studies at that time? A. Yes, we also undertook further evaluation of the ability of bottom organisms to replace themselves after removal. This had been started really—

69. Removal how? A. Through dredging or any other cause, or natural cause for that matter. This had already been undertaken or started with the samples from Mattawoman Creek and the samples taken off of Greenway Flats. So to try to find an area as close as possible to the situation occurring at Craney for which a known date of dredging was available, an exact date, the nearest site we could find was an area off of Mt. Vernon which had been dredged in 1957. If you could find out the exact age of the dredge holes at Greenway Flats this would be perfect because there you could say this hole was dredged last year, that hole was dredged two years ago, that was three (T. 137) years. You would have a very nice sequence of reinvasion. Of course, in Mt. Vernon we had to start, with an in point of 1957, and just estimate a little bit at Greenway Flats. We thought the holes were about that age from what Potomac Sand and Gravel people told us about the way they move around. Then we knew also the exact age of the holes in Mattawoman Creek. So we went up to do some of this benthically colonization work off of Mt. Vernon. We took samples in the old dredging hole and on either side of the river adjacent to the old dredging hole. That would be the Mt. Vernon side to the west and the — there's an amusement park to the east. Marshall Hall amusement park to the east, and the old dredging hole is located approximately along a straight line drawn between those

two points. On the Mt. Vernon side of the existing channel. We found that the holes had been filled up approximately, they were only thirty feet deep instead of the original forty plus feet that they were dredged to. We found a great variation. In three of the samples from the old dredging hole we had a tremendous number of sludge worms and in the other three we found almost nothing,

70. What is the significance of sludge worms?⁰ What are sludge worms?⁰ A. Sludge worms are a specific group, a species of oligochaete worms. These are worms which live on the bottom of rivers. Sludge worms are commonly associated with sewerage pollution, untreated 'T. 138' sewerage pollution.

71. Do you have any idea what the source of that would have been in that area? A. I would guess it would be the plant at the Piscataway Creek among others.

72. Sewerage treatment plant you mean? A. Yes, that's the closest one upstream. The species composition there, species composition being numbers of species of different groups of organisms. We will have the dipterans, which are the insect larvae, the worms which are worms. Species composition was pretty terrible. There was almost exclusively sludge worms with a few dipterans in some cases. So the area is loaded with sludge worms. We found that taking an average, the three samples—

i Mr. Doyle) Excuse me, Mr. Gross. If the court please, I hate to interrupt this witness and I knew I would ultimately have to make this objection. I find I must make it now. I have noted and it has been called to my attention that the Attorney General is consulting with Mr. Capper, sitting behind him in the row there, and I am further informed that Mr. Capper is the hearing officer who conducted the hearings which are still sub curia under the Wetlands Act hearings. (T. 139) Now it seems to me patently improper for Mr. Capper to take any participation in this case, the same way it would be for a judge who is holding the matter sub curia to involve himself in the trial of a case before another judge. I think Mr. Capper

ought to be excused and not to be permitted to take any part in this proceeding.

(Mr. Rich) Your Honor. Mr. Doyle voices some amazement.

(Mr. Doyle) Outrage, not amazement. Outrage.

(Mr. Rich) Outrage. We informed Mr. Doyle some time ago that we planned to call Mr. Capper with respect to the general observations on Wetlands. Not as to his decision in this case, but he is an expert in wetlands in this country. He has a great deal of experience in it and I have spoken to Mr. Capper about purely technical aspects about a case involving no decision on his part. Mr. Doyle, for your information, stated that he would object to Mr. Capper's appearance at the time we put him on the stand.

(Mr. Doyle) Well because I didn't expect you to use him any other way. I am going to object to him any way he comes and if he is going to be assisting counsel in the case that there's (T. 140) equal objection there as far as I am concerned.

(Court) Well I don't think he should take part in the questioning of this witness. I don't know why he is here or what's going on, but—

(Mr. Rich) Well Your Honor—

(Court) You can call him as a witness when you need him and we can decide that at that point.

(Mr. Rich) Are you saying I can't ask Mr. Capper a biological question. For instance, the last question that I asked him was, just to put this before the court and on the record, what source of — what fish feeds on sludge worms. Now I — Mr. Doyle has his experts at his hand and I have seen him refer to Mr. Slease who testified at the Wetlands hearing in this case, and I have seen him consult with Mr. Slease time and again during this trial, and I think it is somewhat unfair on his part to contend that I can't talk to Mr. Capper.

(Mr. Doyle) I certainly don't want to be unfair if the court please. Mr. Rich has advised me, and given me a list of about 8 different experts that he is going to rely on, and all <T. 141 > I am asking him to do is to replace Mr. Capper with those eight experts and he can confer with them all day long, but I don't think a judge who is holding a matter sub curia ought to be one of the consultants in this case as an opponent to the people who are here under trial trying to get this Act thrown out.

i Court t Is this the case — he is holding their case sub curia!'

I Mr. Rich i Their case is being held sub curia. We have advised Mr. Capper that we would not call him to offer any opinion that he might voice with respect to the Wetlands case. He would be called only as an expert witness on the value of wetlands within the State of Maryland. Your Honor.

¹ Mr. Doyle) If the court please, if it will help any. I am perfectly willing to concede that Mr. Capper will testify that wetlands are extremely valuable. With that I would like to see him dismissed from this case so we can try ii as an adversary proceeding.

(Mr. Rich > Well I think we are trying it as an adversary proceeding. I think Mr. Doyle has <T. 1421 raised a purely red herring in this case. Your Honor.

¹ Mr. Doyle> Sludge worms may be more appropriate. Your Honor. <Laughter >

(Court) Well suppose we take a five minute recess. We have been going two hours and then I will rule on it.

¹ Court reconvenes after recess .*

'Court) Mr. Rich.

(Mr. Rich) Your Honor, we wish to inform you that we will withdraw Mr. Capper, who is a Deputy Director of Chesapeake Bay Affairs, as a witness in this case, and we wish to also point out that we have asked Mr. Capper to

sit in the back in the audience of this courtroom and we will not communicate with him during the trial of this matter.

(Court i I think that's a wise decision. You may proceed.

(Mr. Doyle > Thank you. Your Honor.

73. Mr. Gross, at the beginning of the adjournment or the recess you were discussing findings relating to waste sewage in the area of Mr. Vernon. Could you pick up your testimony from that point and include whatever studies and tests you made in this later study regarding the recolonization of the i(T. 143) benthic organisms? A. OK. Other than the presence of sludge worms, we are not trying to prove that there is sewerage waste going into the water. We didn't do any testing to that. We did find that when you average all the undredged versus dredged areas that this average showed that there was only a 20% loss, or there was a number of the — it did not quite come up to its full potential of the undisturbed areas. 20% down, but that you wind up with some problems because you take a dirt sample here and you take one five feet away from it and you get a different number. There's a natural variability of the bottom substrate there. So you can just take for face value that since 1957 that it recovered to within 20% of its previous, or we would guess to be its previous composition.

74. And did that conclude your studies and tests in the second study? A. Yes.

75. Now was that data that you collected, the test data referred back to the team headed by Dr. Lauer? A. Yes.

76. And it was collated? A. Yes.

77. And from that test data of the early studies and from this second one that you just concluded testifying about it it was on that test data that Dr. Lauer reached his expert opinion, <T. 144 > is that so? A. That's right,

i Mr. Doyle» Alright, witness with you. Mr. Rich.

CROSS EXAMINATION

By Mr. Rich:

1. There were two testing periods, is that— A. That's right.

2. Let's see if we can break this down a little bit more narrow. How many days of testing was involved in the first period, and if you have the dates I would appreciate them? A. I have to go look through my records and see where people were on specific days. I would be willing to estimate that the whole program involved perhaps a hundred and twenty five to a hundred and fifty man days.

i Court) Do you mean for both periods⁷? A. Yeah, for both periods.

3. The first period as I understand it was between January and April of 1971, is that correct⁹? A. Right.

4. Now during that period of time between January and April, how many days did you spend down in the testing area? A. Probably a total of ten or fifteen.

5. And how many days did you take benthic tests? How many days did you spend on taking samples from the bottom in the Craney Island? A. Well that varied. We went out one day and ran one transect (T. 145) and went back, counted what we had, which involves more time than the taking of the samples by far. Then went back and on another day took another transect. It was usually about one or two transects per day.

6. For the ten or fifteen days? A. Yeah. I guess so. I really don't want to say it because I don't have my work schedules with me.

7. This study wasn't really taken under the best of circumstances, was it? A. As long as you can get under the water you can take the samples.

8. Well wouldn't you rather have taken this study in May? A. Personally, yes. It's a lot warmer.

9. And there are more living organisms on the bottom in May, I am talking about vegetation? A. Yes. We were out there again in May and I can say that there is no

emergent vegetation except in a very shallow, very narrow band around the edge of the marsh.

10. During the winter? A. During May. You asked me about May.

11. Oh, in May? A. I am talking about May.

12. Well how about in January and April? A. During January—

13. You said that you spent approximately ten to fifteen days between January and April. Is there vegetative cover around (T. 146) the marsh areas during that time⁰. A. On the marsh.

14. On the marsh. A. It's not growing. Well starting about April, depending upon local temperatures and weather conditions, you expect it to start growing about that time.

15. And did you make a notation during your studies of the growth, the type of growth in these swamp areas? A. Yes.

16. And when did you first make a notation? A. You mean when new cattails began to emerge?

17. Yes. A. Actually I didn't note when new cattails were emerging because the old ones from the previous year are still standing and they are going to emerge anyway and there's not much that can be done about keeping cattails down. Is there another species that you are interested in?

18. Well in your direct testimony you said that there is no fish spawning in the middle of the winter? A, Right.

19. That vegetative cover is not what it would be in later months? A. Some of the vegetative cover is there during the winter. Cattails are still recognizable as cattails. The woody species are still recognizable for their individual species. Any botanist can tell you that you can go by blood scales and (T. 147) scars on a tree and tell what that tree is even without leaves on it. So I can tell

what's there in the winter time. There are some herbaceous species however which are not present in the winter time.

20. And you noted these when you visited the place then¹?

A. I noted their absence during the winter time.

21. And did you note the presence when you later returned⁰? A. No.

22. No. you did not¹? A. Well. yes. I noticed some arrow arum growing in the shallow narrow band around the edge of the marsh maybe — restricted within maybe three feet. And there was very scattered — we are talking about Craney Island still, right?

23. I am talking about the entire area. A. Oh. O.K., the entire area. You last mentioned Craney Island which I thought you were referring to. So now your question is did I see emergent vegetation in the entire area¹?

24. Yes. A. Yes. I saw some, another band, greater but not much greater as far as Craney Island, was along the cattail growths in Mattawoman Creek.

25. Now you made some mention of the dredged areas the fact that you did take samples in the dredged areas and these samples indicated with respect — with particularity I direct your attention to Mattawoman Creek. You say that in that area i T. 148 > that had been dredged out you got a very good response, that there were a substantial number of bottom organisms there, more so than in some other adjacent areas? A. From the previously dredged holes?

26. Yes. A. Yes, the previously dredged holes showed a greater abundance of organisms than undredged areas.

27. What year had that hole been dredged? A. 1965 I believe.

28. And between the years '65 and 1971 is it possible that erosion takes place and the hole fills up by the process of erosion? A. Yes, possibly.

29. Well if the process of erosion takes place isn't it true then that some of these benthic organisms from surrounding — surrounding the hole might fall into the hole¹? A. That's what benthic recolonization involves.

30. Alright, so these organisms— A. Because they are not going to raise de novo. It's not going to be another creation. You always have to have a seed source unless you—

31. Then the answer is that these through the process of erosion come into the deep hole and that that over the years will fill up to a point where it will become level with what is around it? A. You are now asking about the erosion or about the reinvasion?

f T. 149) 32. Well does the reinvasion take place in accordance with the process of erosion? A. I think they both go on simultaneously. Now a new organism can come in to a denuded area. Take your garden—

33. No, I don't want to take my garden. I want to direct your specific attention to Mattawoman Creek. The question I asked you is by the process of erosion do benthic organisms from the surrounding area come into that deep hole? A. I wouldn't call it erosion. I would call it migration. A lot of these organisms—

34. So your answer is no, is that right? A. It's a definition question. Not strictly by erosion they don't come in, no.

35. But migration? A. Migration.

36. Comes into these deeper holes? A. Yes.

37. And if there were no benthic populations adjacent to the deep holes then I guess we wouldn't get this migration that you speak of? A. Well then you wouldn't have been removing any thing because there would have been nothing in those holes that were dug out.

38. Well my question is, if you will respond to my question, I would appreciate it. If there are no benthic organisms (T. 150) adjacent to the deep hole areas through

your process of migration the benthic organisms are not going to invade the deep hole areas? A. One problem—

39. Is that a true statement or not? A. No, that's not a true statement because even if there's nothing immediately adjacent these insect larvae eggs are laid by insect larvae, insect larvae fly. They can fly great distances. They lay their eggs indiscriminately over the surface of the water which then sink and find a suitable place to grow.

40. Then for some extent it would come from both processes, isn't that correct? A. Yeah, it comes from what is called drift, organism drift. Some of these things float, sort of rumble along the bottom, move a little bit—

41. Drift into a deeper hole? A. Yeah, drift—

42. Or migrate? A. Yes, these things migrate. They are moving around—

43. So if it's not there in the first place it's not going to get there, is that what you are saying? A. Yes, if there's no seed source, no other place that any source of seed for this new hole you won't have—

44. Right, if Mattawoman Creek was sterile we wouldn't have any- (T. 151 > thing coming into those holes, right? A. Um hum, aside from the insects that would fly over from the next valley.

45. That's a very small type of percentage, wouldn't you say? A. No. dipterans make a very large part of the insects growing—

46. So what you are saying then is the Mattawoman is very rich in this type of growth? A. Not very rich. no.

47. Would you say it's rich? A. I would say it's average.

48. Just average? A. There are so many factors. Each creek is a different entity in themselves.

49. Let's move on. I understand that. You are an ecologist. I guess you have a biological background? A. Yes, that's required.

50. Did you have an oceanographer or a physicist or someone there to help you with the dye studies? You didn't supervise the dye studies? A. We have a chemist who was one of — the leader of the dye studies.

51. Now if you will refer directly to the dye studies in the Mattawoman Creek area. What is the total amount of dye that was placed into the stream the first time? A. I think it was a couple of gallons. I can look it up to make IT. 152 > sure.

52. I think you are right. 2 gallons, and then what is the traceable part of dye? For instance, is it one part per billion that you can trace, or is it one part per million? What can you actually trace? A. For the rhodamine R and our flourometer I think it goes down to about a part per billion.

53. One part per billion? A. Yes. I wouldn't swear to that.

54. And have you estimated the volume necessary — the volume of water necessary to get that two gallons of dye down to one part per billion? A. I am not a chemist and I can't go into the description of the makeup of this dye, but let me tell you that it turned the whole creek red,

55. The whole creek? A. Well, it made a large red splotch in the river.

56. I thought that you could only trace it $2/3$ of a mile¹? A. That's as far as it traveled.

57. Well it traveled $2/3$ of a mile? A. Yes.

58. That's not the whole creek? A. Right.

59. You mean you put that dye into the water and you traced it — did you trace it in both directions? (T. 153) A. Yes, we did.

60. And how far down towards the Potomac River did it travel? A. It didn't travel very far at all. A hundred yards maybe.

61. Let me go on. You put that dye in and you traced it and then you said you put another volume of dye in? A. The final shot.

62. How much was that? A. That was about a gallon.

63. The question I repeat is. do you know the volume of water necessary to take that dye down to one part per billion, which is your detectable— A. If we just have one gallon of water — or one gallon of dye it would take a billion gallons—

64. Wasn't this a 50% solution⁰? A. In acetic acid. Well we're detecting the whole thing. Like I say. I am not a chemist and I would rather not go into that—

65. Well that's alright. A. —except that the dye is picked up. and this is a standard technique used for tracing currents.

66. This dye. what is the specific gravity of the dye? A. I don't know.

67. Is it the same as sediment coming from a dredge? A. I wouldn't know\ I doubt it.

68. The dye will show the direction, is that correct? 'T. 154) A. Correct.

69. It is not going to show the time that it would take for solids to settle out, will it? A. No, the dye will actually stay in the solution longer than the solids. The solids will settle out considerably before the dye will become dispersed, which would indicate that the dredged material would not go as far upstream as the dye did.

70. And you say this is all settleable solids? A. I don't—

71. You said the clear clay fines. A. I don't know about the exact composition of them—

72. Well say the majority. It wouldn't turn the whole creek red, would it, or brown from sediment? A. Not the whole as far as Mattawoman.

'Mr. Rich) Thank you.

(Court) Any redirect?

(Mr. Doyle) No, sir.

(Court) Step down.

(Mr. Doyle i Dr. Lauer.

< Mr. Rich i Your Honor, I don't mean to butt in or anything, but I believe Dr. Lauer is going to be on the stand a very lengthy period of time. I am afraid that we may not get into his cross examination today, and therefore f T. 155) it's going to be somewhat — Mr. Doyle will not be able to speak to him or talk with him once we get into Dr. Lauer. I was wondering if there is another witness or maybe the court would want to recess at this point.

i Mr. Doyle > If the court please. I — of the two choices I would prefer if the court could do it to recess. I have no other witness other than one who won't be here until tomorrow morning. He is an expert on noise levels and I haven't had an opportunity to see him or talk to him as yet, and I know he is not here now. My expectation is except for perhaps some rebuttal testimony that Dr. Lauer and this gentleman would be my case at this point. I don't even know frankly, thinking of it right now. that I have even exhibits that we might discuss or to introduce So I am perfectly willing—

< Court i How long will it take you on direct, do you have any idea?

(Mr. Doyle) I think that may take some considerable time. First off in order to make certain that I have no problem with qualifications, (T. 156 > Dr. Lauer's qualifications are extensive and I intend to have him review them to that extent.

(Mr. Rich) Of course the State will stipulate that Dr. Lauer is—

(Mr. Doyle) Well I still would like, because of the unusual nature of this case, to have those qualifications in the record, and then, of course, he is going to tie together the previous testimony of the tests and studies and reach

a conclusion, and I expect that's going to take some re-statement of that testimony in order to reach the conclusions, so I suspect that direct examination, unless Dr. Lauer fools me and I fool myself, it may be somewhat lengthy, certainly an hour or more.

i Mr. Rich i Your Honor, we are willing to go ahead now. I just wanted to make that clear.

(Court > Well no. I am willing to go on to five, five o'clock. It's almost four now, quarter of, and I mean, we couldn't finish both direct and cross apparently, from what you say, in that length of time. How much time will you need tomorrow? I don't mean the number of witnesses, but approximately. Can you finish your case tomorrow?

iT. 157) (Mr. Rich) Possibly,

i Court) But not probable.

(Mr. Rich) Well I want to go to Nag's Head on Friday. Your Honor. We will do everything possible to conclude it tomorrow.

¹ Dr. Lauer > May I make a comment?

' Court i Yes.

' Dr. Lauer > I know it is speculative as to how long this is going to take. However, I am here and prepared and I have a busy schedule too. I am under the direction of a judge to show up on another case Friday myself and I would prefer in deference to my schedule and my other responsibilities to move on with it as far as we can go because I am going to be unavailable on Friday.

¹ Mr. Doyle) I am completely — whatever the court's convenience.

i Court) Well what's your objection if we finish direct and have the cross—

(Mr. Rich) I have no objection. I just wanted to offer the courtesy to Mr. Doyle.

(Mr. Doyle) It won't be any hardship on Dr. Lauer or myself if we can't talk tonight. I imagine he has heard enough of me and I have probably (T. 158) heard enough of him.

(Court) Well suppose we proceed with the direct and see what time it is.

GERALD J. LAUER, a witness of lawful age, being first duly sworn, deposes and says:

(Clerk) Will you please state your full name and address? A. My name is Gerald Joseph Lauer. I live at 25 Mine Road, Monroe, New York.

DIRECT EXAMINATION

By Mr. Doyle;

1. What is your occupation, Doctor? A. I am an aquatic ecologist. Position wise I am a research professor and assistant director of the Laboratory for Environment Studies at New York University.

2. And what in brief does that discipline entail? A. The discipline of ecology?

3. Yes, sir. A. The most broad definition of it really is that it is a study of relationship of organisms to their environment.

4. And would you trace your educational background or study in this discipline? A. Yes. I received a bachelor's degree of science, Quincy College, Illinois, in 1956. A master's degree from the University of Washington in biology in 1959. A Ph.D from the same institution in 1962, went over into the year 1963, (T. 159) also in biology.

5. And subsequent to that time would you trace what employments or what activities you have engaged in in the practice of biology? A. Yes. From 1959, and even previous to that. During my undergraduate days in Illinois I worked for parts of two years as a biologist assistant with the Illinois Water Pollution Control Board, part of the

Illinois State Department of Health. Through my graduate work I worked as a research assistant and teaching assistant for Dr. W. P. Edmondson at the University of Washington. Subsequent to getting a master's degree I went to work for the U. S. Public Health Service. Division of Water Supply and Pollution Control. That's now changed names several times. I think right now it's the Federal Water Quality Office. I was a commissioned officer in the Public Health Service from 1959 until 1965. I resigned from the division of Water Supply and Pollution Control at the rank of Lieutenant Commander and I still hold a commission as Lieutenant in the Public Health Service. During that time, I started out as a staff biologist. Moved through several progressions of responsibility to the point where I was principal biologist of a program to study the effects of pesticides on aquatic life. Subsequently to that, before leaving, I was made chief of the training branch of the southeast region, Atlanta Florida region. I then went to the (T. 160 i Ohio State University where I was associate professor in the zoology department, and leader of the Ohio Cooperative Fishery Unit. The Co-operative Fishery Unit program includes a combined joint program of the U.S. Bureau of Sport Fisheries and Wild Life, Ohio State University, and the State Conservation Department. Subsequent to that I worked for three years with the Academy of Natural Sciences in Philadelphia. Pennsylvania, as an associate curator, and my responsibility there was to coordinate the department of limnology's consulting program, which had to do mainly with studies of the effects of various kinds of industrial, municipal park development and other types of developments on aquatic life. For the past two plus years I have been at the New York University with the responsibilities which I have just described.

6. Do you belong to any professional societies? A. Yes, I belong to the American Fisheries Society, the American Society of Limnology and Oceanography, the American Littoral Society, The Water Pollution Control Federation of Pennsylvania, Midwest Menthalogical Society, AAAS, and the Hudson River Environmental Society, of which I am president.

7. And have you achieved any honors or other special scientific recognition in your discipline? A. Well in the way of honors, scientific honors. I am a member of Sigma Psi Honorary Fraternity. I went through part of my (T. 161) schooling on academic scholarships which I consider an honor, and also part on an athletic scholarship which I also considered an honor, as it might be judged from my size, I played basketball. I think in terms of professional honors that pretty well covers it.

8. Have you published any thesis or publications? A. Yes, I have published contents, partial contents of my thesis and I have a number of other publications ranging all the way from the physiological effects of environmental stresses on organisms through organism effects through population level effects and community effects with stresses on aquatic organisms.

9. Now the prior witness testified concerning a study of certain areas of the Potomac River and also certain areas of the Mattawoman Creek done, undertaken by an organization called WAPORA, Inc. Are you familiar with WAPORA, Inc.? A. Yes. I am.

10. What is it? A. Well it's a firm which was set up to study the effects of different stresses and pollutional inputs on aquatic ecology.

11. Have you ever undertaken any duties or responsibilities in connection with these studies conducted by WAPORA, Inc.? A. Yes, I have. I was retained as a consultant. I am allowed to do this through my university employment up to 20% of my time. I was retained as a consultant to give technical advise (T. 162) and to help establish and design sampling programs, to review the results and in other wise have a technical input into the conduct of their investigations.

12. Did you take any specific part in the studies with reference to the Potomac River and Mattawoman Creek? A. Yes, I did.

13. Would you describe what part you played in those studies? A. At the initiation of the program when I was

advised that there was a desire to have the program undertaken I consulted with the WAPORA staff. This has all been a team approach throughout. We exchanged ideas and reviewed ideas as to what the most pertinent subject areas would be for investigation. We designed a sampling program on that basis. It has been carried through. I have had input into the conduct of that investigation. I reviewed the results and edited the reports.

14. In lay terms would it be fair for me to call you the head of the team that conducted that investigation? A. I would say the technical head. yes.

15. Did you have — did you consult in connection with the field tests and studies that Mr. Gross testified about before¹? A. Yes, I did.

16. By the way, you did hear his testimony, did you not? A. Yes. I did.

17. Now doctor, referring first to the early study of Mattawoman Creek, and you can refer to your notes there, what — first (T. 163) did you ever make a visual inspection of that scene yourself? A. Yes, I did.

18. On how many occasions? A. On one occasion.

19. And was that during the time that Mr. Gross was overseeing the field tests⁹? A. That's correct.

20. Now without unduly prolonging your testimony. Mr. Gross testified that he did certain general ecology observations. Are you familiar with the results of those tests that he conducted? A. Yes. I am.

21. He also testified that he did certain benthic population tests. Are you familiar with the results of those? A. Yes, I am.

22. He testified that he did certain tests in connection with the presence or absence of toxic metals in the bottom sediments, are you familiar with those tests? A. Yes, I am.

23. He testified to certain tests and studies concerning fish life in that area. Are you familiar with those? A. Yes, sir, I am.

24. And the same question with regard to the wildlife in that area, are you familiar with those? A. Yes, sir.

(T. 164) 25. Now are you familiar with the dredging operations presently conducted at Greenway Flats by Potomac Sand and Gravel Company? A. In a general way.

26. Alright, and are you generally familiar with the proposed dredging operations that they wish to conduct at Mattawoman Creek? A. Yes, I am.

27. Alright, sir, now based on your background and experience and based further on the data concerning Mattawoman Creek collected at your direction and under your supervision, and based further on the studies made of that data do you have an opinion concerning what, if any, ecological effect the dredging operation for sand and gravel will have on Mattawoman Creek? A. Yes, I do.

28. Please state that opinion, and first I would like you to give any short range and secondly any long range ecological affect such an operation might have on Mattawoman Creek. A. O.K. First of all in terms of the short range effects some of the most immediate things one thinks about that went into the design of the sampling program, is that in, of course, in the process of dredging the materials up from the bottom of the stream there is going to be a direct removal of benthic organisms, and this was one of the reasons for studying the benthic organisms in both the Mattawoman Creek instance and (T. 165) the others. A secondary affect on the benthic organisms could be that the redistribution itself by the dredging operation, in settling down over the bottom in adjacent areas could one way or the other affect the population abundance or composition of the benthic organisms living on the bottom. So this is as far as benthic organisms are concerned. As to what affect these would have in the Mattawoman Creek instance some of the factual things have already been testified, but

the indications are that, of course, there would be a direct removal of benthic organisms at the time and place of the dredging. There, of course, is no dredging operation to study in Mattawoman Creek at present other than the past hole which has been mentioned. That's getting more into the long range effects rather than the short term. In an effort to try to look at the short term affects of a dredging operation as was reported by Mr. Gross, we did do some sampling in the vicinity of the operation at Greenway Flats and those studies indicated that there was in general not any significant difference in the benthic organism population either as to composition or abundance. In areas around the actual dredging operation compared to other parts of the river that have been studied. He has already testified to the fact that albeit the distribution of these organisms are extremely clumped and non random. The indications from sampling the holes from past dredging operations do indicate that varying levels of i T. 166 > rehabilitation will take place. In the Mattawoman case the indications are that the organisms are there in more abundance than they were previously, judging by the numbers and composition of organisms in the surrounding undredged portion of the creek. In the case of the Greenway Flats area and the other area studied there is some indication, based on the samples, that fewer numbers of organisms were found in the old dredge holes than were found in the surrounding area. Although the species composition appeared to be unchanged of those organisms that exist in the holes compared to surrounding areas. Insofar as other short terms affects that might take place, obviously if the dredging in Mattawoman Creek instance is going to be — is going to involve a marsh type habitat there is both a short term and a long term affect of this. There is an instantaneous removal of this type of habitat by the dredging operation. So this is both a short term and a long term affect. In geological time the effect might appear to be a blip on the screen, but in terms of human life expectancy I think we would have to consider that that's an irrecoverable affect, the process of removing marsh habitat, and of course to the extent that this marsh plays variable roles for other

organisms that affect would also prevail. As far as the direct affect on fisheries are concerned, again there is no way of studying the affect, the immediate affect on either the adult fish or the juvenile (T. 167) stages of fishes in the Mattawoman Creek instance because there is no dredging going on there. The indications are, well you can make extrapolations and we have done so, based upon the amount of water that would go through the dredge itself in a washing cycle as to, and this is based on data coming from other places, because we didn't have data specific to the site, as to what the approximate numbers of eggs or larvae would be that are — if these lived out in the open water what the numbers of these would be that would be subject. We suspect that they would all be killed in the process of going through the washing cycle, and we have made estimates on that, and the estimates in general, and this is based on concentrations of eggs that I have been observing in the Hudson River estuary for say, striped bass and shad, which are similar species and in that case that's considered equally important, striped bass and shad, nursery area to the Potomac. The general estimate would be that considering the volumes of water that go through the dredge and the length of the spawning season and the fact that the dredge operates part time during the day, it doesn't go twenty four hours around the clock, the general estimates would be that the immediate short term affects of the washing cycle of the dredge, due to passage of these organisms through the dredge, would be equivalent to the passage of — or to the reproductive potential of approximately from one to two adult striped bass, say (T. 168) averaging two pounds in size. The — there is also a potential short term affect on these juvenile forms of fishes, again due to what might be called a silting out or salting out process. In the process of dredging the dredge is going to resuspend sediment in the water or various size composition depending where it is working at the moment, and this material is going to settle back to the bottom and it's conceivable in the process of settling down it might have a salting out affect which conceivable could carry fish eggs down to the bottom where for these forms it could mean suffocation. There was no

way within the scope of our studies to try to go about determining precisely whether this does or does not take place, and if it does take place in what degree this would take place. Another obvious short term affect is going to be on the resuspension of the sediment into the water so that it is going to increase the turbidity of the water, either upstream or downstream of the dredge depending upon which way the tide happens to be running at the time. At the time of the year we were there the turbidity of the river, as has already been testified to, was such that a secchi disc transparency ranged from a couple of inches to about four inches, indicating that the river is already extremely turbid and muddy, and at the time that I was there the dredge was operating and I could distinguish visibly no difference in the turbidity of the water in the area downstream of the dredge i T. 169 > from the rest of the river. It's so muddy you can't see through it. You can't see through it and adding more doesn't make that much difference visually, but there is no question that the operation of the dredge will suspend materials into the water column and depending upon their particle size they will have a given settling out rate. This is about the extent that I can go in that direction. I am not a soils chemist or hydrologist, but this is pretty generally accepted knowledge, I think, up to that point. I think that pretty well — well then we got into the metals business because there is considerable concern about what potential there is for resuspending potential toxic metals that are presently in the bottom muds that have been contributed to the system by a myriad of sources, both municipal and industrial, and the concern is that perhaps the suspending of these back into the water column with the sediments could redistribute these in such a way that they might become harmful to organisms in the water which are not otherwise exposed to those concentrations. In general there is also, our data on metals indicate, Mr. Gross has already indicated that in Mattawoman Creek area the concentrations of metals in the water, in the bottom sediments are quite low indicating that there has not been any substantial pollution of that body of water by heavy metal and that these fall within the

current recommended limits. In the case of the Potomac River itself, the main stem, the i.T. 170 > concentrations of metals in the bottom sediments were considerably higher than the Mattawoman Creek, and this includes an array of metals. He spoke mostly about mercury, that also includes other metals. Mercury is the one of most current concern. The indications of this work are that the metals concentration in the bottom sediments are much higher in the surface layers of the sediments than they are deeper. This was determined primarily by looking at the concentrations of metals in the dredged discharge compared to samples of bottom muds taken by ourselves with dredge equipment, little hand dredge equipment and comparing the two. The net effect of the dredging down through the surface layer into the deeper layer would appear to be a resuspension of these metals into the water along with the sediments and as Mr. Gross indicated the metals appear to be substantially attached to the sediments. They go back in — back down with the sediments. They don't stay in the water. The net effect of the distribution of metals in the sediment itself is to redistribute these concentrations throughout the depth of the redeposited material, so that wherein the area before dredging would have had a higher composition of metals at the very surface and less so in the deeper sediments, after the dredging it would appear that the concentration of metals would be much more equally distributed through the full depth of the disturbed materials, whatever that turned out to be after the dredging operation. i.T. 171) One implication of this is that once the metals are redeposited back on the bottom most of the benthic organisms that live in or on the bottom or restricted to any order of, that bears with the compaction of the bottom, the hardness of the bottom, that they are restricted by and large into the upper three to six inches of sediment. Below that the sediments are, go anaerobic, and these types of organisms for the most part do not exist. So that the net effect of the redistribution of metals will be that the organisms which reinvade the dredged areas are going to be exposed to less concentrations of metals than they were previous to the dredging because the metals have now been

diluted out so to speak during the dredge operation so that they are more equally distributed through the full depth of the bottom sediments. The indications from the literature would indicate that as far as is known there is very little evidence to indicate that the metals in combination with sediment, bound on the sediment, exert the same toxic affect as if they are in solution, so that the fact that the metals are resuspended in the sediment for some period of time, depending upon the particle sizes of the sediment, does not necessarily mean that they are going to be toxic to the organisms living in that water at the time. The indications are that the toxicity is primarily due to the metals in solution because this is most available to the organisms that live in the water column. I think that (T. 172 > pretty well goes through the shorter term effects.

29. Alright, would you then address yourself to what, if any, long term affects you noted in Mattawoman Creek or you would postulate would occur in Mattawoman Creek?
A. Well the longer term affects would primarily have to do with the change in the habitat that would resolve, to the extent that marsh would be removed. This would be a long term affect, the actual removal of the habitat itself would be a long term affect, to the extent that this marsh contributes organic detritous, or serves as a habitat for migratory birds, or otherwise as a source of food of whatever kind for fishes, that means that this habitat is no longer going to be serving these functions. In its place. after the habitat has been removed, the area will then instead of being marsh habitat is going to be a deep water habitat. The depth is going to depend upon, as has been testified to here, the depth of the deposits and depth of the dredging operation. So what in affect will have happened is that the particular habitat where it is not open water now, where it is now marshland will be converted from marshland to open water habitat, and I would consider this a long term affect.

30. That would be limited to the dredge area itself? A. That's correct.

31. O.K. Proceed. A. So that, well — so then that habitat is going to have been (T. 173) converted from a marsh type habitat to a deeper water habitat which will have its own characteristic assemblage of organism and will play its own particular kind of role that is characteristic of those kinds of habitats. So its going to mean substituting one array of habitat type and biological functioning within that habitat for another in the situation of. in fact all three sites. Not just Mattawoman.

32. When you made your visual inspection of the Mattawoman tract were you — were the proposed dredging areas pointed out to you? A. Yes. they were.

33. Then you describe those presently as marsh area is that correct A. Well part of its marsh area. I think, as I recall, Mr. Parker indicated that approximately 70' < was water, and I gathered from that 30' < is land, whether marsh or the higher land.

34. Did your visual inspection at that time disclose any other extensive marsh area other than the areas to be dredged? A. Well there is considerable marsh area along the length of Mattawoman Creek and I did see sections of this marsh.

35. Alright, were there any other long range effects that you wish to allude to if the proposed dredging is permitted? A. I think not. I think within the context of what I have said and I spoke more in generalities than specifics, but the long (T. 1741) range affects to which I have alluded in terms of affects on, changing the habitat and things like this, fish food and spawning and productivity of the area, had been generally covered by what I have said.

36. Let me ask you one other question in connection with Mattawoman. Based on both your short range and the long range ecological affects could you state an opinion as to whether or not a dredging operation conducted in a three hundred acre area have any lasting adverse affect on the ecological balance in Mattawoman Creek? A. Well certainly as I have indicated to the extent primarily that

is marsh is converted to open water habitat. This is going to be a long term affect, in the habitat. As far as its overall net effect on the balance of the ecology of Mattawoman Creek is concerned I think it would take a lot more specific studies than we have done to try to be precise about that, but obviously if this is a part of a total which includes a lot of other marsh habitat its affect is going to be in proportion to the remaining amount of marsh habitat that is there after the dredging takes place.

37. Alright, sir. Now would you please direct your attention to those studies originally conducted in the Craney Island area, and again you have indicated that you were present here when Mr. Gross testified, and I would ask you whether or not you concurred with the synopsis of the studies that he described <T. 175> in connection with the ecological observations conducted there? A. I do.

38. And with regard to the benthic organism tests that were made? A. I do.

39. And do you subscribe to his testimony concerning the tests run with regard to toxic metal concentrations? A. I do.

40. And with — in connection with the turbidity tests? A. I do.

41. And also his comments and description of the tests relating to the river flow pattern in the dye tracer tests? A. I do.

42. And do you also subscribe to his analysis of the situation that existed in that area with regard to fish and wild fowl? A. I do,

43. And also his comments concerning the attempts at coagulation? A. Yes.

44. Alright, sir, now were you also familiar with the proposed dredging operation that Potomac Sand and Gravel would hope to conduct in the Craney Island area? A. Yes, I am.

45. Alright, now based on your background and experience and based further on the data concerning the Craney Island area (T. 176) collected at your direction and under your supervision, and based further on the studies made of that data, do you have an opinion concerning what, if any, ecological effect a dredging operation for sand and gravel will have on the area at Craney Island? A. Yes. In general the remarks I just made with regard to Mattawoman Creek, especially as far as short term affects are concerned are really the same.

46. Well if you have no objection I would like you to reassert those, both short range and long range effects so that the record is clear with regard to both areas. A. OK. With respect to the short term affects on the habitat itself, there's quite a difference here in that the habitat involved in the proposed dredging area in Craney Island vicinity is not a marsh habitat. It's a subsurface water habitat. Similar in all general ways to the other kinds of shallow water habitat that exists up and down along the length of the Potomac River in that area that I have seen at least, and I had some general experience with other areas of the Potomac River from my past experience at the Academy. So in this case it does not involve the change of a marsh habitat to a deep water habitat. It substantially involves changing of a shallow water habitat to a deeper water habitat. That means that the short term removal of marsh habitat and the roles that marsh habitats play in the Mattawoman Creek instance (T. 177) would not be applicable here. In the instance of the Craney Island site, as Mr. Gross has testified to, we have observed spawning of various species of fish in the vicinity of the Craney Island proposed site of dredging. The studies were not conducted through the full term of the likely spawning season but it was conducted through part of it. Based upon those observations of spawning which appeared to be concentrated primarily on — in the most shallow waters in the periphery around Craney Island we have recommended that if dredging is to be permitted that the dredging not be done within this perimeter of the island until such time as the role of the spawning taking place there can be put into context

with the role of the spawning of these species throughout the system to determine its value to the system, and further, this would be — and further during the spawning season we recommended that the dredging operation if it is allowed be conducted in areas as far removed from this as is possible within the proposed dredging site.

47. Let me interrupt you. In connection with your first caveat to the dredging, what would be entailed in getting that kind of data, in — additional studies? A. To really get that kind of data, hard data from which you can make this kind of conclusion, it would involve an, extremely substantial studies of the fish distribution, fish spawning, success of fish spawning, distribution of fish eggs and larvae (T. 178) after spawning. In short it would entail a comprehensive study of the total fisheries population biology for the entire river and it could even extend into the adjacent coastal waters since there are anadromous fish involved.

48. Alright, let me ask you one other question about the fish spawning while we are on it, and then you can proceed with your short and long range effects. When you mention adverse impact on fish spawning in a given area is that adverse impact restricted to the dredged area itself such as the same — as it would be of the marsh land? A. Well of course marsh land is a defined area of some dimensions and they are relatively limited dimensions. The fish spawning, most of the fish of particular interest in the river to the best of my knowledge, spawning for most of these fish extends over quite a number of river miles, both within the main stem of the river and within the tributaries. So that the interference of an operation such as this with spawning in a specific area may have really no measurable affect on the total fish population for the coming year due to all of the other reproductive potential that exists within the system, and I think this is, the best indication of this is that there are quite substantial tonnages of fish taken out of the river throughout the year by the fisheries industry itself, and the whole concept of fisheries management is based on the assumption that there

is a surplus of fish which can be (T. 179) harvested without endangering the — a sustainable yield for coming years. and it's my understanding, although this is old data and there may be much more recent data, that there have been estimates made that somewhere in the order of a million and half pounds of fish are removed at that time. This was, I think, a 1963 estimate, by a combination of sport and commercial fisherman from the river directly or from adjacent coastal waters attributable to the nursery taking place in the river, and I think it's worth noting in this context, in the overall context of a resource use or resource management, that none of the States adjacent to the Potomac restrict the taking of poundage of fish during the spawning season, which implies that there is not a concern that, the reproductive resource is limited to the extent that it is being endangered by the removal of the breeding population at that time. It is also a general biological concept that within limits, most of the time the limits of which are unmeasurable or have not been measured, there are all kinds of homeostatic, or self leveling responses to a system. in response to a predation on a fish population or any other kind of population such that — one example of this, for example is that if you remove one fish it tends to improve the environment for his brother fish because they then don't have to compete with him for food and living space. so that this is another aspect of fish management which is brought to bear, (T. 180) that you can remove these fish from the system, and in fact this is done purposely, especially in warm water fisheries management, to increase the size of the fish which fisherman prefer to get. They prefer to get the bigger ones, so that it is a common practice in fisheries management to purposely kill off portions of fish populations, and in some cases they eradicate the entire population and start all over in a particular body of water for the purpose of fish management, with the concept being that by killing some you are going to improve the environment for others and thereby improve their growth. their reproductive success and so forth. So it's a very complicated picture and my answer obviously has been complicated, but to the best — my best judgment would be

that there is no a priori reason to state that interference with spawning in this relatively local area around Craney Island is going to have any measurable affect on the fisheries.

49. Alright, now you may continue with your analysis of both the short range and long range this dredging operation in the area of Craney Island might have. A. O.K. First, the more short range effects that I have discussed before in respect to Mattawoman apply here also, except in Mattawoman there was not the metal concentrations in the bottom sediment as there is in the river. In the river where the metal concentrations are higher in the bottom sediments at the surface, in that instances where we would (T. 1811) get the affect of dilution of the concentrations of metals in the surface layer throughout the depth of the redeposited materials, and this is where in the concentrations of metals in the upper layers would presumably be reduced as far as exposure to the benthic organisms is concerned, and of course if the concentrations of metals are reduced as far as the benthic organisms are concerned this also would have the subsequent effect that these metals would not be available to accumulate in the benthic organisms from which they could then be transferred on into the fish populations by way of being consumed by the fish. So it would interfere with metals transport to the fish. Now in this instance, just as I don't think any great affect can be made in a detrimental way, due to the resuspension of these materials I also don't think any great pitch can be made from the beneficial side on this. The areas are so small that we are talking about relative to the whole river that changing the distribution of these metals in this localized area, I don't expect would have any more of a beneficial effect by way of keeping it from the organisms, I am talking about the metals from the organisms than it would have a harmful effect by the redistributing them into the system for some temporary point of time during the process of dredging. So if I am going to make that statement on the one hand about the benefits or about the detrimental effects I feel equally obliged to (T. 182) make it about the beneficial, potential beneficial aspects.

50. Are there any other short term or long term range effects of this operation, or proposed operation? A. Well aside from the short term effect that I mentioned before, about what we would expect to mortality of fish eggs and larvae through the actual operating dredge was really addressed as much to the river sites and to Mattawoman Creek and so those would still hold. In general our calculations would indicate that if the concentrations of eggs and larvae are substantially the same in the Potomac as I have been finding them to be in the Hudson River, the amount of water passing through the dredge being what it is that the direct effect of the killing of eggs and larvae to the dredge would be the equivalent of the removal of about two female striped bass of approximately two pounds in weight, based upon their average rate of egg production. As far as other short or long term effects are concerned, another longer terms effect, as least as far as the spawning of fish in that particular area is concerned, is that if the fish are spawning there primarily because it's a shallow water habitat, and it's converted into a deep water habitat, obviously those fish that had spawned at that particular site now would no longer spawn at that particular site after it is deep, but it doesn't involve the conversion of marsh habitat to an open water habitat. In this regard I wasn't — I did make trips around (T. 183) the operating dredge up at Greenway and looked at the area and I was a bit surprised to hear in the opening remarks of counsel that this area had already become — had already been extinguished. I am not quoting him directly or accurately, but he indicated that it had already been extinguished as far as converting marsh habitat to an open water habitat, and I think it has already been indicated that the depth of the water has always been three to ten or twelve feet deep in the area before dredging, and my impression of the area when I saw the area was not that it had ever been a marsh habitat. It's an open river habitat, and I think that impression ought to be corrected. If we are going to try to have to be precise in one camp we ought to be precise in the other also. I think that's the extent of—

51. Did you comment, I may have missed it, you did, I think, comment on the short and long range effects on turbidity in that area? A. Yes. The turbidity as measured during the times of the studies, which was during the winter and spring of the year, were extremely high in the river naturally, as was reported, a transparency of two to four inches was observed in the river. This of course implies that there is either a very substantial input of silt and sediment into the area from outside sources, or that there is a very substantial resuspension of bottom sediments into the water due to natural (T. 184* causes associated with river flows and wind driven winds and so far forth, roiling of the water, to the extent that it was not visuably possible to see a plume coming out from the dredge at that time. So that we weren't there all through the year and this may not be completely the same case at all times of the year. To the extent that that exists it would not appear that the increase in turbidity since the — if the transparency of the water in that part of the river at that time of the year at least, is in the order of four inches it can be said with fair certainty that the maximum depth of photo synthetic growth, that is the growth of aquatic, planktonic aquatic plants could not be any deeper than twelve inches on the outside, and so that the photo synthetic zone in the water at that time of the year is extremely shallow, so that the operation of the dredge contributing to the system could have a very insignificant effect on photo synthesis, both because of the already ambient conditions of high turbidity, but again because of the relatively narrow area or zone of influence compared to the total surface area of the river.

52. Mr. Gross indicated that he conducted some studies in the Mason's Neck Marsh because of some suggestion that the dredging operation at Craney would have some adverse effect on that area. Do you have — would there be in your opinion any long or short range adverse effects on the Mason's Neck Marsh (T. 185) if in fact dredging was permitted at Craney Island? A. It is very difficult for me to see how it could. As far as any direct effect is concerned.

It has been alleged that there will be an effect, both because of noise — three possible reasons have been alleged. One is noise, another is that the resuspended sediment may migrate into the marsh and in one way or another change the elevation of the marsh, and a third has been that by digging the holes out there at the dredge site this may create a bottom gradient such that everything would start to cave in and the marsh might eventually cave into the hole. Based on my visit out there and looking at distances both of the maps and the personal visit, it appeared to me that there was going to be at the very least a half mile shelf of flat bottom area between the proposed dredging site and the marsh itself, the edge of the marsh itself. So — and if the hole is going to be fifty feet deep it's inconceivable to me that the sides can cave to the extent that it is eventually going to cave all the way back to the marsh and start having the marsh cave into a fifty foot hole. The size of the hole couldn't be big enough to accept all of that. As far as the transport of sediment into the marsh is concerned, the dye studies that we did do were done under conditions in which the wind was blowing directly in toward the marsh and we saw no indication from that experiment that a plume from the plant would migrate in toward the (T. 186) marsh in any substantial effect. There is no question probably that if you considered many tidal excursions, and I wouldn't know what number that might be, that the clay size particles which go into suspension, which are going to stay in suspension longer, that some of these may eventually come into contact with the marsh area, just as all of the other clay particles that are suspended in the water due to natural causes reach the vicinity of the marsh fringe. Insofar as the noise is concerned I obviously have not been there at all times of the year to hear the present dredge and to see the response of birds and so forth, water fowl. I would only suggest here that in the previous hearing in April that was alluded to early several pieces of information were submitted by myself and others which would indicate the following. One was that a number of people got up and said that the noise from the present dredge was completely intolerable, but

in another context the same people would say that they still have osprey and eagles and ducks and things come in and lighting in their back yard. This seems inconsistent to me. If it is intolerable then why are they still lighting in their backyards. Another is, according to a newspaper article which I saw—

t Mr. Rich) Your Honor, I think this man is getting a little bit far afield from the question which was posed to him when he is relating to things in newspapers and giving replies. I think if there is a question, fine, but let's (T. 187) not bring up everything in the world—

(Mr. Doyle) I'll just ask a question if it will help the situation.

53. Doctor, could you testify as to any short range or long range effect that the proposed dredging operation might have on wild fowl in the area? A. Yes. To go a little further in relation to the effect of habitation and noise on water fowl, of course in this particular instance there is a subdivision which essentially is neighboring the marsh habitat in question, and this involves the cars in the streets, the people, the banging of garbage can lids and all the rest that goes along with the suburban development. I happen to live in a similar location and we have flights of ducks and geese coming into our little marsh pond behind our house constantly in this kind of situation. With respect to the concern of, and this includes regulatory agencies who have expressed concern along this line, who are responsible for managing the marsh as a refuge, it's a curious thing to me that the concern that was expressed—

^Mr. Rich) Your Honor, this is not in response to the question. If Mr. Doyle wants him to express an opinion, fine, but let him express an opinion.

(Mr. Doyle) If the court please, if I understand the thrust of the Doctor's testimony it is (T. 188) that if there is any effect on wild fowl at all it would have to be as a result of the noise of the operation, and I think he

was trying to address himself to what, if any, effect the noise of the dredging operation might have on water fowl

I Mr. Rich) That's fine. I just don't want newspaper articles quoted and—

(Court) Well he hasn't quoted this time. That was before.

A. Well in this respect I am really quoting from my recollection what an expert witness said at another hearing which was to the effect—

(Mr. Rich) Your Honor, I will have to object to that.

(Court) Well I don't think you had better quote another expert witness over objection, just your own opinion.

A. O.K. Well in any case I can't talk in a quantitative standpoint on this. I don't think it is possible to quote from a quantitative standpoint on this, either from our own data or from others. I was trying to give as much general background as I have in relative, to this particular topic, and I guess could it be said, I will try to say that in this instance plans for the, as I understand it, plans for the development (<T. 189) of the refuge include building of scenic pathways and access points for people to come in and visit within the site itself and if human habitation and their activities are going to be that sensitive, have that kind of effect on. especially the eagles and osprey which have been made particular note of, it is a curious thing to me that the management of the area is going to be such that it is going to introduce that disturbance directly into the park and that people who are responsible for that management can get up on the one hand and say, "This proposed operation is going to have an extremely harmful effect," and at the same time they are introducing disturbances into that same vicinity purposely, and I'll stop at that.

54. Alright, now I don't want to be redundant in my questioning, Doctor, but you may get away from me after this evening and I want to make sure I cover everything. Have you testified fully in connection with the short range

and long range impact of a dredging operation on the bottom fauna in the area of Craney Island⁹. A. Yes, as was indicated by Mr. Gross, we have taken bottom samples and transects radiating out from Craney Island, The abundances of these organisms on the bottom are extremely variable. They substantially consist of the sludge worms which were alluded to before and the aquatic larvae of dipterans. The abundances of these were such that we have <T. 190) calculated that the standing crop of organisms at that time of the year, if we used the maximum figures we observed, were in the neighborhood of about 19 pounds per acre. As far as an instantaneous loss of food, assuming that these organisms, which is the worst possible case, that these organisms are going to be killed by the dredging operation or that they are going to be buried so they are not available to fish to each, this result — this amounts to a removal of an instantaneous food source from the fish in the area of approximately 19 pounds per acre. Based upon a general and this again I think it a conservative estimate, that it would take ten pounds of food to produce one pound of fish, I think this immediate food removal would be the equivalent of what would pro — if it were all eaten, what would produce two pounds of fish per acre from the surrounding areas. This would be a kind of instantaneous or short term effect that would exist.

55. Long range, have you been able to reach any conclusions as to the effect? A. On the long range view it's mixed based upon the results that we obtained from dredge holes, from various sites, we have gotten information which indicates that the reinvasion of organisms ranges all the way from approximately twenty five percent in one case, all the way to two hundred percent in another. So to be specific as to what the exact reinvasion (T. 191) rate is going to be in time and quantity is difficult. If you took a happy average it would come out to roughly a hundred percent, but I am not advocating that this be done, but the indications are, at least in general, that organisms do reinvade the holes, that the species composition is no different than what existed on the bottom, and I am talking about

the river habitats here now in terms of Craney Island. than were there previously, and the total abundances which are going to be there are highly variable, and as I have just stated there could be anywhere from zero at the immediate time of dredging up to, in the case of Mattawoman instances, two hundred percent of what was there in the surrounding areas in an undredged site.

56. Alright, sir, now based on the short range effects and the long range effects that you have testified to, in your opinion would a dredging operation conducted in approximately a seven hundred acre area have any lasting adverse ecologist effect on the ecological balance of the Potomac River⁰.

(Mr. Rich) Your Honor, I think that that question is extremely wide. The Potomac River runs up to West Virginia and it goes down into the Bay and we are talking about Charles County waters right now and we are talking about specific areas. That question is—

(Court) I think it should be limited to a smaller (CT. 192) area that would pertain to this—

(Mr. Doyle) Alright, sir. I will do that. I understood from the opening statements of counsel or from suggestions I heard elsewhere that the effect of the dredging was going to be a great impact on the river, but I will limit my question then.

57. Will it have any lasting adverse effect on the ecological balance of the Potomac River as it relates to Charles County's boundaries? A. Well of course the narrower in you zero the more local are going to be the effects and the more dramatic are going to be the effects. The effects are going to be substantially local, but with all due respect when we are talking about some of the key species of fish that are of interest, they just don't live in Charles County part of the Potomac River. They do range over that total area and part of the basis for considering what's going to be the impact on the fisheries has to take into count the full range of the spawning area, their nursery areas, their

growing areas and their adult distribution areas, and in respect to that since there are areas on each side of this—

(Mr. Rich > Your Honor, the expert is answering the question which I objected to and—

A. I have to.

(T. 193) (Court) No, he said on the areas on each side of this area. I think he said.

(Mr. Rich > Are you limiting it to areas on each side of Charles County? A. I am saying that the organisms that exist in Charles County today may not be in Charles County tomorrow, and to understand what, the effect of the dredging operation is going to be on those populations you can not talk about Charles County alone. If I can turn it around the other way and say that because the area in which these organisms exist on either side of Charles County are so far reaching compared to Charles County that I would be willing to predict that if appropriately done, pre and post operational studies of fish distribution in the area were done that there would be no measurable effect, that could be measured on the fish density and fishes composition in the waters of the Potomac River adjacent to Charles County after this seven hundred acres is dredged compared to before. Part of that is the fact that they are coming in from both directions, and the local effect that is going to be dampened out by the total populations coming in from both ends, so I am sorry. I did answer part of the question you said you objected to. but it has to be answered in order to give the opinion.

¹ Mr. Rich t That's alright. You are a fair man. Doctor.

(T. 194) 58. Now Doctor, you heard Mr. Gross testify concerning the studies made in connection with both — the later studies made in connection with fish spawning and benthic recolonization and I just want to make certain that in my lay mind I read you correctly. You have woven the conclusion of that study into your comments concerning Mattawoman and Craney Island, is that correct? A. That's correct.

59. Alright, sir. Now just one or two final questions. In arriving at the conclusions that you have already testified to, as I understand your testimony, they were predicated upon the studies conducted by Mr. Gross and his team over these two periods of time? A. To a very substantial case that's true. Obviously I can't ignore ray past experience.

60. But in that connection are there any other studies that you know of having been conducted by anybody that would have assisted you in these conclusions? A. I know in general way of studies which were reported on by the State of Maryland biologists in the previous hearing. I know as to their existence. I have not seen—

61. They have not been made available to you?

(Mr. Rich) Objection.

A. I did not ask for them.

(Mr. Rich) Alright, the record is clear.

(T. 195) A. So that's the limit of my knowledge.

(Mr. Doyle) May I have just a second, Your Honor⁹?

(Court) Yes.

62. Dr. Lauer, you have seen and reviewed, have you not, a copy of House Bill 1192 or Chapter 792? A. I have.

63. And is it not true that that is not an absolute prohibition against all dredging in Charles County, is it? A. That's what I gathered from reading it.

(Mr. Rich) Your Honor, this is not the proper witness to testify as to statutory interpretation.

(Mr. Doyle) Well if I can follow these questions up, and if the court would prefer I will make a proffer now. The Statute is clear that navigational dredging would be permitted.

(Court) Well that's — it states that very clearly in the Act.

(Mr. Doyle) Alright, well then I will just proceed with that understanding that navigational dredging is permitted and ask Dr. Lauer—

64. Have you studied any existing charts. Doctor, to see whether any aspects of the channel which passes through Charles County is regularly subject to navigational dredging? A. Having looked at the charts it is indicated that there are (T. 196) areas as you described that are subject to channel maintenance dredging, yes.

65. Would you review this chart that I hand you now, a chart prepared by the U.S. Department of Commerce Coast and Geodetic Survey and see whether in the area of Charles County there is any portion of the channel subject to navigational dredging?

(Mr. Rich) Your Honor, if I may, almost all of the channels are dredged on certain basins. Now if Dr. Lauer has specific information about dredging operations in the channel—

(Court) Well let's see if he can read the chart to find out whether there has been any in Charles County. It may save you some argument.

(Mr. Doyle) Let me see if I can find the right sheet for you, Doctor, if you can't find it. I am not sure I can either but I will find somebody that can.

A. I am finding some but right now I don't find the land marks—

(Mr. Doyle) Let me see if I can find it for you. Pardon me just a second, Your Honor. Charts are not my forte. Your Honor. I am sorry.

66. I ask you to examine this chart here, Doctor, and also this chart right here and see whether or not that is the chart of (T. 197) the Charles County area? A. Yes.

67. Now studying that chart do you note any indications of the need or the regular navigational dredging of any portion of the channel that runs past Charles County?

(Mr. Rich) I object.

(Court) I think you had better lay a little better ground work as to what he is looking at.

(Mr. Doyle) I think, sir. I am wondering — let me just find out whether he sees any areas that indicate that there has been navigational dredging.

A. Yes. I see areas that indicate here that there has been such dredging.

68. Alright, and they lie adjacent to Charles County"?

(Court) Well I think you had better — I don't know what he is looking at.

(Mr. Doyle) I thought—

(Court) Some road map or—

(Mr. Doyle) No, I thought I identified it before. He is looking at a map prepared by the U.S. Department of Commerce, Coast and Geodetic Survey. He is looking at page E of that map which shows the Potomac River in the area of Mason's Neck and Mattawoman Creek.

(T. 198) (Court) And when was it published?

(Mr. Doyle) It was published — this is the Twelfth Edition, dated November 22, 1969, and I will introduce this, I guess as an exhibit and try to get the right parts of it marked off before we leave it here.

(Mr. Rich) Your honor, we will stipulate that parts of the channel are dredged in Charles County from time to time when it is necessary.

(Mr. Doyle) That's fine for me.

69. Then all I want to ask the Doctor is would there be any difference in the impact on the ecological balance of the Potomac River in those areas which were dredged for sand and gravel from those areas which were dredged for navigational purposes, and if so. what would those differences be?

I Mr. Rich i Your Honor, we won't stipulate to the extent of the dredging or to the time or the variables or to any other matter until we know exactly what we are talking about. Channels are dredged, to what extent, to what width⁹. Where are the locations? How close are they to shallow water⁰.

i Mr. Doyle > Well the whole inquiry here as I understand it, Your Honor, is an attempt to shed i T. 199) as much light as possible on what imbalance might occur as a result of dredging in the Potomac in Charles County. The legislature has said in effect we don't want any dredging in Charles County and the thrust and the argument of the intervenors and of the defendants has been they don't want it because of ecological considerations. Now if dredging for sand and gravel will upset the ecology I think we ought to find out what else will upset the ecology in the way of—

i Court i Well I think the point is the extent of it. I mean if there's only dredged the length of this bench it wouldn't amount to much. A half a mile might make a big difference.

¹ Mr. Doyle > That's correct.

70. Are you able to tell from this approximately how much would be dredged? A. From what I did see of it I think it had widths and lengths. I could give approximate—

71. Would you take a look at those and see if you can give us some measurement in the area you have indicated?

(Court) There may be a lot more dredging for navigation than there is for sand and gravel.

(Mr. Doyle > Yes, sir.

(T. 200) (Court) And there may not.

(Mr. Doyle¹ If this Act is upheld there will be, Your Honor. (Laughter)

A. Well there's an indication in the vicinity of Mattawoman Creek, that runs onto another page, but that, there

is an area out from the mouth of Mattawoman Creek, at least on this page, appears to be two miles long, roughly, maybe two and a half. It was dredged to 21 feet in depth and, let's see, I think approximately 200 feet wide, and this was done, it indicates it was done in June of 1963. There is another area at approximately — running from approximately mile 58 to mile point 62, about 63 or thereabouts. That's about 5 miles which was dredged to 24 foot for a width of 200 feet in November of 1963. The continuation of the line that I referred to before in the vicinity of Mattawoman Creek that's on this page appears to be some where in the order of a mile and a quarter to a mile and a half. It was dredged to, again about a 200 foot width, and I presume 21 feet as was indicated on the other page. So it would — it appears that there is about approximately ten to eleven miles length of the river, 200 feet wide that has been dredged on the charts that I am looking at,

(Mr. Rich) In 1963? A. In '63, yes.

72. Based on your studies that you conducted, under your super- (T. 201) vision do you have any expert opinion as to whether such dredging to the extent that you have described would have any impact on the ecological balance in the Potomac River adjacent to Charles County.⁰

(Mr. Rich) > Your Honor, we will request a foundation to be laid as to the knowledge of this man as to the area prior to the dredging in 1963. If memory serves me correct that channel was probably put in there in about 1870, and we are talking about a situation which exists at this time today, 1971. What the effect of that dredging was in 1963 is totally irrelevant and what the effect of a dredging that may occur twenty years from now is also irrelevant.

< Court i I think he may express an opinion as to what — dredging, if you do it today, tomorrow or six weeks ago, I don't see where its effect would be any different.

(Mr. Rich) Dredging what now? That's all I want to know. What are we dredging now?

(Court) According to this plot and his testimony it's dredging a channel which is usually in the deepest part of the river.

(Mr. Doyle > You may answer, Doctor.

(T. 202) A. O.K. As indicated this does involve maintenance dredging of the channel. There is no way of knowing what the depth was previous to the dredging. It doesn't indicate that. It just indicates the depth to which it was dredged, and the length and the width of those dimensions. It does involve in at least two of the instances and, of course, I don't know whether this would be future practice or not, but it was past practice, of spiraling the materials back into the river in the shallow water portions of the—

(Court) Well you really don't that in this case.

A. I don't. I don't know what would happen in the future. It indicates this is what was done in the past, so substantially what we are talking about is a bit the reverse of what's proposed with the current dredging in that we are going to be dredging from deep water to make it deeper, and depositing the material in shallow water to make it shallower, if that in fact is what happens in the future. That is what has happened in the past. To that extent the general short term effects of the dredging would have to be said to be similar in that there is a shallow water habitat that is being disturbed or was disturbed at that time due to the dredging and of course there was also deep water habitat that was disturbed.

(Court) Of course that is based on your assumption that that's what was done. <T. 203) A. I am talking about — assumption based on what is indicated on this chart.

(Mr. Rich^ Your Honor, I have to move to strike the testimony from the record. It's totally irrelevant to what is occurring there now.

< Court) I'll deny your motion.

73. Proceed, Doctor, if you have any more—

(Court) I think he has covered—

(Mr Doyle) O.K.

(Court) Is that plat being offered in evidence?

(Mr. Doyle) Yes, sir. I think I better had in view of the substantial amount of testimony that surrounded it, and I would like to have it marked as — I think it's my 6.

(Clerk) 6.

(Charts filed herewith marked Plaintiff's Exhibit No. 6.)

(Mr. Doyle) I have no further direct examination of this witness. Your Honor.

(Court) Well it's five o'clock. Does this complete your examination on direct?

(Mr. Doyle) Yes, sir, it does, except for the one witness I—

(Court) No, I mean of this witness.

(Mr. Doyle) Of this witness my direct. I might have some redirect but I doubt it.

(T. 204) (Court) Well this is probably a good point to recess. You don't want to — how long will your cross examination take?

< Mr. Rich) In light of the direct testimony it will probably be fairly short, Your Honor.

(Court) Would you like to complete it now?

(Mr. Rich) > If the court—

(Court) When you say short what do you mean?

(Mr. Rich) Fifteen minutes, twenty minutes at the most.

(Court) Alright, you may proceed.

CROSS EXAMINATION

By Mr. Rich:

1. Doctor Lauer, just a few questions. You made the statement that from the quantitative standpoint you didn't want to make an evaluation as to the deleterious effects of the proposed dredging or the beneficial effects, is that, correct? A. That was in respect to the metals wherein I indicated that part of my reasons for not thinking there was going to be a detrimental effect since that was based on, partially on an area consideration, that because of the redistribution of metals which appears to take place due to the dredging, that area stays the same. So in that instance I wouldn't be in a position to say that this benefit is going to be all that great if the detriment isn't going to be all that great.

2. You are not here today to offer a value judgment as to i T. 205 • whether or not this dredging should occur, are you? A. No, I am not. I don't really think that's in a professional technical person's realm to do. It's my job to describe insofar as I am able to, based on data collected, what I see the effects to be.

3. And you have made certain observations and conclusions, and one of the statements that you did make was that the impact on a smaller area would be more dramatic. The larger the area involved the less the dramatic impact in the area, is that correct? A. I think there is an areal consideration pretty like that.

4. And at that time Mr. Doyle called to your consideration the dredging of seven hundred acres in the Craney Island area. Now let me ask you this. Taking into consideration the seven hundred acres in Craney Island and the three hundred acres in Mattawoman Creek and the thousand acres in Greenway Flats area, you take all those dredging operations into consideration and you relate it to the waters in Charles County, wouldn't that make the impact more dramatic? A. Well certainly the impact is greater than if there were only one area.

5. And we are talking about today, we are talking about the dredging of those three areas, that's what we are here to discuss, is that correct? A. That's my understanding.

(T. 206) 6. So we have to look at the total picture" A. Yes.

7. Doesn't there come a time, Dr. Lauer, and I don't mean to get too esoteric, does there reach a point where you have to stop dredging out shallow areas and you have to keep a shallow water habitat?

(Mr. Doyle) If the court please, I object. I think he is getting too esoteric.

(Mr. Rich) This is an expert witness—

(Mr. Doyle) Well I don't think—

(Mr. Rich) Cross examination.

(Mr. Doyle) But it calls not for an opinion. It calls for a personal opinion with regard to when you stop doing one thing and start—

f Mr. Rich > I am asking for his expert opinion.

< Court i Well you may answer the question.

8. Does there come that point in time that you have to make that decision? A. Considering the areal relationships obviously in any situation there's a finite amount of habitats of all kinds, so obviously there is a limit to how much of that habitat that can be effected and this is relative to the total area of the system.

9. You are talking about one echo system really. Now suppose I told you that there was an application to dredge Chicamuxen, that's the next creek down from Mattawoman, and there's an i T. 207) application to dredge the creek across the way in Virginia, the name of which starts with an "O" and I forget it. Now we take all these things into consideration, the dredging of all these areas, isn't the impact more dramatic on the echo system?

(Mr. Doyle) Objection, there's no evidence of that here.

(Mr. Rich) Well I am raising the question. He is an expert witness.

(Court) Well is this a hypothetical question or—

i Mr. Rich > Yes.

(Court) Well, I think he has testified to that. If you did away with the marshlands altogether it's going to be much more dramatic effect than if you just do a little bit. I don't see where there's any point in questioning that.

10. Now let's pinpoint Mattawoman Creek area. What type of fish samples did you take in Mattawoman Creek? A. Well as was initially testified to we didn't take any fish samples during the beginning period of sampling. Subsequently the fish sampling was restricted to the observations of spawning which was not a sampling. It was an observation, and to collections of fish eggs and larvae by towing them out.

11. And you did that in the Mattawoman Creek area? (T. 208) A. In that area, yes.

12. You said that you visited the area on one day? A. That's correct.

13. What date was that? A. Gee, I don't know. As I recall it was in the earlier study—

14. The early study? A. That's correct. I probably could find it if I go back through my last year's calendar, but I don't have it with me.

15. Now what classification is Mattawoman marsh area? A. I don't understand what you mean?

16. What type of wetlands area is it classified as? A. Gee, it was most generally fresh water wetlands. Very little salinity gets up into that area so it generally would be classified as a fresh water wetland.

17. And what is the importance of it being a fresh water wetlands area? A. Well of course the most general importance is that the organisms that exist there are primarily fresh water and not marine. It has other implications. It

means that the aquatic plant growth is going to be different because it doesn't have to be salt tolerant plant growth, so it's going to be fresh water plant growth and not the brackist water loving plant growth. In general aspects as to its favorableness as habitat for water fowl there really isn't the substantial of a difference, except insofar as the the food habits of a particular (T. 209) species of duck may be directed more to the organisms found in a salt marsh than to a fresh water marsh.

18. And do you have a list of the fish that spawn in Mattawoman Creek area? A. We have — there is a list here that we have been told spawn in Mattawoman Creek, This would not — we would not represent this as being our own data because this was something we elicited by questioning, and it may not be a complete list, and I suspect the State has a more complete list than we would be able to furnish.

19. The State hasn't withheld any information from you. by the way, has it? A. Not in the second instance. In the first instance before we got into the previous hearing there was a search made of people who had information and I don't know if it was a purposeful withholding. I couldn't testify to motivation, but we were not able to determine that the fish surveys that were subsequently testified about in the April hearing existed in fact. We were a bit surprised to find that that did exist in fact. We had not been told of its existence previously, but we didn't ask for it, so I have to say no, you didn't hold anything back from us. We didn't know to ask for it either.

20. Let's go back to the type of fish in Mattawoman Creek, will you just list them quickly? A. Well, large mouth bass of course have been indicated to be (T. 2101 there. Several of the alosa species, the shads, American Shad, and presumably the alewife would get in there occasionally. Possibly the herring. No doubt the white perch gets in there some. Probably striped bass get in there from time to time. No doubt there are sun fish in there. There are pike in there we are told. There, probably there's one or another kind of catfish in there. I am sure that there

probably are, depending on what part of the creek you are talking about. No doubt if you get further upstream you are going to find creek chubs and shiners and things like that.

21. Is Mattawoman Creek unique in any way? A. Well it's a fresh water — the lower part of it is a fresh water, marsh lined fresh water creek, to the extent that those exist it's not unique. So I would have to say no, it's not unique in that sense. There are other fresh water marsh lined streams.

22. Would you classify that as an important spawning stream in the Potomac Basin? A. We don't have data, of course, to testify to that. I would not be doubtful that it is. I would be willing to imagine that it is.

23. Doesn't it also contain something, an American lotus or something which is unique to the area, a nelumbo something or other? A. That's been reported. We have heard that. To my knowledge (T. 211) we haven't seen that, but apparently it is in there.

24. And that would be unique to this one particular area if it's there? A. Well obviously it exists other places.

25. Yes, but in the State of Maryland? A. I can't testify to the whole State of Maryland. I don't know if it exists other places or not. I don't have that knowledge of the whole State.

26. Let me also go to the other point that you brought up, the question about — Mr. Lord may have mentioned in his opening statement, that we destroyed the marshes in the Greenway Flats area. Well in fact though we did deepen the shallow area along Greenway Flats, isn't that correct? A. I presume so.

27. And we deepened it to the extent of 50 foot depths, isn't that also correct? A. I think Mr. Parker testified to that.

28. And he also testified that prior to that time it was a variable from, I think it was three to eight feet, if memory serves me correct? A. I think twelve maybe.

29. But it was deepened? A. Yes.

30. Let me just throw out a statement to you so we can save some time. If you disagree with it please tell me how you disagree (T. 212) with it, is that alright? A. I guess so.

(Court) Disagree with what?

(Mr. Rich) My statement.

(Court) Oh.

31. The area proposed for dredging in Mattawoman Creek is used as a feeding, roosting and the nesting grounds. and/or nesting grounds for numerous bird species including some presently on the endangered species list. Birds making use of this area include wood ducks, mallards, blue winged teal, great blue heron, green heron, night heron, bittern, American bald eagle, osprey, turkey vulture, wilson's snipe, various terns, gulls and migratory water fowl? A. I think probably our report contains more or less substantiation than any that has been supported so far.

32. So you generally agree with that statement? A. Yes.

33. Many fish — let me give you another statement. Many fish, furry creatures, and bird species making use of this area in Mattawoman Creek are dependent, for at least part of their life cycles, on shallow waters and marsh habitat? A. I agree with that.

34. There was some testimony by your associate that there was some recreational fishing in the Mattawoman Creek area. To your knowledge is there also some commercial fishing? (T. 213) A. I don't have knowledge of that. I don't know.

35. Let me switch over to Craney Island. Is it true, it's my understanding that there are some sea ducks that feed

on the mollusc on the shallow bottom in the Craney Island area? A. There are species—I can't speak to that "directly because we haven't studied the gut contents of ducks. But there are species of ducks reported to use the area which do, as part of their food, use the mollusc. You know, it's the general known food habit of those species of ducks.

36. Those ducks, are they called diving ducks? A. Yes. they have to get down and get them, so a duck dives.

37. How deep do those ducks dive? Fifty feet? A. They can go up to, based on my recollection from the literature they can go up to forty or fifty feet.

38. But that would be somewhat unusual, wouldn't it? A. Yes, I think that's their limit.

39. It would have to be a pretty strong duck? A. Well, a super duck, iLaughter>

(Mr. Rich) I think we covered the sediment. That's about all the questions I have. Your Honor. Thank you very much.

(Court i Do you have any redirect?

REDIRECT EXAMINATION

By Mr. Doyle:

1. Just one question, Doctor. This mollusc that the super duck goes after (LaughterI is that uniquely indigenous to Craney (T. 214) Island or could you might find that thing some place else up and down the Potomac River? A. We have found it at other sites that we have sampled other than in the immediate Craney Island site. I would expect, not based on sampling data, but general knowledge of its distribution that it would be distributed primarily more in shallow water areas but also in deeper water areas for a considerable length up and down the river.

2. Dredging of the seven hundred acres that we are talking about would not mean that the diving duck would always have to go down to forty or fifty feet to get feed?

(Mr. Rich) Your Honor, I will have to object to that. I am talking about the ducks in the Craney Island area.

(Mr. Doyle) I know no—

(Court) Well, I am aware, ducks don't always stay in just one small area.

(Mr. Doyle) That's right, sir.

(Court) In fact they don't even stay there all summer.

(Mr. Doyle) I have no further redirect.

(Court) Alright, you may step down. Do you all have any further need for Dr. Lauer or may he be excused*?

(Mr. Doyle) He may be excused. Your Honor.

(T. 215) (Court) Mr. Rich, do you have—

(Mr. Rich) No, Your Honor.

(Court) Alright, Dr. Lauer, you won't have to wait until Friday. You may leave today.

(Witness) Thank you.

(Mr. Doyle) I do, if the court please, would like counsel and the court to know that if in fact I have to do it I have another expert witness standing in the wings for possible rebuttal testimony of a similar discipline as Dr. Lauer and it is for that reason I am willing to let him go. I have somebody else to back up if I need him.

(Court) Is there anything else? Well we will recess until ten o'clock tomorrow morning.

(T.216)

October 14, 1971

(Court) Let's see, when we adjourned last night, Mr. Doyle, I think we had completed the cross examination of Dr. Lauer.

(Mr. Doyle) That's correct, Your Honor. I might, prior to the time I call my next witness, Your Honor, mention the fact that Dr. Lauer had a slight change in his schedule. He will probably be in the court room for at least a portion

of the day. I wanted to explain his presence here since he indicated he might be leaving late last night. Mr. Taggart please.

ROBERT TAGGERT, a witness of lawful age, being first duly sworn, deposes and says:

(Clerk) Will you please state your full name and address. A. Robert Taggart, 2009 Friendship Lane, Falls Church, Virginia.

DIRECT EXAMINATION

By Mr. Doyle:

1. Mr. Taggart, will you state your occupation, please?
A. I am a naval architect in marine engineering.

2. And presently what business are you engaged in? A. Business is Robert Taggart, Inc., Marine research and development.

3. And in connection with that type of business do you carry out accoustical studies and tests? <T. 217) A. Yes, we do numerous studies on ships and submarines, both airborne and underwater noise.

4. And describe briefly the nature of those tests, what you look for and what you do. A. These tests are conducted primarily to find out whether the noise levels of, and it is usually navy ships, are satisfactory as far as habitability of the personnel and also with regard to detection by submarine.

5. Do you conduct any other type tests or studies in the accoustical field? A. Yes, we do.

6. Will you describe briefly some of those, the nature of them? A. We have conducted several tests for clients who are concerned with noise levels in apartment house, townhouses, sawmills, industrial plants and so on.

7. And in conducting these tests do you use specialized equipment? A. Yes, we do.

8. Alright, now will you state, please, your educational background? A. I graduated from Webb Institute of Naval Architecture in 1942, degree of naval architect and marine engineer.

9. And subsequent to that what did you do? A. Subsequent to that I have been engaged in ship research and development, for some five years I was head of the acoustics division at the Bureau of — Navy Bureau of Ships.

10. And in connection with your activities with the Navy Bureau of (T. 218) Ships what in the accoustical field did you do during that period? A. Conducted the navy programs in ship noise control.

11. Alright, go ahead, any other relevant accoustical background? A. Yes, after leaving the Navy I was with Reed Research, Incorporated in Washington as technical administrator where we also had a number of projects on noise control of various sorts, and since 1958 I have operated Robert Taggart, Incorporated and we have probably done, I would guess on the order of a hundred projects related to ship noise and other types of noise control.

12. Have you ever qualified in any courts as an expert in the accoustical field? A. Yes, I have.

13. What courts have you qualified in? A. The Charles County Court in Maryland in connection with a sawmill noise case. Fairfax County Court in connection with a swimming pool noise situation.

14. That's Virginia? A. Yes.

15. Alright, now did you at some period in time make an accoustical study in connection with the dredging operation at the request of the Potomac Sand and Gravel Company? A. Yes, I did.

16. When was that study conducted, sir? (T. 219) A. That was conducted in September, 1967.

17. And will you briefly describe the nature of the study, the tests you ran and what your results were? A. The—

(Court) Excuse me. Do you have any questions as to his qualifications?

(Mr. Richi No, Your Honor.

ICourt i You may proceed.

18. You may proceed, Mr. Taggart. A. These tests were conducted on the two dredges owned by Potomac Sand and Gravel in a typical dredging situation. Measurements were made at a distance of 250 yards from the pair of dredges with one operating and then the other operating and then both operating in their customary operational mode. There were also ambient noise surveys made in the area where they were planning to do some dredging at a later date. These were made at the St. Charles Church.

19. And was this in the vicinity of the Mattawoman Creek? A. Yes, it was.

20. When you say ambient surveys would you please describe what that term means? A. This is to get a measure of the noise that exists in the air in a typical area, that is to get its level and its spectrum.

21. Without regard to any particular source, the noise from all sources? (T. 220) A. That's correct.

22. I see. Alright, now what type of tests did you conduct in making these surveys? A. These were — we used a sound level meter feeding into a third octave band analyzer which gives the noise level in decibels at a series of frequencies to get the entire frequency coverage of the noise.

23. Is that equipment recognized equipment? A. Yes, this is standard approved by the American Standards Association.

24. Alright, sir. Now what type of tests did you conduct? A. Measurements were made, as I say 250 yards from the pair of dredges and the sound levels and their spectra were obtained with one dredge operating, and with the other dredge operating, and with both dredges operating, and then these were plotted against the ambient noise existing

in that particular area with no dredges operating. In other words, getting a background in the situ measurement.

25. Alright, now you may refer to your notes if you wish. Will you give the various readings that you — that resulted from these tests and would you explain — translate from a technical into lay language what those readings mean"?

(Mr. Rich) Your Honor, may I just ask at this point where these tests were made. I missed that. The test that he is speaking of right (T. 221) now.

26. Would you repeat please, where you took the tests at the two sites? A. The two dredges were operating off Gunston Cove in the Potomac River when the measurements were made.

27. And how far were you from the dredges when they were made? A. 250 yards from the dredges and the dredges were about 800 yards from the Maryland shore.

28. Alright, now you said you also made the ambient tests in the vicinity of Mattawoman Creek. Would you indicate where each of those soundings were taken? A. The ambient readings were taken on the grounds of the St. Charles Catholic Church about 200 yards southeast of Maryland Route 210.

29. And how far from the proposed dredging site would that have been? A. This was about twelve hundred to fifteen hundred yards from the proposed site.

30. Would you please give the results of those tests? A. If I may I will just refer to the — what we call the wide band/or overall levels which are indicative of the total operation. The spectrum levels are of interest in interpreting it but the wide band levels I think give a reasonable--

31. In lay language would that mean the total sound that you A. It's the total sound, yes.

(T. 222) 32. Go ahead. A. Now with no dredges operating, this is off Gunston Cove, there are an average level of 56 decibels, with a peak level of 78 decibels.

33. What is a decibel? A. A decibel is actually a logarithm of the relationship of a sound pressure to a base pressure. There are many ways of calculating decibels. This happens to be a standard method and they can be related to other noises.

34. Is it fair to say that as the decibel reading increases the noise level has risen? A. That's correct, yes.

35. Go ahead. A. With the dredges not operating there was a 56 decibel level with peaks up to 78 decibels.

36. Now is there any way that you can relate the reading of 56 and 78 to sounds which we in the court room might be accustomed to or could relate to? A. Yes. The sound level in this room with nobody speaking would be probably on the order of about 50 decibels, I would guess just from the situation here now. With the voices coming through at a distance from my mouth of about two feet it would be something on the order of about 70 decibels. In other words, the noise drops off very rapidly from the source going on out. In fact it drops about 6 decibels every time (T. 223) you double the distance from the source.

37. May I conclude from that that if I were standing in the rear of the court room the measurement of 70 decibels at the point you indicated would be somewhat less back there? A. That's right, yes.

38. And as you indicated it would be markedly less as the distance increases? A. That's correct.

39. Alright, proceed. A. With the dredge. Arlington, operating a measurement of 63 decibels average was obtained with a peak level of 72 decibels.

40. Now can you just explain please what the peak level reading means, what does that indicate? A. Noise, of course, is a variable function with time. In other words, when a person is speaking, for example, their voice raises up and down, the same thing is true when machinery is operating. There is a variation in level at times. In any general area, for example, if there is any truck traffic on

a road going by or any other form of traffic the noise level will peak up and down as the vehicle goes by.

41. So that the first reading you are giving us here would be the average there of the variables. The second is the peak. A. The maximum that was measured, yes.

42. Alright, sir, go ahead. A. With the other dredge. No. 8, operating an average level of (T. 224) 65 decibels—

(Court) That's with both operating? A. No, this is with the other one. No. 8 operating and Arlington shut down at this point.

(Court) With a peak of what? A. 65 with a peak of 73. Then with both dredges operating an average level of 62 with a peak of 72. Now let me mention right here that you would normally expect with — when the two dredges were operating if they have these same average levels that the sum of the two would be greater by about 3 decibels. However, as these noise measurements were made there might have been other situations that were causing this level and not the dredge itself necessarily, because you will note with both dredges operating the level was actually lower than when they were operating individually. Then the ambient level on the grounds of the St. Charles Catholic Church was 53 decibels with a peak level of 80 decibels.

t Court) Would you mind repeating that? A. 53 decibels average. Peak 80 decibels.

43. Were you able to determine why you got a peak that seemed to be higher than the others? A. Yes, that was a truck accelerating on the highway.

44. A truck accelerating on the highway, would you know where it was? A. It was going by on Maryland highway 210, and let's see, this (T. 225) measurement site was about 200 yards from the truck. In other words, this is about equivalent to the distance that the measurements were made from the barges — from the dredges earlier.

45. Now did you conduct any other tests in connection with this study? A. Basically these are the tests. They were analyzed in detail to get their complete spectrum levels and spectrum levels were reported in the total report.

46. Alright, now based on the tests and the studies that you made and based on your experience in the accoustical field, can you state an opinion concerning the noise level of the dredging operation conducted by Potomac Sand and Gravel?

(Mr. Rich) Your Honor, I think it first has to be established as to — exactly what dredge is going to be used in what area, that these are the same dredges that were used at that time are going to be used now, if this man is familiar with the ambient sound levels, particularly in the Mattawoman Creek area. He stated that distance is a very important factor here. He also stated he took his ambient level at St. Charles Church which is right close to the highway going past there, and I think the question is fine. This man (T. 226) is a recognized expert, but I think it should be limited to the precise areas that they propose to dredge in.

(Mr. Doyle) I think those are excellent subjects for cross examination, Your Honor. I don't think they disqualify this witness from stating his expert opinion on the study he made. He is not trying to say that other dredges will equal these studies. He is just trying to say what his opinion is with regard to the noise levels that these two dredges generated under the conditions he has described.

(Mr. Rich) It's irrelevant as to the subject of this case, totally irrelevant.

(Court) What do you mean, the two dredges?

< Mr. Rich) Yes, he has not established that these are the same two dredges. It has not been established the areas where they propose to dredge. We'll stipulate to the decibel findings but it has to be related to the facts of this case.

(Mr. Doyle) If the court please, Mr. Taggart very clearly indicated at the outset of his testimony he was employed by Potomac. (T. 227) I doubt that having employed him they would take their dredges out and put new ones in.

(Court) I don't think there's a question about the dredges. At least in his testimony he said, as pointed out, said he was retained by Potomac Sand and Gravel to make these sound tests on their dredges. Now I don't know why he would go out and make them on some other dredges.

(Mr. Rich) Your Honor, I assume that they were Potomac's dredges at that time. I agree with that. I want to know if these are the same dredges that they propose to use in the new operation, the subject of this suit.

(Court) Well he wouldn't know that. I don't think you—

(Mr. Rich) Well unless they are the same dredges, Your Honor, I think the sounds emanating from those dredges are irrelevant to this case.

(Court) I don't follow you on that. I don't know why they would sell all the dredges and get new ones in.

(Mr. Rich) But they did testify already, Mr. Green testified about the replacement of dredges—

(Court) They were worn out but these, they said they (T. 228) were modern steel new ones, or new five or six years ago, whenever it was, in the 60's.

(Mr. Rich) This man's tests were made in '67, Your Honor, that's four years ago.

(Court) Well dredges last a long time.

(Mr. Rich) Well I think that has to be established.

(Court) Well I don't follow you on that.

(Mr. Doyle) Nor do I, Your Honor. All this man — he can certainly cross examine, isn't it a fact and—

(Court) I think you should clear up a little more as to how close to these tracts, or Mattawoman seems to be the

main one you are interested in, and Craney Island, in relation to those two where these tests were made.

i Mr. Doyle) Alright.

47. Mr. Taggart, look at your records again and as I understand it, the tests when you made the readings in connection with the dredges were taken where? A. These were taken on the dredges immediately opposite Gunston Cove, approximately 800 yards from the Maryland shore.

48. Alright, now how far was the sounding equipment from— A. The sound equipment was about 250 yards from each of the dredges.

49. Alright, now were those dredges in normal operation at that (T. 229) time"? A. To the best of my knowledge. yes. They were working.

50. Then you went — after you obtained those readings — let me ask you this. Would it make any difference, insofar as the level and the test results are concerned would it make any difference whether the dredges were operating one place or another assuming you took your readings from the same distance from them each time? A. No, it should make no difference.

51. Alright, now you took a second set of readings where? A. At the St. Charles Catholic Church.

52. And in connection with the proposed dredging site in Mattawoman Creek how far was that reading site? A. Approximately twelve hundred to fifteen hundred yards from the proposed dredging site, and this was about 200 yards from the highway.

53. And would you explain how you — is it possible for you as an expert to relate the dredging sounds to the site at which you took the ambient noise level?

(Mr. Rich) The question is not possibility. Your Honor,
i Court) Well let him answer the question first.

A. Yes, we could estimate the, assuming the dredges in the new site, using the ambient level that we measured at

St. Charles Catholic Church, and calculate the level that those dredges (T. 230) would be — at which they would be heard at that church.

54. By using the calculations that you took at the dredging site itself? A. Yes.

(Mr. Doyle) I think he ought to be permitted to state his opinion, if the court please.

(Mr. Rich) Your Honor, he has not related the St. Charles Church to the Mattawoman Creek area. He stated twelve hundred yards which is, as I remember it's 1760 yards in a mile. That's some distance from the area. Your Honor.

(Mr. Doyle) Well certainly, sir, he can't move the Catholic Church any closer to Mattawoman Creek than it is.

(Court) I will overrule your objection. He said, as I understand his testimony was, that where ever these tests were made he could relate it to Mattawoman. It wouldn't make any difference as to the sound or the — is that correct? A. That's correct, sir, yes.

(Court) You could get the same results as if the tests had been made in Mattawoman Creek. A. That's correct. The only thing we would not know would be the (T. 231) ambient level of noise directly in the creek itself, let's say, but there's no reason why we could not compute the noise of these dredges at any distance from the dredges based on the readings gotten here and the distance at which they were taken.

55. My question was, based on your studies and your experience can you state an opinion concerning the noise level of this dredging operation? A. Yes, it's my opinion that this dredging operation would not significantly raise the ambient level in this general area.

56. Now can you state some comparison, I would like, when you made the tests on the dredges I take it that the noise levels in the sense they were emanating from the dredges were constant? A. Yes, reasonably constant.

57. Alright, now can you compare that, the constant type of noise level that you — that came from the dredge to one that is a recurring or receding type of noise insofar as its decibel level is concerned and the effects of that kind of noise on a listener? A. Yes, to a listener he can detect or notice or be annoyed by, I would say, a noise that is varying in either level or frequency considerably more than he is by a noise of constant level.

58. And finally, sir, is it not a fact that the question of whether noise is or is not annoying is a highly subjective matter? <T. 232 i A. Very highly subjective, yes.

(Mr. Doyle) Witness with you. Mr. Rich.

CROSS EXAMINATION

By Mr. Rich:

1. Sir, you say that the dredges were operating at the time that you took these tests, some of the times that you took these tests⁹. A. Right.

2. Do you know how much, whether the washing operation was in process? A. No, we were not given the information on what operations were going on. The Potomac Sand and Gravel was operating these dredges in their, what they considered to be their normal operating load and this is all the information we have.

3. And how do you know it was considered to be their normal mode of operation? A. Because we were requested to make the measurements under whatever mode of operation they decided upon, so whatever that mode was someone else would have to—

4. They knew you were making the tests at the time that— A. Oh, yes, they were alternating between dredges and so on.

5. Now if I may refer to this chart. I am not that familiar with the area. One of the points of contention in this case is of course the Mattawoman Creek area, and you stated that you took the ambient level at the church, the Catholic Church? A. Right.

(T. 233) 6. Could you come up to this map and show me in a fashion where that church is? A. I doubt that I could, I am not completely familiar with the area and this was taken quite some time ago. In fact our, the request was to make the measurements at this particular location.

7. Did you take any ambient measurements in Matta-woman Creek itself? A. No, we did not.

8. Isn't it true to some extent that there is a resounding type of principle, that if an area has a lot of trees or other type of obstacles that noise will resound off of it? A. Yes, noise does reflect.

9. And the noise level might be — if you would compare a noise level in an open field and an area where there is growth or trees or something for it to resound off of or reflect off of wouldn't the noise level be greater in that area which was somewhat confined by the growth? A. Yes, the noise level — let me relate this, perhaps to a room as opposed to outside.

10. Alright. A. You can get a reverberant level within a room that will be approximately, that is with a completely reflective room such as this is, some three decibels higher than the source level, let's say.

(T. 234) 11. The answer to that question is that because of the problem of reflection as you put it, the noise level would be higher in an area of this nature? A. The noise level can be higher. I do not believe that this would be the case with trees.

12. Well trees or growth, have you visited the Matta-woman Creek area? A. No, I have not.

13. Where they propose to dredge? A. No.

14. You don't know what type of growth is there? A. No.

15. Have you seen the Craney Island area where the proposed dredging is to take place? A. No, I have not.

16. Have you taken any ambient sound levels in the Craney Island area? A. No.

17. And where was this dredging occurring when you did take the levels⁹? I know you have answered the question but I have forgotten the answer. A. O.K. This was off Gunston Cove about. I believe, it was 800 yards from the Maryland shore.

18. Can you pinpoint that on the map for me? A. That would have been about in the location around here.

(T. 235 i 19. In the middle of the river? A. I would judge it should be out of the channel on the Maryland side of the channel.

20. Do you know the noise level that a osprey or a bald eagle will not be offended at, or the tolerance level for noise of the bald eagle⁰? That's a better question. A. No. I do not.

21. Do you have at your hand any figures to indicate noise levels of tolerance, or tolerance levels with respect to noise of the birds in this area? A. No, I do not.

i Mr. Lord) Your Honor, could we just have one second, please?

!Court* Yes.

22. You say that you took readings off of the dredge 250 yards? A. Correct.

23. That was out near the middle of the river near Gunston Cove? A. Yes.

24. Do you know how far the fastland will be from the dredge in the Mattawoman Creek area when it is dredging there? A. No, I don't.

25. Did you take any readings inside of 250 yards? A. No, I think they were all taken that one distance.

26. Can you explain to me why you just took that one distance? A. Actually the chain in level with distance in a completely open (T. 236) area can be calculated quite readily and it is desirable to make them at a fixed distance where the distance is known, and then the readings can

then be corrected to any other distance, and it was desirable in this case to get a spot that was equal distance from the two dredges.

27. You have spoken of a number of decibel readings 250 yards. For instance, you stated that the levels would range from the Arlington between 63 and 72. What would be the figure for say 100 yards? A. 100 yards would be about 6 decibels higher than that.

28. So the range would be for the record between 69 and 78? A. If the noise that was measured was coming from the dredge.

29. Right, I am assuming that. Let's come in another 50 yards what would be the level from a 50 yard ran^e. A. It would be another 6 decibels.

30. Another 6 decibels, and I assume this is, that it's going to double each time we come in half the distance, is that correct? A. Roughly speaking until you get in very close then it no longer applies. This is what we call a far field application. In other words, within a yard of it it wouldn't be up to 24 or 30 decibels higher certainly.

31. How close did you say you were to that road⁹. The Catholic church. A. 200 yards.

32. 200 yards from the road, and what amount of decibels — you say there was a great variance because of a truck coming by? <T. 237> A. Yes.

33. What exactly did that truck cause in the amount of decibels? A. 80.

34. 80, from what? A. The average was around 53.

35. So that truck coming by ran it up from 53 to 80°. A. True.

36. And that was how far away? A. That was 200 yards.

37. And you were approximately 1200 yards away from Mattawoman Creek? A. Right.

38. Do you know if that 1200 yards is from the proposed dredging area or just Mattawoman Creek at its closest point? A. As far as I know it's the closest point of the creek.

39. You don't know where it is? A. No.

40. You don't know if it's the proposed dredging area or otherwise? A. I don't know where the proposed dredging area is.

i Mr. Rich) Thank you.

REDIRECT EXAMINATION

By Mr. Doyle:

1. Mr. Taggart, you indicated that certain substances are reflective of sound. Is it not true, sir, that some other substances may absorb sound? A. Yes, sir.

(T. 238) 2. How would you characterize foliage and trees and bushes and that type of growth? A. Foliage is generally high absorbative of sound. In other words, it would tend to reduce the levels in such an area.

(Mr. Doyle) Thank you. sir. That's all.

RECROSS EXAMINATION

By Mr. Rich:

1. You didn't complete — how about trees? A. Trees and foliage, yes.

I Mr. Rich) Thank you.

(Mr. Doyle) If the court please, that is the plaintiff's case with the exception of some proffered exhibits I wish to make at this time and I must confess I am not certain that what I am about to do, at least except for House Bill 1192 which was introduced in connection with the motion, I don't know that it is in the evidence yet in this case and I think I ought to put it there.

(House Bill 1192 filed herewith marked Plaintiff's Exhibit No. 7.)

(Mr. Doyle) The other proffers of exhibits I'll make, I am not sure quite follow the correct procedure, but inasmuch as I think I have to protect the record concerning the ruling on the motion I wish at this time to offer as (T. 239) exhibits House Bill 1271 and five representative bills that were introduced into the committee on environmental matters—

(Court) You mean in the trial, not for the purpose of the motion.

(Mr. Doyle) The trouble is they weren't introduced at the time of the motion. I want to get them in the record in some proper fashion so in the event these matters do become again relevant I'll have what I need to make the arguments that are necessary.

(Court) Well as I, from my notes, on the motion you introduced House Bill 1192 and House Bill 1271.

(Mr. Doyle) 1271, that's correct, sir. Now what I would like to do just to show representative nature of the type of bills that are submitted to environmental matters, I would like to offer these five bills as samples of that fact for purposes of the motion. I don't mean to put it in the trial of the case, but I do — would like to have it in connection with the motion in the event that becomes again relevant.

(Court) Oh, that's to the motion.

(T. 240) (Mr. Doyle) Yes, sir, the five bills.

(Court) Well you have two of them, is that correct?

(Mr. Doyle) I have, 1192 and 1271 are in.

(Court) Are in?

(Mr. Doyle) Yes, sir, now this is just five bills I picked out at random of bills that were submitted to the Committee on Environmental Matters because the argument

has been made that that committee only gets environmental type bills and I want to, perhaps if I have to make the argument that that's not quite so. I'll offer these in that context solely.

i Court) Well suppose we made that 3a thru e.

(Mr. Rich) Your Honor, we have no objection to that.

(Court) They were referred to in the argument.

(Mr. Rich) The bills speak for themselves.

(Mr. Doyle) Then in the case itself we have offered House Bill 1192.

(Court) And that's exhibit 7.

(Five Bills filed herewith marked Plaintiff's Exhibit No. 3a thru 3e on Motion.)

(Mr. Doyle) And with that the plaintiff rests, if the court pleases.

(Court) That was only the one Bill 1192 in the case itself.

(T. 241) (Mr. Doyle) That's right.

(Court) Mr. Lord or Mr. Rich, are you gentlemen—

(Mr. Rich) Your Honor, we have a small amount of slides that we would like to put on with the man that took them first and then they would be interpreted some what. We would do it very quickly, Your Honor, if that would be alright with the court. Mr. Wheeler, will you set up the slides. Mr. Robey, will you take the stand.

(T. 242) CLARENCE J. ROBEY, a witness of lawful age, being first duly sworn, deposes and says:

(Clerk) Will you please state your name and address?
A. Clarence Joseph Robey, 5624 Whitfield Chapel Road, Lanham, Maryland.

DIRECT EXAMINATION

By Mr. Rich:

1. Mr. Robey, by whom are you employed? A. Maryland Marine Police.

2. And in what capacity, sir? A. Marine inspector 3.

3. And—

(Court) Marine inspector 3? A. Yes, sir.

4. In that capacity, sir, what functions do you perform? A. My primary duty is as pilot and photographer for the marine police.

5. Mr. Robey, I asked you at some point, about a week and half ago to take some aerial photographs, is that correct? A. Yes, sir.

6. If you would just briefly inform the court as to your experience in taking aerial photographs? A. Well I started taking them personally in 1946 and I have been off and on since then seven and a half years with the marine police I have been taking aerial photographs. I am a retired naval lieutenant commander.

(T. 243> (Mr. Doyle) I am willing, if the court please, to concede the gentleman's capabilities in that area.

(Mr. Rich) Alright.

7. Mr. Robey, let's look on the slides rather quickly and I just want you to identify the areas that you have taken. A. Yes.

(Court) Would you want the lights out?

(Mr. Rich) Yes, please. I think for the purpose of the record we could call these slides exhibit C 1, 2, 3, 4, right now so it would be faster that way.

(Slides filed herewith marked Defendant's Exhibit No. C-1 thru 9.)

8. Mr. Robey, state the date and the time of day and the type of plane and the type of camera you used in taking these pictures. A. The camera was a Retina Reflex. The film was Kodachrome X. The aircraft was a super cub 150. The day was October 6, 1971 as is indicated on the slides themselves, signed by me. and it was approximately between one and two o'clock when the pictures were taken.

9. Can you identify that area? A. That is Mattawoman Creek.

10. Looking in what direction? (T. 2441 A. Looking, approximately it would be southwest.

11. Looking approximately southwest, and how far from the mouth of the creek is it, approximately? A. Approximately from the mouth of Mattawoman Creek to where that would be would be approximately two miles.

12. Let's go on.

(Mr. Doyle) Is it possible to just ask a question on these pictures while we have the picture here, Your Honor?

(Court) Do you have any objection?

(Mr. Rich) No, Your Honor.

(Mr. Doyle) You say looking in the direction that you are looking there it's two miles from the mouth to the point where you took the picture? A. Approximately according to the chart there.

(Mr. Doyle) Can you estimate how much more creek there was beyond the picture site? A. I am referring to a hydrographic chart 560. I would say approximately a mile.

(Mr. Doyle) So your testimony is the entire creek is about three miles long and you were about two-thirds up the creek when you took the picture? A. On that picture.

(Mr. Doyle) Alright, thank you.

(T. 245) 13. Let's switch to the second one. What does that show? A. That shows an area of the creek as indi-

cated by you for me to take the picture of intended dredging.

14. Let's go on. I just want to get through these rapidly. What does that show? A. That is the other portion of the creek. That would be northeast.

(Court) You said the other portion. You mean the mile that is not shown on the first slide? A. Yes, sir.

15. Let's go on. A. That is a portion of the intended dredging area.

16. Go on. What's that show? A. That shows the other mile of the total of what I consider to be a three mile area.

17. You saying that takes in more area— A. Yes, sir.

18. Than the original — than picture No. 1? A. Yes.

19. Let's go on to the next picture. A. Intended dredging area.

20. Let's go on. A. That is a picture of the dredge on Greenway Flats.

21. What is the difference in color of the water in that picture?

(Mr. Doyle) Objection. The witness isn't qualified (T. 246) as a water expert. I don't know how at whatever height that airplane he could possibly testify to the color.

(Mr. Rich) I will qualify him if you want.

(Court) Well I think you should if you want to ask him questions.

22. Alright, let's go back into your qualifications with regard to taking photographs—

(Mr. Doyle) Not the photographs. I am not objecting to his qualifications on the photographs. I am objecting to his qualifications to testify why there seems to be different colored water below the airplane.

(Mr. Rich) I will go into that. This man, for the court's record I will proffer this. This man is a pilot who spots oil

spills, fish kills, change in color of all type of water areas in the State. He is charge of all the airplanes the State has. He is — precision aerial drops and as a seaman's eye reports to agencies on aerial sightings of red tide, algae, siltation, pollution, potential oil spills, fish mortality and photographs the same. He estimates the area size. He estimates the number of fish mortality per (T. 247) acre of water since May of 1965. He gives speeches on what a pilot should look for and report to help the environment. He has spoken at the Kodak seminar on law enforcement photography. He is going through the F.B.I, basic and advanced courses on photography. He is qualified to teach police photography by the Maryland Police Training Commission. He attended a naval school of justice. He is a public information officer for the United States Navy, eleven years. He is a public information officer of Maryland Marine Police.

1 Mr. Doyle t If I may state the objection, if the court please. He is neither a hydrologist, a biologist, a botanist, or any other specialty which would enable him from some height to testify definitively why the water seems to be differently colored. This is not an oil spill. You can ask him that. Is that an oil spill, but I don't think he is qualified to testify as to why that water is a different color.

(Mr. Rich) Your Honor, this man — his job is spotting changes in color of water—

(T. 248) (Court) Well it's easy to tell the difference in the color, but you have got to be able to tell what causes it or what it is.

23. Alright, are you familiar with dredging operations?
A. Yes, sir.

24. And what is the basis of your familiarity? A. Having spotted — having had to go up off Patapsco when they were doing some dredging up there, taking aerial photographs of flume coming out of the dredge at Patapsco harbor. They were dredging at the time — I think they were dredging channel at the time but it was causing water disturbance.

25. And is this part of your duty at the Department of Natural Resources? A. Yes, sir.

26. Alright, now what causes the difference in color in the photograph?

(Mr. Doyle) Objection. If the — If I understand the witness's testimony he looks for differences. He looks for conditions that exist and reports them to others who eventually then investigate the cause. Now I'll concede that you can see some differences in water there, but I don't think this witness is the one to testify what the difference is and what caused it.

(Court) It's obvious there is a difference in color (T. 249) but it's a question of whether he is qualified to say what's causing it or what it is is something else.

(Mr. Rich) Well I have read the man's qualifications. Your Honor.

(Court) Well you have read what he is supposed to do but I don't know whether he is qualified to do it. He is supposed to report algae and he is supposed—

(Mr. Rich) Red tide.

(Court) Yes, but that doesn't say he is qualified to do it.

27. Alright, was that dredge in operation when you flew over? A. Yes, sir.

28. And did you visualize the operation from the air? A. Yes, sir.

29. Alright, did you visualize if a flume was coming out of that operation? A. Yes, sir.

30. And is that the flume yellow area? A. Yes, sir.

(Mr. Doyle) Objection.

(Court) Well I think he is qualified to say if that was what was dumping into the water, not what it is.

(T. 250) (Mr. Doyle) Just to be consistent I will move to strike all the testimony with regard to that, Your Honor.

(Court) I will deny your motion.

31. Let's go on to the next picture. What is that area? A. That is Craney Island and the marsh to the southwest.

32. Craney Island is that little speck out in the water?⁰
A. Yes.

(Court) Well wait a minute. Where is Craney Island. They said it was two trees there sticking out of the water.
A. This is Craney Island right here.

(Court i Alright.

33. Next slide. A. That is another shot of Craney Island.

34. The next slide. Oh, that's it.

(Mr. Rich i I will leave this man on the stand if—

i Mr. Doyle > I have no cross examination.

i Court i You have any questions⁰

i Mr. Doyle i No, sir.

(Court i Step down. Are they all the slides you have to show?⁹

i Mr. Rich i Yes, sir. Now I am going to have Mr. Wheeler just relate himself to the Mattawoman Creek area and he will be able to identify (T. 251) those areas that—

* Court) I just want to know if you want it removed or if the next witness will need it?

f Mr. Rich) Right. Mr. Wheeler.

(Court I How many slides were there?

i Mr. Rich > Nine.

RICHARD H. WHEELER, a witness of lawful age, being first duly sworn, deposes and says:

(Clerk) Would you please state your name and address?
A. Richard H. Wheeler, 1301 Poplar Street, Annapolis, Maryland.

DIRECT EXAMINATION

By Mr. Rich:

1. Mr. Wheeler, by whom are you employed? A. State of Maryland, Department of Chesapeake Bay Affairs.

2. In what capacity are you employed? A. As a biologist.

3. And in that capacity with the State what functions do you serve? A. I serve in estimating environmental impact of various applications to all their wetlands, and I serve as a chief wetland coordinator and interpreter of wetland areas and private and State wetland mapping.

4. And how long have you done this? A. For thirteen months.

5. And what is your academic background? (T. 2521) A. I have a bachelor of science in biology from Towson State College.

6. Are you familiar with this Mattawoman Creek area?⁹ A. Yes, sir, I am.

(Mr. Doyle) Your Honor, may I ask the same question asked of me yesterday. Is Mr. Rich going to qualify this man—

(Mr. Rich) No, no. This man is only going to speak to the Mattawoman Creek pictures and what he has seen.

(Mr. Doyle) O.K.

7. You say you are familiar with the Mattawoman Creek area? A. Yes, sir, I am.

8. Now under what circumstances have you gained this familiarity? A. From four site visits, two of which I personally made. Two of which my field crew made. One was in April of 1971. Two were in August of 1971, and one was in the first part of this month. The purpose of the visit was to analyze vegetative relationships to period of inundation, or that is to tide, and to document vegetative communities that we felt that we had analyzed from remote

sensing techniques from various photogrammetric exercises in remote sensing.

9. You say you have a field crew.' A. Yes.

10. Do they work under your supervision⁷. 'T. 253 t A. Yes.

11. What data was collected during these field investigations? A. Species composition generally. This is vascular plant composition and some of the wooded swamp area also, but generally vascular plant composition of this particular marsh, and the relationship of these plants to other plants, the communal relationships, and the relationship of these communities to various nutrient factors, and in relationship of nutrient factors to tide factors—

12. Mr. Wheeler, I don't want to cut you short but you are getting a little bit too technical for me. In summation, rather than go back to each piece of information that was collected, could you summarize the type of plant growth in the area? I seek now — I want to limit my questions to you directly to the Mattawoman Creek area where the proposed dredging is to take place. A. Yes. Rather than—

(Mr. Doyle) May I — I think I have got to object. I didn't hear the witness indicate he was familiar with just the dredging area and my impression so far is that he made a general inspection of Mattawoman Creek, not just one limited to the dredging area.

'Mr. Rich i Well if you want me to go to the entire Mattawoman Creek I will be glad to—

(T. 254) (Mr. Doyle) Well I don't want — where you go. I just got to hold you to what this witness can testify to.

13. Alright, are you familiar with the dredging area? A. Yes, sir, I am.

14. Have you listened to the testimony of Mr. Parker and Dr. Lauer with regard to the dredging area? A. Yes, sir.

15. Have you reviewed the slides presented here? A. Yes, sir.

(Mr. Doyle) If the court please, while I am on my feet on a completely unrelated matter, may Mr. Taggart leave, the audio specialist?

(Mr. Rich) Yes.

(Court) Yes, he may be excused.

16. I want you to speak to the proposed dredging area and I want you to, in summary fashion, state the findings of the field investigations made under your supervision.⁰
A. Well the dredging areas as outlined on this map provided me from Potomac Sand and Gravel Company, via you, Mr. Rich, showed that dredging area No. 1—

17. Is that the same as exhibit B? A. Yes, this is the same exhibit, a copy of that exhibit. Area No. 1, the part below mean high water its vegetative character is yellow water lily, also called spatterdock. Area No.—

(T. 255) 18. Excuse me. Would it help you to have the slides on while you speak? A. It may, yes.

19. Do you have them in the right order, Mr. Wheeler? A. Yes, I think I can relate them back and forth. Now this is a panoramic view, of course, of the area. The area I am speaking of below mean high water in dredge area No. 1, Your Honor, is the area — perhaps I should get — is there a pointer here?

(Court) Yes, there's one behind the map on the stand.

A. This area right in here, this is the yellow water lily. This is the part that you can see coming out into the — like that. The second area — this is an oblique picture so I must qualify these general lines. The second area — by the way this is the area of original dredge operation. I presume, I think as was said yesterday by Potomac Sand and Gravel. The second area as related to that generally encompasses this part, coming back like this and out here which is kind of an oval shape.

20. For the purpose of the record you are speaking to the middle of the slide? A. Yes, I am speaking to the middle

of the slide actually southwest, south and north of the deposit area which I believe would be at this point of reference for the future slide is this light pile of sand and gravel right here. The chief vegetative (T. 256) character of this is the broad leaf cattails and a few smartweeds, and there also is some wild rice in this area, and also a unique species in this area too. *Aneilema Keisak*, it's hardly found in Maryland, and we have already found it in two different places in Maryland marshes. It's northern range is listed for Virginia so it was a fairly significant find, and that was located right in here. This is another unique species besides the American lotus. Also we can pick up parts of—

21. Well if you want to get more particular you can switch the slides. A. Well I think — thank you, Mr. Rich. This is also a yellow water lily, spatterdock it's also called. This is the dredge area No. 3 which extends approximately, on this oblique, approximately out in this area here. But you can see, Your Honor, there's a dip, there's two dips in here. Dredge area No. 1 related to the first dip, the most southwest dip, and then dredge area No. 3 relates to the second dip which is northwest, northeast dip, east northeast dip here, the one closer. Dredge area No. 6 is also visible. That was hatch-marked on this thing. I don't know whether it was different, but also the back parts of dredge No. 1 and No. 3 have hatch-marks through them. Mr. Rich, I don't know, Your Honor, I don't know if that has any significance or not. Dredge area No. 6 is approximately in this area here. Dredge area No. 5 (T. 257) is out in here at the right center in this area. That's the right center of the picture, and dredge area No. 4 is just off this picture I believe and would come in this area right in here, sir.

i Court) Well where that white pile of sand is— A. Yes, sir.

i Court) —how deep is the water there? A. I believe — I am not sure. We didn't take soundings. I believe I heard testimony yesterday as to fifty feet—

'Court) No, not in the hole itself, but I mean in the creek. A. Oh, out in this area here. This is what is called

type 13 wetlands by the Federal Fish and Wildlife Service, sir, and that means that the tide in that area would vary from as low as maybe a foot to three feet, depending on whether or not we were on a spring flood tide or whether we were on an average tide, but generally since, with this yellow water lily I would estimate probably an average depth of two and a half feet. This area here is partially submerged. Some of this is only subject to spring flood tide. Again the same area, Your Honor, this is again the dredge area in the center, it's a previously dredged area. This is a proposed dredge area here and you get a better view of it. Proposed dredge area No. 2, you can actually see on this particular picture considerable amounts of water that come in and permeate this marsh, but this is dredge (T. 258) area No. 2 again, an excellent picture. It comes out this way a little further, although generally it's in this area, and right here you can see a good portion of area No. 3 coming out here and also part of area No. 1. I presume, in this corner here.

22. You will have to speak to the corners and the areas and the slide, Mr. Wheeler. A. I am sorry. Mr. Rich. Dredge area No. 2 is in the middle of this slide, to the middle and left of this slide. Dredge area No. 1 is to the bottom right, and Dredge area No. 3 is to the middle right. Again another panoramic view. This — you want — what do you want on this, Mr. Rich?

23. My question related purely to the plant life in the— A. Well plant life, well as you get in here. Here is — I heard yesterday unfortunately that the applicant to dredge wasn't able to visit this area during the growing season and unfortunately did not spot the American lotus, ne-lumbo something is, specific that is letua, now that's right in here. Also there's a small patch of it right here. You can see it has a broad green faced head on it right here. This is one of three or four stands in Maryland of this. As I said before the aneilema Keisak which is found out in here has only been reported twice in Maryland. The general vegetative character of this area in here, these woods, are low wet wooded swamp and in Federal Fish and Wild Life Services circular 39 they classify this as type 7, the wooded swamp.

The main tree you are seeing here, this different color is the ash.

24. I think you ought to clarify that a bit, the statement you (T. 259 > have been making about the Departments classification. How is this area classified? A. Well this area is classified as wetlands types 6, 7, 12 and 13, although it's predominantly 7,12 and 13. The Department of Interior has published bulletins for ease in communication, just like anything else, hopefully enlightening, and sometimes it can be that too. In typing wetlands as to their general character of the water as to salinity, how much there is or how much there isn't, and some of the vegetation and also the depth of the water. Wetlands type 12 that's fresh, coastal fresh marshes which according to — by the standards in this circular go no deeper than six inches, they are submerged no deeper than six inches. Wetlands type 13 are coastal fresh marshes which range from six inches to three feet in depth. They generally support vascular plant growth such as yellow water lily and this nelumbo letua is found, and other species such as, highly productive species such as wild rice and several of our cattails, and cattails are also found in type 12. This is an arbitrary system set up by the Service and it has been quite helpful in communication most times.

25. Do you have any more slides there, Mr. Wheeler?
A. There are more, Mr. Rich. However, they would be similar or somewhat repetitious.

(Mr. Rich) Well I think you can take your seat unless Mr. Doyle can cross examine on the slides.

(T. 260) (Mr. Doyle) I may have a question or two but I don't think I will need the slides.

(Court) You may be seated.

26. What was the frequency of plant growth and its productivity noted in that area, Mr. Wheeler?

(Mr. Doyle) Objection.

27. What has been noted by your crew or yourself in that area? A. Our crew has found predominant species

if you want — the predominant species in this area our crew has found by one, field checking the area and keying the species out if they didn't recognize them through the normal taxonomic procedures, and two, researching literature that has been done on primary productivity of areas, various species in fresh water areas relating these species to the species found, to the literature on these species, and we have found that they are highly productive. The areas range from, oh, off hand, we have averages for the broad leaf cattail, I have the data right here. I must say the averages of primary productivity for these areas are in many cases three or more times higher than that of a cultivated acre system. What I mean by that is that of wheat or corn or oats or potatoes.

28. Are you saying that one acre of this type of marsh area produces three times as much as a cultivated acre of those type of— A. From data research that we — from all data acquisition we have been able to get, from all researching of the literature we have been able to get. this is our conclusion, yes sir.

29. Aside from this productivity ratios that you have spoken to (T. 261) what other ecological values do you attribute to this marsh area? A. Well also obviously there is habitat values such as resting, feeding, nesting, escape, spawning, which have been, various values of that nature have been gone over quite frequently. I don't think primary productivity values of these marshlands have been emphasized and I felt it should be. Also, marshes, much of the literature and recent, very recent literature has begun to acknowledge the fact that tidal marsh flats can act as some what a pollution, pollution buffer areas. In other words, the plants will absorb the phosphates, nitrates, ammonia and other nitrogen phosphorous containing compounds. Apparently the literature seems to back this up, that they will absorb these compounds and does not keep them in the system for algae which has a rapid die off rate and less subsequent frequent blooming, and also these tidal marshes have very good quality of re-oxygenation, putting oxygen back into the water.

30. How does that work, putting oxygen back into the water? A. Well oxygen is a byproduct of the photosynthesis. Photosynthesis, by the way, is the — in the definition of primary productivity, it's a byproduct of that. In other words—

31. You take carbon — is it true you take carbon monoxide— A. Dioxide.

32. Dioxide from the air and the plants in turn produce oxygen— <T. 262) Yes, sir, well through the aid of water and sunlight they produce, they fix carbon more or less into carbohydrates.

i Mr. Rich > Your witness.

CROSS EXAMINATION

By Mr. Doyle:

1. Mr. Wheeler, am I to understand that when you made these four visits to the Mattawoman Creek that the sole purpose of the visits were to review the proposed dredging site? A. No, sir. On our visits to that area, right now we are in an extensive wetland mapping program which includes, involves mapping private and State wetlands obviously, and my visits to this area were primarily concerned with that. Our field crew this summer were, I had trained and had been trained by several people from local universities in remote sensing, and recognition of various tonal factors on infra red, various types infra red photography, and one of their main purposes of course was to relate this tonal factors to the vegetative community. However, they had to be able to identify what kind of vegetation was there. In other words, they couldn't call a cattail a smartweed or a smartweed a wild rice, or something like this, so they had to know, they had to have some taxonomic skills, or if they didn't know they had to bring the plants back. This is where I gained a lot of data on this marsh.

2. But that data was gained on four visits? A. Yes, sir.

3. And those four visits, as I understand what you just said, (T. 263) encompassed the entire stretch of the creek from the mouth to the — to its— A. Yes, sir, they did. Now the first visit that I was on went from the mouth down to past, there is a naval propellant station there. I believe, and we went past that and out in the Potomac and it got too rough for the boat we had so we went back up to the Route 224 bridge, a place all the way back up through the, all the snags and oxbows.

4. The sergeant prior to you who testified estimated on just the chart that the creek is about three miles in length, but I note on the pictures that it meanders. Is it fair to say that it's actually probably longer than three miles in length? A. That's a good question. Certainly I recognize that. Unless I had some type of odometer in the boat I don't believe I could answer that question.

5. But your investigation on these four occasions did in fact encompass that entire meandering stream? A. Yes, sir. Now my investigations on two — my personal investigations did encompass the entire stream. Now my field crew took from the mouth to the sand pile, which you are familiar with, on one day to do a complete tonal relationships, community to tone, and on the second day went from the sand pile up to the bridge.

6. I see, and these were full days? A. Yes, sir, eight hour days.

(T. 264) 7. And how large was your crew? A. The field crew consisted of three people. They had one boat and—

8. Including you? A. Well, yes, sir. When I wasn't there there was another person there in my place. There were always three people. One boat operator and two photo interpreters.

9. You didn't have to row that boat, did you? A. No, sir, we had a twenty horsepower Johnson engine on the boat.

10. Now was it your purpose just to identify the vegetation along the course of the creek or did you have other purposes? A. Well we wanted to identify the vegetation there in relation to period of inundation was one of our purposes, yes sir. In other words, we wanted to — we had — the literature supports certain things about vegetation being below or above certain water lines and we wanted to confirm or refute our observations that we had made by interpretation of infra red photography.

11. So what you really did is make as complete a visual inspection of all the wetlands in this area as you possibly could? A. Yes, sir.

12. And as I understood your prior testimony or answer to a question of mine that you didn't go there specifically to investigate these proposed dredging areas? A. On one visit they, I did, to be quite honest with you, I had (T. 265* a, also had a dual motive. One was to check the tide levels and one was to check and try to relate the vegetation to the dredge areas as outlined.

13. As outlined where? A. As outline in this—

(Mr. Rich) Defendant's exhibit B.

A. Excuse me, exhibit B.

14. And that exhibit B was supplied to you by Mr. Rich? A. Yes, sir.

15. And you were advised that those six areas there were the dredge areas, is that correct? A. Yes, sir, I was. I was also advised that these — I am not sure about the hatch marks—

16. I was just going to ask you, were you advised that certain portions of the proposed dredge areas are not to be dredged? A. Mr. Rich had mentioned to me that, I didn't get the clear point, it was possible that in exhibit B the areas 5, 6 and the upland areas of 3 and 1, sir, were not to be dredged. We did not do any upland studies. We noticed it was mainly in oak, maple.

17. Portions of all those tracts are over open water are they not? A. Yes, sir. I tell you, this map does not, is

not, does not actually relate, it is a fairly good map but it doesn't show every little bend and creek, and what you may call open water, 'T. 266 > what you may call mean high tide, as you all know. There's one area I had question about and whether, it looks like, it's possible that the tip of five could very well be either over open water or not over open water. Whether it is or not I don't know because of the special relationships of this map—

18. Your study had to do specifically though with that vegetation growing out of the water, did it not? A. Yes, sir, growing out of the water, any water that was beneath predictable tide level.

19. So that if dredging was to occur to any degree in open water it would not have any adverse effect on that vegetation, would it?

(Mr. Rich) Object.

(Court) You may answer if you know the answer.

A. I don't understand the question.

20. Well as I understood your study was for the vegetation that was growing above water in the wetlands. A. Sir, you realize that wetlands are all lands below, the State wetlands are all lands below mean high water, so the bottom of the Chesapeake Bay is wetlands.

21. I understand that but I understand too that you were trying to — you weren't interested in, I don't believe I have heard you testify that you actually inventoried the wetlands up there, did you? A. What do you mean by inventoried, sir?

22. Count the number of acres of wetland on the Mattawoman Creek? (T. 267) A. Yeah, we did do some acreage counting, however, most of our work was done in trying to discriminate and finally discriminating water lines.

23. And vegetation? A. Vegetation is a primary — since vegetation is responsive to — some vegetation is quite responsive to period of inundation or tide levels, it is very

important, the vegetation is a very important factor in determining—

24. Alright, now before I forget it. How many acres of wetland did you inventory up there? How much total acreage of wetland in that creek? A. I have no idea.

25. You just said you did? A. I said I had an idea — some partial acreage, in other words I know that the — or I was asked to find this information, I know there are approximately two hundred acres of State wetlands involved in Areas 2, 1, 2 and 3, and 4.

26. In other words, you have inventoried the wetlands in the proposed dredging sites? A. I wish you would define that term inventory. Inventory can mean several things, sir.

27. Well let's define it so we understand one another. I am talking about counting the number of acres of wetland up the Mattawoman Creek? A. As far as counting surface area, no, sir.

i T. 268) 28. But you did do that, make that type of study with regard to the proposed dredging area? A. We had a draftsman take a polar planometer and calculate from this picture here, the projections we had made onto a map, I asked the draftsman to show me approximately how much water was beneath mean high tide.

29. Well it was done by calculations from the plat? A. No, sir, it was done by calculations from our maps which are blown up to one inch to 200 feet, and our — the best — with whatever land marks we could take, we tried to put this plat, these lines here which are — well, we tried to take these lines and as reasonably as we could project them on to our maps which are 1 inch per 200 feet and it was taken from that.

30. And that gave you the estimate of the acreage involved in the dredging areas? A. Yes, sir.

31. But you haven't made any similar calculations for the approximate total of wetlands throughout the Matta-

woman Creek? A. No, sir, we haven't been called to do so. We have the — we know where the wetlands are. so with a polar planometer it wouldn't be too difficult.

32. Under the wetlands act is it your department that is required eventually to inventory all the wetlands? A. It is our department that is required to map the wetlands. sir, (T. 269) > but there is a difference between mapping and what you are — your connotation of inventory.

33. Well I assume once you map it you can make the same kind of calculations about all the wetlands you made about these dredging tracts, can't you? A. Yes, sir.

34. Well that's all I am trying to find out. You haven't mapped it yet? A. We have mapped the Mattawoman, yes, sir.

35. Well can you estimate the same way for — the same way you did for me the total acreage in the dredging sites, estimate for me the total wetlands in the Mattawoman Creek? A. Yes, sir, I can give you an estimate. Well wetlands, I am referring, of course my estimation would be based on any of the lands beneath a predictable tide level which would be of course spring flood tide. We have — it would be difficult to do this — oh, you want an acre figure?

36. I would like to know some idea how many— A. You see, let me — in answering this question my answer could very well be — not be too good, simply because we were searching for mean high water in spring flood tide levels, rather than total acreages involved. There is a wetland habitat inventory which was taken, more of what you are thinking of, I think, was taken in '67 and '68 by the Fish and Wildlife Administration which lists total acreage for all wetland units.

(T. 270) 37. Do you have those figures? A. I don't have those figures with me, no, sir.

(Mr. Rich) Your Honor, we will be glad to bring those figures in.

38. Now again, I am a little puzzled about the nature of your quest that led you and your team out there on four

days. I understood it, I thought, on direct examination to involve vegetation, a study of vegetation⁹. A. Yes, sir.

39. And that vegetation was not something you had to dig under ground to get to, or dive under water to get to. it was there for you to see. isn't that right⁹. A. Yes. sir, it was.

40. O.K. And that's why I am asking you if the dredging occurs in areas of open water from which no vegetation extended, isn't it fair to say that the dredging operation would not adversely affect that vegetation? A. No, sir, that's not. in my opinion—

41. Well I am sorry, you can't state an opinion. You haven't been qualified—

(Mr. Rich) Well you asked the question. Let the man answer.

42. I am just asking, if I am dredging a piece of open water here and the vegetation is over here it can't possibly disturb that vegetation, can it? (T. 271) A. If you had some type of barrier between your dredge operation that would prohibit sediment that is being stirred up by a dredge from completely inundating the, and possibly raising the level of the marshes beside it, possibly lowering the euphotic area or — well, if it's deep enough to lower it. I don't know. It depends on how close you dredge. There are a lot of factors involved in that question, sir.

43. If I dredged on fastland would that necessarily upset that vegetation? A. Not necessarily, so, sir.

44. To the extent that any dredging of sand and gravel took place on fastlands, to that extent the vegetation wouldn't be disturbed, isn't that correct? A. The vegetation on the fastlands certainly would be.

45. Well I understood your study had nothing to do with vegetation on the fastlands? A. Well it's just my feeling that dredging was to dig up dirt and to dig up dirt, unless you are going to dig around every tree, my assumption was that you would naturally dig trees with it.

46. The vegetation you noted was common up and down Mattawoman Creek was it not? A. The vegetation I noted was common down Mattawoman Creek?

47. It ran throughout the Creek did it not? A. Well I can give you a species — no, sir, there is some (T. 2721 diversity, sir. The further up toward the river you get you get into your more types 6 and 7 swamps, you get your viburnums in there, your viburnum dentatum, principally shrubs and your rosa plaustris, your swamp rose. You get up in there you get a lot of your panic grasses, and things of that nature. Also your asbas, your black willows and river beeches and river birches and some dogwood species. It's innumerable. Now as you come down the river you run into more of your broad leaf and emergent plants. What they call arrow arum and pickerelwood and nelumbo, the American lotus, and also you will find wild rice in that area, fairly good stands of wild rice, and also as you go down the river we find typha angustifolia. A narrow leaf cattail is up near the head. As you go down further you run into latifolia, or broad leaf cattail. Also you run into several smartweeds, as I said before. You run into decodon down there. The character does change I would say, somewhat.

48. It changes but it's not patterned like a flower garden.⁹ It extends over periods of space along the creek, doesn't it? A. Well sir, vegetative mapping, I don't know — would you rephrase that question.

49. I am just trying to find out if the vegetation doesn't follow a pattern up and down the creek. I understand you might find some at the head that you don't find at the mouth, but you don't find what vegetation there is there in patterned (T. 273) squares like a flower garden. It stretches out. It grows naturally and wildly, isn't that so?¹¹ A. Well it is to a certain extent, although there are—

50. To what extent is what I just said not so? A. Well there are a lot of patterns in nature which aren't comprehensible to most of our thinking but, for example, there is a pattern in there that — pattern that is comprehensible

to almost anybody's thinking is the American Lotus, is a nice circular stand. I have a picture there to show you if you would like to see it. That's a pattern. It's located right in one spot. The Zizania. excuse me, the wild rice all seems to follow berms on the way down and it of course is all below mean high water. The broad leaf emergent plants are generally, they follow the pattern in that they are in zero, maybe one or two inches to three or maybe a foot, foot and a half of water all the way down. The water lily follows a pattern on what are called tidal mud flats in some of these areas, too.

51. In your investigation of the dredge areas is there any vegetation in any of those areas that is not repeated elsewhere in Mattawoman Creek?

(Mr. Doyle) Mr. Rich, I wish you wouldn't indicate the answer to the question. Let the witness answer the question. You don't have to nod your head.

(T. 274) (Mr. Rich) Your Honor, I move that be stricken from the record. I am just sitting here like this.

A. Your Honor, I wasn't watching Mr. Rich.

(Court) Well, strike it out,

A. Would you repeat the question?

(Mr. Doyle) Would you repeat that question. Miss Stenographer?

(Question played back. •

A. Yes, aneilema keisak, the one species that we have only found twice in Maryland, is in dredge area No. 2, and is no where else.

52. Is that a wild growth? A. The method of introduction I am not sure of, sir.

53. Well I mean it's not planted, it's not a domesticated vegetation, is it? A. I don't believe it is a scape exotic, no, sir.

54. Now is it your testimony that there's something unique in the soil qualities or the water qualities of those

dredging areas that would prevent that flower from growing some place else in Mattawoman Creek? If there are unique aspects to it I want you to tell me what they are.

A. Unique aspects of the dredge area over any other area in the creek?

55. Yes. (T. 275 > A. I would say — I think I see the point you are driving at. I would say the whole creek in itself is very valuable and I can't select your dredge spots out as any more valuable than a spot, really any — a spot right next to them. However, that doesn't, in my opinion negate the value of the whole stream.

56. I am not trying to negate the value of the stream and I think you just gave me an honest good answer. What's your assignment with the Chesapeake Bay Affairs Department? A. I investigate — I do investigative environmental impact operations, proposed operations which may have environmental impact, proposed alterations of wetlands which may have environmental impact, and right now I am chief coordinator of the wetland mapping, a program with a contractor.

57. Is it fair to say your department or Chesapeake Bay Affairs Department is a defender of the wetlands? You are there to protect the wetlands, isn't that so? A. No, sir.

(Mr. Rich) Your Honor, the statute speaks for itself. I will cite it for the court, it's Article 66 c, Section 718 through 731, and the statute has certain indicia in it, and for this man to interpret what his role — what the Chesapeake Bay Affairs role is under that statutory law is somewhat irrelevant to (T. 276 > this case. The law speaks for itself.

<Court> Are you asking what he does or what the whole Act covers?

(Mr. Doyle) I am. no—

(Court) I mean, he's just one small part of this—

(Mr. Doyle) Yes, sir. I am not interested in what the whole Act covers. I am just trying to find out if it is not a fact that the Chesapeake Bay Affairs Committee is inter-

ested in preserving the wetlands to the fullest extent possible. I am interested really in the motivation for the witness being here.

(Mr. Rich i If I might go on the record I could just state that the law says that the Department of Natural Resources, it does not specify the Chesapeake Bay Affairs, but the Department of Natural Resources makes recommendations, purely recommendations to the Board of Public Works on public wetlands.

(Court) Well the Act speaks for itself. I think rather than get his opinion, he is just an employee and he couldn't speak for the Committee—

58. As I understand then, Mr. Wheeler, your prime function as the chief wetland coordinator is to inventory and run studies (<T. 277) such as the one you have described here? A. I don't believe I said I was the chief wetland coordinator, sir.

59. Well what ever — what are you? A. I am in charge of coordinating the mapping, wetland mapping project with a private contractor.

60. And that's all you do? A. That's all I am doing right now, yes, sir.

i Mr. Doyle i No further questions.

REDIRECT EXAMINATION

By Mr. Rich:

1. Just to clarify — at one point you made the statement that wild rice grows below mean high tide. A. Yes, sir.

2. Is it true that there are certain vegetations or plants growing under mean high tide? A. Yes, sir. Absolutely. That is quite clear. I can give you a list of some eight or ten species in that particular area which are predominant in that area which grow beneath mean high water. That's one of the essentials of mapping.

3. And just to clarify another question that Mr. Doyle brought up. What effect would the proposed dredging as

proposed by Potomac Sand and Gravel have on the entire Mattawoman Creek area?

(Mr. Doyle) Objection.

(Mr. Rich) This was Mr. Doyle's question. Your (T. 278) Honor.

(Mr. Doyle > Oh, no. Mr. Rich I thought said very clearly in the beginning he wasn't trying to qualify this man as an expert. The man testified all he did was make an inspection for vegetation and he is not qualified to render an opinion as to the effect of a proposed dredging operation on that vegetation. He doesn't qualify to do — or he hasn't qualified him to do that.

(Mr. Rich) Your Honor, Mr. Doyle asked this man for his opinion as to the vegetation with respect to this area and the entire Mattawoman Creek. He went into this and opened the door a number of times and the record speaks for itself. I am just asking this man what effect does the dredging out of the proposed areas have on Mattawoman Creek.

(Court) As to vegetation.

(Mr. Rich > As to vegetation growth.

(Court) I think he may answer that.

A. Well obviously dredging, the proposed dredging in the dredge areas would completely eliminate the vegetation there. Considering Mattawoman Creek is a natural system I feel that — there's various angles to this question. Let me rephrase my (T. 279) answer. The areas within the dredge — proposed dredge area by Potomac Sand and Gravel obviously would be physically removed. The areas directly adjacent to them would certainly not be abetted in their growth patterns and I am uncertain as to what secessional data we have there. Probably, I am sure there would be some caving in. I remember Dr. Lauer's testimony about another area. However, you must remember this would be cutting directly through the marsh and I am sure there would be some caving in right in this particular instance. It certainly would be an alteration of

the natural secessional system besides the direct removal — besides of a direct removal of the vegetation within the spoil areas. I am sorry, within the deposit areas. I think a study would be necessary—

i Mr. Rich) No further questions.

RE CROSS EXAMINATION

By Mr. Doyle:

1. You indicated Mr. Wheeler, that there is growth in the dredging areas, growth below mean high tide, is that correct? A. Yes, sir.

2. You weren't trying to imply, were you, that there wasn't growth below mean high tide in all the other areas along that creek were you? A. No, sir, I wasn't.

3. Now you indicated that the dredging operation would certainly do what we have admitted it would do, and that is to take away the vegetation in the areas actually being dredged. You carefully (T. 280) said however that in those areas that were adjacent to it all you could say is that the vegetation would not be bettered, isn't that your answer?

f Mr. Rich > He used the word abetted.

(Mr. Doyle) I thought he said not bettered.

A. I meant a-b-e-t-t-ed.

4. Not abetted? A. Yes, sir.

5. Would it be the contrary to that necessarily? A. I certainly believe that any alteration of the natural system there would be effects on — if you alter one part of the natural system certainly another part can not go untouched.

6. On what studies do you base that conclusion, Mr. Wheeler? A. I don't base that conclusion on any specific studies—

7. Alright, now you mentioned that there would necessarily be caving in as a result of the dredging, is that correct? A. (Nods head in the affirmative)

8. On what studies or facts do you base that conclusion?
A. Just, well mainly from the fact yesterday Dr. Lauer—

9. Oh, you are predicating it on something you heard yesterday? A. Partially, yes, sir.

(Mr. Doyle) I move to strike that portion of the answer, if the court please, as not proper foundation for the conclusion.

(Mr. Rich) Well Your Honor, Mr. Doyle asked the (T. 2811 question and he is repeating what Dr. Lauer said.

(Mr. Doyle) I asked a lot of questions but that's no reason why it's a proper answer.

(Court) No, I'll strike it out. It's in the record. Dr. Lauer's statement.

(Mr. Doyle* No further recross.

(Mr. Rich) Mr. Wheeler, you can go back to work.

(Court) Step down. Do you have any further need for this witness, Mr. Doyle?

(Mr. Doyle) No, sir.

(Court) You may be excused.

(Mr. Rich) Mr. Odell,

(T. 282) JAY ODELL, a witness of lawful age. being first duly sworn, deposes and says:

(Clerk) Will you state your name and address? A. Jay Odell, 1109 Primrose Court, Annapolis, Maryland 21403.

DIRECT EXAMINATION

By Mr. Lord:

1. Mr. Odell, by whom are you employed? A. State of Maryland, Fish and Wildlife Administration under the Department of Natural Resources.

2. And how long have you been employed by the State of Maryland? A. Three and a half years.

3. And has it always been in the area of fish and wildlife*?
A. Yes, that's correct.

4. Will you tell the court your educational background?⁰
A. Bachelor of Arts degree, Marshall University, 1962.

5. What was your major? A. Science and education,

6. Go on. A. Master's — Master of Science degree, Marshall University, 1965 in biological science.

7. And while you were working towards your master's degree what were you doing for employment? A. During that period of time I was engaged in teaching in public schools, West Virginia and Ohio.

8. What subjects? A. Various subjects including general science, geology, biological (T. 283 > science.

9. Alright, upon obtaining your master's degree did you take further postgraduate studies? A. Yes. One summer of postgraduate work during the summer of 1965.

10. Alright, and did there come a time when you left your teaching position in the public schools and take a job with the Federal Government? A. Yes. National Parks Service under the Department of Interior as park naturalist, State of Oregon, Crater Lake National Park.

11. And what year was that? A. 1966.

12. And you stated, I think, that you came to work for the State of Maryland in 1968, is that correct? A. That's correct.

13. Alright, and in what capacity have you been employed by the State? A. Since I started with the State in March of 1968 I have been project leader or chief of stream investigation and fish investigation for anadromous species in Maryland waters.

14. Anadromous species? A. Yes.

15. Could you tell me what those species would be? The definition of anadromous species would be. (T. 284) A. It would be a species of fish that spends the better part of its life cycle in salt water, principally the ocean, that

migrates to inland areas of lesser salt content for spawning. Principally in the spring, early summer.

16. So you have been involved really with two separate types of projects, anadromous fish study and stream survey, is that correct? A. Two separate phases but the same program.

17. I see. Did you create this program in 1968? A. I started the program in 1968, that is correct.

18. And it is continuing in effect right down to today? A. That's correct.

19. Do you work with a staff? A. Yes.

20. Do you supervise that staff? A. Yes.

21. And how many people are on the staff? A. Seven other field personnel other than myself. A total of eight people engaged in field activities.

22. And you are the project leader of that study? A. Yes.

23. Alright, now since 1968 do you have any figures on the number of streams that you have surveyed in the State of Maryland? A. Approximately two hundred streams surveyed throughout the tidewater counties of the State—

(T. 285) 24. Tidewater counties? A. Yes. It would be counties having tidal waters. This would be principally seventeen counties in Maryland.

25. Alright, and what does a stream survey consist of? A. This would be a reconnaissance of either by boat or by actually walking the stream, depending upon whether or not the stream was navigable, and recording physical, biological and chemical factors along the stream which would effect fish passage and reproduction.

26. And you also said that there were fish surveys conducted under your authority? A. Yes.

27. Do you have any idea how many streams have been surveyed since 1968 for fish studies? A. Approximately

four hundred streams investigated at one or more times for species of fish present.

28. So your four hundred figure relates to the number of separate streams, not the number of investigations? A. Correct.

29. It could be a significantly higher number of investigations? A. Yes.

30. Alright, now what does a fish survey entail? A. It entails going to a stream and sampling the stream with various types of fish collecting gear, depending upon conditions of the stream. Using the gear, collecting the fish. (T. 286) bringing the fish ashore, counting the numbers present, recording all species of fish present, and later in the laboratory making size indications of the various species caught.

31. Now do you have an estimate from those figures and the total number of streams that you have worked on as to how that relates to the number of streams in the State of Maryland, percentage figure? A. In tidewater Maryland, considering all streams, both fresh and salt water streams within the eighteen counties located in the Bay area, this four hundred would probably be 30% calculation of the total number.

32. Alright, now with specific reference to the Potomac River drainage area, has there been any concentration of your efforts in this area? A. Yes.

33. And can you describe for the court what that's been? A. Since last August the Potomac River drainage has been the area of study in my program. We work on a river system basis, therefore, the Potomac River, since last August and continuing through until the present time has been the sole area of study. This area study would encompass all streams from the river mouth to Washington, D. C. on the Maryland side of the Potomac.

34. Would it be a fair statement that your field of concentration during the past year has been in this area you have just (T. 287) described? A. That's correct.

35. Alright, now switching back to two other points. Are you presently involved in any teaching? A. Yes, sir,

36. And where is that? A. At Charles County Community College, LaPlata, Maryland.

37. And what do you teach? A. I am instructor in aquatic and pollution ecology.

38. Alright, and are you familiar with the scenic rivers program? A. Yes, sir, I am the fish and wildlife representative on the scenic rivers technical task force committee. I represent the department.

(Mr. Lord) Your Honor, I would like to suspend for a moment and see if Mr. Doyle has any questions of this witness.

(Mr. Doyle) Just one or two.

CROSS EXAMINATION (on qualifications)

By Mr. Doyle:

1. As I understand, Mr. Odell, is it fair for me to say you are an expert in anadromous fish? A. Yes, sir. We do the principal share of anadromous fish investigation in the State.

2. And that's your only field of expertise?

(Mr. Lord) I object to that.

(Mr. Doyle) I am asking him—

(T. 288) A. No, it would not be.

(Court) Well, he has answered the question.

3. It would not be. What other fields of expertise are—
A. Well in conjunction with the anadromous fish study we also do, as I mentioned, an inventory of streams to ascertain the conditions that would relate to anadromous fish propagation. So we consider ourselves to be expert in anadromous fish investigation as well as other species, plus stream inventory work.

4. But if your investigation has no impact or reflect on anadromous fish you are not interested in it and you don't profess to be an expert in those areas, do you? A, Yes. sir. We also work in other things. From time to time we review Corp of Engineers permits for dredging and filling. We review Federal soil conservations service projects for channelization. We report wetland types where they have occurred. In general from time to time we review all the environmental matters coming through the State channels.

5. But doesn't it all relate finally to how any one of those things effect anadromous fish? A. In most cases.

6. In all cases, isn't that so? A. Not in all cases. In some cases we review things that would in fact be a question of whether or not anadromous fishes would be effected, yes.

;T. 289) (Mr. Doyle i Alright, I have no further examination on his qualification.

(Court) Alright.

DIRECT EXAMINATION (continued)

By Mr. Lord:

39. Mr. Odell, with specific reference to Mattawoman Creek about which there has been considerable testimony already, are you familiar with this area? A. Yes.

40. Can you estimate the number of times that you have visited personally this area? A. I would estimate approximately 15 times since 1968.

41. Alright, has your staff or yourself conducted any stream surveys or fish surveys at Mattawoman Creek? A. Yes.

42. Go back to the first such survey and for the court's benefit and my benefit could you give us the date as to when this would have been commenced? A. Mattawoman Creek was surveyed on September 17, 1970. This was a survey by boat and by walking the stream from the stream

mouth to the — 7.7 miles above the mouth of the stream. This would be at the Route 225 location.

43. Is that the upper terminus of the creek? A. This would be not the upper terminus. The upper terminus would be approximately twenty to twenty five miles to the head waters of the stream.

(T. 290) 44. Alright, and did this — are you familiar from the testimony that has been heard and from your general knowledge where the proposed dredge sites are in Mattawoman? A. Yes.

45. And did this survey include that particular area? A. Yes, it did.

46. Alright. And what in the way of sampling materials was done by you and your staff during that September 17th survey? A. On September 17th, five sites in Mattawoman Creek were investigated for fish. An additional two sites were investigated on September 21st for fish. Total of seven sites were investigated during September of 1970.

47. Well now tell me a little bit more about the nature of what is done at each one of these sites? A. We use a beach seine usually, for this particular stream, it was 50 feet in length, four feet deep. The mesh size was ^a4 inch. The seine was designed to capture all species in the area greater than Vith of diameter, which would capture most of the species present.

48. How would you characterize the month of September as being an appropriate month to undertake such work?⁹ A. We design our study for fish investigation so that it would take place during late summer and early fall because this would be the time of year in which juvenile species would be present following the spring spawning season. This would be (T. 291) the time they would be in the area before moving down river and out to sea for the anadromous fishes.

49. Would it be a fair statement that you believe that this would be the most appropriate time to conduct such a survey? A. Yes, it would be the most appropriate time

to determine nursery areas for fish following spring spawning, that's correct.

50. And on the other hand which particular month would you feel were the most inappropriate to conduct a fish survey? A. A survey of this type the most inappropriate time would be from approximately November 1 to March 1.

51. Alright, now that takes care of the September, 1970 surveys, was anything done by your project group subsequent to that time? A. Yes.

52. And could you describe that? A. During the past spring of 1971 we had two stations in Mattawoman Creek in which plankton collections were taken weekly, starting in April—

53. Before you get into that can you describe for me what a plankton is and the process you would use in order to take it? A. A plankton would be the microscopic organisms in water, consists of both plants and animals. The gear we used was standard half meter plankton net with an attached jar. The net is towed behind the boat for five minutes at each site and the (T. 292) resulting water was passed through the net, strained to capture fish eggs and larvae forms of fishes as well as other organisms present in the water.

54. Well I assume on date collected in September of 1970 and again in the spring of 1971 that you did an inventory of the material collected, is that correct? A. That's correct, plus lab analysis made of the data collected.

55. Well with respect to species and types could you tell the court what you determined to be present as a result of those surveys? A. Starting with the fish survey in September, 1970 the 7 sites were located at approximately one mile intervals from the mouth of Mattawoman Creek to mile 7.7 at Route 225.

56. Once again through the dredge area. A. Alright, through the dredged area there would be two or three sites. The first site would be site No. 5 at the dredge zone. This site as far as anadromous or semi anadromous species

of fish we collected blueback herring, white perch, and striped bass. At site 6, which is approximately 1 mile above site 5, still in the proposal dredge zone, we collected white perch, yellow perch, blueback herring and alewife. These would be the two sites immediately in the proposed dredging area.

57. And do you have other points nearby the dredging area where you also took samples? (T. 293) A. Yes. station 7 was above the proposed dredge zone.

58. Are there other types of fish which were picked up in those areas? A. No. In general our collections revealed that from the mouth of Mattawoman to the sample area there was a consistency in species,

59. Alright, of the fish that you mentioned, you might go back over them again, and tell the court whether these are commercial fish or sport fish or both? A. The work we do is principally for commercial fisheries. The anadromous species would all be considered commercial, having commercial catch value that — there would be five anadromous species. The alewife, which is a herring. The blueback herring, the American shad, hickory shad, striped bass. Now semi anadromous species also having commercial value would be white perch, and yellow perch, and there are other species having commercial significance but these would be the principal species in which we are interested at the present time.

60. And some of these also have sport fishing value? A. Yes. White perch, yellow perch, striped bass, all have sport values as well as shad in some areas of the State.

61. Alright, now moving on to your spring of 1971 work can you give some observations on what you found as a result of that? A. At site 1, which is approximately three miles above the mouth of the stream—

(T. 294) 62. And where in relation to the dredge area?⁹ A. This would be below the proposed dredge zone. We collected larvae forms of the following species. Yellow perch, white perch, striped bass and herring which indi-

cated this would be a spawning area since the larvae recently hatched from eggs were collected. At site 2. which would be in the proposed dredge zone, larvae forms were collected for the following species: yellow perch, white perch and herring.

63. Alright, based on material gathered in these two studies did you reach the conclusion about the value of this area from a hatchery and spawning point of view?
A. Yes.

64. And what is that conclusion? A. Spring plankton collections revealed that this was a spawning area for various species of fish having important commercial and sport catch of significance in the Potomac River drainage and throughout the State of Maryland. Our collections from last September revealed that this same area is an important nursery area for commercial and sport species following the time of spawning, which has significance for the Potomac River drainage and the State of Maryland.

65. Well taking into consideration the whole Potomac River drainage area that you have already indicated an extreme familiarity with do you have any comments or opinion with respect to this particular area⁰.

(T. 295) (Mr. Doyle) Your Honor, I am going to object to that question. I am not sure I understand it.

(Mr. Lord! I will rephrase it if you would like, Mr. Doyle.

(Mr. Doyle) Well I wish you would.

66. Over the past year, Mr. Odell, you have stated that you have concentrated exclusively in the Potomac River drainage area and you have also indicated a complete familiarity, because of 15 visits to the Mattawoman area, you have also stated its importance subjectively for hatchery and nursery. I would like now to have your opinion as to the importance in the setting of the Potomac River drainage area of this particular area?

(Mr. Doyle) Well, if it please the court, I think my objection, even now with clarification, must still stand be-

cause I didn't understand the witness to testify when he described the surveys of the streams that were taken that he attempted to classify them in any way sofar as standing or qualitative measures were concerned. I understood the surveys to look for anadromous fish and factors that would either help their, or impede their growth and their survival. I didn't under (T. 296) stand him to say that he classified the streams, and I suspect that's the thrust of this question. I don't think there has been a proper foundation laid for it.

(Mr. Lord) Your Honor, all I am asking this witness is to state if he has an opinion on this subject, what his view is of the importance of this particular area in the context of the Potomac River drainage area, which he is completely familiar with and—

(Court) Of course, he said he only surveyed one side, the Maryland side as far as D.C., is that correct? A. (Nods head in the affirmative.)

67. Alright, with that limitation have you surveyed other streams in the Potomac River drainage area and if so. what would be the geographical limits of that work? A. Yes. we studied all streams in the drainage on the Maryland side from the mouth of the Potomac River to Washington, D. C. These were investigated through stream surveys and were also investigated for species of fish.

(Mr. Lord) Now Your Honor, against that background I would like to restate that question.

(Mr. Doyle) And again I would object. There has been no showing that the surveys taken elsewhere are comparable in either extent or in study (T. 297) content to what's happened in Mattawoman. I understand a egg and larvae survey has been made on a weekly basis in Mattawoman. I don't know that the surveys have been equally extensive elsewhere and it seems to me like somebody is pinpointing Mattawoman.

(Mr. Lord) Your Honor, I think if Mr. Doyle wants to try to get at this witness on that subject on cross examina-

tion he is free to do it but it seems to me to be a perfectly proper question.

(Court) Well I think it might be helpful if you would show these other surveys were the same type or similar type and just what they—

68. Alright, I think you understand what is troubling the court, Mr. Odell. Could you give some further testimony as to the types of surveys conducted in other streams and creeks? A. Each stream was surveyed in exactly the same manner throughout the Potomac River drainage in that physical stream surveys recorded the same features. The physical actions sought the same species, so the only variation would be in certain instances different types or sizes of gear might be used, depending upon the conditions of the stream. We had to use a gear that was most appropriate to the stream conditions.

(Mr. Lord I Does that lay the foundation?

(T. 298) (Court) Yes.

69. Now do you recall the question? A. Yes.

70. Would you please respond to it? A. Our spring collections throughout the — of plankton and adult fish throughout the Potomac drainage revealed ten main spawning streams in the drainage. These would be the ten streams that would be direct tributaries to the river, and Mattawoman Creek was one of the ten streams identified as supporting spawning of anadromous, semi anadromous species.

71. Alright, now are you familiar with dredging operations? A. Yes.

72. Can you state the extent of your familiarity? A. Review of Corp of Engineers permits to dredge and fill in various waters in Maryland. Recommendations made at various times for dredging and filling in relation to fish spawning activities or other environmental considerations. Review of various soil conservation service channelization projects throughout Maryland. Personal sighting of various dredge operations throughout the State.

73. Alright, have you actually observed a dredging or dredging and fill operation relating to sand and gravel"?

A. Yes,

74. Now I assume then that you are familiar with this operation and the results of this operation, is that correct⁰.

(T. 299) A. Yes, that's correct.

75. Now against the background that you have already stated do you have — can you tell the court what the result of dredging would be upon Mattawoman Creek?

(Mr. Doyle) Objection. There has been no indication by this witness, at least we haven't heard anything, that suggests that he has viewed a dredging operation in the context of how it may or may not effect or have an effect on anadromous fish, and I don't believe he can relate how a dredging, what the dredging operation would do unless he shows that kind of a background, or show some studies that would lead to a proper conclusion in that area.

(Court) Is there anything you wish to say to that?

(Mr. Lord) Well Your Honor, if you want me to rephrase the question I can but I — it seems to me to be a proper question. This is not related specifically to anadromous fish. This is related to his observations on many occasions of what the site at Mattawoman is like and he is also, his extreme familiarity with dredging.

(Court) I will let him answer the question.

(T. 300) 76. Alright, would you please state your conclusions? A. The dredging for the most part is before the fact of dredging, so based on my experience with dredging operations and the biology of anadromous fish and familiarity with general literature on dredging operations, the probable facts, as far as fish spawning and nursery area would be several. One effect would be an increased water turbidity resulting from the physical process of dredging.

77. Once again, can you clarify that term turbidity⁹. A. Turbidity would be the penetration of light into water.

78. So the water would become more opaque, is that correct? A. It would become more opaque or more turbid, less clear. This consequent increase in turbidity would be a lessening of water quality, of course, and a consequent reduction of light penetration into water would reduce plankton production. That is there would be less sun light penetrating the water and there would be less photosynthesis or production of aquatic plants which are important in the food chain for various species of fish present. It would be a physical removal of aquatic vegetation associated with the wetland areas in the area.

79. What is likely to be the result of that? A. Well this vegetation serve as spawn attachment for various species of fish. During the life cycle of many fish the eggs must be attached under water to aquatic vegetation and suspended and receive oxygen through the tidal action while (T. 301) attached. This vegetation would not be present so therefore there would be a reduction in the actual spawning habitat through physical removal of vegetation to the extent that the dredging operation occurred.

80. What other effects are likely to result or possibly could result from the removal of vegetation? A. There will be less oxygen produced in the water. You would expect a decrease in oxygen because green plants associated with a marsh or wetland habitat produce oxygen by photosynthesis during the day time, so consequently removal of the plants would lessen the oxygen would deteriorate water-fall in the stream, oxygen removal, or not actually removed. It's not actually made if the plants are not present.

81. Well you have said that vegetation acted as an attachment for spawning purposes. What would be the result if the dredging took place during the spawning season? A. The substrate material for egg attachment would not be present. The spawning if it occurred would be probably on the stream bottom where conditions would be less suitable for or not suitable at all for egg development.

82. Suppose eggs were already attached to the vegetation what would the result of the dredging be? A. This

would be physical removal. The eggs would in some cases be broken loose from the vegetation and they would be set adrift in the water where conditions for propagation might be (T. 302) more unsuitable. The question of development, it's hard to say. It depends upon the fate of the egg.

83. Would these — we heard some testimony yesterday and I believe you were present for it, about the phrase benthic organisms. Would these be benthic organisms within the definition as you are familiar with it? A. Benthic organisms would be the organisms attached to the bottom or live on the bottom or in association with the bottom strata. These organisms would be physically removed by the dredge. The effect of this would be a reduction in food supply for these species of fish and other organisms that had these in their food chains.

84. Is — it's true, is it not, as we have heard from several witnesses that this Mattawoman Creek area is certainly subject to tidal movement, isn't that correct? A. Yes.

85. What are your observations about other possible impact of dredging in tidal areas?

(Mr. Doyle) Objection.

(Court) Let me interrupt you at this point. Before we get on to any other possible effects, I think I am going to have to recess for lunch and continue — he has covered the one and we can get to the rest of it after lunch. We will recess until 1:30.

(T. 303) (Court reconvenes after luncheon recess.)>

(Court) I think you were in the process of direct examination.

(Mr. Lord) Right, and I remind Mr. Odell he is still under oath.

86. We were talking, Mr. Odell, about the effects of dredging upon this area and you had mentioned several points and I think I had just asked you whether in fact

this was an area affected by the tidal flow and you said that it was, and I ask you because of this particular fact are there additional considerations or factors which might result from the dredging of this area?

(Mr. Doyle) And I objected and the ground would be the same after lunch as before lunch, that the question is not specifically related to his area of expertise which is its effect on anadromous fish. I think the question ought to be limited in that regard.

(Mr. Lord) Well Your Honor, I thought we had already been through this before.

(Court) We had—

(Mr. Lord) Mr. Doyle—

(Court) I will overrule the objection.

87. Alright, answer the question please. A. Probably, since this is a tidal stream throughout the proposed (T. 304) dredging zone will be a movement of sediment which is dredged from the bottom. This will be scattered, at least a portion of it throughout the zone of tidal influence. There will probably be some direct damage to fish eggs and larvae resulting from sediment. This would be either direct mechanical damage which might be lethal to developing fish forms or it might cause an attachment situation to the eggs or larvae where they would be surrounded by a coat of sediment with a consequent depletion of oxygen causing suffocation. This proposed dredging area would also probably interrupt the process of spawning during the spring when it occurs, which would be a mechanical action, a thrashing of the water which would have a disturbance factor of the spawning behavior of fishes in this zone.

88. After the dredging operation has been completed would there be any effect in your opinion of the movement of fish through the spawning area? A. Is that after the dredging is completed?

89. Yes. A. After the dredging is completed there should be no physical fish passage blockage. In other words, the

stream would not be obstructed to fish passage through the zone and to upstream areas but it would be a period of sediment presence in water in this area after dredging until this settles.

90. Right. Now you said, I think, that you are the coordinator, or (T. 305) see if I get the phrase correct — the representative on the scenic rivers program. Has the scenic rivers program contemplated inclusion of the Mattawoman Creek? A. Yes, it has.

91. Now this is a fresh water area, is it not? A. It is fresh water area although it is subject to tides, that's correct.

92. And does this give it any particular uniqueness in the whole drainage system we are discussing here? A. It's not unique in the sense that it would be the only stream in the drainage that has a tidal influence and also fresh water. Several other streams in the same area have the same situation.

93. Now you talked about anadromous fish. Did you determine from your fish study that there are also resident species of fish in this area? A. Yes. I just mentioned the ones that are well known for commercial and sport catch values although there are many other species. Some other species important in sport fishing.

94. Now you have heard testimony over the last two days about Craney Island. Are you also familiar with that location? A. Yes.

95. And what's the basis of your familiarity? A. During the latter part of 1970, more specifically during September of 1970, members of my program and myself conducted (T. 306) fish sampling in the area of Craney Island in the Potomac River, and during the past spring of 1971 my staff members and myself conducted a plankton survey in the Potomac River near Craney Island.

96. And following along the lines of your testimony with respect to Mattawoman what did these surveys reveal

with respect to species? A. The survey last September was a fish survey by a beach seine similar to the survey in Mattawoman Creek, various sites along the Potomac River in the area of the Island were seined as well as other sites from the river mouth to Washington, and as far as anadromous species we collected white perch, striped bass, blueback herring and American shad in the Potomac River area around Craney Island.

97. And how about your sample taken later, plankton sample? A. During the spring survey we collected eggs or eggs and larvae of various species. These would include, the commercial species would be striped bass, white perch and herring and possibly some of the herring collected would be American shad, although this is questionable.

98. Did you draw any conclusions from these studies with respect to the importance of this area? A. Yes, this was established through our survey and also through former surveys that it is a spawning area in the Potomac River for striped bass. In addition our survey revealed that it (T. 307) was a spawning area for white perch and herring, and possibly American shad.

99. Well you heard, did you not, Dr. Lauer's testimony yesterday that his study had revealed similar conclusions in the Craney Island area, is that correct? A. Yes.

100. And he further stated that it would be his recommendation that an area be zoned out and not dredged where this type of spawning and hatching activity takes place, did you hear that statement? A. Yes.

101. I assume that you would, up to that point, agree with Dr. Lauer⁹. A. Yes.

102. That there should be no dredging in those particular areas? A. Yes.

103. Do you have any additional comments on that point? A. I would prefer not to see dredging anywhere in the area of Craney Island or Mattawoman Creek from the

standpoint that I have responsibilities to the State for the protection and enhancement of anadromous fish propagation areas throughout the State which are rapidly dwindling in some respects, so as a matter of record I have always officially opposed dredging in any form because of the probable effects to anadromous fish spawning areas.

(T. 308 > (Mr. Lord) No further questions.

CROSS EXAMINATION

By Mr. Doyle:

1. Mr. Odell, I take it from your last comments that it is your belief that any activity that adversely effects the anadromous fish should be banned, is that so? A. If possible and feasible, yes sir.

2. Does that include commercial fishing? A. No, sir.

3. That's adverse to the anadromous fish, wouldn't you say? A. No, sir.

4. Well it doesn't do them any good to take them out of there in the nets, does it? A. Yes, it does.

5. What good does it do? A. It benefits the overall population from the standpoint that many more fish might be available without any type of collecting or harvesting means. The terrific population would produce problems of overcrowding and reduce food supply.

6. Well then you are saying and you do agree with Dr. Lauer that to some degree it is necessary to have the anadromous fish adversely affected for population control purposes? A. Not necessarily adversely affected. If it would be beneficial to have them harvested where there is a source of marketable income.

7. Well perhaps I am using the words adversely affected, let's get (T. 309) our terminology right. I mean, I got the impression you were against any activity that would in any way affect the population of the anadromous fish in a way that would reduce it, that's not so? A. Other than harvesting the resource.

8. Well what difference does it make how the population is controlled as long as it is controlled⁰. A. Well if there is no harvesting taking place the situation in many cases is sheer destruction without a profit, but harvesting is recognized as one of the techniques in management in which a beneficial population is kept present. The excess population being harvested for a marketable source of income.

9. I see. So what you are saying is if it is being taken for a commercial purpose is that constitutes harvesting⁰. A. Yes,

10. But if it is taken in any other fashion that is not harvesting? A. Ordinarily it's not. This would be a case of lethal means.

11. In terms of population control however the net effect is the same, is it not? It is beneficial in a sense it helps the species survive⁰. A. It helps in most cases the species to survive.

12. Now you indicated that you ran these stream surveys and that you concentrated on the Potomac since last August and I understand to be the Maryland, streams on the Maryland side of the Potomac and how far up the Potomac did that survey take place? <T. 310) A. To the Anacostia River.

13. And in miles, how many miles is that? A. Approximately 130 miles.

14. And did I understand you to say that in that — is that the area in which the 17 streams that were surveyed, where they lie? You mentioned that you had surveyed 17 streams since 1968. Were they all in the Potomac area? A. I did not make a statement that I had surveyed 17 streams.

15. Oh, well then correct me. How many streams did you survey? A. Approximately, since I started the program in 1968, 200 streams.

16. I see. Were they all in this area of the Potomac? A. No, sir.

17. How many were in the area of the Potomac? A. Approximately We.

18. Around 20? A. Right.

19. And do I understand your testimony that of those 20 you consider 10 of them as main spawning streams? A. 10 main spawning streams in the Potomac drainage, that's true.

20. Of which the Mattawoman is one? A. Yes.

21. Now I suspect for jurisdictional reasons you didn't look to any of the streams on the Virginia side, did you? A. No.

(T. 311) 22. Are there streams on the Virginia side? A. Yes.

23. Would it be fair to infer that some of those streams are also important spawning areas? A. Yes.

24. And would it be fair further to infer that if 50% of them on the Maryland side are important spawning areas that a similar percentage of important spawning areas would be in existence on the Virginia side? A. It would be a calculated guess, yes.

25. How is it that some are important spawning streams and others are not? A. Many factors. The preclusion of spawning in many streams is by physical stream obstruction. In other words, blockage of the stream by man made or natural barriers, such as dams, waterfalls, or physical stream obstruction which prevents a species from reaching a spawning area in a stream. Channelization which renders the stream in many respects unfit for spawning through removal of spawn attachment, through more shallow stream condition, through destruction of stream pools, meanders, which serve as resting places, through severe pollution causes which create chemical blockages or mortalities and these would be the principal factors.

26. Would you consider the Potomac River polluted? A. Portions of it.

(T. 312) 27. What portions of it would you consider to be polluted A. Washington, D. C. area.

28. Are any portions of it polluted in the 120 mile or so stretch that you surveyed? A. There are pollution sources but not as severe as the first area I mentioned.

29. Those pollution areas that you have noted in your survey area evidently did not affect the spawning capabilities of the Potomac did it? A. Some of them we suspect it interfered with spawning activities.

30. You say you suspect. Did you make any studies to reach a conclusion? A. We made studies as I said, on all streams that had potential in the zone of the Potomac I described.

31. I am talking now about the Potomac itself. A. The river proper"?

32. Yes. A. We made studies in the Potomac, yes.

33. Where in the Potomac other than Craney Island? A. From Route 301 bridge which is river mile 48. to Chain Bridge in Washington, D. C.

34. And how many test sites did you have in that area?⁹ A. 16 to 18 sites were investigated weekly.

35. Did your investigations reveal that all of those sites were spawning areas? (T. 313 > A. No, sir.

36. How many were and how many were not? A. The spawning activities extended up river as far as Washington. There was one site in Washington, D. C. that was not a spawning area, and this spring our evidence indicates that the spawning activity at the Route 301 area I mentioned did not take place. This might be a seasonal pattern because the spawning zone varies up and down river from year to year depending on spring run off and other factors.

37. It is fair then to conclude of the, you say 18 test sites? A. Approximately 18.

38. Of the approximately 18 test sites insofar as you are able to tell from your studies 17 of them were spawning areas? A. This year or in the past?

39. Would that be indicative or would that support the conclusion that in general the Potomac throughout the length of the river that you studied is in fact a spawning area for fish, the entire length of it? A. No. The entire length we studied in general was a spawning area.

40. That's what I mean. I am just limiting it to what you studied. Obviously what you didn't study has to wait and see, but in that 120 or 130 mile stretch the fact that you spread out your test sites and that 17 out of 18 either were or had been spawning areas would indicate that the Potomac in general in (T. 314) that test area or that test stretch is one big spawning area? A. Yes.

41. Now you have indicated that the fall and early summer is the best time to run these surveys because I understand that to be the spawning season, is that correct? A. No, that's incorrect.

42. I wondered about that. I wasn't sure if my notes were accurate or not. Straighten me out as to what you meant. A. The spawning season for most species in Maryland waters that have commercial significance is from approximately March 1 to June 1, depending upon location within the Chesapeake Bay drainage, weather, water temperatures which can make this vary a few weeks. Following the spawning season the eggs began to hatch and develop into larvae forms and then juvenile forms. The period of time late summer and early fall would be the period of time in which the species that had eggs in the spring, these would be developing.

43. I see. So when you said the late fall and early summer is the best time for your survey it is because then whatever fish are born are born and swimming and it is easier to measure them— A. The best time to determine nursery areas following spawning.

44. Insofar however, as damage by any activity to the fish the critical time, I understand it, would be between January 1st — what was the spawning— (T. 315) A. March 1st.

45. March 1st to June 1st, is it fair to say that would be the critical area when you are talking about protecting the development of the fish? A. This would be one of the critical times, probably the most critical in the life cycle of the species.

46. Is commercial fishing permitted during those times⁵?
A. Yes.

47. Does that have any unfortunate effect on the eggs or the larvae? A. No. sir.

48. Why is that? A. Most of the commercial fisherman use gill nets to catch fish on the spawning runs up river or upstream. These gill nets have a mesh size of 1 to 3 inches usually, and they catch fish but the eggs of course can easily move through the mesh. No eggs are really taken.

49. Is it possible that they catch fish with eggs inside of them that haven't been laid? A. Yes.

50. That is not very helpful to those eggs, is it? A. Right.

51. So that there would be some adverse effect on the eggs and larvae in the sense that if fishing continues in that spawning season and some fish are caught before they expel those eggs those (T. 316) eggs never have a chance to hatch? A. That's true.

52. And do you have any idea in tonnage, I don't even know how this is measured, what the production figures of the commercial fishermen are in this area? A. For the first five months in 1971 in the Potomac River. Maryland and Virginia fishermen had a dock side catch value of \$322,000.00.

53. Can you translate that for me into fish some way?
A. I can transfer it into pounds.

54. Alright, do that. A. It would be approximately six million pounds.

55. Six million pounds. Would it be a fair estimate for me to conclude that each fish weighs about a pound? A. No.

56. Is it more or less? A. It varies with the species.

57. Would it be fair for me to conclude from that poundage though that we are talking about millions of fish rather than thousands or tens of thousands? A. Yes.

58. And I note that you indicated that those are the figures for the first five months of 1971. That would include the entire spawning period, would it not? A. This would take into account the spawning period as a general (T. 317) rule unless temperature and so forth might extend the spawning period into June.

59. Alright, now you testified that there have been a number of surveys made in the Mattawoman Creek area. and if my note is right you studied during 1971, or for some period of time in 1971 the plankton collections on a twice a week basis, is that correct? A. No.

60. Well will you straighten me out again? A. The plankton collections were at a given site each week, once a week.

61. Once of a week. What other types or inquiry or tests did you run in connection with the Mattawoman Creek survey? A. During the spring?

62. Well as I get it you made one survey in September of '70. Tell me what you did on that survey? A. September, 1970 we established seven fish sampling sites in lower Mattawoman Creek extending from the stream mouth to stream mile 7.7. We made collections, identified fish, counted the fish, and sized them.

63. Alright, so that was more or less a census of the fish at that time. Then you came back you said in 1971 and you performed these plankton collections? A. Yes.

64. And that was on a once a week basis? (T. 318) A. Yes.

65. Now did you do anything else in connection with that 1971 survey? A. Yes.

66. What else did you do? A. We conducted water quality investigations at the sites of plankton investigation.

67. And what were the nature of those? A. Determining water quality.

68. And if I understood your direct testimony correctly you determined that the water quality at those 7 test sites in Mattawoman Creek were supportive of the anadromous fish? A. We did not conduct water quality at the 7 sites last fall. We conducted water quality at the 2 sites of plankton collection in the spring.

69. I see, at just two plankton collection sites? A. That's correct.

70. And where were they located? A. One of them was located a hundred yards upstream of Marsh Island.

71. That would be below the proposed dredging? A. That's correct, and one was off Nelson Point.

72. And where would that be in connection with the proposed dredging area? A. It would be in the dredge zone.

(T. 319) 73. And if you referred to Defendant's exhibit B could you indicate where in the dredge zone that would be? A. If I can find it on the map. Is this the exhibit?

74. Yes, sir, A. It appears to be in zone 4.

75. And it was just done at those two sites, that you studied plankton collections once a week throughout the year? A. And water quality at one time during the spawning season.

76. Now you indicated at the same time you were doing that in Mattawoman in order for you to make the comparison of spawning streams you were doing the same kind of surveys elsewhere, is that correct? A. Yes.

77. And that is in all 20 of the streams up the Potomac? A. There were more than 20 streams but we were doing this throughout the Potomac drainage, yes.

78. And in each one, in each instance you first ran a census of the fish, if I can use that phrase, that you did in September of '70? A. Yes, this was a sampling to determine nursery areas.

79. And then you followed that up with weekly plankton collections? A. Yes.

80. And also with water quality tests? A. Yes.

81. And it was on that basis you were able to conclude which were the good and which were the poor spawning areas? (T. 320) A. No. We established spawning areas. We did not, or have not as yet made a quantitative analysis of the data collected from site to site. We determined the actual presence or absence of spawning.

82. Now if I understood your direct examination too, I came away with the general impression that no species of fish, the anadromous fish at any rate that you have mentioned, are indigenous just to one area of the Potomac or one tributary of the Potomac, that they pretty generally course through the entire body of water? A. Yes, they are various places in Maryland.

83. Right, so that if in the study area of the Potomac, and Mr. Odell, I am always limiting my question to what you studied the area, in the study area in the Potomac if, for example, through channelization as you mentioned a spawning area is eliminated that doesn't in any way mean the total elimination of any species of fish, does it, in that area? A. It might be for that particular stream.

84. For that stream, but if we are talking in terms of species of fish, or those species as we just agreed course through the entire Potomac and its tributaries? A. If they can find suitable spawning sites, assuming these would be present, it's probable that they might spawn in another stream, but the thing we have to bear in mind is that most of these species by instinct return to the same stream (T. 321) each year in which they were born, so the fact that another stream exists does not say that they will spawn in any other stream.

85. But neither does it say that there's a lack of spawning area if in fact there is fish to be spawned? A. Assuming there would be other spawning area.

86. As I get it— A. There would be possibly other species, the same species of fish but other fish going to the other area.

87. That's what I mean. So that you have, in essence, there is plenty of opportunity to preserve each one of these species that you testified exists in the area? A. I wouldn't say there would be plenty of opportunity because the spawning area is governed by many factors. One of them is salinity. These fish spawn mainly in fresh or brackish water with low salt content, and there are many areas in the Potomac River that are unsuitable for spawning because of high salt content or because of other physical stream factors.

88. Now you correct me if I am wrong, I understood you to say that when you ran a fish survey at Craney Island, that's in the Potomac, is it not? A. Yes.

89. You found eggs and larvae which would indicate a spawning area, would it not? A. Yes.

(T. 322) 90. Of the American shad? A. We calculate American Shad.

91. And did you calculate American shad in the Mattawoman? A. Yes.

92. So the salinity difference or brackishness had no effect there, or lack of it, in other words, there must be some American shad who are able to spawn both in fresh water and not fresh water, isn't that so? A. No.

93. Well what's the difference? A. Well the salinity of Mattawoman Creek is essentially the same salinity in the Potomac River at Craney Island.

94. Alright, now we are back to where I thought we were. That is to say that these species that you are talking about spawn not only in the tributaries where you attribute

some importance to the freshness of the Mattawoman water but also in the Potomac where the water is not fresh? A. The water is — would be considered fresh in this area of the Potomac.

95. In the Potomac is it? A. Tidal fresh water,

96. Is it the same kind of water that's in Mattawoman?⁹
A. Essentially the same as far as salt content.

97. And is it essentially the same insofar as breeding purposes or spawning purposes of the American shad is concerned? (T. 323) A. Yes.

98. And how about the herring? A. In one respect similar, yes, in that they have similar salinities but the herring prefer to move in many cases through the tidal fresh water into areas of fresh water flowing streams. They are attracted by current.

99. Well so nonetheless, according to what my note here shows, they do in fact spawn in both those areas? A. Yes.

100. And the same with white perch? A. Yes.

101. And yellow perch? A. Yellow perch would be somewhat questionable in the Potomac. They spawn in Mattawoman Creek.

102. Striped bass? A. Striped bass are in the Potomac. They spawn probably in the lower part of Mattawoman Creek.

103. So that for spawning purposes then, I want to try at least to get some agreement between us, that for spawning purposes that waters of the Mattawoman and the waters of the Potomac for these species aren't really that much different, are they? A. Not—

(Court) If I am not mistaken I think you all are talking about two different things, as I understand it, and if I am not right correct (T. 324) me. You are saying that the various species that are in the Mattawoman Creek now, if it's disturbed and they go back, they would normally come back there, and if they couldn't come back they may

go somewhere else or they may not, but that doesn't say that there aren't other same species that return to the same place each year.

(Mr. Doyle) And that's all—

(Court) But the ones as far as Mattawoman may never find a place.

(Mr. Doyle) Exactly, and that's — what I was trying to do if the court please, is tie up the fact that he indicated that a harvesting or weeding out of the species to some extent is good or desirable and it makes no difference really whether you get a white perch from Craney Island or the Potomac or the Mattawoman if in fact they come from any place, the species has been preserved and if they are weeded out from any place the good is obtained.

(Court) Well essentially what you say is correct but he doesn't think they should be weeded out the same way you do.

(T. 325) (Mr. Doyle) No, sir, I understand. He says the commercial fishing is the way to weed them and I would like to do a little bit of it by dredging.

104. Now you indicated in answers to questions by Mr. Lord the probable effects in your view of a dredging operation, and as I understand it the predicate on which you base those probable effects was your knowledge of your dredging operations, and I think I put down all of the bases on which you say you have some familiarity with dredging, and I am going to make sure of that. You say that you reviewed Corp of Engineer permits? A. I have in the past, yes.

105. That's a document of some kind? A. Yes.

106. And you review recommendations concerning dredging in relation to fish spawning? A. Yes.

107. Is that a document of some kind? A. Ordinarily.

108. And you say you review the reports concerning dredging as it relates to soil conservation? A. Yes.

109. Is that a document of some kind? A. Yes.

110. Now you also say that you read literature on dredging, that's (T. 326) another basis? A. Yes.

111. And then finally you indicated that you made personal sightings? A. Yes.

112. Of sand and gravel, and it's on those five bases that you stated the probable effects that you thought a dredging operation might have? A. Yes.

113. And am I correct in assuming that when you say those are the probable effects are not in any way based on studies that you made in connection with a dredging operation, are they? A. From the standpoint of general observation, data collection, yes, some degree.

114. Observation and data collection. What type of data did you collect and where? A. We collected data in Charles County in the governed swamp drainage prior to channelization. During channelization and after channelization to determine the facts on fish presence or absence and fish propagation before and after channelization.

115. When did you make that study? A. Study started in 1969 and continued through the past spring, spring of 1971.

(T. 327) 116. Do you have that data with you? A. No, sir.

117. How extensive were those studies? A. It consisted of making fish investigations on a weekly basis for the most part throughout two streams. One stream, the stream was in a natural habitat. The second stream had been affected by channelization.

118. And this was, as you indicate, channel dredging? A. Yes.

119. You have made no studies or collected any data in connection with the sand and gravel dredging operations? A. No.

120. But you indicated in your direct examination that you have observed such an operation? A. Yes.

121. Where did you make those observations? A. Greenway Flats.

122. And when you say observations you mean you just went out there and looked at it? A. Yes, I espied the area.

123. The Greenway Flats would be within the study area of the Potomac? A. Yes.

124. Is it not a fact that in the Greenway Flats area many of these species of fish still exist and flourish? (T. 328) A. Species of fish I mentioned exist in the zone of the Potomac suitable for spawning up river as far as Washington.

125. And that would include Greenway Flats. A. Yes.

126. There the dredging operation evidently had no adverse effect? A. I would hesitate to say. When I say they were in the area I do not imply they were in the dredged zone. I imply they were in the river below and above the site.

127. Do you have any idea how long dredging has gone on there? A. Just from general testimony.

128. Period of years? A. Yes.

129. Now you indicated that some of these adverse probable effects, and I take it, isn't it a fact that you used the word probable effects, that word was used because you really did not have any definitive studies on which to base an absolute observation, isn't that so? A. No.

130. Why did you use probable then? A. I used probable because these would be before the fact of dredging. So it's probable in the sense that the dredging has not taken place.

131. Oh, I see. In other words, none of these things may happen if dredging took place? (T. 329) A. Yes. They may happen or they may not happen, but based on

experience these would be the probable things that would happen.

132. Based on experience only? A. Based on experience right.

133. Yes. Now one of the things you noted as a probable effect would be an increase in turbidity, is that correct?' A. Yes.

134. Would you classify the Potomac as a very turbid body of water? A. In some areas at some times.

135. Is it true also in some instances even the Mattawoman is a turbid body of water? A. Not as a general rule.

136. Well, I said sometimes. A. It would be some turbidity at some times.

137. And the fact that the Mattawoman is turbid at some times and the fact that certain areas, if I understand your testimony, the Potomac is turbid at all times, hasn't necessarily meant the elimination of the fish in either of those areas, has it? A. It's hard to say because I wasn't in the Potomac before 1968. I don't know what existed as far as total species.

138. Let me ask you this. Is there any way, does any body know, any expert know how many eggs a fish might lay in a spawning (T. 330) area? A. Yes.

139. How many would a fish lay? A. It varies from species to species.

140. Well give me a couple of examples. A. Striped bass a hundred thousand or so.

141. One bass a hundred thousand eggs? A. It's probable.

142. And how many, obviously all hundred thousand of those eggs don't fertilize and grow into fish? A. True.

143. So that again you go back to this harvesting prospect you are talking about, again reductions of these eggs must

occur or you are going to have trouble? A. Not necessarily trouble. Do you mean reduction before hatching or after hatching?

144. At anytime. A. Well it's a well known fact that, the life cycle of the species that more eggs are always laid than develop. This is because of the potential destructive effects which occur to eggs, naturally. I mean some of these eggs are eaten by other species of fish. So the fact that there are many more eggs present than hatch is a natural characteristic of the species for survival of a few of the eggs.

145. You indicated, and I am not quite sure or certain of this, that (T. 331 > one of the probable effects would be the removal of aquatic vegetation in the dredging area. Do you mean by that the bottom — the vegetation on the bottom of the stream bed or the river bed, or are you talking about the vegetation Mr. Wheeler was talking about that grows out on top of it? A. I mean the vegetation in the area of dredging. It would be mainly the emerged aquatic vegetation.

146. Emerged, you mean sticking up over the surface? A. Yes. Any other vegetation on the bottom that would be physically removed by the dredge.

147. Well the reason I am asking the question is because I thought you followed it up with the conclusion that a removal of the aquatic vegetation would mean a decrease in the oxygen in the area? A. That's probable effect.

148. I was under the impression that these plants consumed oxygen? A. They consume oxygen at a certain time but—

149. Well if they are not there then they wouldn't be consuming oxygen? A. Most of the time they produce oxygen.

150. Well how about when they die and decompose, doesn't that effect the oxygen supply? A. It does not effect it noticeably because you don't have a mass destruction of all the plants in a given area at a given time.

151. Now you ran surveys of Mattawoman that you testified to and (T. 332) you ran surveys at Craney Island and you testified that Mattawoman is one of the 10 important spawning streams on the Potomac. Would you consider Craney Island area another one of those 10 important spawning areas? A. When I say 10 important spawning areas, one of Those spawning areas is the Potomac River. I am classifying Potomac River as a stream, although it has a river name.

152. Well then that whole 130 miles is an important spawning area? A. No. I mentioned before there are some areas that have a high salinity and they are totally unsuitable because they do not meet the criteria of fresh or brackish water.

153. O.K. So what you are saying then is that you consider the Potomac an important spawning area even though there may be spaces and areas of the Potomac which in fact are not spawning areas? A. True.

154. In total though the entire river is an important spawning area? A. The Potomac River is an important spawning area. In some years from Route 301 to Washington. Now I considered the area as a spawning stream. That would be one of the ten streams.

155. That's right, and you take the good and the bad of the stream and you recognize some parts of the Potomac are not going to support fish to the same degree and to the same (T. 333) extent others will? A. True.

156. And in your scientific arena it makes no difference. I am sure, to you whether any one given area is better spawning ground than another given area in the Potomac, you look at the entire picture? A. Eventually we will look at comparisons from stream to stream, but this necessitates a computer system because there were 4000 collections in the Potomac this spring, and we can not really compare until we have a computer system. So at the present time we are establishing the fact that, for the most part, the presence or absence of spawning in a given stream.

157. And finally, Mr. Odell, isn't it a fact that insofar as the effects of the dredging are concerned, when you give these probable effects, you are restricting those probable effects to the area in which the dredging occurs? A. Some of them.

158. And which you do not? A. I mentioned destruction of vegetation. This would be for the most part in the immediate zone that's being dredged. The change in water quality. I mentioned that turbidity would increase because of the disturbance of bottom sediments. This would take place in the dredged zone and also out of the dredged zone through movement of particles by tides. i

1 T. 334) 159. Would that movement of particles by tides though tend to diminish the further away from the dredging zone you got? A. As a general rule the particles tend to settle as they are disbursed and—

160. And if you start out with a turbid body of water to begin with or an area that is turbid, the injection of the sediment into that area just increases turbidity to some degree? A. It increases turbidity depending on many factors, like rate of tide movement and the quality of the sediment. Some sediments are transported more easily than others. Some are dropped faster than others.

161. O.K. So that insofar as the increase in turbidity and the sediment residue that would move some distance from the dredging before it cleared, is that correct? A. That's correct.

162. Alright, and then what other effects, probable effects that you suggested might occur, would you say would occur away from the dredge site? Any? A. Most of the others would occur at the dredge site and also away from it. You can't really separate the dredge site proper from the rest of the area. All these areas that are being affected vary with many conditions.

163. Speaking in your terms and considering the entire Potomac as a stream and therefore a spawning area, is it not a fact that a 1400 acre portion of that stream is a very

small portion (T. 335) of the whole? A. There are 1400 acres at Mattawoman?

164. No. of the Potomac. A. Is a small area in relation to what⁰?

165. To the entire 130 miles of the Potomac that you consider a stream and a spawning area? A. I didn't consider the 130 miles to be a spawning area.

166. I just understood you to say that you consider the Potomac a stream and you consider the entire stream one of the 10 important spawning areas. A. I mentioned the spawning area in the Potomac is within one zone of the Potomac, not—

167. What's that zone? A. That's the zone I mentioned from Route 301 to Washington.

168. And how big a zone is that? How long is that? A. This would be from stream mile 48 at Route 301 to Washington, D. C, the approximate area of the Anacostia River.

169. Well how many miles is that? A. It's approximately, this would be from stream mile 48 to approximately stream mile 130.

170. 90 miles. A. Approximately.

171. So I guess it would be fair to say that a 1400 acre area would be a very small portion of the total of that⁹. A. Yes.

i T. 336) 172. Would you also admit that a three hundred acre area of the Mattawoman is a very small portion of the total 7.7 miles that you surveyed? A. I would hesitate to say that it's a small part.

(Mr. Doyle) Alright, sir. I have no further questions.

REDIRECT EXAMINATION

By Mr. Lord:

1. Just one question. On this harvesting and dredging situation, isn't it true that another way you can control

fish population would be to dynamite in the area? Wouldn't that control the fish population⁰. A. To some extent.

2. Would you recommend such a course of conduct⁰. A. No.

i Mr. Lord i No further questions.

RE CROSS EXAMINATION

By Mr. Doyle:

1. Is there any evidence in your dredging observations or anything you have done in connection with the preparation of this case that suggests that there is going to be any attempt by the. by Potomac to dynamite". A. Nothing I have heard.

i Mr. Doyle i That's all.

i Mr. Rich > Mr. Goldsberry.

(T. 337) JAMES R. GOLDSBERRY, a witness of lawful age, being first duly sworn, deposes and says:

< Clerk > Will you please state your full name and address? A. James Richard Goldsberry, Jr., Route 1, Box 36. Queenstown. Maryland.

DIRECT EXAMINATION

By Mr. Rich:

1. Mr. Goldsberry, by whom are you employed? A. I am employed by the State of Maryland, Fish and Wildlife Administration.

2. And in what capacity, what general capacity do you serve in? A. At the present time I am serving as a fur bearers project leader.

< Court > What kind of leader? A. Fur bearers project leader.

3. Now I want you to give the court your academic qualifications. A. I am a graduate of Ohio State University with a degree in wildlife management.

4. Prior to your graduation from Ohio State University what experience have you had in the area of natural resource? A. I had some experience both in private industry and for the University itself. Private industry I worked for a private consultant firm in Cincinnati, Ohio by the name of Hartker Enterprises, Incorporated. It was a pond and lake service company that did consultant work on designing work on designing and construction of ponds and lakes and also management of ponds and lakes.

(T. 338) 5. At the time you worked for this company were you involved in management planning with respect to sand and gravel operations? A. Yes, sir. There were two large sand and gravel operations, ex operations which we worked on. They were at the present time lakes.

6. What function did you perform in that service? A. We did general fish surveys and fish management in aquatic plant manipulation and this type of thing.

7. And you say that experience lasted until 1962. What experience did you then get into? A. Well then I was hired by the Ohio Cooperative Wildlife Research Unit which is one of 17 units throughout the United States. It's based at Ohio State University and it's cooperative between the Ohio State University, the Ohio Division of Wildlife and the U. S. Department of Interior. It's very similar to the fisheries cooperative unit.

8. And what work did you perform in that capacity? A. For that — for the coop I was research assistant and worked on several projects.

9. What did these projects deal with? A. One of the projects dealt with a study of the family behavior of Canada geese at Seney National Wildlife Refuge in the upper peninsula of Michigan.

10. What experience did you have in 1963? (T. 339) A. In 1963 I worked on the, again for the cooperative as a

research assistant on the study, at that time in connection with the, also the Ohio Department of Health on the movement of skunks in relation to rabies control.

11. And while you were still working for this research group in 1964 what work did you perform? A. In 1964 I assisted on a project in Lake Erie marshes which dealt with the cycling of chlorine 36 Ring-Labelled DDT through a Lake Erie fresh water marsh echo system. Now this study consisted of tracing DDT through all of the various plant and animal parameters within a marsh.

12. Fresh water marsh? A. Fresh water marsh.

13. In 1965 what job did you go to then? A. 1965 I was hired by Remington Arms Corporation at Remington Farms in Chestertown, Maryland.

14. What were your duties at the— A. My duties there were game manager. I was principally in charge of managing the fish and wildlife on Remington Farms which is a wildlife demonstration area. Primary duties consisted of managing water fowl on some 25 impoundments that they have upon the farms including one reservoir which contains approximately eight to ten thousand Canada geese throughout the wintering season. I was also in charge of rearing and releasing approximately 5000 mallard ducklings, ducks each (T. 340) year.

15. I see that your job there ended in 1967, and at that time you came with the State of Maryland, is that correct? A. Correct.

16. And when you came with the State of Maryland, I want to trace your functions up to the present time, what work have you carried on since 1967? A. When I came with the State of Maryland in 1967 the primary duties that I conducted through 1969 were review and commenting on all Corp of Army Engineer projects and also soil conservation service projects. Various data collections were made and comments submitted to the United States Department of Agriculture and to the United States Department of Interior, and also the Board of Public Works for the State of Maryland.

17. Would it be fair to say that these are projects, the applications for permits in large measure were connected with dredging projects? A. 90% of them were connected with some type of dredging project, either channelization through soil conservation service or channelization in tide-water dredging and filling operations, and also sand and gravel operations.

18. Go on. What other capacities have you served with the State? A. O.K. I also was a member of the, and still am a member of the wetlands advisory, technical advisory committee in con- (T. 341) nection with Maryland wetlands survey. This is a survey initiated in 1967 and was a complete survey of all the wetlands of Maryland, delineating their type and acreage and the — what had been done to them. Whether they had had some type of destruction or whether they were in their natural state, and also the plants and animals that occurred upon these various areas. I also — at the present time now I am a furbearer project leader as I have stated. I am in charge of providing information concerning distribution and abundance and the effect of State management upon the furbearing species in Maryland. Also provide and advise on the proper type of management on both private and State owned lands.

19. In your capacity as that project leader are you also involved with the water fowl associated with the marsh land? A. Yes.

20. What function do you serve there? A. Well at various times we are called upon to conduct surveys, and some of the surveys that I have conducted on waterfowl throughout the years, and this has been, over the various years have been aerial surveys of waterfowl. Some of these being winter waterfowl inventory, Canada goose survey. breeding pairs surveys, sea duck survey, and various ground counts such as woodduck roost counts and sea duck counts. Also I am a pesticide coordinator for the wildlife management division (T. 342) of the department, and there I am charged with liaison work between the Board of Agriculture and the Department of Entomology at Col-

lege Park, University of Maryland. Also review pesticides requests upon department owned lands. Also oversee literature review and formulation. Also—

21. Let me go back. You talk about overseeing literature. Have you ever participated with the American Geological Society in a study? A. Yes, there was a study conducted of the — let me see, I have got it written down here some place. Well the title of the study is folio 18, which is recently published by the American Geological Society and it was a survey of the wildlife wetlands and shell fish areas of the Atlantic coastal zone. It was just recently published. I was a participant in the study and furnished information for this particular study.

22. What other publications have you been involved in?⁹ A. I have written several technical and also — I am trying to think of the word — popular type articles which have been published in various—

23. What did they deal with? What was the subject matter? A. Some of — one of them, for instance, dealt with redwing blackbirds, another dealt with the marshlands of Maryland, others have dealt with nutria and beaver, and this type of—

24. Well now have you given any speeches or talks where you represented ('T. 343) the department? A. Yes, they give approximately twenty, between twenty and thirty talks each year some of which are to various university groups. Very recently — a very recent one was a group from Frostburg State Univer — or State College in Maryland. Also Audubon College, or not Audubon, but—

25. Don't be nervous. Take your time. A. Well I can't think of that. I have also spoke to the Maryland Society of Civil Engineers, that particular talk was on wetlands.

26. Have you won any honors, Mr. Goldsberry? A. In 1968 I was named Maryland Conservationist of the Year by the Sikar-Safari International organization.

27. And that was in respect to what type of work? A. Well that was in respect, I believe, to the wetlands type of work I had done on wetlands at that time.

(Mr. Rich) Mr. Doyle, do you—

(Mr. Doyle) I take it you are letting me cross examine on the basis of his qualifications as a prospective expert?

(Mr. Rich) Yes.

CROSS EXAMINATION (on qualifications)

By Mr. Doyle:

1. When did you graduate from Ohio State, Mr. Goldsberry? A. 1965.

2. 1965. Then a lot of this industrial and research experience (T. 344) that you set out here was actually before you had your degree, was it not? A. Yes, sir.

3. You worked for somebody while you were going to school? A. Definitely, yes, sir.

4. Sure, I did the same thing, and you tried to get a job in the area in which you were finally going to work in, didn't you?

(Mr. Rich) Well, Your Honor—

A. Well this is where my interest was, sure.

5. And isn't it true then that you weren't in any way finally responsible for any of these research projects that you undertook? You worked on them at somebody else's direction and control? A. Well a couple of them were at my own direction and control.

6. Which were they? A. The striped skunk survey. I was overseen, of course, by different project leaders as you always are.

7. What was the nature of the skunk survey? A. This was the movements, a telemetry study of the movements of the striped skunk to determine home ranges, travel patterns and so forth, so that, the primary purpose of this was to determine size of the animals, the particular home range so that control measurements could be put into effect for rabies control since the incidents of rabies was extremely high at (T. 345) that time in Ohio.

8. You indicated to me, or in your testimony that your degree was in wildlife management? A. Yes, sir.

9. What are the studies that are involved in wildlife management? A. In wildlife management, it is essentially an ecology degree. You study all the various parameters of ecology including soils, botany, zoology, parasitology, anatomy.

10. Is there a major and a minor in this degree? A. Well you could make major or minor in wildlife management, depending on what your basic goal was. But you could major in something else and minor in—

11. Did you major or minor in anything? A. I majored in wildlife management, yes, sir.

12. And you say that this falls within the gamut of ecology but that's an awful broad term, is it— A. That's right.

13. Are you suggesting then that this degree runs the gamut of ecology? A. Yes, sir. I had something in the neighborhood of 98 quarter hours of biological sciences.

14. 98 quarters? A. 98 quarter hours, yes—

15. How many course would that be? A. Well it was all that they offered in zoology at the Ohio (T. 346) State University on campus.

16. And I take it this was a four year course? A. Yeah, I was in school approximately six years.

17. Why? A. Partially due to the fact that I had some excess credit hours which I carried, also due to some illness. I had ulcers.

18. But you are not suggesting that the wildlife management degree requires any more than the usual four years undergraduate work, are you? A. No, sir. No.

19. Can you tell me approximately how many biology type courses you took? A. Oh, lands. In excess of 10.

20. And were these the normal three credit courses in one semester? A. No, they were normally five credit courses.

21. One semester? A. One quarter.

22. Is that the same as a semester? I went to the old-fashioned schools? A. No, a quarter — a system is divided into three segments a year, rather than two.

23. Are they approximately the same amount input in them as the old semester system was? (T. 347) A. Yes, sir.

24. Is it fair to say these five biology courses you took were not directed to the same, or the number of—

(Mr. Rich) That's not correct. There were 10.

(Mr. Doyle) Whatever it was — I knew you would correct me if I was wrong.

(Mr. Rich) Thank you, Mr. Doyle.

25. Do you know — were any of these 10 biology courses — enumerate some of them. A. Zoology 636 — ecology. Zoology 620, advanced vertebrate biology, or advanced vertebrate zoology. Zoology 508, ornithology, zoology 604 was bird biology, study of physiology, etc., of birds.

26. And these were all courses that were taken in the classroom under some professor? A. Yes.

27. Now when you left school you went with Remington Arms? A. Yes, sir.

28. And as I understand it you were with them about two years? A. About a year, a little over a year and a half, yes, sir.

29. A little over a year and a half and there you were the game manager of their reserve? A. Right.

30. And what did your duties as game manager entail? A. Primarily management of the various wildlife resources on (T. 348) the area.

31. When you say management what did you do? A. Conducted various types of things like directed the laborers, etc.. on the farm how to manipulate the land, for instance, planting of crops, this type of thing. Regulation of water levels and—

32. You mean you did some farming there? A. No. I didn't directly. Wildlife management, that's part of wildlife management as far as manipulation of land, it's cultivation of land for various reasons. For instance, fallow disking which stimulates the growth of various herbaceous plants which come up naturally in — and feed waterfowl. Waterfowl or what have you, the primary thrust at Remington was waterfowl.

33. And your job primarily w^{as} to see to it that there was sufficient there in the way of vegetation and food for them to survive? A. Nesting habitat and the whole gamut, yes, sir.

34. You didn't do, I don't understand you to say you did during that year and a half, or whatever it was. any research or studies, you more or less just managed the place, isn't that so? A. Well we did conduct various studies. One of the particular things that I worked on was nesting, various uses of nest boxes by waterfowl, various survival in broods on the various (T. 349) reservoirs, etc. that they have at Remington.

35. These were studies? A. Yes.

36. Conducted by you? A. Yes.

37. Alone? A. No. I had various assistants, student assistant — I had two different student assistants while I was there.

38. Did you publish any material in connection with these studies? A. Myself, no.

39. There were no publications that resulted from them? A. No.

40. Were they done in connection with your employment with Remington Arms? In other words, did you have

to report back to the boss about— A. Right. Yeah. We did various reports as you always do when you are working for somebody else.

41. Were these assignments or were these voluntary endeavors on your part?

(Mr. Rich) Your Honor, I don't mean to cut Mr. Doyle short—

(Mr. Doyle) Well then don't.

(Mr. Rich) —but the experience is in and of itself this man's—

(Court) Well he has a right to cross examine him (T. 350) as to his qualifications. This was brought out on direct by you.

42. Alright, sir, let's go closer in, when you came to Maryland. As I understand it from 1967 when you came to Maryland to 1969 you reviewed permit applications for the Corp of Engineers? A. Yes, sir.

43. Was that as a member of the Department of Fish and Wildlife? A. Yes, it was then Game and Inland Fish, same department.

44. Are you the department head there? A. No, sir.

45. Are you the assistant department head? A. No, sir.

46. What is your — where do you stand in the organization? A. Furbearers project leader.

47. This is one project that is under the assistant and the director? A. Right.

48. And how many projects, different projects are there in the department? A. Well under that particular — I am trying to think now. There are two main projects. One is fisheries and one is wildlife management.

49. And where does the furbearers belong in this? A. Furbearers falls under wildlife management.

50. Under wildlife management. (T. 351) A. However, at the time that I was reviewing the projects I reported

directly to the director of the department who was then George B. Shields.

51. You indicated that you reviewed these requests for dredging permits. What was the reason for that review?⁹

A. The reason for the review was the memorandum of understanding — Department of Interior memorandum of understanding with the Corp of Army Engineers, that they would solicit comments, etc. on the fish and wildlife aspects of the various Corp of Army Engineers and departments.

52. Am I to understand then when you got one of these permits you would read it, you would try to ascertain the nature of the job and where it was going to be, and then there would be a determination made by your department as to whether to advise the Corp of Engineers whether you were in sympathy or in opposition to the permit? A. Yeah, we would receive the permit. I would read the permit, find its location and what all it entailed, visit the location, depending upon the type of application just take a visual survey and determine at that time whether it needed further study and report back. Some of these things just entailed small bulkheads or small channel type dredging.

53. And you say you would report back, to whom would you report? A. To the director.

54. Of the department?

(T. 352) 55. With your recommendations? A. Right.

56. Which he may or may not agree with? A. Right.

57. And it was his final decision as to whether or not the approval or the disapproval of your department was made? A. Definitely.

58. Now you indicate to me you are a member of the wetlands technical advisory committee. How large is that committee? A. It's comprised of a member from all the natural resource agencies that were in existence at the time of the study.

59. How many are they? A. Well then there were, Department of Forest and Parks, Department of Water

Resources, Department of Game and Inland Fish, Department of Chesapeake Bay Affairs, also the University of Maryland Conservation Service, and the Department of State Planning, and Department of Economic Development, apparently 8.

60. And your membership on there was as a result of your employment with the Fish and Wildlife Department?⁰
A. Yes, sir.

61. You were the representative of your department on the committee? A. Yes, sir.

62. You were not picked because of your own background or expertise? (T. 353) A. Well I was hired for the position because of my—

63. I see. A. —so apparently, so I was.

64. Your superior decided that you ought to be the fellow to represent the department? A. Right.

65. And am I to understand when you go to those meetings — are you still on it? A. Yes.

66. When you go to those meetings you bring to those meetings the judgment of the department on any given matter that involves the department, is that correct? A, Yes, sir. There were other businesses associated with that. For instance, the setting up of the particular study.

67. You do not have, do you, the authority or the responsibility to make decisions on behalf of the department insofar as the affect of your membership on that committee?
A. No.

68. O.K. Now you mentioned that you are in charge of the furbearers project. How long have you been in charge of that? A. It will be going on two years, since—

69. Since you stopped reviewing permit applications for the Corp of Engineers you went in the furbearer project?
A. Yes.

70. **And** what does that entail? (T. 354) That entails, I guess it's best just to read it. Provide information con-

cerning distribution, abundance and effect of State management on furbearing species in Maryland.

71. Could you enumerate some of those species? A. River otter, nutri—

(Court) Could you keep your voice up just a little bit¹?

A. Right. O.K. The beaver, the muskrat. the red fox, the raccoon, skunk, mink, weasel, bobcat, coyotes.

72. Dogs and cats be involved? A. Possums, no, sir.

(Court) Wildlife.

(Mr. Doyle) Well furbearers. I didn't — you are right. It's under the wildlife department.

73. Now you indicated to me that you also have written several publications for both technical and popular journals, is that correct? A. Right.

74. What technical journals have published your works? A. Well they have been in various proceedings of types of things.

75. What do you mean by that? A. Well, for instance proceedings in the real estate association of Maryland.

76. The proceedings of the Real Estate Association of Maryland? A. On the prevention to real estate — this is very similar to (T. 355) for instance, in our profession we have the southeast, well in this section we have, we have the southeast — I can't think of the darned thing — Game Association which yearly sponsors a convention at which time papers are presented and nay papers then are published.

77. These are not regular publications in the sense that they periodically appear like a law review journal, or something like that? A. They appear yearly, yes.

78. Well they appear as a result of a convention? A. Right.

79. And if I happen to get on the program and go to that convention to make a speech I could get my paper in there, couldn't I? A. I suppose you could.

80. Now you say popular publications. What are they?⁰
A. Maryland Conservationist for instance.

81. And how many articles have you had published in that? A. At—

(Court i The Maryland what? A. Conservationist. At least two.

82. At least two, and the Maryland Conservationist is what? A. It's a departmental publication of the Maryland Department of Natural Resources.

83. It's part of your — it's part of the department you are in? A. Yes, sir.

(T. 356) 84. I see. It's like a house publication? A. No. it's a publication for the public. It is public.

85. It's sold? A. Yes, sir, it's sold.

86. And you have had two articles published in there. and how many articles have you submitted to them? A. Two.

87. One had to do with the redwing blackbird? A. Yes. sir.

88. What did the other one have to do with? A. Marshlands.

89. And what about them? A. Just what they are, what they produce, what effects are occurring to them in Maryland, such as dredging, filling.

90. Did your article — or was your article predicted upon studies you had made? A. Yeah.

91. You yourself had made? A. Right.

92. And how long was that article?

(Court) This is just cross examinations on qualifications.

(Mr. Doyle) Yes, sir.

(Court) Well I don't think we need to get into every detail.

(Mr. Doyle i Alright, sir, I will waive it until the (T. 357 > right time. Go ahead, Mr. Rich.

DIRECT EXAMINATION i Continued)

By Mr. Rich:

28. In order to comply with Mr. Doyle's wishes as we set up, what are the bases of your knowledge with respect to dredging operations again? Will you go over them? A. The bases?

29. Yes. A. To what I know about dredging operations, I have observed various types of dredging operations, drag line, clam shell, hydraulic, various types of ladder dredges, etc., with buckets. The various forms of spoil deposition.

30. Have you ever observed the dredging in the Gree-way Flat area? A. Just from the air.

31. Now I direct your attention to the Mattawoman Creek area. What is the bases of your familiarity there with that area? A. The original basis in conjunction with the application of Potomac Sand and Gravel — well the old Smoot Sand and Gravel reaffirmation of that permit by Potomac Sand and Gravel.

32. And when was that? A. I believe that was in 1967.

33. What function did you serve at that time with respect to that application? A. Well this was during the period of time when I was reviewing Corp of Army Engineers permit requests.

34. And was action did you take in the way of analyzing the (T. 358 < problems as presented? A. I visited the area and made various observations and collections.

35. Alright, now let's look at the observations and collections.

35. Alright, now let's look at the observations and collections you made at that time in that area. Could we have

the approximate date you visited the area? A. I believe that was September of 1967. September the 11th, 1967.

36. And what data was collected at that time and what observations were made? A. Well, the various species of plants—

37. Well let's — we have already heard a lot of testimony on plants. Let's — just trying to eliminate what we have already heard during the past two days. A. Let's see. We went into the area and one thing that wasn't mentioned was the submerged aquatics—

(Court) The what? A. Submerged aquatics. These are the aquatic vegetation that grows in the bottom of open water areas. We have — you use a hook to collect this type of thing and we went down Mattawoman approximately quarter of mile intervals and threw the hook out and — to determine what species of submerged aquatic vegetation was in the area.

38. What were your findings with regard to the submerged aquatic vegetation? A. I am trying to remember. Some of the things were potamogetons, (T. 359) in particular, sago pondweed, myriophyllum, ebiea, coontail, these were the primary species of submerged aquatics that we found.

39. You have been here the past day and a half and you have heard the testimony of Mr. Parker. You have seen State's exhibit B, and you have heard about the areas where the proposed dredging is to occur in Mattawoman Creek, is that correct? A. Yes, sir.

40. Alright, now will you relate your findings to that area?

(Mr. Doyle) Objection. I don't understand that question.

41. Will you tell what you found in that area? A. In the area of—

42. The proposed dredging. A. That was proposed for dredging?

43. Right. A. We found the various marsh plants. Some of the area had the upland — more upland type species such as green ash, sweetgum, blackgum, oaks, maples, sycamore, elm. We also found greenbriar, poison ivy, grape, dogwood, alder, river birch, swamp rose. These area on the high areas adjacent to the swamp. From the higher hummocks out in the marsh we found species such as jewel weed, swamp milkweed, joe-pye weed, panic grasses, foxtail grass, nut grasses, and woolly head grass for instance. In the mud flat area, the shallow water areas we found spatter- <T. 360 > dock, pickerelweed, arrow arum. Also cattail, various bullrushes, jewel weed, beggarticks, smartweeds of various types, wild rice, wild millet, hibiscus, water hemp, water hemlock, and various, two species of typha, and also the American lotus.

44. Now how — let me try and pinpoint your area of expertise. How do these plant lives relate to the furry creatures or what is it, furry animals? A. Right.

45. Furry animals and the water fowl in the area¹?

(Mr. Doyle I I object. If I understand — well perhaps I don't. Let me — was this—

i Court) Mattawoman Creek.

(Mr. Doyle) Yes, sir, but I'm wondering, my notes seem to indicate that he was testifying about submerged aquatics.

(Court t He did and then while you stepped up to speak to someone he covered the rest.

i Mr. Doyle) Oh, I am sorry, sir. Fine.

A. O.K. Well we can speak to all of them.

46. Do it in a manner that would be able to summarize.

(Mr. Doyle! I hate to interrupt again, Your Honor, but I have another basis for objecting to that question. I haven't heard any testimony, I may have missed that too, as to whether or not <T. 361> there are any fur bearing animals in the Mattawoman Creek Area, and I haven't

heard, I don't believe as yet, any indication from him as to which waterfowl, if any, he is relating his answer to.

(Court) I don't think he has mentioned that.

(Mr. Rich > I thought I asked him first if he heard the testimony yesterday. I thought that would be sufficient. If he wants it repeated, that's fine.

(Court) Well no, I mean in regard to the waterfowl or fur bearing animals. I don't recall anything on those.

(Mr. Rich) Well there was the testimony brought out by Dr. Lauer.

A. Well I can—

47. Answer the question. A. As to the waterfowl?

48. Waterfowl and fur bearing animals. A. Alright. O.K. We do have, within the area we have deer, rabbit, muskrat, otter, mink, raccoon, beaver and opossum, and we also have various species of waterfowl.

49. What are they? A. Black duck, mallard, blue winged teal, wood duck, pygogrebes, great blue heron — oh, excuse me, the great blue heron is another specie. Scaup, ruddy ducks, this type of thing have been observed there.

(T. 362) 50. Alright, now I will go back to my original question, and you have described the fauna in the area and the plant life. How does this plant life relate as a supportive echo system to the birds and the furry creatures you have just described? A. Right. Well within the realm of the world we have various minerals and nutrients which occur in organic forms and are utterly useless to many forms of animal life. They are just for instance floating free in the water. Iron, phosphorous, nitrogen, potassium, magnesium, manganese, zinc, copper, all these various things are floating free in the water. Animals such as beaver, muskrat, waterfowl can not use these minerals directly. It is the plant species in conjunction with photosynthesis that tie these minerals up and convert them into useful foods, and then it's — then these

foods which are the plant life then become the basis for food for the other species working our way right up to man.

51. You have capsulized that fine. I direct your particular attention to the proposed dredge area. Now mention has been made today and yesterday that to dredge out this area of approximately three hundred acres or two hundred acres would have a limited effect or a substantial effect on the rest of the echo system as a supportive basis in Mattawoman Creek area. You have heard all this testimony, is that correct? A. Right.

52. What is your opinion as to the relative value of this limited (T. 363 > dredging area with respect to the entire Mattawoman Creek as a supportive echo system?'

(Mr. Doyle) Objection. Several basis. First I would reiterate what the obvious thrust of my earlier cross examination of the witness was and that he is not competent to testify as an expert. Secondly, Mr. Rich's question is unnecessarily broad. It says in effect to this man you have heard all the testimony of the last day and a half, state this opinion, and there has been obviously contradictory testimony which would preclude anybody stating an opinion unless he indicates very clearly, or the question indicates very clearly which of the contradictory testimony he is accepting, and I don't believe under those circumstances an opinion ought to be elicited or permitted on either ground.

(Court) Well he probably — his opinion I think would show which one, he has considered it all but which way he leans as to who he believes and who he doesn't believe. As to his qualifications, you cross examined him thoroughly and I think he is qualified, so I will overrule (T. 3641 your objection.

53. Answer the question. A. As far as the total effect on Mattawoman Creek it would have a total effect on Mattawoman Creek. Studies that have been conducted there by various people, Mr. Gross, I believe, conducted this dye study. For instance, it shows that the dye only

moved two thirds of a mile. In reviewing dredge projects, for instance, in various types of materials we find that sand and gravel have a high amount of colloidal type materials and these are very fine clays which remain suspended in the water when they are stirred up for a very long period of time, several days if not weeks at times. With the tidal dye study indicating that the tide only moves two thirds of a mile this would mean that these colloidal materials would dissipate the Mattawoman Creek very very slowly. What they would do would be increase turbidity and the most immediate effect of reducing turbidity would be the destruction of the submersed aquatics that are there, the elodeas, the pondweeds, the coontails and this type of thing. So the first thing we would do would be to lose one of the primary productive species for our food wealth. Other things that could occur would be the settling out of various sediments into the adjacent detritous matter or organic matter that there is on the bottom of these marshes and smothering these areas off from the small creatures that inhabit them and that have limited mobility (T. 365 > within these types of materials. Another effect would be the effects of the holes themselves, and the erosion into the holes. It was testified that the holes were dug fifty feet deep or forty feet deep and now they are twenty feet deep. This would indicate that they are eroding in at the rate of something like five feet a year. With this erosion, eroded material is coming from surrounding marshlands. It is coming from the build up of organic materials which furnishes part of the nutrients for the surrounding marshlands and it's coming on these adjacent mud flats. So in effect we are removing habitat and this erosion takes with it the top organisms that occur in the very top layers of this type of material, and so that not only are the organisms required to reinvade the holes that are dug, they also must reinvade the areas that have eroded away, and so bottom organisms are effected in this way. It's possible too that the erosion could also erode out adjacent root stocks of the various plants, like the pickerelweed and nuphar, or spatterdock is the common name, could erode these plants away and thus open some of these mud flats

up to more rapid erosion from barges for instance, moving up and down and causing wave actions or wind, causing wave actions. So these are some of the effects. Other effects would just be the, as was testified to earlier, the removal of the actual marsh that occurs there, and you physically remove it and it's no longer there. It's (T, 366) no longer producing things.

54. I referred to your September of 1967 study. What other studies have you partaken in in this area? A. Well in my own work we have transect surveys, aerial transects. which we fly and one was flown this past February over all the streams in southern Maryland, primarily to locate beaver colonies, and we fly these in the winter time of course when we can see the dams and see the beaver houses and count the actual beaver lodges that occur, within the dredge site there is at least one beaver colony that we observed from the air, and occasionally you can miss some because you only cover a very small area of the marsh. Up the Mattawoman Creek itself we did observe I think some nineteen colonies.

55. What other funny animals did you observe? A. I also have observed muskrats and — that occur on the area.

56. These are observations made in your record— A. Yes.

57. What do you call that — you used a technical name, transects? A. Yeah, aerial transects.

58. What was the date of that? A. That was in February of 1971. I don't remember the exact date but I have it recorded somewhere.

59. Now at that time did you visualize or observe waterfowl? A. On the transect "itself?"

60. Yes. (T. 367) A. I did but at that particular time, I don't make note of it when you are flying a transect for a particular purpose, if you notice everything you miss what you are—

(Court) What do you call it, trans what? A. Transect.

(Court) Do you photograph it or is this just a visual observation? A. This is an aerial transect. We take a map and layout a line on the map and each year we fly up this same line so that over a period of years flying this same line you get the charges that occur—

(Court) Yes, but did you take a photograph? A. No. this is done—

(Court) You draw in on the map what you observe? A. No, we have the line marked off and numbered as to certain segments and most of it's done by using a tape recorder and we say, for instance, "Segment 1," and then as we are flying up segment one we record what we see, and give a time and then segment 2, and you record, so that you get — you don't get specific exact locations but you get locations within segments.

61. Now let's go on. Any other studies that you participated in or supervised in that area? A. Well I did do some what we call ground trooping of our transects. This is just going in physically on the ground and seeing for sure (T. 368) what you saw from the air was actually what occurred upon the ground,

62. Do you know when you did that? A. That was done in April. This was also in conjunction with a visit to the area with the Department of Chesapeake Bay Affairs, sort of killing two birds with one stone, in conjunction with the hearing that was coming up then.

63. And at that time did you notice anything that you have not testified about prior to today? A. Well I did notice several other species of wildlife while we were on the area. I observed one bald eagle, four pair of osprey. I did look at the beaver colony. There were twenty one black ducks. One pair of mallards, several yellow legs. which are shore birds, a cuspsian tern, ring-billed gull, several ring-billed gulls, black-crowned night heron, blue-winged teal, approximately 130. There were 50 wood ducks counted then. 200 jacksnipe were observed, pied-billed

grebe, great blue heron, many barn swallows, crested fly-catcher, downy woodpecker, blue jay. There are also other surveys that are conducted. There has been surveys of Mattawoman Creek since the early Ws on the wood duck roosts that occur.

(Court) On what. A. Wood duck roosts. The wood duck is a communal rooster in the spring time and then in the fall. Now during the breeding (T. 3691 season he spreads out and goes about his duties of raising his young. and then in, for instance in the fall, prior to migration these ducks group up into large flocks at night and they pick certain areas, for what reason we don't know, to roost: in. and these ducks then roost in the areas and then spread out and feed in the day time and then come back to the particular areas at night and roost again. So there have been studies. There are wood duck roosts in Mattawoman Creek. In fact Mattawoman Creek is one of the larger—or one of the largest roosting areas in the State, and there were — I can give you just an idea of the count here that occurred in this area — what I happen to have is 1968 data. We ourselves, of course, being single biologists and having the entire State to work have to call upon personnel which we have trained to conduct these various surveys. Here we go. This survey was made by two wildlife officers who had received training from the project leaders in the methods of making various wildlife counts. They were wildlife officers, Farear and Lebo.

64. What was the count? A. This was a good duck roost count. This is counting the birds in specific location that fly into a particular roost. Now they fly in from all directions and this is just one specific location, and we count these areas year after year after year after year to get the relative abundance of wood ducks in this (T. 370) type—

'Mr. Doyle) I am going to object to the witness introducing the result of this survey. It is hearsay. It wasn't conducted by him or under his supervision. I don't think—

< Court > He said it was under his supervision. It was men he trained.

A. These—

(Court) Now wait a minute. I don't understand about the location. You say there are numerous locations they fly in, but you only checked from one location. A. Well because of the — well there are a couple of hundred different wood duck roosts in the State.

(Court) Yes. but we are talking about the one in Mattawoman. A. Right, so because of limited personnel with the State we can't completely surround the area and count all of the directions the ducks might fly into it, so—

(Court) Well I mean, this is just one group that came into this roost, is that correct? A. Right. This is one group from one direction. The count was made from the Mattawoman Creek on the old Potomac Sand and Gravel barge because of the weather at that time.

65. Where was that barge in relation to the proposed dredge area? (T. 371) A. Well it was relatively close to one of the dredge areas if not upon one. It's south of where the spoil is piled up now at the present time from the prior dredgings. At 18:28 twenty five wood ducks flew in. At 18:30 ten wood ducks flew out. At 18:33, eight wood ducks flew in. 18:39, nine. 18:40, seventeen. 18:41, fourteen, and this goes on this way through the time that the last wood duck flew in. There was a total that evening of 377 wood ducks that flew over that particular location and landed in the roost which occurs in that vicinity.

66. I think your testimony has been very clear so far. I just want to clear up one point that was brought up at the end of Dr. Lauer's testimony yesterday. He referred to the channelization of the 1963 map — in fact I think that's an exhibit, isn't it?

(Mr. Doyle) That one there?

(Mr. Rich) No, the one that you introduced.

(Mr. Doyle) If I introduced it it's an exhibit.

67. Exhibit 6, and at that time there was testimony as you will recall, Mr. Goldsberry, that in '63 that channel

was dredged out last. Do you know when that channel was originally dredged out? A. Yeah. The Potomac was a navigation stream of course dates back to the first inceptions of Washington, D. C. The principal Corp project. and this was the original first dredging of the > T. 372 > Potomac in crmpletion of the project, it was completed in 1905, and this was a channel of 20 some feet from the mouth of the Potomac to Washington, D. C. Of course there are other things that have occurred in the Potomac in this area in relationship. Sand and gravel operations have been conducted there I guess since people settled Maryland. Well probably dating back to the early 1800's.

68. Well let me — I didn't raise that question and it would be unfair for you to answer it. I do know that you are a student of history and you are a student of the support, system in the Potomac River for waterfowl and furry creatures, is that correct? A. Yes.

69. Could you briefly just give a brief summary of the history of waterfowl in the Potomac estuaries? A. Right. O.K.

(Mr. Doyle) Your Honor. I don't see any relevance to the history of waterfowl in the Potomac estuary.

70. Well let's relate it specifically to the area adjacent to and near Craney Island and Mattawoman Creek and Greenway Flats?

(Mr. Doyle) If it relates to history I still persist in the objection as to relevancy. This man has testified of surveys taken which show (T. 373) water fowl in the area.

(Court) I think the history is interesting but I don't think it is really important. I want to know — what the court is interested in is what effect it would have on what's there now.

(Mr. Rich) Well I think it relates directly and if Mr. Doyle—

(Court) Not the history of it. We are going back to when St. Mary's City was settled and—

(Mr. Rich) No, I don't want him to go back that far. Your Honor, I will be very brief, and I think it's a matter of information that would be very helpful to have this.

(Court) Well I'll let it in subject to exception and we will see what it is.

A. The history of the Potomac, originally the Potomac was, started at 1900, was very similar to what we find in the Susquehanna flats. There were submersed aquatics growing in the Potomac up past Washington, D. C. There were fringe marshes all the way down the Potomac. Some of the plant species there would be wild celery, many of the pondweeds as we found in Mattawoman. The area then supported thousands, tens of thousands of waterfowl and did so until the 30's, approximately at the time of the 30's we had a severe drought throughout, nationwide really. (T. 374) and salt water invaded the upper estuary of the Potomac and was detrimental to the submersed aquatics that grew there, although many remain. Then at that time we had an invasion of water chestnut. It was — a decision was made then by the Corp of Army Engineers to rid the Potomac of water chestnut which they did in various manners, and it left, well with the demise of some of the submersed aquatics and the increase of water chestnut and its resultant control various channeling. The settlement of the area around D. C. with sediments coming down and the removal of the water chestnut in the loss of many of the submersed aquatics. Sedimentation began increasing, or turbidity began increasing in the Potomac and the water fowl populations began to drop. The water fowl populations continued to drop and are still dropping today, and there have been studies performed by the Fish and Wildlife Service and by the Fish and Wildlife Administration of Maryland as late as the 50's and 60's which show that the Potomac River now from Chicamuxen Creek to Washington, D. C. no longer supports submersed aquatic vegetation, and without this many of the important water fowl species that were vegetation eaters, like the canvas back and scaup have left this section of the Potomac River and

they no longer use it and instead of having tens of thousands of waterfowl there as we use to have we now have a few thousand waterfowl. Most of these are found up on the shoal areas where surveys have indicated that we have good growths of the different worms and animal life. The marsh clam rangia, for instance, occurs now. This is a relatively recent invader, and we had testimony yesterday as to the benthic organisms that occur, for instance, in the Craney Island area. This is very similar to what our studies have shown. So the only species of waterfowl that occur there now are the ones that are feeding upon this animal life.

(Mr. Rich) Thank you. Your witness.

CROSS EXAMINATION

By Mr. Doyle:

1. Mr. Goldsberry, is it not so that it is your belief that any activity that would adversely effect the wildlife and the fur bearing animals in Maryland should be banned⁰.

A. Any activity that would adversely affect fish and wildlife in Maryland?

2. Should be banned⁹ A. Yes, sir.

3. That's your job, you are here to protect those things, right⁹ A. Yes.

4. Exactly, and it's not within your function, and really you shouldn't concern yourself with the nature of the activity or whether it is good or bad. There's one test as far as you are concerned with that's whether it has an adverse affect on waterfowl and wildlife, right⁰. A. Right.

5. Now you mentioned this unfortunate reduction over the history (T. 376) of the Potomac in the wildlife, and the supportive aspects of the ecology, of that wildlife. But it seems to me coming through it all. isn't it a fact that probably the biggest villain in that story, the pollution that came from Washington. D. C, the human waste and the way the river was used for that purpose. Isn't that the

biggest polluter of the Potomac? A. There are several polluters—

6. I know that, but isn't that the biggest? A. No. I would say not.

7. It's not? What would you say it was? A. The biggest polluter would be the siltation that's coming in.

8. And where does that siltation come from? A. It is coming from various sources. It is coming from agricultural lands. It is coming from housing developments. It's coming from sand and gravels that are dug up from the bottom of the Potomac.

9. Where would that — where have you seen evidence of that siltation, the latter? A. The latter, in the Greenway Flats area.

10. Have you investigated Greenway Flats? A. I have observed silt suspended in the water behind your dredge there.

11. When did you conduct this survey at Greenway Flats?⁰ (T. 377) A. I can't remember the date. I flew over the area in an airplane.

12. Flew over the area? A. Right.

13. And flying over that area you could see the siltation coming up from the bottom of the river? A. I could see the siltation coming from the barge.

14. Well isn't it fair to say you could see siltation but you couldn't tell the source of it from an airplane? A. Well based upon my knowledge of having stood on dredges and watched them operate, seen the way they operate, the mannerisms of various digging operations, I would say yes, that the silt was coming from the dredging operation.

15. Assumption based on other observations elsewhere?⁰ A. Right.

16. Not Greenway? A. No, but—

17. Right, now let's talk about these other observations. Where did you stand on a barge dredging sand and gravel?"
A. Dredging sand and gravel?

18. Yes, sir. A. Kent Narrows, dredging sand, and Ocean City was dredging sand.

19. Ocean City dredging sand, when was that? A. It has been within the last five years, '67, '68 or sometime in '69.

(T. 378) 20. Were these commercial dredging operations?
A. Yes, sir.

21. Do you know the names of the companies that were doing the dredging? A. Not offhand, no, sir.

22. And what your purpose for being there? A. Just to observe what was — what a dredge was doing so that I could relate what dredges did to the type of surveys I was running for the State.

23. You mean you just casually went down to Kent Narrows one day to stand on the dredge? A. Well not casually, but—

24. Well what was the purpose of the survey? A. To observe dredging operations.

25. So that you could relate it to an aerial observation of the Greenway Flats? A. Well relate it to the various things that I was reviewing at that time, the Corp of Army Engineers permits that I was reviewing, in order to adequately review these permits. I felt that I should know as much as possible about not only the environment that, the spoils and etc. were being pumped and, but some of the machinery that was doing the operations.

26. And these observations again were when, with the sand dredging equipment? A. '67, '68, something like that.

(T. 379) 27. And they were all commercial activity? A. Yes, they were being conducted by companies, you know.

28. Yes, fine. Now you indicated that you had available to you the results of surveys of wood ducks, I think you

said, taken in 1968 by inferiors or people subject to your direction and control, is that correct? A. That's correct.

29. And as I understand it that survey data was collected in what you described in the Mattawoman tract in the site of the dredging area? A. Right.

30. And it's a fact that those wood ducks were then there⁰. A. Yes.

31. They were counted, you actually saw them, and this is also a fact, is it not, that these surveys were taken subsequent to the time that Potomac had been in that area dredging? A. Afterwards, yes, sir.

32. So the dredging operation that took place earlier didn't mean the ultimate complete extinction of these birds in that area, did it? A. No, it never does. Mother Nature is a pretty good thing and she keeps fighting back at the things that we do to her and just because you partially destroy something or something doesn't mean that you eliminate it entirely, but it means that you had some detrimental effect upon it.

(T. 380) 33. And these creatures, as you say, are fairly adaptable and when something bothers them in one area they move over to another undisturbed area until that goes away? A. Not necessarily. There are certain things about particular environments that are unique. For instance there are certain parameters about wood duck roosts that are unique, and if — we know what some of these are. We don't know what all of them are. When Mother Nature and the wood duck know, but there are only certain locations where roosts occur.

34. Are you suggesting that there is anything at all unique in what occurs in Mattawoman Creek? A. I would suggest that there are some unique parameters that occur in Mattawoman Creek, not only because there is a wood duck roost there but because of the size of the wood duck roost, approximately 500 birds.

35. That 500 bird wood duck roost is unique? A. It's relatively unique to Maryland.

36. Oh, relatively unique now? A. Yes, there are several other areas in Maryland that have good numbers of wood ducks in them, but Mattawoman Creek is one of the highest—

37. When you make one of these wood duck surveys do you stand right in the roosting area or do you have to stay some distance from it? A. No. you stay some distance from it.

38. How far away from it would you be? (T. 381) A. Well I have been, actually when you say stay some distance. I have conducted counts from ten feet from where wood ducks were dropping in. I have also conducted counts from anywhere to half a mile to a mile from where wood ducks were falling into a roost.

39. Do the notes of the survey conducted by your associates indicate where they made this survey in relation to the actual roost? A. Yes, it was made from a Potomac Sand And Gravel's barge.

40. And how far was that from the roost? A. Quarter of a mile. Half to quarter of a mile.

41. Half to quarter of a mile. Now you indicated that you also ran a survey in February and April of 1971. The survey in February being an aerial transect to locate beaver colonies, and as I understand your description of that you draw a line on the aerial map and you fly from one extremity of that line to the other— A. Right.

42. Making your sightings as you say for the one thing because it's just too much to observe, right? A. Yes.

43. How long is that transect? A. In Mattawoman Creek."

44. Yes, sir. A. There are several. We have—

(T. 382) 45. No, I am talking about the one you actually surveyed in February. A. The one I was on?

46. Yes, sir. A. Eleven or twelve miles, something like that.

47. And does that run parallel to the creek or perpendicular to the creek? A. It runs parallel to the creek.

48. And would it be up the center of the creek? A. No, we stay off to the side so we can see the creek. If you flew up the center you could see what was on either side but you wouldn't see the creek so the line is placed off to the side of the creek so that you can observe the actual creek as you fly upstream.

49. And what you were looking for was beaver colonies? A. Yes, sir.

50. And now later you say in order to substantiate what you saw from the air you go back and in this case you went back April of '71 and you ground trooped this same— A. Truthed.

51. Truthed. Ground truthed the transect and that, I understand, constitutes getting out of the airplane and walking up the line on the ground? A. Right.

52. And you conducted that in April of '71? (T. 383) A. Yes.

53. And were you alone or did you have a party? A. Well I went on that section of the line with people from Chesapeake Bay Affairs.

54. And I guess on that, when you say you walked the line you just — you may not be able to walk actually the line, you walked the general route? A. Right, you go through the general area and see what's there. Beaver are obvious.

55. And you walked that entire twelve miles that day¹? A. No, sir.

56. Well how much of that did you walk? A. Actually walking, we went by boat from 225 downstream into, up into the various creeks that are in Mattawoman Creek and observed the activity.

57. From the mouth of the stream did you start? A. No. I started from the bridge at 225.

58. And what direction did you go? A. Downstream, and then back upstream.

59. Did — and that course you traversed took you past the proposed dredge area? A. Yes,

60. How do you know where that proposed dredge area is? A. The original proposed dredge area was upon the Corp of Army Engineers plat. Then subsequent to that I had been shown (T. 384) various maps with so-called proposed dredge areas on it.

61. Now the Corp of Engineers permit which I understand was the first— A. Yes, that was under Smoot.

62. That was in 1967 when you made that observation *in* — of the area in connection with permit renewal. Did the application actually contain a plat? A. Didn't contain a plat. It contained a schematic drawing of the area.

63. And was it one big area? A. It showed at that time, yes, sir, it showed the dredge area as being one large area approximately three hundred acres in size.

64. You have been here and heard the testimony and you know of defendant's exhibit B, do you not? Have you ever seen that? A. Yes, sir.

65. And you do know, do you not, that those six irregular areas marked off are actually the dredging areas? A. Yes.

66. Is it fair then to say that the Corp of Engineer permit application and the schematic attached to it was a much larger area than those six indicated here? A. Well testimony has indicated these six will be three hundred acres and I believe the original application also covered three hundred acres, so the relative size hasn't changed.

(T. 385) 67. I see. A. But the areas have moved around. I suppose, to probably take advantage of various deposits of gravel.

68. When in '67 did you begin your employment with the Fish and Wildlife Administration A. February.

69. You indicated in connection with the erosion situation when you were testifying as to the effect that the rate at which the old dredge holes filled up was, indicated an erosion factor of some five feet a year? A. Apparently so, yes. He said that the holes presently are twenty feet deep and they were originally dug forty feet.

70. And you indicated, as I understand your testimony. I want to make sure it's accurate, that the eroding material in your opinion is coming from the surrounding marshlands and falling into the hole there, is that correct? A. It would have to be, yes, unless somebody would haul it in and dump it.

71. It comes from surrounding areas, is that erosion a natural process? A. All erosion is natural, yes.

72. And I take it that would occur then whether the dredged hole is there or not? A. No, the dredged hole would precipitate the erosion. Erosion is a gravity induced thing or a current induced thing. Conditions (T. 3861 might be correct in that particular vicinity or they might not for current to dig out a hole which might induce dredging — or might induce erosion, but if you have a flat surface it generally doesn't erode.

73. Oh, if you have a flat surface, but suppose you have a graduated decrease in depth of water, would there be some erosion along that— A. Certainly.

74. And what you are saying then is that the dredge hole doesn't cause the erosion, it may affect the rate of the erosion? A. Right, it definitely affects the rate of the erosion, yes, sir.

75. And you concluded from that it was possible. I think I have this exact, it's possible that erosion could erode the plants away? A. Yes.

76. You have no evidence or statistical studies in Mattawoman of that affect have you? A. No, not in Mattawoman.

(Mr. Doyle) I have no further cross examination.

(Mr. Rich) We have no questions.

(Court) Step down. How many more witnesses do you have?

(Mr. Rich) We have one with the possibility of a very short witness for two minutes or three minutes.

(T. 387) (Court) Well suppose we take a short recess.

(Mr. Doyle) Can I ask, if the court please, can they tell me approximately how long the one witness might be?

(Mr. Rich > We have two witnesses.

(Mr. Doyle) This witness.

i Court) The next one you call.

(Mr. Lord) Oh. this witness on direct will only be about fifteen minutes.

(Mr. Doyle) I would like to call the court's attention, I don't believe it will be any problem but I have been scheduled to testify before a legislative committee hearing this afternoon for some time. I told them that I probably would not be over there until late and I would hope that I could get out of here by five thirty or six o'clock in any event because they are waiting to hear from me.

(Court) Well fifteen minutes you will have time.

(Mr. Doyle) Alright, fine. I hope they can stick to that.

(Court) We will take a short recess.

(Mr. Lord) Mr. Cole, will you take the stand?

IT. 388) WILLARD WALTER COLE, JR., a witness of lawful age, being first duly sworn, deposes and says:

(Clerk) Will you please state your name and address?
A. My name is Willard Walter Cole, Jr. My address is 1245B Quincy Court in Cary, North Carolina.

DIRECT EXAMINATION

By Mr. Lord:

1. Mr. Cole, by whom are you employed? A. U. S. Fish and Wildlife Service.

2. And where is the office out of which you work? A. I am presently assigned to the Raleigh area field office, southeastern region, U.S. Fish and Wildlife Service.

3. And what States are included within the jurisdiction of that field office? A. The Raleigh area office handles four States in southeast. These being Maryland, Virginia, North and South Carolina.

4. Alright, and how long have you been with the Fish and Wildlife Service? A. I have been with the U.S. Fish and Wildlife Service since 1968.

5. And can you state for the record your academic background? A. Yes, sir. I have a bachelor of science degree from North Carolina State University.

6. When did you obtain that? A. In 1966.

7. In what particular— (T. 389) A. That bachelors was in fishery biology.

8. Alright, and you say you went to work for the Federal Government in 1968. What did you do between the time you graduated in '66 and 1968 when you went to work for the Fish and Wildlife Service? A. I worked as fishery biologist in three different capacities for the Florida Game and Fresh Water Fish Commission.

9. Alright, now have you been handling the same basic type of responsibilities ever since you have been working for the Federal Government? A. For the Federal Government?

10. Yes. A. Yes.

11. Since '68, and what is the general nature of your responsibilities? A. Since 1968 I have been with the division of river basin studies. We are a particular element

within the Fish and Wildlife Service which has the primary responsibility for review of water resource projects that come under the consideration of the 1958 Fish and Wildlife Coordination Act.

12. Well I think you have better tell us a little bit more about that Act and the particular responsibilities that you carry out under it. A. O.K. The Coordination Act—

13. Once again for the record, that was the fish and Wildlife (T. 390) Coordination Act⁹. A. I am sorry—

14. Of 1958? A. Yes. That is the short title. It was last amended in 1958.

15. Alright. A. Our primary responsibilities fall in line like this. Under Section 2a of this Act. and I will quote if I may.

16. Yes, please do. A. "Whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage by any department or agency of the United States or by any public or private agency under Federal permit or license, such department or agency first shall consult with the United States Fish and Wildlife Service of the Department of Interior, and with the head of the agency exercises administration of the wildlife resources of the particular State wherein the impoundment, diversion, or other controlled facility is to be constructed, with a view to the conservation of wildlife resources by preventing loss of and damage to such resources as well as providing for the development and improvement therein, in connection with such water resources development." If I may go on this Act is very important in Federal procedures as it does cover many types of problems.

(T. 391) 17. Can you give us some idea what types of projects? A. Yes. In a review capacity the division of river banks and studies in the U. S. Fish and Wildlife Service handles well over thirty one types of programs.

Those that my office is most involved in and these are the major programs in the United States, involves such things as Department of Transportation, U. S. Coast Guard permits for work in and over United States navigable waters. U. S. Army Corp of Engineers, Section 10 and Section 13 of the 1899 Rivers and Harbors Act.

18. Let me stop you at that point. Now are you talking about permits that are issued by the Corp or actual projects that are undertaken by the Corp? A. I am talking in this instance about permits applied — in which a private or public applicant will apply to the Army Corp of Engineers for permission in navigable waters.

19. As has been done by Potomac Sand and Gravel? A. Yes, as in the particular instance. The permit, they have in fact considered a Section 10 permit.

20. Under the 1899 Statute? A. Yes.

21. Alright, now go on and give the other— A. Other projects that we are involved in are the Atomic Energy Commission license, all that they issue we review, for the Power Commission license we also review these, as well as the Soil Conservation Service Projects, and in particular here (T. 392) are the Public Law 566 projects, which as many of you know this is called the small watershed projects. We also are deeply involved in wild rivers, National riverway studies, estuarine preservation studies, wetlands preservation, and we also, I believe, now are reviewing approximately seventy to eighty percent of the service review of any environmental impact statements formulated under the National Environmental Policy Act of 1969.

22. Now let me stop you there. I want to make sure I understand your testimony. All of these types of projects fall within the charge that your department has received from that 1958 Act, is that correct? A. These are the more important one. Let me say, these are the more massive ones. They involve more work.

23. And so what happens then you are advised by the appropriate agency that this project is anticipated and you

are asked to give your comments to that agency after studying its impact, is that correct? A. That is correct.

24. Alright, now did you mention or do you have any jurisdiction over projects that are undertaken by the Corp Engineers itself? A. Yes, we do. In addition to their permit program we also review all of their projects. By projects I mean those which are derived from many congressional authorizations, but if I (T. 393) can in general state the types that they are. These are navigation projects, flood control projects, beach erosion projects, hurricane protection projects, water supply development and flood plain zoning projects.

25. Well before we get into the real point of your testimony, you were in court yesterday, I believe, when some statements were elicited from Dr. Lauer with respect to the channelization of the Potomac River, were you not? A. Yes, I believe I was.

26. And exhibit 6, I believe, was introduced which showed that there was a navigational channel in the Potomac somewhere near Craney Island? A. Yes, sir.

27. And the Mattawoman area. If future dredging were to be done by the Corp of Engineers, this channel was to be deepened again or cleared, would your department be given an opportunity under that Act to comment and give your views? A. Yes, we would. We review, like this dredging, that would be what it would be in this instance because it does involve a previously authorized project. We do this—

28. That would give your department an opportunity to study the impact on wildlife resources and comment? A. Yes.

29. Right. O.K. Now is it not true that the Federal Government also has a proprietary interest in this area? (T. 394k A. Yes.

30. And when I say this area I am talking about the Mattawoman Creek, Craney Island area of the Potomac River? A. Yes, we do.

31. And where is that? A. We, the Fish and Wildlife Service has direct responsibility for the administration of what's called Mason's Neck Wildlife Refuge,

32. And where is that located? A. This is on the Mason's Neck Peninsula. It's also called the White Marsh.

33. Do you have a map with you that shows that? A. Yes, perhaps this would be better.

34. Now this map that you have just handed me, Mr. Cole, could you state for the record what this is? A. This map is a map of our Mason Neck Wildlife Refuge, Fairfax County, Virginia, which is located on what they call Mason Neck.

35. So is it a fair statement that this is just on the Virginia side of the Potomac River? A. Yes, this is just — and in fact it lies between Sycamore Point and Hallowing Point, right in—

(Mr. Lord) Well I think it would be appropriate to introduce this as defendant's exhibit D.

(Map of Mason Neck Wildlife Refuge filed herewith marked (T. 395) Defendant's Exhibit D>.

(Mr. Lord) After the court has had an opportunity to look at it I would like to return it to the witness for just a minute.

36. Mr. Cole, have you visited the Mason Neck Wildlife Refuge? A. Yes, I have.

37. Are you familiar with the location of Craney Island? A. Yes.

38. And with respect to— A. With respect to this refuge, yes.

39. Alright, can you take this pen and mark with an "X" as nearly as possible the location of Craney Island to this particular site?

(Witness marks exhibit)

40. Is there a scale on this map? A. Yes.

41. And applying the scale to the lower center can you give the approximate distance for Craney Island in relation to Mason Neck? A. Refuges and their scales are sometimes hard to — from the point up here at the marsh I would say it is approximately three miles and a half.

42. That far? A. Well if I understand the scale correctly.

43. Well that's alright. I think it probably speaks for itself. (T. 396) Alright, getting back to specific projects since you have been with the department the last three years, could you give a representative list of important projects that you yourself have worked on? A. Yes, I can. Specific projects. Now I think it important that we clarify this. In Federal service and within our division are not done under our names. We are all, everyone in the southeastern service is a staff member of our regional director and—

(Court) Could you face this way a little bit when you speak so you speak into the microphone.

A. Specific projects in which I have been involved in, and I will try to go down some of these in order. The first one was the central and southern Florida flood control project. This is one of the oldest flood control projects in the United States, and Congress ordered the Department of Interior and the Department of Army to do a computer ecological reanalysis of this project. I did participate in this. I have also participated in numerous permit evaluations within the State of Florida in our old Vero Beach office, which covers the State of Florida, particularly in this one we worked on called Coastal Petroleum which was to do mining in Lake Okeechobee for lime rock. Also I have worked in permits in the Boca Ciega Bay area—

(T. 397) 44. What type of project was that? A. This again is a Section 10 Corp permit. Eventually this one became *Zabel v. Tabb*, frequently quoted today—

45. Is that the title of a law suit? A. Yes, it was.

46. And what was the proposed activity to take place—
A. The applicants was Zabel and Russell in this particular instance and they proposed to do some dredging and filling for the construction of a housing development in Boca Ciega Bay.

47. Alright, any others? A. Yes, in Florida, I have worked on the cross Florida barge canal project in many different stages. I was also on a special assignment, I believe it was for approximately nine months, during the big controversy in Florida, what was later called the big Cyprus Everglades Jetport situation. I was assigned to the Secretary's office to prepare an environmental impact report on these which we and numerous other Interior employees did prepare. I have also worked, in conjunction with this I have also worked on the 1-75 alignment across south Florida which does involve many types and different terrain.

48. 1-75 being a Federal interstate highway? A. A highway, yes, which we also become involved in where aquatic areas are involved. Recently I have been involved in (T. 398) what's called the New Hope Dam and Reservoir project right outside of Raleigh, North Carolina which is currently in litigation.

49. Have you been involved in any power plant sighting situations? A. Yes. One in particular, not in this area, but it was in Florida. It was called Turkey Point power plant. It was an ABC license and Corp permit in conjunction. This is in South Biscayne Bay.

50. Did this involve any dredging? A. Yes, it did under Section 10 permit.

51. Now I think you were here yesterday when Mr. Parker testified concerning the memorandum of understanding that exists in the Department of the Interior, and I think he stated what the memorandum of understanding required. Do you have any comments on that particular testimony and also what is your understanding of what that memorandum accomplishes? A. My understanding of

the memorandum of understanding between the Department of Army and the Department of Interior which was signed on July 13th, 1967, essentially set forth the policies and procedures for coordinating the actions of the two departments after initial application and the first comment and review had been received by the Corp of Engineers. It does provide a mechanism whereby the two departments can coordinate in the decision, the Federal decision on the application up through the chain of command eventually to the (T. 399) chief of engineers and the Under Secretary of the Interior.

52. Is it a fair statement that in your review of the types of projects that you have outlined you were acting pursuant to Section 2a of the Fish and Wildlife Coordination Act, 1958? A. Yes.

53. And of course when appropriate the memorandum of understanding may come into play? A. This is correct.

54. But that is not the principal document— A. No, it's not. The two principal laws that we operate under today currently are the Fish and Wildlife Coordination Act and the National Environmental Policy Act.

55. Alright, against that background did there come a time when your office received a request for comment on proposed dredging for sand and gravel at Craney Island and at Mattawoman Creek? A. We received two public notices from the Baltimore District of the Army Corp of Engineers for dredging operations. One to Smoot Sand and Gravel, I believe. I have them here, and one to Potomac Sand and Gravel. One of them does involve a project off of the Mason Neck area in the Potomac River. One does involve the Mattawoman Creek area, yes.

56. And did in fact your department, the Raleigh office respond after study to the Corp of Engineers and give your comments to the court? (T. 400) A. We did not respond from the Raleigh office.

57. Right. A. We handled the initial field review on these matters. There is a complicated review process in

the Federal system but the regional director signed the statement after review of all members of the Fish and Wildlife Service.

58. Yes. Now do you have those statements with you today? A. I have the statements, yes I do, that have been mailed to the District Engineer in Baltimore.

59. Alright, now just so there can't be any question about this, and I think this is along the lines of a review procedure that you described, did your office receive in Raleigh sometime recently an authorization for your regional director or his designee to appear and testify at this hearing today? A. Yes, I did.

60. Alright, and did in fact your supervisor designate you to appear on behalf of your office? A. The regional director, Mr. Sid caused — did designate me to appear as Mr. Bradley's alternate.

61. Alright, and so you were authorized to appear here and give the statements that have been developed, or taken from your files, is that correct? A. Yes.

62. Alright, now you have with you xerox or carbon copies of the two separate statements which were given⁹ (T. 401) A. I have carbon copies of the statements that had been given to the District Engineer in Baltimore and that were presented at the Maryland Wetlands public hearing.

63. Alright, will you please produce those? A. They are carbons.

64. O.K.

(Mr. Lord) Now Your Honor, what I have been handed from the file of Mr. Cole with respect to the Craney Island dredging is a letter of November 4, 1970 from the Regional Director to the Federal Water Quality Administration, and covering that is a letter from the Regional Director to the U. S. Army Corp of Engineers dated January 27, 1971. Both of these were transmitted by letter of April 16. by

the Acting Regional Director to Mr. Capper, the Director of Chesapeake Bay Affairs. There are similar companion papers with respect to the Mattawoman Creek project giving in depth comment as result of the study undertaken by Mr. Cole's office. I have already provided copies of these to Mr. Doyle and I would like to at this point introduce these both as exhibits in the case.

(Mr. Doyle) May it please the court, the plaintiff (T. 402) objects to the introduction of these as exhibits in this case. Mr. Lord has kindly provided me with copies so I can look them over in advance, and it appears obvious that a fair review of those documents will reveal the fact that while somebody in these Federal agencies did do studies and Mr. Cole had nothing at all to do with them, and indeed his testimony here today shows he had nothing to do with them. These studies are in fact definitive and substantive conclusions by the Federal agencies with regard to the applications for dredging. In this form it is absolute total hearsay and it seems to me it should not be permitted to be introduced into this record unless I have the opportunity to cross examine the authors of the reports.

(Mr. Lord) Do you want me to comment. Your Honor?

(Court) Yes.

(Mr. Lord) I think I have already established that these were taken from the formal records of the agency in which Mr. Cole has been employed, at which he has been employed for the last three years, and that he has been authorized by his direct supervisor who is in charge of (T. 403) these records, and that supervisor was authorized by the principal office of the Department of Interior in Washington to appear here today and present these as statements representing the views of the Department of the Interior, and I just don't see that there is any possible objection on any ground, of hearsay or otherwise.

(Court) And they are records that are kept in the regular course of business—

(Mr. Lord) Absolutely.

(Mr. Doyle) If it please the court, this is exactly what the basis of my objection is and that's why I made the comments with regard to the definitive and substantive conclusions reached in those letters. The attempt to avoid the hearsay rule that's being utilized here is the ordinary record exception, and that ordinary record contemplates a routine kind of a document that's, the person who compiled the record had no reason to believe might be involved in litigation and therefore it comes in because it is not subject to any attack as to credibility. These documents were prepared solely for the adversary proceeding (T. 404) into which they were introduced on the question of the permits sought by Potomac and to that extent they are not ordinary business documents. These are hard hitting evidential documents that should be subject to cross examination by their authors.

(Mr. Lord) Your Honor, I think we have already covered this point and that's why I took some pains to spread it out in advance. Mr. Cole's office is required by congressional Act to give this — give these comments. There's no discretion involved at all. They would be in derogation of their statutory duties if they refused to give comments or didn't act pursuant to the statutory charge that they received. This was done. The Corp received the application. The Corp is familiar with the statute as Mr. Cole's people are, asked for comment. The comment was given. and this is what we are asking to introduce into evidence at this point in time.

(Court) I will admit them at this time. I am going to admit them subject to exception at this point.

(Mr. Lord) Mr. Cole, would you forward these so they (T. 405) can be marked as exhibits E and F for the defendant.

(2 Reports filed herewith marked Defendant's Exhibits E and F)

(Mr. Lord) Can you tell me which has been given which letter of designation?

(Clerk) E is Mattawoman Creek.

(Mr. Lord) Alright, thank you.

65. Now Mr. Cole, the letter of April 16 addressed to Mr. Capper and marked with the file reference at the top. Pot. Sand & Gravel. Mattawoman Creek, has several attachments and I am certainly not going to ask you to read to the court everything that's included, but I would ask you to read one or two paragraphs—

(Mr. Doyle) Now if it please the court, if I understand the basis of your ruling permitting these to come in, they come in more or less as ordinary records kept in the ordinary course of business, and is that exception to the hearsay rule. I have never had experience where a messenger who brings the records to court in connection with that exception has been permitted, unless he shows some personal knowledge about them, to comment on or to interpolate from them. It seems to me the (T. 406) records speak for themselves and Mr. Cole should not be permitted to testify with regard to them except on a showing that he has some personal knowledge about them.

(Mr. Lord) Well passing the point that Mr. Cole is obviously much more than a messenger, based upon his testimony, he is certainly not commenting. I am merely asking him to read one or two pages from the material that is already in evidence.

(Mr. Doyle) They are part of the evidence and I suppose the court can read all of it without having to worry about one or two paragraphs.

(Court) I can read them.

(Mr. Lord) Alright, sir.

66. Mr. Cole, with respect to Mason Neck Wildlife Refuge could you explain in a Federal system what is a wildlife refuge? What's the purpose of it? A. A wildlife refuge is on a — a wildlife refuge would be set up for the perpetuation and protection, preservation of a species, a rare and endangered species. We have some, many refuges

set up for this. We also have many refuges that are set up for the particular aspects of waterfowl management up and down the various waterfowl fly ways. Very often our refuges serve dual purposes. In fact they serve more than dual (T. 407) purposes. They are, besides preservation they also, many of them are recreation areas. Some of them are just havens for wildlife. They are exactly that, refuges.

67. Now with particular respect to Mason Neck do you have any figures on the size of that refuge? A. Yes, this refuge was authorized for 845 acres which, I think, yes, which was bought originally I understand by the nature conservancy. Approximately 245 of these acres of — are of marsh.

68. Of that 845? A. Yes.

69. So about 25% would be marsh area, and you say this is for the protection of rare and endangered species, what particular species are involved here at Mason Neck? A. The particular purpose of Mason Neck was for a comprehensive program for the conservation, restoration, and propagation of the southern bald eagle.

(Court) Of the what? A. Of the southern bald eagle.

(Court) Bald eagle? A. Yes, sir.

70. Which has been observed at that particular location? A. He has been observed roosting in that location and as many as four birds at one time in the last six months.

71. You said four birds at any one instance? (T. 4081) A. At one roosting site, yes.

72. Now, your region, you have indicated, obviously has jurisdiction over the State of Maryland, the border between Maryland and Virginia is the Potomac River. Have there been any particular programs in the Department of the Interior or in your division relating to the Potomac River? A. Yes, there have been. The Potomac River has, as was mentioned by an earlier witness, has a long history in this nation. It is called the nation's river. In fact the

Department of Interior has a booklet out calling it the Nation's River. We have many congressional studies request and a presidential study order, that we would do all the fish and wildlife surveys in the Department of Interior to maintain the natural amenities of the nation's river. Our actions to date, in fact Mason Neck Refuge is an example in part of this.

73. And am I to understand then that you look at the Potomac River in a larger prospective? A. Yes.

74. Could you tell us a little bit more about that*? A. Well the Potomac River is a river that has had a lot of man influenced activity, or is subject to a lot of man influenced activity, because of the close proximity of the metropolitan area of Washington. D. C. It certainly has many ills, many of which have been brought out by other witnesses. It will continue to have ills until many things are corrected. I am (T. 409) sure — I am positive that we in the Department of Interior are doing all we can for instance to get the necessary funding and arrangements made for the control of pollutions coming from metropolitan D. C. Any restoration or preservation program that we would undertake would be a multidisciplinary, a multifaceted thing. We would go after pollution control, control of development activities along the shore lines in unwise development areas, the control of navigation channels resulting from public and private projects, the control of, for instance if you would, sand and gravel operations, if they are connected with the Potomac River basin proper or would in any way influence it. We would go at this from a multifaceted aspect. We had, there are been — and I — and I believe Mattawoman Creek was included and I believe the records would show this, that Mattawoman — there are certain marsh areas up and down the Potomac that have been recommended for preservation in state as they are today. Mattawoman Creek marshes are one of those. The document and the task force was to, that created this recommendation was a combination of many federal and state resources agencies. It

was their opinion that the values attended to Mattawoman Creek locally and throughout the entire Potomac basin, were worthy of and should receive every protected action that it could.

75. Well in conclusion then is it a fair statement then that although you have the general statutory charge that we have (T. 410) already talked at length under the Fish and Wildlife Coordination Act, that your additional points of interest to the Department are the fact that we are dealing with the Potomac River or the Nation's River, and also we are dealing with a potential threat to Mason Neck Wildlife refuge? A. Yes.

(Mr. Lord) I don't have any further questions.

CROSS EXAMINATION

By Mr. Doyle:

1. Mr. Cole, was I correct before when I saw the exhibit that was introduced of the Mason Neck Marsh, am I correct when I conclude that Craney Island where you marked it is not within that Mason Neck Marsh reserve? A. It is not within the refuge boundaries, no, sir, but there is — if I understand this—

2. That's all — you just — that's all, you have— A. I am sorry.

3. Now are you familiar with House Bill 1192 or what is now known as Chapter 792 of the Acts of Maryland of 1971? A. No, sir, I am not.

4. You are not familiar with the fact that that's the basis of this law suit here? A. I am familiar with that fact.

5. But nothing more? A. Nothing more.

6. You have read, I suppose, and are familiar with the content of (T. 411) the two documents that were introduced as Defendant's exhibits E and F which you brought with you? A. Yes, sir.

7. Is there any reference at all or any relationship to House Bill 1192 or Chapter 792 in any of those documents? If you know.

(Court) Well he said he is not familiar with House Bill 1192.

(Mr. Doyle) But he is familiar — I am trying to find out whether these documents, whether the — the suggestion here is that if the documents were prepared in any way in connection with this law suit.

(Court) No, he testified to that. They were prepared as a result of an application made to the Army Corp of Engineers.

(Mr. Doyle) If the evidence is clear on that point—

(Court) That's clear.

(Mr. Doyle) I am going to move to strike his testimony on the same basis that I offered the original objection, that it's not relevant to this law suit.

(Courts) Alright, overrule you motion.

8. Now Mr. Cole, as I understand your testimony your department (T. 412) has very broad authority to act on all permits and all actual governmental projects that have to do with dredging? A. Yes, sir.

9. And you can, that department of yours can either approve those permits and projects or disapprove them, can it not? A. Sir, we do not have the power of decision, approval or disapproval. We can only report and recommend to the appropriate agency.

10. Right, but the authority given to you under the Act permits you to not only disapprove but also to approve any of these applications? A. We would provide a recommendation that the subsequent agency may take certain action.

11. Right, that can go either way? A. That can go either way.

12. That's right. You don't absolutely prohibit all of this — all of these projects, or all dredging permits merely because that's what they are, do you? A. No, sir. Every project is reviewed on its own merits.

(Mr. Doyle) I have no further cross examination.

(Court) Alright, step down. Do you have any more witnesses?

(Mr. Rich) Your Honor, I have one witness we wanted to call. I will proffer the testimony in order to save time. I just want to introduce the records of (T. 413) the Virginia Water Pollution Control Commission. A man has been sent up from Virginia to do so. I do not intend to ask him any substantive questions, and I think we could cut off much time by just letting me introduce the records into evidence. They are kept in the ordinary course of business. I will recite the statutes to you and the statutory authority if that—

(Court) Have you seen the records?

(Mr. Doyle) I have never seen the records, no, sir.

(Mr. Rich) Well, they are within your file. They are the same—

(Mr. Doyle) Well they are within my file. My file is this thick.

(Mr. Rich) They are the records that were introduced at the wetlands hearing—

(Court) Well why not give him an opportunity to look at the records.

(Mr. Rich) Very well. I can call Mr. Parker now in order to save some time—

(Mr. Doyle) Well let me look at them.

(Court) Well give him an opportunity to look at them and maybe we won't have to call him.

(Mr. Doyle) If the court please, for no other reason (T. 414) than for consistency sake, I will make the same

objection and on the same grounds and hopefully as vigorously as I did the last time in connection with this gentleman offering any evidence from the files of the Virginia Pollution Agency. The key letter of the three documents is obviously a substantive finding of fact with regard to a permit to dredge. Therefore, it seems to me appropriate that the author of that report ought to be here for cross examination, and I object on the grounds of hearsay.

(Court) I don't even know what it is at this point. It's some records I know, but from the State of Virginia.

(Mr. Rich) Right, pursuant to a statutory authority I will establish that, Your Honor, and I will do it very briefly.

(Court) Alright.

(T. 415) JAMES E. RYAN, JR., a witness of lawful age, being first duly sworn, deposes and says:

(Clerk) Please state your full name and address. A. James E. Ryan, Jr., 121 Buckingham Street, Chester, Virginia.

DIRECT EXAMINATION

By Mr. Rich:

1. Mr. Ryan, by whom are you employed? A. I am employed by the Commonwealth of Virginia State Water Control Board.

2. In what capacity are you employed there? A. I am employed as a pollution control engineer by the enforcement division of that agency.

3. Are you also an attorney, Mr. Ryan? A. I am a member of the Virginia Bar.

4. Mr. Ryan, you have three documents in your hand. Were these records prepared pursuant to statutory authority? A. Yes, sir, they were.

5. And what authority is that? A. It's the authority invested in the Board by the State Water Control of Virginia, entitled 62.1. They reflect the views of the staff for our Control Board on the issue of permitting for dredging.

6. And that is a State law? A. Yes.

7. And is there also response made by the State because of the Federal law? (T. 216) A. Yes, because of Section 21B-2 of the Federal Water Pollution Control Act as amended by the Water Quality Improvement Act of 1970.

8. And these statements are made as part of the ordinary business of that Department that you work for? A. Yes.

9. And these records are kept in the ordinary course of business? A. Yes, they are.

10. And they were not prepared for this litigation? A. No, in no case were they.

(Mr. Rich) Alright, we offer these records. Your Honor.

(Mr. Doyle) I object.

(Court) Well I don't know whether they cover the James River or what they — I know they are records, but that's all I know.

(Mr. Rich) Oh, alright, excuse me.

11. What areas do these records cover? A. This pertains to a proposed dredging project by Potomac Sand and Gravel in the Potomac in Maryland waters between Hallowing Point and Sycamore Point.

12. Is that otherwise known as the Craney Island area? A. The Craney Island site.

(Mr. Rich) I now offer these records, Your Honor.

(Court) Yes. I will overrule the objection and (T. 417) admit these subject to exception too.

(Virginia Records filed herewith marked Defendant's Exhibit G.)

(Mr. Doyle) What number is that?

(Clerk) G.

(Court) G, did you say?

(Clerk) G.

(Mr. Rich) I have no further questions of this witness.

CROSS EXAMINATION

By Mr. Doyle:

1. Mr. Ryan, did you have anything at all to do personally with the input that led to the reports that have just been introduced? A. No, sir, I did not.

(Mr. Doyle) Then I renew my motion to strike. Your Honor, exhibit G.

(Court) Well, I will deny your motion.

(Mr. Doyle) I have no further cross examination.

(Court) You may step down.

(Mr. Rich) You are excused, Mr. Ryan. May we just call Mr. Parker for two minutes, Your Honor.

(Court) What time did you want to get over to the legislative—

(Mr. Doyle) Well, I have sent Mr. Jaske over to cover at least the hearing and to explain (T. 418) that I would be over soon as I could be and I will do whatever the court wishes.

(Court) Well I don't want to get in bad with the legislative council, but is this the last witness?

(Mr. Rich) Yes, Your Honor.

(Court) Two minutes. Do you have any rebuttal?

(Mr. Doyle) I had thought to ask Mr. Parker two questions and I can do it while he is on the stand.

(Court) And that will complete all the testimony?

(Mr. Doyle) Yes, sir.

(Court) Alright, call him.

(T. 419) DAVID A. PARKER, a witness, having already been sworn, deposes and says:

(Clerk) You may be seated. You are still under oath to tell the truth. Will you please repeat your name for the record? A. David A. Parker.

DIRECT EXAMINATION

By Mr. Rich:

1. Mr. Parker, would you describe the dimensions of the dredges, the dredge now in use in the Mattawoman Creek area? A. There is no dredge used in Mattawoman Creek area now.

2. The dredge used last week in the Mattawoman Creek area? A. There was no dredge in the Mattawoman Creek area—

3. Oh, excuse me. The Greenway Flat area, excuse me. A. That dredge is approximately 40 feet wide and approximately 150 feet long.

4. And do you know the tonnage of that dredge empty? A. No, I do not.

5. How much of the—

(Court) 40 by 120? A. 150.

6. Do you know how far above the water line the dredge extends at its highest point?

(Court) How what?

(Mr. Rich) How far above the water line the dredge extends at its highest point.

(T. 420) A. Approximately thirty feet.

7. Could you briefly describe the dredging process now being used in the Greenway Flat area? A. At the present time we have a ladder dredge in the Greenway Flats area. The process involves, as I believe I testified yesterday, the removal of the sand and gravel by means of a continuous bucket chain from the bed of the river, and the subsequent placement of that material into a hopper from

which it is processed, washed, separated and loaded in the barges.

8. How is this washed, Mr. Parker? A. It is washed by means of a screen and water.

9. And I assume you have a screen and you have water and part of the particles are retained and part of them are placed overboard. A. That's correct.

10. And do you know in any given batch the percentage percentage kept? A. Weil there is no given batch. It is more or less a continuous process.

11. Well let me ask you this. In your continuous process do you have knowledge of the percentage kept onboard and then used for delivery with respect to the percentage that is washed overboard? A. I believe I testified yesterday that it was in the realm of 10%<, I think, that was discarded.

i T. 421) 12. Mr. Parker, one other item I would like to clear up and that is given the present rate of depletion with respect to the three sites we are concerned with here, in how many years will those three sites be depleted?

(Court) I think he testified to that yesterday. It depends on how fast you work. I mean if you work—

(Mr. Rich > Well with his present rate of depletion. Your Honor.

(Court) Yes, but he moves around from one place to the other. He said that it depends on whether he works there day in and day out or—

(Mr. Rich) Well he can give me an answer to that, Your Honor.

(Court) What is it?

(Mr. Rich) He can give me an answer, Your Honor.

(Court) He can't tell you how long it's going to take. He can tell you how much he can take out in a day or — if he works one day a week it's going to be one thing. If he works every day in the week it will be something else.

(Mr. Rich) Well considering his present annual rate of depletion, Your Honor, this man can give me a—

(T. 422) (Court) Well on an annual rate maybe he can.

A. Approximately, at our present rate approximately twenty years.

13. And at that time does your company, you have already testified there are no other sand and gravel deposits? A. None that we are aware of today.

14. So your company then contemplates leaving the business?

(Mr. Doyle) Objection.

(Court) Sustained.

(Mr. Rich) That's all. Your witness.

DIRECT EXAMINATION (on rebuttal)

By Mr. Doyle:

1. Mr. Parker, were you present with Mr. Taggart when he ran the noise survey that he testified to this morning? A. Yes, I was.

2. And did you visit the dredge site prior to that noise test? A. Yes, we were at the dredge site.

3. And were you able to ascertain whether or not during the time that Mr. Taggart was running the test that the dredges were operating in the normal fashion? A. Yes, we were. We were in radio contact with the dredges.

4. And how were they operating? A. They were operating in normal fashion.

(Mr. Doyle) I have no further rebuttal, Your Honor.

CROSS EXAMINATION

By Mr. Rich:

1. You looked at the slides, Mr. Parker, and I believe that the witness at the time stated that there was a flume com-

ing out (T. 423) of the dredge, or flume. Is that flume or flume? A. It's your word. Whatever you want to call it.

2. How does that flume get out of the dredge⁰.

(Mr. Doyle > May I ask the court, in this cross examination on our rebuttal evidence.

(Court) Well I am not sure. I am not sure what your rebuttal was.

f Mr. Doyle > I just had it, two questions.

(Court) You didn't have any cross examination?

(Mr. Doyle > No, sir, no cross examination.

(Mr. Rich) He's still my witness.

(Court) Well no, you finished. He didn't have any cross so he made that his rebuttal. It's getting a little complicated.

(Mr. Rich) Well we will rest our case then, so not to confuse it.

(Court) Alright, you may step down.

(Mr. Doyle) The plaintiff has no other rebuttal testimony, but at this time in order to perfect the record, and I will not repeat the reasons for, unless the court wants to hear them on the motion, but I will move to strike all testimony heard during the course of this trial with regard to environmental or ecological issues on the grounds that I stated at the opening of the trial in connection with (T. 425) the motion to strike and the answer in opposition to the position to intervene.

(Court) Well for the same reasons I gave I will deny your motion.

(Court and Counsel discuss Briefs and Arguments.)

(Court) Also I have admitted these subject to exception and at that time if I change my mind, and you again move to strike these—

(Mr. Doyle) Yes, sir.

(Court) If there isn't anything else you are excused until the 6th of December.

(Mr. Doyle and Mr. Rich) Thank you, Your Honor.

PLAINTIFF'S EXHIBIT NO. 1
(EXHIBIT A to Bill of Complaint)

THIS DEED, made this 30th day of December, in the year one thousand nine hundred and sixty, by and between THE SMOOT SAND & GRAVEL Corporation, a body corporate of the State of Delaware, GRANTOR, and Potomac Sand and Gravel Company, a body corporate, GRANTEE.

Witnesseth, that for and in consideration of the sum of Ten (\$10.00) Dollars and other valuable considerations paid the said Grantor by the Grantee, receipt of which is hereby acknowledged, the said The Smoot Sand & Gravel Corporation, a body corporate of the State of Delaware does hereby grant and convey to and unto the said Potomac Sand and Gravel Company, a body corporate its successors and assigns in fee simple, all those pieces, parcels tracts or subdivisions of lands and premises situate, lying and being in Charles County, Maryland, which are particularly described as follows:

First: A tract of land known as the "Mattawoman Farm" and described by courses and distances as follows:

Beginning for the same at "A" on the Mattawoman main run on the east side of the public road leading from the Potomac River landing, called "Glymont", to Nanjemoy, where the bridge crosses said run, at which point stands a large white oak tree, and running thence with the general course of said road South $26\frac{1}{2}$ deg. West 286 perches to "B", a stone, on the side of said road; thence South W i deg. East 24 perches to "C", a stone, the last boundary of Mason's Amendment; thence South 50 deg. West 67 perches and 8 links to "D", a stone; thence South $13\frac{1}{2}$ deg. West 112

perches to "E"; thence South 89 deg. West 111 perches and 19 links to "F", a stone; thence North 11 deg. West 77 perches to "H", an old mulberry tree; thence South 79 deg. West 10 perches to "I", a stone; thence North $7\frac{1}{2}$ deg. West 51 perches and 9 links to "O", a stone; thence South $83\frac{1}{2}$ deg. 20 min. West 60 perches to a stake on the old road: thence North 22 deg. West 12 perches: thence North 38 deg. West 32 perches; thence North 19 deg. East 16 perches; thence North 14 deg. West 18 perches; thence North 2 deg. West 40 perches; thence North 14 deg. West 13 perches to a small locust on the side of the road leading to Chickamuxen; thence with said road South 74 deg. West 18 perches to Shell's fence: thence with this fence North 8 deg. 10 min. West 128 perches to Mattawoman Creek; thence up the Creek North $77\frac{1}{4}$ deg. East 34 perches; thence North 39 deg. East 24 perches; thence North 9 deg. West 20 perches; thence North $29\frac{1}{2}$ deg. East 18 perches; thence North $85\frac{1}{2}$ deg. East 15 perches; thence South 60 deg. East 20 perches; thence North 57 deg. East 14 perches; thence East 40 perches; thence North 41 deg. East 20 perches; thence North $5\frac{1}{2}$ deg. East 10 perches; thence North 08 deg. East $30\frac{1}{2}$ perches; thence North 51H deg. West 42 perches; thence North 01 deg. East $V\frac{1}{2}$ perches; thence North $32\frac{1}{4}$ deg. East 28 perches; thence North 37 deg. West 4 perches; thence North 09 deg. East 9 perches; thence North 24 deg. East 9 perches: thence North 42 deg. East 24 perches; thence North $56\frac{1}{2}$ deg. East 40 perches; thence North 69 deg. East 20 perches; thence South $52\frac{1}{2}$ deg. East 20 perches; thence South 28 deg. East 40 perches and 16 links: thence South 04 deg. East 22 perches and 18 links: thence South $22\frac{1}{2}$ deg. East $20\frac{1}{2}$ perches; thence North 87 deg. East $4\frac{1}{2}$ perches; thence South 26 deg. East 30 perches: thence South 49 deg. East 12 perches; thence North 88 deg. East 44 perches; thence South 87 deg. East 54 perches; thence South 73 deg. East 20 perches; thence South 79 deg. East $23\frac{1}{2}$ perches: thence South 6% deg. East 14 perches; thence South 47 deg. East 36 perches to the beginning, containing 1015 acres, 1 rod and 25 perches of land, more or less.

(Mr. Rich) Well considering his present annual rate of depletion, Your Honor, this man can give me a—

(T. 422) (Court > Well on an annual rate maybe he can.

A. Approximately, at our present rate approximately twenty years.

13. And at that time does your company, you have already testified there are no other sand and gravel deposits? A. None that we are aware of today.

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(Mr. Doyle) Objection.

(Court) Sustained.

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A. Yes, I was.

2. And did you visit the dredge site prior to that noise test? A. Yes, we were at the dredge site.

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(Court) Well I am not sure. I am not sure what your rebuttal was.

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(Court) You didn't have any cross examination?

(Mr. Doyle*) No, sir, no cross examination.

(Mr. Rich) He's still my witness.

(Court) Well no, you finished. He didn't have any cross so he made that his rebuttal. It's getting a little complicated.

(Mr. Rich) Well we will rest our case then, so not to confuse it.

(Court) Alright, you may step down.

(Mr. Doyle) The plaintiff has no other rebuttal testimony, but at this time in order to perfect the record, and I will not repeat the reasons for, unless the court wants to hear them on the motion, but I will move to strike all testimony heard during the course of this trial with regard to environmental or ecological issues on the grounds that I stated at the opening of the trial in connection with (T. 425) the motion to strike and the answer in opposition to the position to intervene.

(Court) Well for the same reasons I gave I will deny your motion.

(Court and Counsel discuss Briefs and Arguments.)

(Court) Also I have admitted these subject to exception and at that time if I change my mind, and you again move to strike these—

(Mr. Doyle) Yes, sir.

(Court) If there isn't anything else you are excused until the 6th of December.

(Mr. Doyle and Mr. Rich) Thank you, Your Honor.

PLAINTIFF'S EXHIBIT NO. 1

(EXHIBIT A to Bill of Complaint)

THIS DEED, made this 30th day of December, in the year one thousand nine hundred and sixty, by and between THE SMOOT SAND & GRAVEL Corporation, a body corporate of the State of Delaware, GRANTOR, and Potomac Sand and Gravel Company, a body corporate, GRANTEE.

Witnesseth, that for and in consideration of the sum of Ten (\$10.00) Dollars and other valuable considerations paid the said Grantor by the Grantee, receipt of which is hereby acknowledged, the said The Smoot Sand & Gravel Corporation, a body corporate of the State of Delaware does hereby grant and convey to and unto the said Potomac Sand and Gravel Company, a body corporate its successors and assigns in fee simple, all those pieces, parcels tracts or subdivisions of lands and premises situate, lying and being in Charles County, Maryland, which are particularly described as follows:

First: A tract of land known as the "Mattawoman Farm" and described by courses and distances as follows:

Beginning for the same at "A" on the Mattawoman main run on the east side of the public road leading from the Potomac River landing, called "Glymont", to Nanjemoy, where the bridge crosses said run, at which point stands a large white oak tree, and running thence with the general course of said road South $26\frac{1}{2}$ deg. West 286 perches to "B", a stone, on the side of said road; thence South $17\frac{1}{2}$ deg. East 24 perches to "C", a stone, the last boundary of Mason's Amendment; thence South 50 deg. West 67 perches and 8 links to "D", a stone; thence South $13\frac{1}{2}$ deg. West 112

perches to "E"; thence South 89 deg. West 111 perches and 19 links to "F", a stone; thence North 11 deg. West 77 perches to "H", an old mulberry tree; thence South 79 deg. West 10 perches to "I", a stone; thence North $7\frac{1}{2}$ deg. West 51 perches and 9 links to "O", a stone; thence South 83 deg. 20 min. West 60 perches to a stake on the old road: thence North 22 deg. West 12 perches; thence North 38 deg. West 32 perches; thence North 19 deg. East 16 perches; thence North 14 deg. West 18 perches; thence North 2 deg. West 40 perches; thence North 14 deg. West 13 perches to a small locust on the side of the road leading to Chickamuxen; thence with said road South 74 deg. West 18 perches to Shell's fence; thence with this fence North 8 deg. 10 min. West 128 perches to Mattawoman Creek; thence up the Creek North $77\frac{1}{4}$ deg. East 34 perches; thence North 39 deg. East 24 perches; thence North 9 deg. West 20 perches; thence North $29\frac{1}{2}$ deg. East 18 perches; thence North $85\frac{1}{2}$ deg. East 15 perches; thence South 60 deg. East 20 perches; thence North 57 deg. East 14 perches; thence East 40 perches; thence North 41 deg. East 20 perches; thence North $5\frac{1}{2}$ deg. East 10 perches; thence North 08 deg. East $30\frac{1}{2}$ perches; thence North 51° deg. West 42 perches; thence North 01 deg. East $13\frac{1}{2}$ perches; thence North $32\frac{1}{4}$ deg. East 28 perches; thence North 37 deg. West 4 perches; thence North 09 deg. East 9 perches; thence North 24 deg. East 9 perches; thence North 42 deg. East 24 perches; thence North $56\frac{1}{2}$ deg. East 40 perches; thence North 69 deg. East 20 perches; thence South $52\frac{1}{2}$ deg. East 20 perches; thence South 28 deg. East 40 perches and 16 links; thence South 04 deg. East 22 perches and 18 links; thence South 22° deg. East $20\frac{1}{2}$ perches; thence North 87 deg. East $AV\frac{1}{2}$ perches; thence South 26 deg. East 30 perches; thence South 49 deg. East 12 perches; thence North 88 deg. East 44 perches; thence South 87 deg. East 54 perches; thence South 73 deg. East 20 perches; thence South 79 deg. East $23\frac{1}{2}$ perches: thence South 6° deg. East 14 perches; thence South 47 deg. East 36 perches to the beginning, containing 1015 acres, 1 rod and 25 perches of land, more or less.

Being all and the same land and premises acquired by the said The Smoot Sand & Gravel Corporation by Deed from L. E. Smoot, et al., Trustees of Columbia Sand & Gravel Company, dated the 9th day of January, 1932 and recorded among the Land Records of Charles County, Maryland, in liber WM.A No. 54 folio 497 etc.

It being the intention of the Grantor herein to convey to the Grantee any and all land that may have been added by accretion along or by the meandering of the Mattawoman Creek to the land embraced in the above metes and bounds description.

Second: All that lot, tract, piece, parcel or subdivision of land and premises, situate, lying and being in the Seventh Election District of Charles County, Maryland, and which is more particularly described on a plat drawn by Louis H. Steffens, County Surveyor, and recorded with the deed by which the Smoot Land & Gravel Corporation, a body corporate of the State of Delaware acquired title to the property described as

Beginning for the same at a stake marked "A" on said plat, said stake marking the north boundary line of the land hereby conveyed, and running thence in an easterly direction with the courses and distances designated on said plat, following the meanderings of the marsh land and Mattawoman Creek to a point designated as "F" on said plat, located on the dividing line between Lots No. 49 and 50.

The property hereby conveyed is more particularly described as follows, to wit:

Parcel 1. Beginning at point "A", a stake located in the east boundary line on the property of A. J. Brown, and being the northwest corner of this parcel, and running thence North 79 deg. 50 min. East 238 feet; South 64 deg. 15 min. East 144 feet; North 72 deg. 20 min. East 200 ft.; North 41 deg. 30 min. East, 275 feet; North 67 deg. 20 min. East 310 feet; to a concrete block; thence North 22 deg. 5 min. East 188 feet; North 30 deg. East 300 feet:

North 47 deg. East 244.2 feet to a stake; thence South 4 deg. West 121 feet to a stake; thence North 43 deg. East 211 feet; North 85 deg. 30 min. East 132 feet; North 45 deg. 25 min. East 200 feet to a stake which is located at the southeast corner of Lot 16 or the southwest corner of Lot 17; thence South 86 deg. East 218.3 feet to a stake on South boundary line of Lot 18, which stake is located at the feet of a gum tree; thence South 53 deg. 29 min. East 170 feet; South 28 deg. 30 min. East 413 feet; to a stake which is at the intersection of the westerly and southerly lines of Lot 5; thence with the southerly boundary line of said Lot 5, North 68 deg. 34 min. East 135 feet to an iron rod which is located at the intersection of the Indian Road railroad right of way with this line; thence South 50 deg. East 100 feet; South 49 deg. East 100 feet South 62 deg. 30 min. East 100 feet; South 67 deg. 30 min. East 100 feet; South 73 deg. 30 min. East 68 feet; to another iron rod located in said right of way boundary line which is at its intersection with the property deeded by Sigel Brown to Gertrude Trusman by deed recorded in liber F.D.M. 16 folio 83; thence South 34 deg. 45 min. West 30 feet more or less to a point marked "B"; thence South 53 deg. East to intersect the center line of Mattawoman Creek which is the northwesterly boundary line of the property now owned by The Smoot Sand & Gravel Corporation in the Tenth Magisterial District, and passing through a point 11^x4 perches distant from "B", marking the beginning of the marsh; thence in a southwesterly direction with the boundary line of the said tract of ground owned by The Smoot Sand & Gravel Corporation, to a point where the easterly boundary line of the first mentioned property of A. J. Brown extended would intersect; thence along said line in a northerly direction to "A", the point of beginning.

Parcel 2. Beginning for the same at a point South 54 deg. 27 min. East 580 feet, more or less, from the northerly corner of the property deeded by Sigel Brown, et al. to Gertrude Trueman by deed recorded in liber F.D.M. 16 folio 83; said point being the northwest corner of the here-

inafter described property and running thence North 60 deg. 49 min. East 270 feet, more or less to intersect the southwesterly line of Lot "G" of South Glymont; thence South 29 deg. 22 min. East 136 feet to a point marking the southwest corner of said Lot "G"; thence North 60 deg. 38 min. East 70 feet to a point marking the southeast corner of said Lot "G"; thence South 16 deg. 29 min. East to intersect the center line of Mattawoman Creek which is the northerly boundary line of the property of The Smoot Sand & Gravel Corporation, and passing through a point at 54.85 feet, marking the shore line of Mattawoman Creek; thence southerly and westerly with the aforesaid boundary line of the said "The Smoot Sand & Gravel Corporation" to a point where the easterly line of Gertrude Trueman's property intersects; thence North 54 deg. 2? min. West along said line, and passing through point marked "C" to the Place of beginning.

Parcel 3. Beginning for the same at a point marked "E", the same being the point of intersection of the west boundary line with the southerly boundary line of Lot 42 in South Glymont and running thence North 74 deg. 1 min. East 194.8 feet; North 80 deg. 55 min. East 423.5 feet; South 75 deg. 14 min. East 226 feet; South 66 deg. 46 min. East 149 feet; South 51 deg. 14 min. East 420.1 feet; South 1 deg. 49 min. East 22.29 feet; South 46 deg. 1 min. East 16.9 feet to the southwest corner of Lot 50; thence South 43 deg. 59 min. West through point "F", marking the shore line of Mattawoman Creek to intersect the center line of Mattawoman Creek which is the northerly boundary line of the property now owned by The Smoot Sand & Gravel Corporation, thence northerly and westerly with said boundary line and down the meanders of Mattawoman Creek to a point where the west boundary line of Lot 42 extended intersects; thence North 21 deg. 54 min. East along said west boundary line of Lot 42 extended, to the point "E", the place of beginning.

Save and excepting, however, from Parcel 3 last above described, all and such riparian rights as may have been acquired in the above property by a certain Robert M.

Boykin, his heirs and assigns by virtue of a deed from Sigel Brown and wife dated June 2. 1910 and recorded among the land Records aforesaid in liber H.C.C. No. 21 folio 672 etc. by which said deed the said Robert M. Boykin acquired title to eleven acres of land on the north edge of Mattawoman Creek.

Being all and the same land and promises acquired by The Smoot Sand & Gravel Corporation, a body corporate, by deed from Sigel Brown, et al. dated August 24, 1932 and recorded among the Land Records of Charles County, Maryland in liber W.M.A. No. 55 folio 490 etc.

It being the intention of the Grantor to convey all of the land all privileges with respect to dredging or digging and carrying away sand, gravel and like material as acquired by said deed from Sigel Brown, et al.

Third: All that lot, tract, piece, parcel or subdivision of land and premises situate, lying and being in the Seventh Election District of said Charles County and described as follows:

Beginning at a point on the south side of the State Road leading from Indean Head to La Plata, and being South 40 deg. 4 min. East 150 feet from the northeast corner of Lot 56 of Henry Crocker's survey of 1910, and thence with the courses and distances given in a deed from Juliana E. Brawner, Trustee, to Samuel H. Cox in 1867, as recorded in liber G.A.H. No. 1 folio 340, allowing for the variation, South 43 deg. East 46 perches to a large oak tree on the west of said State Road; thence leaving said State Road North 87 deg. 30 min. West 24 perches, South 66 deg. 15 min. West 22 perches, South 18 deg. West 8 perches, to where a gut empties into Mattawoman Creek; thence leaving the lines of the said deed and running down and binding on said Creek until it intersects a line drawn parallel to the west line of Lot 50 in said Henry Crocker's survey of South Glymont and with the south line of said Lots 50, 51, 52, 53, 54, 55 and 56 of said survey of Henry Crocker's to the southwest corner of said Lot 56; thence South 49 deg. 10 min. East 150 feet; thence North 49 deg.

56 min. East 630 feet to the place of beginning, containing forty (40) acres of land, more or less.

Being all and the same land and premises acquired by the said The Smoot Sand & Gravel Corporation, a body corporate, by deed from Walter J. Mitchell and Florence J. Mitchell, his wife, dated the 12th day of August, 1938 and recorded among the Land Records of said Charles County in liber W.M.A. No. 69 folio 146 etc.

Fourth: All that lot, tract, piece, parcel or subdivision of land and premises situate, lying and being in the said Seventh Election District of Charles County and described as follows:

Beginning at a point on the north boundary line of the property owned by The Smoot Sand & Gravel Corporation and the west boundary line of the State Road leading from Mason Springs to Indian Head; thence running along the west boundary line of said State Road in a northerly and westerly direction to a point in the west boundary line of said highway, which point is the southeast corner of the property owned by Walter J. Mitchell; thence in a southerly and westerly direction with the said boundary of the Walter J. Mitchell property to a point where it intersects the north boundary line of The Smoot Sand & Gravel Corporation property; thence in an easterly and southerly direction with the boundary of The Smoot Sand & Gravel Corporation property to the point of beginning, containing, by estimation, twelve and one-half (12½) acres, more or less.

Being all and the same land and premises acquired by the said The Smoot Sand & Gravel Corporation, a body corporate, by deed from Helen Emily Cox dated the 12th day of August, 1938 and recorded among said Land Records in liber W.W.A. No. 69 folio 147 etc.

The above parcels of land being conveyed subject to such rights and easements as might have been granted and minus such parts or parcels as were conveyed therefrom

in fee by the Smoot Sand & Gravel Corporation in the following instruments of record:

(1) Deed to State of Maryland, to use of the State Roads Commission dated January 11, 1951 and recorded among the Land Records of Charles County, Maryland in liber P.C.M. No. 94 folio 13 etc.

(2) Right of Way or Easement to Southern Maryland Electric Cooperative, Inc. dated January 12, 1951 and recorded in liber P.G.M. No. 94 folio 174 etc.

(3) Deed to Southern Maryland Electric Cooperative, Inc. dated April 23, 1953, and recorded in liber P CM. No. 106 folio 272 etc.

(4) Right of Way or Easement to the Southern Maryland Electric Cooperative, Inc. dated September 3, 1957 and recorded in liber P.C.M. 132 folio 185 etc.

(5) Deed to Eugene A. Jenkins and Olga T. Jenkins, his wife, dated February 20, 1958 and recorded in liber P.C.M. 134 folio 384 etc.

(6) Deed to State of Maryland, use of the State Roads Commission, dated November 21, 1958 and recorded in liber P.C.M. No. 139 folio 173 etc.

(7) Deed to State of Maryland, use of the State Roads Commission, dated April 7, 1959 and recorded in liber P.C.M. No. 141 folio 183 etc.

Fifth: Tract One, known as "Greenway Ducking Shore", and formerly known as "Greenway", "Greenway Fishing Shore", and "Greenway Fishery", more particularly described as follows:

Beginning for the same at a point now fixed on the fast land in the line dividing the lands now or formerly belonging to Esten W. Hungerford, or Rowe, ninety feet distant from high water mark of said Potomac River, and running thence southwardly and parallel to the meandering of said River ninety feet distant from high water mark

at all points forever, as the said high water mark may change by the washing of said River, to a point in the line dividing the land of Slater, formerly Rowe and Elliott, ninety feet from high water mark; thence with said dividing line into the Potomac River; thence with the meandering of said River northwardly until it strikes the line dividing the lands of Hungerford and Rowe, and thence with the said dividing line to the beginning, together with all appurtenances, easements, rights of way, riparian rights, and privileges thereunto appertaining, being the same property which was conveyed by William E. Hayes to William W. Rapley, by deed dated the 10th day of October, 1932, which deed was recorded on January 25, 1933, in liber W.M.A. No. 56 folio 447, being one of the Land Records of Charles County, Maryland to which deed and the deeds therein referred to, reference is hereby made for a more full and particular description of the land and premises hereby intended to be conveyed.

Being all of Tract One described in the deed from William W. Rapley to The Smoot Sand & Gravel Corporation dated the 10th day of June, 1937 and recorded among the Land Records of said Charles County in liber W.M.A. No. 65 folio 314 etc.

Subject, however, to such "privilege of way", if any, as may now exist over the above described land by reason of the language contained in a deed from Logan Brandt and Ann Caroline Brandt to George Tubman dated December 13, 1856 and recorded among the Land Records of Charles County, Maryland, in liber J.S. No. 2 at folio 47 etc.

Sixth: All that part or parcel of a tract of land commonly called and known as "Gut Landing Farm" or by whatever other name or names the same may be called and known situate, lying and being on the Potomac River in the Seventh Election District of Charles County, Maryland, which is a portion of the land conveyed to The Smoot Sand & Gravel Corporation by deed from The Greenweigh Rod and **Gun** Club, a body corporate, dated September 22, **1944 and** recorded in liber T.B.M. No. 80 folio 433 etc.;

that portion of said "Gut Landing Farm" hereby intended to be conveyed being particularly described as follows:

All that parcel of land designated as Parcel ≈ 3 containing approximately 23 100 of an acre as shown on the Smoot Sand & Gravel Corporation Plat ≈ 1330 , dated March 30, 1954 attached and made a part of the deed from The Smoot Sand & Gravel Corporation to John M. Orem and Marie W. Orem, his wife, dated June 9, 1954 and recorded in Liber T.B.M. No. 113 folio 360 etc.; the 23 100 of an acre being a strip of land 5 feet in width lying along the shore of the Potomac River in front of Parcel ≈ 2 as shown on said Plat ≈ 1330 .

And also included in this conveyance is a similar strip of land 5 foot in width extending along the shore of the Potomac River so as to include the shore front five feet back from high water mark along Parcel ≈ 4 and Parcel ≈ 1 as shown on the aforesaid plat designated as The Smoot Sand & Gravel Corporation Plat ≈ 1330 : it being the intention of the Grantor to convey to the Grantee the five feet of fast land back from high-water mark along the entire length of the Potomac River shore front conveyed to The Grantor herein by the aforesaid Deed from The Greenweigh Rod and Gun Club, a body corporate, dated September 22, 1944 and recorded in Liber T.B.M. No. 80 folio 433 etc.

It is common knowledge and distinctly understood that the shorelines and High-water marks of river-front properties change from time to time by reason of accretion and erosion; therefore, it is distinctly understood and agreed that the East boundary line of the strip of land hereby conveyed will always be five feet back or inshore from the high-water mark to that title to a permanent 5-foot strip of fast land shall forever remain vested in the Grantee, its successors and assigns.

Said parcel *it3* hereby conveyed is conveyed subject to the operation and effect of all the applicable provisions thereto, including the right of access over said Parcel ≈ 3

to the Potomac River, as granted by The Smoot Sand & Gravel Corporation to John H. Orem and Marie H. Orem, his wife, their heirs and assigns, under the terms of an agreement by and between The Smoot Sand & Gravel Corporation and John M. Orem and Marie M. Orem, his wife, dated June 10, 1954 and recorded among the Land Records of Charles County, Maryland in liber No. 113 folio 364 etc.

And for purposes of access by way of land to and from the 5-foot strip of land hereby conveyed, the same rights of access thereto over existing roadways as are now held by the Grantor herein, its successors and assigns, are granted to the Grantee, its successors and assigns for use concurrently with the Grantor, its successors and assigns.

And the Grantor reserves unto itself, its successors and assigns, the right to go over said 5-foot strip of land to the Potomac River and to have free access to the water in front of said 5-foot strip, including fishing, ducking, boating, bathing and all over privileges except sand and gravel dredging rights in the Potomac River in front of said 5-foot strip, provided such right, use and enjoyment shall not interfere with, molest or disturb the Grantee herein, said Potomac Sand and Gravel Company, its successors and assigns in dredging operations.

Together, with the buildings and improvements thereon erected, made or being; and all and every, the rights, alleys, ways, waters, privileges, appurtenances and advantages, to the same belonging, or in any wise appertaining, including riparian rights under Maryland law and any other applicable law or laws pertaining thereto.

To have and to hold the land and premises; above described and mentioned, and hereby intended to be conveyed; together with the rights, privileges, appurtenances and advantages thereto belonging or appertaining unto and to the proper use and benefit of the said Potomac Sand and Gravel Company, a body corporate, its successors and assigns in fee simple, subject, however, to easements, reservations and any and all limitations hereinbefore set forth.

And the said The Smoot Sand & Gravel Corporation, a body corporate of the State of Delaware does hereby covenant that it will warrant generally the property hereby granted and conveyd, and that it will execute such further assurances of said land as may be requisite.

In Witness Whereof, the said The Smoot Sand & Gravel Corporation, incorporated under the laws of the State of Delaware, has caused this deed to be executed by L. E. Smoot, its President, and its corporate seal affixed thereto, duly attested by

and has appointed L. E. Smoot attorney in fact to acknowledge same to be the act and deed of said Corporation.

THE SMOOT SAND & GRAVEL CORPORATION,
a body corporate

By: L. E. SMOOT,
President.

PLAINTIFFS EXHIBIT NO. 2

(EXHIBIT B to Bill of Complaint)

THIS DEED, Made this 30th day of December,———in the year one thousand nine hundred and sixty, by LEWIS E. SMOOT and ANN H. SMOOT, his wife, both of King George County, in the State of Virginia, GRANTORS.

Witnesseth, that for and in consideration of the sum of Ten (\$10.00) Dollars and other good and valuable considerations paid the said Grantors by Potomac Sand and Gravel Company, a body corporate, receipt of which is hereby acknowledged, the said Lewis E. Smoot and Ann H. Smoot do hereby grant and convey to and unto the said Potomac Sand and Gravel Company, a body corporate, its successors and assigns in fee simple, all that lot, tract, piece, parcel or subdivision of land and premises which was acquired by the said Lewis E. Smoot by deed from The Smoot

Sand & Gravel Corporation dated the 27th day of February, 1917 and recorded among the Land Records of Charles County, Maryland in liber W.M.A. No. 47 folio 635 etc., in which said deed the land hereby intended to be conveyed is described as situate, lying and being in the Potomac River about one-half mile west of the property formerly owned by the said Lewis E. Smoot located in Charles County, Maryland, commonly called and known as "Grimes Ditch", constituting an island commonly called and known as "Crane Island", or "Craney Island", and containing thirty (30) acres of land, more or less, but which according to a plat recorded on October 12, 1922 among the Land Records of Charles County, Maryland in liber W.M.A. No. 39 at folio 605 is shown to contain twenty (<20) acres, one (1) rood and six (6) perches by a survey dated October 7. 1851.

Together, with the buildings and improvements thereon erected, made or being; and all and every, the rights, alleys, ways, waters, privileges, appurtenances and advantages, to the same belonging, or in any wise appertaining, including riparian rights under Maryland law and any other applicable law or laws pertaining thereto.

To have and to hold the land and premises; above described and mentioned, and hereby intended to be conveyed; together with the rights, privileges, appurtenances and advantages thereto belonging or appertaining unto and to the proper use and benefit of the said Potomac Sand and Gravel Company, a body corporate, its successors and assigns in fee simple.

And the said Lewis E. Smoot and Ann H. Smoot do hereby covenant that they will warrant generally the property hereby granted and conveyed, and that they will execute such further assurances of said land as may be requisite.

Witness the hands and seals of said grantors.

LEWIS E. SMOOT (Seal)

ANN H. SMOOT (Seal)

PLAINTIFF'S EXHIBIT NO. 3

i EXHIBIT C to Bill of Complaint)

THIS DEED, Made this sixth day of March, in the year one thousand nine hundred and sixty-four, by GEORGE P. JENKINS and MARY B. JENKINS, his wife; FRANK A. SUSAN and CLARECE SUSAN, his wife, all of Charles County, Maryland, Grantors.

Witnesseth, that for and in consideration of the sum of Ten (\$10.00) Dollars and other valuable considerations paid the said Grantors by the Potomac Sand and Gravel Company, a District of Columbia Corporation, receipt of which is hereby acknowledged, the said Grantors do hereby grant and convey to and unto the said the Potomac Sand and Gravel Company, a District of Columbia Corporation, its successors and assigns in fee simple, a tract of parcel of land known as "'Part of Cornwallis⁷ Neck", situate, lying and being in the Seventh and Tenth Election Districts of Charles County, Maryland, and which, according to a survey and plat intended to be recorded among the Land Records of Charles County, Maryland made by D. H. Steffens. Registered Land Surveyor, is more particularly described as follows:

Beginning for the same at an iron pipe fixed in the ground at the edge of the marsh at the corner of a fence, said pipe marking the beginning corner of the land now owned by the Potomac Sand and Gravel Company as described in, the first parcel of the second tract in deed 152 folio 37; running thence with the edge of the marsh the line of the land of Joseph H. Brown, et al. South 67 deg. 45 min. West 373.37 feet to a pipe and gum tree; thence South 16 deg. 23 min. West 207.09 feet to a pipe; thence South 40 deg. 20 min. West 154.8 feet to a pipe; thence South 22 deg. 11 min. West 331.80 feet to a pipe a corner of the land formerly owned by The Virginia Investment Company; thence with said land South 35 deg. 36 min. West 675.87 feet to a pipe; thence South 52 deg. 55 min. West 475.0 feet to a pipe; thence South 83 deg. 55 min. West 76.43 feet to a pipe; thence with the land

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of Joseph H. Brown, et al. South 87 deg. West 346.0 feet to a pipe fixed on the bank of Mattawoman Creek; thence with said creek in an easterly direction to the tract now owned by the said Potomac Sand and Gravel Company; thence with said tract to the point of beginning, containing eighty-four (84) acres, more or less.

Being part of the same land and premises acquired by the said George P. Jenkins and Frank A. Susan, as tenants in common, by deed from Edward J. Waring, et al. dated June 30, 1952 and recorded among the Land Records of said Charles County in liber P.C.M. No. 102 folio 328.

Together, with the buildings and improvements thereon erected, made or being; and all and every, the rights, alleys, ways, waters, privileges, appurtenances and advantages, to the same belonging, or in any wise appertaining.

To have and to hold the land and premises; above described and mentioned, and hereby intended to be conveyed; together with the rights, privileges, appurtenances and advantages thereto belonging or appertaining unto and to the proper use and benefit of the said the Potomac Sand and Gravel Company, a District of Columbia Corporation, its successors and assigns in fee-simple.

And the said George P. Jenkins, Mary B. Jenkins, Frank A. Susan and Clarece Susan do hereby covenant that they will warrant specially the property hereby granted and conveyed, and that they will execute such further assurances of said land as may be requisite.

Witness the hands and seals of said grantors.

GEORGE P. JENKINS (Seal)

MABY B. JENKINS (Seal)

FRANK A. SUSAN (Seal >

CLARECE SUSAN (Seal >

PLAINTIFF'S EXHIBIT NO. 5

State of Maryland
Board of Review
of the
Department of Natural Resources

Contested Case No. 69-2
Potomac Sand & Gravel Company
Appellant
v.
Department of Water Resources
Appellee

DECISION AND OPINION OF THE
BOARD OF REVIEW

This is an appeal by Potomac Sand and Gravel Company from a denial by the Department of Water Resources of a permit to dredge in Mattawoman Creek between Mattingly's Wharf and the Route 225 Bridge in Charles County for the purpose of removing sand and gravel. Appellant is the owner of a large tract of land bordering Mattawoman Creek, of which about 550 acres is marshland. Appellant's plan of operation would leave about 250 acres of this marshland undisturbed. The remaining 300 acres would be excavated, resulting in a pool 15 to 20 feet in depth.

The property was acquired by Appellant on December 31, 1960, when it purchased all the assets of Smoot Sand and Gravel Corporation who in turn had acquired it from the Columbia Sand and Gravel Company and various other prior owners. This chain of title into Appellant goes back many years, and as early as 1934 Appellant's predecessors in title had discovered that the area contained commercially valuable sand and gravel. The evidence presented by Appellant indicates that both Smoot and Appellant acquired the land because of sand and gravel deposits. As early as 1936 Appellant's predecessors obtained

authorization from the United States Corps of Engineers to dredge for sand and gravel in the property, and extensions of this authorization have continuously been obtained. A request for further extension is now pending. Tests made by Appellant or its predecessors indicate that the property contains about 10.58 million tons of sand and gravel, most or all of it in the marshland portion of the tract. During 1964 and the first part of 1965, Appellant removed and sold 345,601 tons of sand and gravel from the property.

Appellant's evidence was that it supplies 75% of the sand and gravel used in concrete construction in the District of Columbia, about 10% of that used in Prince George's and Montgomery Counties, and about 15% of that used in the Virginia portion of the Washington-Metropolitan area. From sources other than the subject property, Appellant can obtain a four- to five-year supply of sand and gravel. Appellant's testimony, uncontroverted by Appellee, was that no other usable supply of sand and gravel is available in the Potomac or its tributaries except those owned by Appellant. According to Appellant's witnesses, elimination of the source of sand and gravel supplied by Appellant will cause substantial increase in construction costs for the Washington-Metropolitan area, including Montgomery and Prince George's Counties in Maryland.

The Department of Water Resources in its letter to Appellant of September 10, 1969, denying the permit, based the denial on a finding that "the proposed project would destroy large reaches and large acreage of wetlands, regions which are of vital ecological importance to the management of the State's natural resources. It is the finding of the Department of Water Resources that the action contemplated by the proposed dredging in Mattawoman Creek would be detrimental to the best public interest."

To support this finding Appellee produced witnesses at the hearing before the Board who testified that in their opinion the silt and disturbance that would result from Appellant's operation would affect the ecology of Mattawoman Creek. According to these witnesses this siltation

and disturbance would damage early life stages of several species of fish and might drive away or damage the habitat of wood ducks and puddle ducks, which use the property for a brood area, and bald eagles and ospreys which nest and feed in the area; any of the larger life forms going through the dredge pump would be killed. Appellee did not define the amount of siltation causing its concern. Another of Appellee's expert witnesses said in regard to the siltation that it would cause damage "to some degree" because it would be in addition to "natural forces". In that witness's opinion the problem is "preservation of the fluvial character of the stream".

A witness for Appellee, whose testimony has been given close attention by the Board, said that Appellant's operations would affect 250 to 300 acres because of deepening. now used as a brood area for ducks. Ospreys and bald eagles now use the area (< in numbers not disclosed by Appellee) and might be adversely affected by the deepening of the feeding area and the disturbance of the dredging. In the opinion of this witness there would be no beneficial effects to wildlife as a result of this deepening, and the increase in turbidity would adversely affect the food availability for wildlife. Whether these effects would be temporary or permanent is not clear from Appellee's case, and the record is devoid of any evidence as to the quantity of wildlife adversely affected or the relative importance of this part of Mattawoman Creek to the ecological web of wildlife in this part of the Potomac.

Appellee says that Appellant's operations would have an effect on the ecology, but the degree or importance of the effect is not ascertainable from the record.

The Charles County Board of Parks and Recreation recommends the granting of the permit to Appellant by letter of April 23, 1969, from Richard E. Slavin, Chairman" of Site Acquisition Committee of that Board, to Director of Department of Water Resources. According to this Charles County Board's letter game and fish in Mattawoman Creek are rapidly depreciating because of pollution, and the lake which Appellant would create would improve the situation

as a holding basin for fresh water, and at change of tides would cause flushing action, reducing siltation of the channel and intrusion of pollution from the Potomac. The Charles County Board believes the lake would be a valuable recreation site. Appellee produced no direct evidence as to the matters advanced by the Charles County Board, and we must give that Board's letter the weight due it as a communication from a governmental body charged with public responsibilities and jurisdiction in the subject area.

Appellant relies on its rights as a riparian owner to remove the sand and gravel under Article 27, Section 485 of the Annotated Code of Maryland, 1957 ed. The Appellee challenges this position of Appellant, arguing that whatever rights Appellant had under said Section have been extinguished or modified by Article 96A of the Maryland Code and therefore a denial of a permit by the Department of Water Resources acting under power granted by Article 96A is not limited by Section 485 of Article 27.

Appellant also relies on various other sources of rights which it claims either give it the power to proceed in spite of a denial of a permit by the Department of Water Resources or remove the situation from the jurisdiction of the Department. These include the previous issuances of a permit by the Federal Government which it is claimed prohibits the State from acting contrary to the Federal permit grant; the grant of a special exception under the zoning ordinance of Charles County, Maryland, which was litigated in favor of Appellant in the Circuit Court for Charles County, which Appellant claims now constitutes *res judicata* as to the right of Appellant; and Appellant raises the point of an alleged constitutional protection of its vested rights in the property based on the long period of ownership in Appellant or predecessor companies in the same business, its expenditures in acquiring the property for its sand and gravel deposits and for explorations of these mineral resources and the removal of sand and gravel in 1964 and 1965. We find that it is not necessary to decide any of these other purported sources of rights in the Appellant and do not herein rule on them.

Section 485 of Article 27 has been held by the Court of Appeals of Maryland to grant a license or privilege to riparian owners, not existing except for the statute, to dredge and carry away sand and gravel. This is a revocable license and Appellee argues it has been revoked by enactment of Article 96A.

The Board concludes that Article 96A has modified but not revoked the license granted by Section 485 of Article 27. Reading the two statutes together, the Board is of the opinion that Appellant retains its right to remove the sand and gravel but must do so in accordance with authorized and reasonable water quality protection provisions imposed by Appellee and subject to appropriate conditions imposed in accordance with any other applicable laws or regulations. The Board finds that the Appellee was not justified in denying the permit absolutely. It is the duty of the Department of Natural Resources to develop such conditions as the permit to Appellant as will reasonably assure compliance with the various laws enacted by the State bearing on the matter. Hopefully, this can be done with the cooperation and assistance of Appellant.

This is a case of first impression so the Board remands the matter to the Department of Natural Resources for further action in accordance with this opinion without specific instructions from the Board as to the particular conditions or limitations of the permit. Appellant will, of course, have the right of further appeal to this Board, if it desires, as to the conditions and limitations imposed, if any.

The Board wishes to note that it took into consideration the letter in the record of July 23, 1969, from the Director of the Department of Water Resources to Senator Wine-land (Prince George's County) stating that Sec. 485 of Article 27 confers the rights mentioned above to riparian owners and therefore the Department's only authority is to exercise control as to water quality. "Beyond that the Department of Water Resources has no jurisdiction." This expression of departmental interpretation and policy has been given weight by the Board in reaching its conclusion. But, as noted above, the Board concludes that reasonable

conditions may be imposed by the Department of Natural Resources under any source of authority.

We believe the Department of Natural Resources should not overlook the fact that other resources, such as sand and gravel, are as much a part of the natural resources of our State as wildlife. The Department must consider the full array of facts, and the reasonableness of the grant or denial of a permit or the conditions imposed on a permit can be determined only by reference to all facts bearing on the situation. Section 16 of Article 96A specifically requires this, but the evidence presented to the Board leaves us unconvinced that the Department of Water Resources gave sufficient weight to the advantages to the public of the use of the sand and gravel deposits, or to the relative advantages or disadvantages of the change in the ecology and environment in the area that would result from the exercise of the permit.

The Board remands the case to the Department of Natural Resources to reconsider the issuance of the permit, with reasonable conditions determined to be appropriate, if any, in accordance with this decision and opinion of the Board.

Mr. Gale moved that the Board of Review resolve that the foregoing Decision and Opinion be adopted by the Board of Review at this regular meeting of February 2, 1970. Seconded by Mr. Higgins and passed.

The following members voted in the affirmative:

Mr. Benjamin P. Gale	Mr. John W. Neumann
Mr. Edward H. Higgins	Dr. Donald W. Pritchard
Mr. J. Neil McCardell	Mr. Phillip S. Thompson

Mr. Wibberley did not cast his vote on the above resolution since he was not present during the formal hearing of this case.

RALPH C. HAMMER,
Executive Secretary.

February 2, 1970.

PLAINTIFF'S EXHIBIT NO. 7

House of Delegates

No. 1192, Enacted as Chapter 792,
Laws of Maryland 1971

By the Charles County Delegation—Environmental Matters

A BILL ENTITLED

AN ACT to add new Section 337A to the Code of Public Local Laws of Charles County (1969 Edition, being Article 9 of the Code of Public Local Laws of Maryland), title "Charles County," to follow immediately after Section 337 thereof, and to be under the new subtitle "Regulation of Dredging Operations," to prevent dredging for sand and gravel and similar materials in Charles County and to provide penalties for such dredging.

Section 1. *Be it enacted by the General Assembly of Maryland,* That new Section 337A be and it is hereby added to the Code of Public Local Laws of Charles County (1969 Edition, being Article 9 of the Code of Public Local Laws of Maryland), title "Charles County," to follow immediately after Section 337 thereof, and to be under the new subtitle "Regulation of Dredging Operations," and to read as follows:

Regulation of Dredging Operations

337A.

(a) It shall be unlawful to dredge for sand, gravel or other aggregates or minerals, in any of the tidal waters or marshlands of Charles County, providing that this section shall not conflict with any necessary channel dredging operation for the purposes of navigation.

E. 360

(b) Any person violating the provisions of this section shall, upon conviction thereof, be punished by a fine of not less than five hundred dollars (\$500.00) nor more than twenty-five hundred dollars (\$2,500.00), providing further that each day such offense continues shall be a separate violation of this Section and subject to penalties thereof.

Sec. 2. *And be it further enacted.* That this Act shall take effect July 1, 1971.

M.A.S.G.M X^Cri ;VA7.C.V.AL 'i.'^jyfc REFUGE

FAIRFAX COUNTY, VIRGINIA

UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE BUREAU OF SPORT FISHERIES AND WILDLIFE



COMPILED IN THE DIVISION OF REALTY FROM SURVEYS BY U.S.G.S AND PRIVATE SURVEYS

ATLANTA, GEORGIA

MARCH 1967

Gunston Hall

MEAN DECLINATION 1985

4R-VA-803-404

E. 362



Fig. 44 Deposit Location

- v; Sigr. Ificanco;
- # Defines the location and configuration of probable excavation areas and MV-
- 4i ?OuO.rac Sar.d ar.d Gravel Company.

E-361

DEFENDANTS' EXHIBIT E

April 16, 1971

Mr. John R. Capper, Deputy Director
Department of Chesapeake Bay Affairs
1825 Virginia Street
Annapolis, Maryland 21401

Dear Mr. Capper:

In response to your notice of public hearing in Case No. 71-96 — Potomac Sand and Gravel for a continued hearing to dredge for sand and gravel in Mattawoman Creek near Indian Head, I am asking Mr. Edward B. Bradley of our Raleigh, North Carolina, field office to read the following statement into the record at your hearing on April 20, 1971.

The Bureau of Sport Fisheries and Wildlife reviewed the permit application and examined the project area. It was found that the area contains fish and wildlife resources of significant value and that proposed works could be expected to cause substantial damage. The Department of Interior Regional Coordinator was so advised.

On January 27, 1971, the U.S. Department of Interior Regional Coordinator, Boston, Massachusetts, wrote the Baltimore District Engineer regarding the application of Potomac Sand and Gravel for an extension of time in which to complete dredging for sand and gravel in Mattawoman Creek near Indian Head, Charles County, Maryland. The letter pointed out fish and wildlife and scenic values had been identified in a Departmental letter of February 5, 1968, to the District Engineer.

The January 27 letter concurred in the findings of the Bureau of Sport Fisheries and Wildlife and concluded that continued dredging of Mattawoman Creek and its marshes would seriously damage natural resources having national significance. In view of the Administration's policy to protect and improve the quality of the Nation's environment, the Department of the Interior recommended that permit extension on

E. 364

this project be denied. Copies of the letters cited above are attached for inclusion in the record of this hearing.

Sincerely yours,

(Sgd) LESTER E. SCHERER,
Acting Regional Director.

2 Attachments

BSF&W, Washington, D.C. (RB>
DRBS, Raleigh, N.C.

Jan. 27, 1971

District Engineer
Baltimore District
U. S. Army Corps of Engineers
P. O. Box 1715
Baltimore, Maryland 21203

Dear Sir:

This is in response to your August 25, 1970 letter concerning a request by the Potomac Sand and Gravel Company for extension of time in which to complete dredging for sand and gravel in Mattawoman Creek near Indian Head, Charles County, Maryland. The work was originally authorized by a Department of the Army permit issued to the Smoot Sand and Gravel Corporation on February 23, 1936.

Interior's comments on this application were submitted in a letter dated February 5, 1968. Our letter identified the fish, wildlife and scenic values of Mattawoman Creek and its tidewater marshes and recommended that the application be tabled until the Federal and State studies are completed and appropriate recommendations are developed.

Our views on this application are reflected in the 1965 Project Potomac Study. Mattawoman Creek is among the high value areas recommended for preservation in this study. Recent establishment of nearby Mason Neck National Wildlife Refuge makes the Mattawoman Creek marshes even more valuable as an adjacent waterfowl

feeding area. This marsh complex is one of the best estuarine units in the lower Potomac and, because of its proximity to Washington, D.C. has excellent development potential for wildlife oriented recreation.

Since the submission of our 1968 comments, there has been an increase in public concern over destruction of our Nation's estuarine resources. This has been demonstrated by the authorization of a National Estuary Study and numerous other legislative acts to protect the environment; e.g., The National Environmental Policy Act of 1969 and The Environmental Quality Improvement Act of 1970.

We feel that continued dredging of Mattawoman Creek and its marshes would seriously damage natural resources having national significance. In view of the Administration's policy to protect and improve the quality of the Nation's environment the Department of Interior recommends that permit extension on this project be denied.

Sincerely yours,

RICHARD E. GRIFFITH,

Regional Director,
Bureau of Sport Fisheries
and Wildlife.

for Mark Abelson,
Regional Coordinator.

February 5, 1968

Colonel Frank W. Rhea
Baltimore District, Corps of
Engineers
U.S. Department of the Army
P.O. Box 1715
Baltimore, Maryland 21203

Dear Colonel Rhea:

The Department of the Interior recommends that the application for dredging sand and gravel in Mattawoman

Creek near Indian Head, Maryland, be tabled until State and Federal studies of the Potomac Estuary provide a clearer basis for decision on an operation that could seriously affect the quality of the environment in this area.

The Interior Interdepartmental Task Force on the Potomac considers this tidewater marsh area to be a significant environment asset in a fast-urbanizing part of the Potomac Basin that is in need of such areas of open space having natural scenic and wildlife values. Mattawoman Creek is typical of Potomac Estuary lands which in general have been recommended for conservation to maintain those values.

The Department of the Interior is supporting legislation to authorize the Secretary of the Interior in cooperation with the States to inventory and study the Nation's estuaries and their natural resources with a view toward activating conservation programs to preserve them. Consideration is being given to recommending a cooperative study by Maryland, Virginia, the District of Columbia, and Federal agencies of the recreational values along the estuary, with resultant recommendations to Congress within two or three years.

As you know, the President has asked that conservation of natural resources be given high priority in formulating a comprehensive plan of development for the Potomac Basin. Federal and State agencies participating in the Project Potomac study have put forth a concerted effort to develop a plan which can serve as a conservation model for the entire nation.

The Maryland Department of Forests and Parks has identified the Mattawoman Creek Valley as a potential State Park to be connected with Smallwood State Park. The Department is concerned over the detrimental effects which a dredging operation would have upon the Creek Valley environment, and has informed us that it objects to the application. We believe that the State's interest and plans here should be fully supported by the Department of the Interior.

The proposed dredging in Mattawoman Creek will have serious harmful effects on one of the finest examples of Freshwater marsh in the Potomac River Basin.

That portion of Mattawoman Creek which will be affected by the proposed sand and gravel mining operation supports high quality fish and wildlife resources. Wildlife resources found in the marsh and adjacent swamp include a variety of game birds and animals including deer, squirrel, and several species of migratory waterfowl. Studies conducted by Federal and State fish and wildlife agencies have shown that this area supports one of the largest concentrations of nesting wood ducks in the State. Mallards also use the marsh for nesting and rearing purposes. Hunting pressure for these species plus black duck, pintail, and teal is high and hunter success is excellent. This area also affords habitat for other bird life including osprey and several species of herons and egrets. In addition, several bald eagles have been observed in the general project area.

Fishery resources in Mattawoman Creek are of good to excellent quality and consist primarily of chain pickerel, largemouth bass, bluegill, and crappie. In addition, anadromous runs of alewife, branch herring, and yellow perch utilize the stream as a spawning and nursery area.

Both resident and anadromous species are heavily utilized by sport fishermen. In fact, Mattawoman Creek is regarded as one of the finest fishing streams in the lower Potomac Basin.

Mattawoman Creek is also endowed with outstanding scenic amenities which add to the recreation potential of the Potomac Basin. The proposed dredge area is unique in that it contains the rare native lotus, *Nelumbo Lutea*, a plant noted for the size and beauty of its flower. To the best of our knowledge, this is the only area in Maryland where this beautiful aquatic plant is found growing in its natural environment.

Sand and gravel mining operations considered under this permit will have serious adverse effects on scenic values

plus fish and wildlife resources in the area. Dredging to a depth of 30 feet will destroy aquatic vegetation and invertebrate organisms utilized as food by ducks and wading birds, thus reducing the productivity of the habitat and its overall values to wildlife. The disturbance factor associated with dredging activities could also cause bald eagles to abandon the area. In addition, proposed dredging will have a detrimental impact on resident and anadromous fish populations by destroying shallow water spawning and nursery habitat. Furthermore, high turbidities and siltation associated with dredging will temporarily affect stream ecology and productivity in downstream areas by disrupting spawning activities and causing suffocation of eggs and young fish. Although current plans call for returning dredged material to the original borrow area, the damages to marsh habitat are expected to be significant and any recovery toward predredging conditions would be very slow. The net effect of this dredging will be a reduction in the habitat's productive capability and a loss of fishing and hunting opportunity.

In summary, the proposed dredging in Mattawoman Creek will not only seriously damage highly significant fish and wildlife habitat, but will also be incompatible with the objectives of Project Potomac and plans to establish a State Park in the Valley. State conservation agencies, including the Departments of Natural Resources, Forest and Parks, Game and Inland Fish, and Chesapeake Bay Affairs have objected to this permit. As a result, the Maryland Board of Public Works has informed you of its objection to the issuance of this permit.

In conclusion, the Department of the Interior recommends, as noted above, that this application be tabled until the Federal and State studies are completed and appropriate recommendations are developed.

Sincerely,

MARK ABELSON,

Regional Coordinator.

DEFENDANTS' EXHIBIT F

April 16, 1971

Mr. John R. Capper
Deputy Director
Department of Chesapeake Bay Affairs
1825 Virginia Street
Annapolis, Maryland 21401

Dear Mr. Capper:

In response to your notice of public hearing on Case No. 71-97 — Potomac Sand and Gravel to dredge for sand and gravel between Hallowing Point and Sycamore, I am asking Mr. Edward B. Bradley of our Raleigh, North Carolina, field office to read the following statement into the record at your hearing on April 20, 1971.

The Bureau of Sport Fisheries and Wildlife reviewed the permit application and found that the proposed work will be very damaging to highly valued fish and wildlife resources. The Mason Neck National Refuge, a Virginia State park, and a regional park have been established on the peninsula just north of the area to be dredged. The river bottoms to be dredged are an important adjunct to the Mason Neck National Wildlife Refuge. Wildlife resources in the area consist primarily of migratory waterfowl which are seasonally present in large numbers and utilize the waters for roosting and resting purposes and the shallow bottoms for feeding. Black ducks and wood ducks utilize the wetland portions of the refuge for nesting and broodrearing. The Mason Neck Refuge was established primarily to provide sanctuary and habitat for the endangered southern bald eagle. The proposed dredging could have significant effects on the food resources of eagles on and in the vicinity of the refuge.

Black ducks and mallards also use the open waters of the area to be dredged. Scaup, ruddy ducks, canvas-

backs, and redheads are the principal species of diving ducks that feed on the open water shallow bottoms. Our investigations of the area indicate that the soft bottoms are rich in organic materials which contain organisms such as midge larvae, large thin shelled clams, and Rangia clams, important foods of ducks.

The proposed dredging at Mason Neck will seriously damage highly significant fish and wildlife habitat and will be incompatible with the Department's objectives for use of the Nation's river and plans to maintain Mason Neck as an unspoiled natural area. Therefore, the Bureau of Sport Fisheries and Wildlife objects strongly to the proposed dredging. The concern of the Bureau of Sport Fisheries and Wildlife was explained in some detail in a letter of November 4, 1970, to Regional Director of the Federal Water Quality Administration, who was at that time acting for the Interior Coordinator. The Bureau's views were upheld by the Department and on January 27, 1971, the U.S. Department of the Interior Regional Coordinator, Boston, Massachusetts, wrote the Baltimore District Engineer regarding the application of Potomac Sand and Gravel to dredge about 1,300 acres in the Potomac River between Hallowing Point and Sycamore. In view of the resource values that would be destroyed, the Department of the Interior recommended that the permit be denied.

Copies of the above referenced letters are provided for inclusion in the record of this hearing.

Sincerely yours,

(Sgd) LESTER E. SCHERER,

Acting Regional Director.

2 Attachments

cc:

BSF&W, Washington, D.C. (RB)

DRBS, Raleigh, N.C.

Jan. 27. 1971

District Engineer
Baltimore District
U. S. Army Corps of Engineers
P. O. Box 1715
Baltimore, Maryland 21203

Dear Sir:

The permit application of Potomac Sand and Gravel Company dated August 27, 1970 has been reviewed by Interior agencies and found to be in direct conflict with the Administration's policy to maintain, protect and improve the quality of the environment.

The applicant proposes to dredge about 1,300 acres in the Potomac River between Hallowing Point and Sycamore Point to a depth of approximately 50 feet below mean low water. Approximately 5 million tons of sand and gravel will be removed and the waste materials will be returned to the dredged area.

The proposed project area lies adjacent to the Mason Neck Peninsula. On the peninsula, just north of the area to be dredged, there is a Virginia State Park, a regional park, and the newly established Mason Neck National Refuge. The extensive natural area, just 18 miles from the District of Columbia, has been preserved as recommended in the Department of the Interior's report. *The Nation's River*.

The proposed sand and gravel dredging project will have serious adverse effects on fish and wildlife resources in the project area and also will destroy the esthetic values of the area. Dredging operations will destroy mollusks and other bottom food organisms utilized by waterfowl and will reduce the amount of shallow water spawning and nursery habitat used by anadromous fish populations. Craney Island, an important bird roosting site, will also be lost to the project. The high bluffs which occur along the banks of the Potomac are subject to erosion. It is expected that proposed deepening of the river to a depth of

50 feet will accelerate natural erosion and lead to actual loss of land area in the refuge and State and regional parks.

In view of the resource values that would be destroyed by the proposed project, the Department of the Interior recommends that this permit be denied.

Discussion leading to the above recommendation is contained in the attached report by the Bureau of Sport Fisheries and Wildlife.

Please inform us of the final disposition of this permit application.

Sincerely yours,

RICHARD E. GRIFFITH,

Regional Director,

Bureau of Sport Fisheries and
Wildlife.

for Mark Abelson,

Regional Coordinator.

November 4, 1970

Regional Director
Federal Water Quality Administration
918 Emmet Street
Charlottesville, Virginia 22901

Dear Sir:

The Bureau of Sport Fisheries and Wildlife has reviewed the notice of application for a Department of the Army permit issued by the Baltimore District, Corps of Engineers, NABOP-P (Potomac Sand and Gravel Company) 6, dated August 27, 1970. The applicant has requested a permit to dredge for sand and gravel in the Potomac River at Craney Island, Charles County, Maryland. The following comments are submitted in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The proposed project provides for dredging about 1,300 acres in the Potomac between Hallowing Point and Sycamore Point to a depth of approximately 50 feet below mean low water. About 5 million tons of sand and gravel will be removed while waste materials will be returned to the dredged area.

The proposed project area lies adjacent to the Mason Neck Peninsula. On the peninsula, just north of the area to be dredged, there is a Virginia State Park, a regional park, and the Bureau's newly established Mason Neck National Refuge. This extensive natural area, just 18 miles from the District of Columbia, has been preserved as recommended in the Department of the Interior's report, *The Nation's River*. The Bureau plans to maintain the 245 acres of marshes and the Eagle Creek drainage, where eagles roost, as a sanctuary and restrict public use to the uplands. Nature trails will lead to points at the edge of the marsh for wildlife observation.

The Potomac is heavily enriched with nutrients entering the river from the metropolitan area and algal blooms often cover much of the surface area in the warm months. Resident fish in the project area include freshwater species such as eatfishes, carp, and gar. Anadromous fish using the area include blueback herring, alewife, American shad, hickory shad, white perch, and striped bass. Although there is an extensive seasonal commercial fishery for the anadromous species, sport fishing activity is low due to limited access and the polluted condition of the river.

The river bottoms to be dredged are an important adjunct to the Mason Neck National Wildlife Refuge, and wildlife resources in the area consist primarily of migratory waterfowl which are seasonally present and utilize the waters for roosting and resting purposes and the shallow bottoms for feeding. Black ducks and mallards also use the open waters of the area to be dredged. Scaup, ruddy ducks, canvasbacks, and redheads are the principal species of sea ducks that feed on the open water shallow bottoms. Our investigations of the area indicate that the soft bottoms are rich in organic materials which contain

organisms such as midge larvae, large thin shelled clams, and *Rangia* clams. Because of their small size, *Rangia* clams are an important food of diving ducks.

The Mason Neck marshes are freshwater tidal marshes intersected by three tidal creeks. Waterfowl food production on these low marshes is excellent because of the abundance of such food plants as wild rice, arrow arum, smartweed, and pickerelweed. Puddle ducks make extensive winter use of the marsh area while wood ducks, black ducks, and mallards also nest in the area. When inspecting these marshes, about a thousand ducks were observed with mallards, black ducks, wood ducks, pintails, baldpates, and teal the most common species.

The proposed sand and gravel dredging project will have serious adverse effects on fish and wildlife resources in the project area and also will destroy the esthetic values of the area. Dredging to a depth of 50 feet will destroy mollusks and other bottom organisms utilized by waterfowl. Surveys conducted at other deeply dredged borrow areas¹ have shown that even after 6 years the once productive shallow bottoms have remained deep holes that have filled with soft anerobic mud that is almost completely devoid of bottom fauna. Dredging will destroy Craney Island, a small island in the work area. This island is an important bird roosting site and islands of this type are very few in the Potomac. The disturbance factor associated with dredging so near the wildlife sanctuary will seriously degrade the value of the refuge and parks as a scenic natural area. The proposed dredging will also have a detrimental impact on anadromous fish populations by destroying the shallow water spawning and nursery habitat.

High bluffs occur along the banks of the Potomac between Sycamore Point and High Point on Mason Neck. Currents in the Potomac are such that these banks are eroding. It is expected that proposed deepening of river

¹ Assateague Ecological Studies. Report No. 1. A preliminary Report to the National Park Service by the Natural Resources Institute — University of Maryland, dated October 1969.

bottoms to depths of 50 feet will accelerate this rate of erosion and incur actual loss of land area in the refuge and State and regional parks.

High turbidities and siltation associated with dredging will temporarily affect stream ecology and productivity by disrupting spawning activities and causing suffocation of eggs and young fish. Although plans call for returning unwanted dredge materials to the original borrow area, high turbidities and sedimentation are expected to adversely affect the shallow waters and marshes of the adjoining refuge. This project could take years to complete and as long as turbidities due to dredging prevail, it will be impossible for submerged aquatic plants to return to the Potomac even if algal blooms are controlled by adequate sewage treatment in the future. Only a few inches of sediment accumulation could change the productive low marsh on the refuge into a relatively unproductive high marsh. Losses of areas that produce natural foods for waterfowl would be particularly detrimental to the development of the Mason Neck National Wildlife Refuge, since land in the area does not lend itself to agricultural production of food for waterfowl.

In conclusion, the proposed dredging at Mason Neck will seriously damage highly significant fish and wildlife habitat and will be incompatible with the Department objectives for use of the Nation's river and plans to maintain Mason Neck as an unspoiled natural area. Therefore, the Bureau of Sport Fisheries and Wildlife recommends that this application for a Department of the Army permit be denied.

Please advise us of the Corps' action on this recommendation.

Sincerely yours,

C. EDWARD CARLSON,
Regional Director.

Central Atlantic Environmental Service
Maryland State Wetland Hearing
On
Potomac Sand and Gravel Applications
in
Charles County, Maryland

April 20, 1972, Tuesday

New Charles County Public Library, La Plata (Route 6
and Garrett Avenue)

9:30 A.M.—Case No. 71-96 — *Potomac Sand and Gravel*
for a continued hearing to dredge for sand
and gravel in Mattawoman Creek near
Indian Head.

1:30 P.M.—Case No. 71-97 — *Potomac Sand and Gravel*
to dredge for sand and gravel between
Hallowing Point and Sycamore.

DEFENDANTS' EXHIBIT G

Commonwealth of Virginia
State Water Control Board

August 2, 1971

Mr. J. Gary Gardner, Director
Technical Programs
Environmental Protection Agency
Water Quality Office
918 Emmet Street
Carlottesville, Virginia 22901

Dear Mr. Garner:

Subject: Public Notice dated 27 August 1970
NABOP-P (Potomac Sand & Gravel
Company) 6

This is in regard to the subject public notice concerning
the proposed project by Potomac Sand & Gravel Company
to dredge for sand and gravel at Craney Island, Maryland.

We have enclosed a copy of our letter of July 14, 1971, to Mr. David A. Parker of Potomac Sand & Gravel Company.

We wish to remain on record as objecting to the project as presently proposed and requesting a public hearing in accordance with Section 21 < b) (2) of Public Law 91-224 should there be any further consideration given the proposal in the future.

Very truly yours.

A. H. PAESSLER.

Executive Secretary.

LAB /jgm

Enclosure

cc: Colonel W. J. Love

Potomac Sand & Gravel Company

Commonwealth of Virginia
State Water Control Board

July 14, 1971

Mr. David A. Parker
Potomac Sand & Gravel Company
3020 K Street N.W.
Washington, D. C. 20007

Dear Mr. Parker:

This is in regard to the letter of May 19, 1971 concerning your proposed dredging project for sand and gravel in the Potomac River at Craney Island.

When the proposed project was brought to the attention of the Board at their recent meeting, reference was made to a new Maryland State law prohibiting dredging for purposes of obtaining sand and gravel and similar materials in Charles County, Maryland, location of the proposed project.

Since the Maryland Legislature with concurrence of Governor Mandel has passed a law making it unlawful to dredge

in Charles County, as stated above, further action on our part would not be appropriate at this time.

Very truly yours,

A. H. PAESSLER,

Executive Secretary.

LAB/eem/clm

cc: J. Gary Gardner, Environment Protection
Agency

Governor's Council on the Environment
Marvin M. Sutherland, Department of Con-
servation and Economic Development
Virginia Institute of Marine Science

Commonwealth of Virginia
State Water Control Board

November 25, 1970

Mr. J. Gary Gardner
Director, Operations Office
Federal Water Quality Administration
Middle Atlantic Region
918 Emmet Street
Charlottesville, Virginia 22901

Dear Mr. Gardner:

This is to acknowledge receipt of your letter of October 1, 1970, and to respond in accordance with our responsibility, as assigned by Governor Holton, under the provisions of the Water Quality Improvement Act of 1970.

We have coordinated with several other State agencies to request studies and thereby to obtain information concerning the anticipated effects of the proposed dredging project by Potomac Sand & Gravel Company in the Potomac River between Sycamore Point and Hallowing Point. Accordingly we submit the following comments:

1. The proposed dredging areas is a spawning area for several species of commercial fish. The spawn-

ing season includes the months of April and May and probably the last two weeks of March. Naturally, we are concerned that this project would be detrimental to fish spawning here. Such effect would be "pollution" as provided in Section 62.1-44.3 of the State Water Control Law. The pertinent part of the definition in the Law is as follows: "Pollution means such *alteration of the physical, chemical or biological properties of any State waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life.*"

2. The charted mean low water depth within the waters of Virginia in the cove between Sycamore Point and Hallowing Point is two to five feet. Should dredging to 50 feet below mean low water take place along the Virginia-Maryland boundary in this area, it is very obvious that a serious erosion of Virginia bottom would occur. We feel that no dredging near the Virginia boundary should be permitted within the six feet contour, at a minimum, to prevent erosion and physical alteration of Virginia bottom in the area. If physical alteration of Virginia bottom does occur from erosion, or from redeposit of sediment due to the proximity of the dredging, water flow and water quality would be affected.
3. The close proximity of dredging to Virginia waters between Sycamore Point and Hallowing Point will result in sedimentation and turbidity affecting the desirability of swimming, boating, and water skiing. Such result contravenes Virginia water quality standards.
4. The National Wildlife Refuge and the Northern Virginia Regional Park Authority are located in the immediate vicinity of the proposed dredging project. The area has been selected due to the abundance of natural habitat conducive to production and exhibition of wildlife. If redeposit of sedi-

ment occurs, reducing the water depth along the shoreline in this refuge and park area, a serious effect upon feeding shallows for waterfowl will result.

5. The preservation of Mason Neck is a key recommendation of the President's Potomac Valley Task Force, and of the Potomac Estuary Study, completed by the Department of Interior, Bureau of Outdoor Recreation, in 1970. Development plans for the area will incorporate maximum conservation of natural habitat and scenic qualities, with relatively small areas developed for intensive recreational use. Dredging must not be allowed to adversely affect these plans.

If view of the above comments, the State Water Control Board, as authorized under Public Law 91-224, Section 21 (b) (2), hereby requests that a public hearing be scheduled relative to the dredging as proposed by Potomac Sand & Gravel Company in the Corps of Engineers Public Notice dated August 27, 1970. In accordance with the comments above, we believe the proposed dredging will violate Virginia's water quality standards and we object to the project as proposed.

Sincerely,

Original Signed by

A. H. PAESSLER,
Executive Secretary.

LAB/clm

cc: Colonel W. J. Love, Baltimore District,
Corps of Engineers
Department of Conservation & Economic
Development
Virginia Institute of Marine Science
Commission of Outdoor Recreation
Governor's Council on Environment
Marine Resources Commission
Mr. Norman Cole, Chairman, SWCB
Mr. W. H. Singleton, Board Member, SWCB

FILED APR 17 1972

IN THE
Court of Appeals of Maryland

SEPTEMBER TERM, 1972

No. 35 (Adv.)

POTOMAC SAND AND GRAVEL COMPANY,
Appellant,

v.

GOVERNOR OF MARYLAND, ET AL.,
Appellees.

APPEAL FROM THE CIRCUIT COURT FOR ANNE ARUNDEL
COUNTY (MATTHEW S. EVANS, Judge)

BRIEF OF APPELLANT

JAMES J. DOYLE, JR.,
JOHN B. JASKE,
SHERBOW, SHEA & DOYLE,
VICTOR H. LAWS,
Attorneys for Appellant.

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BRIEF OF APPELLANT

STATEMENT OF THE CASE

This is an Appeal from a Decree of the Circuit Court for Anne Arundel County (Honorable Matthew S. Evans, Judge) in a suit by Appellant seeking declaratory and injunctive relief against the Governor, State's Attorney for Charles County, Sheriff for Charles County and Superintendent, Maryland State Police. The Court ruled that Chapter 792, Laws of Maryland, 1971, enacted during the 1971 Session of the Maryland General Assembly as H.B. 1192, effective July 1, 1971 ("Chapter 792" or "the Act")

is constitutional. The opinion of Judge Evans upon which the Decree was based may be found at E. 35.

The Court held that Chapter 792 does not deprive Appellant of property without due process of law; does not deny Appellant equal protection of the laws; does not take Appellant's property for a public use without just compensation; is not a special law on a subject for which provision has been made by an existing general law in violation of Article III, Section 33 of the Constitution of Maryland; and does not subject Appellant to criminal prosecution under a penal statute the terms of which are so vague and indefinite as to be uncertain in their meaning and a denial of due process of law.

QUESTIONS PRESENTED

1. Whether Chapter 792 deprives Appellant of rights guaranteed to it by the Fourteenth Amendment to the Constitution of the United States and Article 23 of the Declaration of Rights of the Constitution of Maryland in that it denies Appellant due proces of law.

2. "Whether Chapter 792 constitutes the taking of Appellant's property for public use without compensation in violation of Article III, Section 40 of the Constitution of Maryland, Article 23 of the Declaration of Rights of the Constitution of Maryland and the Fourteenth Amendment to the Constitution of the United States.

3. Whether Chapter 792 is a special law on a subject for which general legislation has been enacted thus violating Article III, Section 33 of the Constitution of Maryland.

STATEMENT OF FACTS

This action was instituted by Appellant, a District of Columbia corporation. For many years, Appellant and its

predecessors have been engaged in the business of dredging sand and gravel in Maryland and Virginia. The product is mined from deposits found in land owned by Appellant or from the beds of waters adjoining that land. Appellant is the record owner of three parcels of land in Maryland:

1. The Mattawoman Tract consisting of in excess of 1100 acres on Mattawoman Creek, Charles County, Maryland.

2. The Greenway Tract consisting of a strip of land ninety feet wide and a second strip five feet wide bordering the Potomac River in Charles County.

3. Craney Island in the Potomac River in Charles County. The deed conveying title indicates the island is about 20 acres in size. However, no more than 1 acre of land usually is above water. Deeds to the properties were introduced into evidence as Plaintiff's Exhibits Nos. 1 and 2 (E. 336, 347).

Appellant acquired all three properties in 1961 together with all of the operational equipment of the Smoot Sand and Gravel Company (hereinafter referred to as Smoot) (E. 73). Smoot had operated continuously in Maryland since about 1905 (E. 73). In 1964 Plaintiff purchased 84 additional acres next to the Mattawoman Tract. A deed to that property was introduced into evidence as Plaintiff's Exhibit No. 3 (E. 349).

Appellant was created solely as successor in interest to Smoot to conduct dredging for sand and gravel on its property and in the bed of the Mattawoman Creek and the Potomac River (E. 75-76). Although other forms of dredging are carried on in Maryland and navigational dredging has been conducted for over 100 years, Appellant is the only company in Charles County presently commercially "lining sand and gravel by dredging (E. 84-85, 186, 301).

While the Potomac River is for the most part open water with shallows near such points as Craney Island, Mattawoman Creek is bordered by dense foliage and a broad wet shoreline. Dredging has been conducted by Plaintiff on the Greenway Tract and in areas of the Potomac River contiguous to it. Charles County owns the bed of the Potomac-River adjacent to its shore to the low tide mark on the Virginia shore. Consequently, all Appellant's present and proposed dredge sites are in Charles County.

Appellant currently operates at Greenway under a permit granted by the United States Army Corps of Engineers (E. 104). Approval for this permit is required from the Department of the Interior which submits the permit to the Federal Water Quality Administration, the Fish and Wild Life Service, the National Park Service, and the Bureau of Outdoor Recreation for approval. Comment from the general public is also required. The application for a Corps permit is also submitted for approval to the Maryland Board of Public Works, the Maryland Department of Natural Resources, the Maryland Department of Water Resources, the Maryland Department of Game and Inland Fish, the Maryland Department of Public Health and the Maryland Department of Forests and Parks. A separate permit for dredging may be issued by the Maryland Department of Water Resources after critical comment is requested from the Maryland Department of Game and Inland Fish, the Maryland Department of Public Health, the Maryland Department of Forests and Parks, the local county commissioners and the general public. A schematic diagram of these permits was introduced into evidence as Plaintiff's Exhibit No. 4 (E. 351).

In 1970, the Maryland General Assembly enacted Chapter 241, Laws of Maryland, 1970 (Art. 66C, Sees. 718-731.

Annotated Code Maryland, 1970 Replament Volume) titled "Natural Resources" subtitled "Wetlands" (the "Wetlands Act"). This Act distinguishes between State Wetlands, i.e., lands under navigable waters below mean high tide affected by the regular rise and fall of the tide, and private wetlands, i.e., lands not considered State Wetlands bordering on or lying beneath tidal waters which are subject to regular or periodic tidal action and support aquatic growth. The Wetlands Act prohibits, with certain exceptions, any dredging and filling on State Wetlands except under a license issued by the Board of Public Works. Consultation on any license application is had with interested federal, state and local agencies and the Secretary of Natural Resources prepares a report indicating whether or under what terms the license should be granted. After a local hearing, the Board of Public Works decides on the basis of the ecological, economic, developmental, recreational and aesthetic factors presented if the license should be issued and upon what terms.

Private wetlands will be subject to regulation after all such lands in Maryland are inventoried. These regulations will be established after a hearing is held and any person who believes that these rules improperly restrict the use of his property may seek relief through the courts. The inventory of private wetlands is not yet complete.

Appellant filed an application for a permit under the Wetlands Act and hearings into the application were held in December, 1970 and April, 1971 (E. 110-111). During the interim between the two hearings, the Maryland General Assembly passed Chapter 792 of the Laws of Maryland, 1971 (Art. 9, Sec. 337A, Code of Public and Local Laws of Maryland) (E. 359).

"(a) It shall be unlawful to dredge for sand, gravel or other aggregates or minerals in any of the tidal

waters or marshlands of Charles County, providing that this section shall not conflict with any necessary channel dredging operation for purposes of navigation.

"(b) Any person violating the provisions of this section shall, upon conviction thereof, be punished by a fine of not less than Five Hundred (<\$500.00) Dollars nor more than Twenty Five Hundred (\$2,500.00 > Dollars providing further that each day such offense continues shall be a separate violation of this Section and subject to the penalties thereof."

The statute became effective July 1, 1971. However, its enforcement was restrained pending disposition of this action (E. 9, 33, 34, 35, 55).

Appellant now dredges only in the Greenway Tract in the Potomac River. Dredging of this area was 90 percent complete at the time of trial, October 13, 1971 (E. 791. In the event Chapter 792 is held to be unconstitutional, dredging at Craney Island or Mattawoman will not be permitted unless Appellant obtains all of the permits set forth above. Appellant pays State taxes on all three properties (E. 80).

ARGUMENT

I.

CHAPTER 792 VIOLATES THE FOURTEENTH AMENDMENT OF THE CONSTITUTION OF THE UNITED STATES AND ARTICLE 23 OF THE DECLARATION OF RIGHTS OF THE CONSTITUTION OF MARYLAND IN THAT IT DENIES APPELLANT DUE PROCESS OF LAW.

Due process, also called the "law of the land" (Articles 19 and 23, Declaration of Rights of Maryland), is the corner stone protection for the freedoms which citizens of this **country** enjoy. It covers the sub-categories of procedural **and** substantive due process and statutory vagueness **and** is closely related to the guarantee of equal protection of **law** also found in the Fourteenth Amendment to the United

States Constitution. No comprehensive definition of due process has ever been formulated. Historical discussion may be found in *Murray's Lessee v. Hoboken Land Company*, 59 U.S. 272 (1855). See also the discussion by Justice Bradley in *Davidson v. New Orleans*, 96 U.S. 97 (1877).

The most common definition of due process is stated in *Nebbia v. State of New York*, 291 U.S. 502, 525, 54 S. Ct. 505 (1933):

"The Fifth Amendment in the field of federal activity and the Fourteenth, as respects state action, do not prohibit governmental regulation for the public welfare. They merely condition the exertion of the admitted power, by securing that the end shall be accomplished by methods consistent with due process. And the guarantee of due process, as has often been held, demand only that the law shall not be unreasonable, arbitrary or capricious, and the means selected shall have a real and substantial relation to the object sought to be attained. It results that a regulation valid for one sort of business, or in given circumstances, may be invalid for another sort, or for the same business under other circumstances, because the reasonableness of each regulation depends on relevant facts."

Thus, precedents are of limited value to a decision of this type, for the decision depends on facts and circumstances which will almost certainly vary from case to case. The lower court correctly stated that ". . . the first consideration is whether the statute is a taking by eminent domain requiring compensation, or a regulation of use under the State police powers" (E. 45). It then held that Chapter 792 is a regulation of use, not a taking by eminent domain. Actually, Appellant's property is taken by the Act in the sense that about 30% of its Mattawoman tract is privately held wetlands (E. 114). However, even if the Act did not constitute a taking, its effect, as a purely regulatory measure, would be equally unconstitutional.

Appellees contend Chapter 792 is a reasonable exercise of the State's police power. The lower court agreed citing as its primary authority *Goldblatt v. Town of Hempstead*, 369 U.S. 590, 82 S. Ct. 987 (1962) (E. 45) and adopted the test stated in *Lawton v. Steele*, 152 U.S. 133, 14 S. Ct. 499 (1894) which upheld constitutionality if it was determined:

1. That the public interest is served.
2. That the means adopted are reasonable in serving that public interest.
3. That the means adopted do not unduly oppress individuals (E. 47).

These standards have been further refined in Maryland in *Pocomoke City v. Oil Company*, 162 Md. 368 (1932) and approved in later cases [See *La Rogue v. County Commissioners*, 233 Md. 329, 337 (1963)] as follows:

- "1. That restrictions imposed by the State or some Agency of the State upon the use of private property cannot be justified under the police power unless they are *reasonably necessary* for the adequate protection of the public welfare, safety, health, comfort, or morals:
2. That whether such restrictions are reasonable in fact is a judicial question;
3. That when imposed by competent legislative authority, the burden of proof in any such inquiry is upon him who challenges their validity (citations omitted i; and
4. When they are reasonably necessary for the adequate protection of the public welfare, safety, health, morals, or comfort, such restrictions will be regarded as valid exercise of the police power until they contravene some express constitutional prohibition." i Emphasis supplied.) 233 Md. at 337.

Under these tests a legislative enactment which impinges on the right of an individual to conduct a legitimate

business enterprise must in some manner advance the welfare of society as a whole. Due process initially requires a reasonable connection between a statutory restriction and the public welfare. Here there is no such connection. Chapter 792 totally outlaws Appellant's business without in any way protecting society or the public welfare.

Grossman v. Baumgarten, 242 N.Y.S. 2d 910 (1963) involved a challenge of a regulation prohibiting tattooing. There, the Court said at p. 916:

"Under special and limited circumstances, the police power is broad enough to encompass the prohibition of an art, business or calling. But it cannot be gainsaid that in a society like ours where individual enterprise is the essence of constitutionally protected liberty, we must look with special care at the enactment, whether legislative or administrative, which prohibits the exercise in an otherwise lawful calling. Certainly, prohibition of an activity should not be upheld where a regulation of it would serve the same public good."

Though the case was reversed on its facts, *Grossman v. Baumgarten*, 271 N.Y.S. 2d 195 (1966), this reasoning has been reiterated. *Garden Spot Market v. Byrne*, 378 P. 2d 220 (Mont. 1963). In the case of *A & H Transport. Inc. v. Mayor, etc. of Baltimore.*, 249 Md. 518 (1968) it was stated that a determination of reasonableness entails consideration of:

1. The scope and extent of the situation that the legislature is trying to alter.
2. The rights harmed by the act.
3. The availability of other effective but less restrictive remedies.

The **Supreme** Court in *Goldblatt v. Town of Hempstead*, 369 U.S. 594, 82 S. Ct. 987 (1962), a decision relied upon by the lower Court, recognizes this rule:

"To evaluate its tan ordinance prohibiting further pit excavation] reasonableness we therefore need to know such things as the nature of the menace against which it will protect, *the availability and effectiveness of other less drastic protective steps*, and the loss which appellants will suffer from the imposition of the ordinance" Id., 269 U.S. at 595, 82 S. Ct. at 990 (Emphasis supplied).

As stated in *Moore v. Thompson*, 126 So. 2d 543, 550 (Fla. 1960): "The power to regulate does not encompass the power to prohibit".

Chapter 792 is a total prohibition. It prohibits a legitimate business which has been carried on by Appellant since 1961 and by Appellant's predecessor since 1905. If enforced it will put Appellant out of business in Charles County (E. 95), and, as Appellant's present and proposed dredge sites are all in Charles County, it will completely close Appellant's business in Maryland. The rule is plain that where regulation will suffice, a total prohibition is unconstitutional.

Here there is not just the potential for achieving the same protection through regulation. The State has enacted regulations which fully protect the public and completely avoid any possible detrimental effect which dredging could have on its welfare. The Wetlands Act together with the other Federal and State regulations imposed upon Appellant, protect the public from any adverse affects that dredging may inflict on every resident of Maryland. Section 221 of the Wetlands Act (Art. 66 C, Sec. 721, Annotated Code of Maryland), directs the Board of Public Works to consider "the varying ecological, economic, developmental, recreational, and aesthetic values" prior to issuing any permit.

Despite the control and regulation this statute imposes upon the use of all Maryland wetlands, including those in

Charles County. Judge Evans held that the harm done by Appellant's business justified its total prohibition. Reference to the record extract, however, fails to reveal any evidence that the enactment of Chapter 792 was reasonably necessary to protect the residents of Charles County in any way. Indeed, all of the evidence introduced on both sides dealt with the ecological considerations of the bodies of water involved and how dredging may affect those considerations. And, in the case of the two areas located in the Potomac River, it is clear that dredging will not have the adverse effects that Judge Evans found may occur in Mattawoman (E. 170-181). Nor were the lower Court's findings concerning increased turbidity at Mattawoman and noise supported by the evidence (E. 165, 199-202 J).

Moreover, even assuming adverse effects in the Mattawoman Creek, it is clear from Judge Evans' opinion that the factors impelling preservation of that area were as much or more in the interest of the State as a whole as in the interest of Charles County. Therefore, the procedures of the Wetlands Act were fully available to the appropriate state authorities to deny any spoilation of the Mattawoman Creek and also to control the degree and extent of any further dredging in the Potomac River. Consequently, not only is Chapter 792 not reasonably necessary, it is in fact totally unnecessary and an abuse of the police power.

But Chapter 792 does extend beyond the Wetlands Act in one important and illegal respect. It attempts to do that which the Wetlands Act recognizes the State cannot do. It extends its prohibition not just to State Wetlands but to all tidal waters and marshlands in Charles County. As the lower Court found, thirty percent of the proposed dredge area in the Mattawoman tract is not State Wetland (E. 114). A legislative enactment which regulates a legitimate

business prosecuted on private property must advance the public welfare without unduly restricting use of the property. Though courts no longer judge the wisdom of the legislature, they must and do test legislative enactments against fundamental standards of due process of law. Chapter 792 is unreasonably restrictive to Appellant's business, particularly when related to the Wetlands Act.

II.

CHAPTER 792 CONSTITUTES THE TAKING OF PRIVATE PROPERTY FOR A PUBLIC USE WITHOUT COMPENSATION IN VIOLATION OF ARTICLE III, SECTION 40 OF THE CONSTITUTION OF MARYLAND, ARTICLE 23 OF THE DECLARATION OF RIGHTS OF THE CONSTITUTION OF MARYLAND AND THE FOURTEENTH AMENDMENT TO THE CONSTITUTION OF THE UNITED STATES.

The right to due process of law divides between exercise of the police power heretofore considered, and exercise of the power of eminent domain. For the latter, reasonableness will not suffice. A taking of property by eminent domain requires compensation.

It must first be determined whether there are "property" rights here at issue. Even if the property right which Appellant has in carrying out a lawful business could be ignored, *Dasch v. Jackson*, 170 Md. 251 (1936) and *Schneider v. Duer*, 170 Md. 326 (1936), Appellant seeks to mine approximately 100 acres of the Mattawoman which is above mean high tide and is thus not State Wetland (E. 114).

Chapter 792 so severely interferes with Appellant's property as to be a "taking" within the constitutional prohibition. Chapter 792 may be likened to a zoning ordinance for it "zones" Appellant's property as unusable for dredging sand and gravel.

"Confrontation between public interests and private interests is common in the application of zoning laws.

with which the Wetlands Act may be analogized . . ." *State v. Johnson*, 265 A. 2d 711, 715 (Me. 1970).

The case of *Stevens v. City of Salisbury*, 240 Md. 556 (1964) offers a complete discussion of zoning regulation. It must be determined whether the enactment is a police power regulation or a taking under the eminent domain power requiring compensation. The latter is a severe interference "tantamount to deprivations of use or enjoyment of property" 240 Md. at 567. The facts of this case prove that this Act "takes" Appellant's property.

Thirty percent of the Mattawoman dredge site is private property. Dredging for sand and gravel is totally prohibited on that property by the statute. David Parker, an engineer employed by Appellant, testified that there is no feasible way to mine sand and gravel in these areas other than by a water based operation (E. 126-127).

The lower Court relied on *Commonwealth v. Tewksbury*, 11 Met. 55, 52 Mass. 55 (1846) and *Goldblatt v. Town of Hempstead*, 369 U.S. 594, 82 S. Ct. 987 (1962) in concluding that the restriction imposed by Chapter 792 was not unconstitutionally severe. It inferred that, as the property owners there could economically put their property to other uses, so Appellant should be able to make other use of its property in the Mattawoman tract.

In *Tewksbury* the property at issue was a portion of the shoreline of Boston harbor. Even in 1846 the value of such property would have been substantial and subject to multiple uses. In *Goldblatt* the Town of Hempstead had expanded around a lake formed by appellant's sand and gravel operation. Appellant also owned 18 acres of dry land next to the lake. The lack of evidence of a diminution in **value due to the** town ordinance is thus easily explained.

Lake and shoreline property within an urban area have substantial value apart from a value for sand and gravel.

Appellant herein owns 100 acres of property which, as illustrated by Defendants' Exhibit B (E. 361) is divided into segments. The segments make up a portion of a rural marsh, inaccessible except by water (E. 126-127). In fact, large craft must come in on the high tide (E. 124). Lack of access makes it economically unfeasible to mine these areas by conventional land method (E. 126). This lack of transportation to Appellant's properties proves that the properties have no commercial value other than as a source for sand and gravel. It is a recognized rule of real property law that lack of access renders property unfit for occupancy. *Condry v. Laurie*, 184 Md. 317, 321 (1944). The disparity in value between Appellant's properties if Chapter 792 is applied and the properties regulated in the *Tewksbury* and *Goldblatt* cases is apparent.

It cannot be doubted that forcing Appellant to leave its land in a natural state serves a public purpose. In *State v. Johnson*, 265 A. 2d 711, 716 (1970) the Supreme Judicial Court of Maine held that the denial of a permit under the Maine Wetlands Act to dredge and fill defendant's land was an unconstitutional taking in these words:

"As distinguished from conventional zoning for town protection, the area of Wetlands representing a 'valuable natural resource of the State,' of which appellants' holdings are but a minute part, is of state-wide concern. The benefits from its preservation extend beyond town limits and are state-wide. The cost of its preservation should be publicly borne. To leave appellants with commercially valueless land in upholding the restriction presently imposed, is to charge them with more than their just share of the cost of this state-wide conservation program, granting fully its com-

mendable purpose. In the phrasing of Robb *supra*. (*State v. Robb*. 100 Me. 180) their compensation by sharing in the benefits which this restriction is intended to secure is so disproportionate to their deprivation of reasonable use that such exercise of the State's power is unreasonable."

The *Johnson* case recognizes the decision of this court in *Frankel v. City of Baltimore*, 223 Md. 97 (1960) concerning unconstitutionally restrictive zoning. The decision also cites other cases in which property regulations in the interest of conservation have been overturned including *Dooley v. Town Plan and Zoning Commission of Town of Fairfield*, 151 Conn. 304, 197 A. 2d 770 (1964) and *Morris County Land Improvement Company v. Township of Parsippany-Troy Hills, et al*, 40 N.J. 539, 193 A. 2d 232 (1963).

The discussion by the Supreme Court of Massachusetts in *Commissioner of Natural Resources v. S. Volpe & Co.*, 349 Mass. 104, 206 N.E. 2d 666 (1965) at p. 671 is particularly pointed.

"The plaintiffs argue as though all that need be done is to demonstrate a public purpose and then no regulation in the interests of conservation can be too extreme. We quote an example from their brief: 'if the decision of the trial judge is not upheld in this case, where the evidence is so overwhelming that the marsh * * * does contribute substantially to the ecological system necessary to the sustenance of shell fish and fin fish, the statute will be emasculated and our efforts to conserve our natural resources will have received a severe setback.' An unrecognized taking in the guise of regulation is worse than confiscation. As the New York Court of Appeals said in the *Arverne* case *supra*, 278 N.Y. 222, 232, 15 N.E. 2d 587, 592: 'An ordinance which *permanently* so restricts the use of property that it cannot be used for any reasonable purpose goes, it is plain, beyond regulation, and must be

recognized as a taking of the property. The only substantial difference, in such case, between restrictions and actual taking, is that the restriction leaves the owner subject to the burden of payment of taxation, while outright confiscation would relieve him of that burden.' " (Emphasis in the original).

In reversing a decree of the Supreme Court of Pennsylvania upholding a statute which limited subsurface coal mining, Mr. Justice Holmes for the United States Supreme Court reviewed the competing forces of individual rights and public welfare and concluded:

"We are in danger of forgetting that a strong public desire to improve the public condition is not enough to warrant achieving the desire by a shorter cut than the constitutional way of paying for the change". *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 416, 43 S. Ct. 158, 160 (1922).

Although Chapter 792 places but a single restriction on Appellant's property, this restriction takes away the only feasible use of the property and leaves it in its natural state for the benefit of the general public. Such a legislative conversion of Appellant's property to a public purpose plainly requires compensation. Chapter 792 contains no provision for determining or awarding such compensation and is therefore unconstitutional.

III.

CHAPTER 792 IS A SPECIAL LAW ON A SUBJECT FOR WHICH GENERAL LEGISLATION HAS BEEN ENACTED AND THEREFORE VIOLATES ARTICLE III, SECTION 33 OF THE CONSTITUTION OF MARYLAND.

The discriminatory nature of the Act is clearly seen when measured against the prohibition of Article III, Section 33 of the Constitution of Maryland:

"And the General Assembly shall pass no special law, for any case, for which provision has been made by an existing General Law."

Chapter 792 has been drafted as a public local law. However, this designation will not save it if it is actually a special law. Such a law grants special benefits or imposes special impediments in certain individual situations. Whether any enactment which is designated a public local law is really a special law must be ascertained from the practical reason for the legislation. *Baltimore City v. Allegheny County*, 99 Md. 1 (1901), and *Beauchamp v. Somerset County*, 256 Md. 541, 549 (1969). A narrowly drawn special statute may be permissible if it promotes some general interest for which the general law is inadequate. *Middleman v. Maryland-National Park & Planning Commission*, 232 Md. 285 (1963).

While the Equal Protection Clause prohibits unfair classification, Article III, Section 33 prohibits a limited subclassification selected from an established class. A recent case applying this protection is *Beauchamp v. Somerset County*, 256 Md. 541 (1970). There a public general law exempted any American Legion Post from assessment by the Somerset County Sanitary District. The Court found that the Sanitary Commission had created only one sub-district in Somerset County which served only one American Legion Post, though there were two other posts in the County. The Court held that the exemption "provided for an individual case" and was void:

"It is thus seen that the practical effect and the effect intended by the sponsors of the Act was to exempt American Legion Post No. 94 from any assessment or charge by the Sanitary Commission. The Act thus, in effect, applies to one taxpayer only and to the land of that one taxpayer. In our opinion, it is a 'special'

act which is unconstitutional under the provisions of Article III, Section 33 of the Maryland Constitution." 256 Md. at 549.

In this case, the practical effect of Chapter 792 is an even more flagrant violation of Article III, Section 33. Appellant is the only dredger of sand and gravel in Charles County, though there is another dredger of clam shells in the Chesapeake Bay (E. 84) and navigational dredging has gone on for years (E. 186, 301). One of the State's witnesses testified that he stood on the decks of two other commercial sand dredges in other parts of the State (E. 305). Moreover, sand and gravel are mined in dozens of dry land pits throughout the State (E. 84-85). The lower Court held that, as Chapter 792 does not name Appellant and as others who wished to dredge in Charles County would suffer the same fate as Appellant, it was not a special law. In *Beauchamp*, the American Legion Post was not named in the act. Moreover, another American Legion Post built within the sanitary district would have been equally affected. But this Court was willing to look to reality in applying the Constitution. American Legion Post No. 94 was and had been the only American Legion Post in the exempt district. So here Appellant and its predecessor have been for over 60 years the only dredgers for "sand, gravel or other aggregates or minerals" in Charles County. Chapter 792 can be drawn as a public local law with county wide affect and by limiting the description of the prohibited activity still focus just as directly on Appellant as if it prohibited dredging "in the Mattawoman Creek, in and around Craney Island and in the Potomac River adjacent to the area known as the Greenway Shore." The Wetlands Act is a general law covering dredging operations and investing the Board of Public Works with the Legislature's total police power.

The special nature of Chapter 792 becomes more obvious when compared with the Wetlands Act which applies to all dredging *and filling* for *any substance* in tidal waters. Chapter 792 arbitrarily isolates dredging for "sand, gravel and other aggregates or minerals." and restricts its application solely to Charles County, thereby rendering Appellant its only target. Clearer proof of the Act's special intent and special application could not be found, and to the extent that its special status violates this provision of the Maryland Constitution, it should be declared invalid.

CONCLUSION

Chapter 792 is a total prohibition of sand and gravel dredging in Charles County. It takes Appellant's property without compensation shutting off a source of raw materials for construction companies in the growing Maryland-Washington D. C. area which has existed for over sixty years. It is aimed solely and completely at Appellant and is totally inoperative against any other entity. In imposing this restriction and adversely affecting Appellant, Chapter 792 adds nothing to the public welfare. It achieves no protection which has not already been achieved. It thus violates the due process clauses of the United States and Maryland Constitutions as well as the other constitutional provisions discussed herein.

The Decree of the lower Court should be reversed, and Chapter 792 should be declared invalid.

Respectfully submitted,

JAMES J. DOYLE, JR.,

JOHN B. JASKE,

SHERBOW, SHEA & DOYLE,

VICTOR H. LAWS,

Attorneys for Appellant.

FILED APR 27 1972

IN THE
Court of Appeals of Maryland

SEPTEMBER TERM, 1972

No. 35 (Adv.)

POTOMAC SAND AND GRAVEL COMPANY,
Appellant,

v.

GOVERNOR OF MARYLAND, ET AL.,
Appellees.

APPEAL FROM THE CIRCUIT COURT FOR ANNE ARUNDEL
COUNTY (MATTHEW S. EVANS, Judge)

BRIEF OF APPELLEES

FRANCIS B. BURCH,
Attorney General,
HENRY R. LORD,
Deputy Attorney General,
WAHHEN K. RICH,
Special Asst. Attorney General,
For Appellees.

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IN THE
Court of Appeals of Maryland

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No. 35 (Adv.)

POTOMAC SAND AND GRAVEL COMPANY,
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GOVERNOR OF MARYLAND, ET AL.,
Appellees.

APPEAL FROM THE CIRCUIT COURT FOR ANNE ARUNDEL
COUNTY (MATTHEW S. EVANS, Judge)

BRIEF OF APPELLEES

STATEMENT OF THE CASE

This is an appeal from a Decree dated March 3, 1972 of the Circuit Court for Anne Arundel County upholding the constitutionality of Chapter 792, Laws of Maryland of 1971. Chapter 792 is a public local criminal law prohibiting the dredging (with certain exceptions) for sand, gravel or other aggregates or minerals in the tidal waters or marshlands of Charles County. Appellant, who operates a sand and gravel dredging operation in Charles County, had attacked the statute as unconstitutional both under the United States and Maryland Constitutions. In finding that

the statute was a valid exercise of the State's police power the Court held that the proscription contained within Chapter 792 does not deprive Appellant of property without due process of law; is not confiscatory; is not a special law as denoted in Article **III**, Section 33 of the Maryland Constitution; does not deny to the Appellant equal protection of law; and is not unconstitutionally vague. The latter two challenges have not been developed by Appellant in its brief.

QUESTIONS PRESENTED

1. Whether Chapter 792 is unconstitutional as a taking of private property for public use without compensation,
2. Whether Chapter 792 is unconstitutional as an invalid exercise of State police power, hence denying Appellant due process of law.
3. Whether Chapter 792 is unconstitutional under Article III, Section 33 of the Maryland Constitution as a special law conflicting with the public general law.

STATEMENT OF FACTS

The Upper Potomac estuary of which the projected dredging sites at Mattawoman Creek, Craney Island and the Greenway Flats are part, was once one of the finest waterfowl wintering and production areas in the Upper Chesapeake region. It was an area of clear, unpolluted water, bordered by shoal flats, populated by a wide variety of benthic organisms. The area contained tidal marshes, overgrown with many varieties of flora, sustaining sources of food for the fish, animals and waterfowl which populated this section of the watershed. At the turn of the century the area supported tens of thousands of waterfowl (E. **302** *et seq.*)

About 1930 the Potomac experienced a severe drought thereby causing a salt-water incursion, damaging the submerged aquatics in the upper estuary. This increased salinity coupled with the invasion of the water chestnut were the initial causative factors in the degradation of habitat quality. With the acceleration in the development in the District of Columbia area, increased turbidity from dredging and poor land practices, and greater domestic pollution, the degradation process continued (E. 304). Increased turbidity in particular resulted in reduced vegetative growth, both submerged and above water in this section of the Potomac. Despite these changes waterfowl continue to return to this section of the river and, in fact, there are substantial, but reduced quantities of mallards, black ducks, golden eyes, and ruddy ducks. Ringneck, scoup, canvasback and widgeon also are present in reduced quantities.

Craney Island lies in the Potomac River on the Virginia side of the channel off Mason Neck Wildlife Refuge and is now apparently almost totally submerged. The proposed dredge site at Craney Island would include approximately 1,400 acres of State-owned wetlands lying below mean high tide (E. 75). Appellant has indicated that they plan to only dredge approximately one-half the permit area, or in other words 700 acres which contain approximately 6 million tons of sand and gravel (E. 121). Fish present at Craney Island included white perch, striped bass, blue-black herring, and American shad (E. 257). In this area the waterfowl feed on the clams, snails, worms and insect larvae living in the mud flats surrounding the Island (E. 302). In 1970 Appellant paid taxes on .26 acre in the amount of \$48.53.

Evidence presented by both State and Federal representatives emphasized that the federally owned Mason

Neck Wildlife Refuge was established primarily to provide sanctuary and habitat for the endangered southern bald eagle and that the proposed dredging at the Craney Island site could have significant effects on the food resources of eagles on and in the vicinity of the refuge (E. 369). Appellants proposed dredging is in direct conflict with the Federal policy to maintain, protect, and improve the quality of the environment. Special concern was voiced that deepening of the river to a depth of 50 feet will accelerate natural erosion and lead to actual loss of land area in the refuge and State and regional parks (E. 374, 375). Both the Bureau of Sport Fisheries and the Bureau of Wildlife of the Department of the Interior strongly recommended that no dredging take place in the Potomac River near or about Craney Island (E. 375).

The court below found that Mattawoman Creek (see Defendants' Exhibit B, E. 361) is classified as one of the ten main spawning streams in the Potomac estuary, abundant with both anadromous and resident species of fish also described that Court's opinion (E. 37). The Creek is considered one of the most productive fresh-water marshes in the estuary and contains a relatively lush growth composed of the yellow water lily, cattail, smart weed, and two somewhat unique plants, the native lotus (*nelumba lutea*) and a species of wild rice (*aneilema keisak*).

Though the principal tree in the woods surrounding Mattawoman Creek is the green ash, sweetgum, black, oaks, maples, sycamore, and elm trees are also found (E. 293). The submerged aquatic vegetation in the Creek includes pond weed, elodea, and coontail, which are all classified as potamogetons (E. 292). The Mattawoman Creek area contains a great number and variety of waterfowl. They include black duck, mallard, blue wing teal,

wood duck, ruddy duck, pygogrebes, and scoup (E. 294). Though not classified as a waterfowl, the great blue heron is also present. The Court below found that the Appellant proposes to dredge 300 acres, of which 70[^] are below mean high tide. Approximately 100 of these acres are comprised of partially inundated swamp land and fastland. Appellant owns 1,015 acres on Mattawoman Creek (E. 37). The present depth in the Mattawoman area varies from very shallow areas to a depth of 6 to 8 feet in the channel (E. 117). Proposed dredging may go to a depth of fifty feet (E. 37), extracting a total of 10 million tons of sand and gravel. Appellant paid a total 1970 property tax on its Mattawoman Creek property of \$1126.

The most heavily dredged site is Greenway Flats, which is located two miles below Marshall Hall on the Maryland side of the Potomac River in Charles County (E. 75). The Court found that Appellant owns two strips of land bordering the river, the first of which is 90 feet wide, while the second contiguous strip is 5 feet wide, their total length being 1.8 miles (E. 38). Appellant, since acquiring the property in 1961, has been continually dredging the area and has removed an estimated 7.7 million tons of sand, gravel, and stone. The Company further estimates that there is approximately 1 million tons of marketable material still left in the area (E. 79). The dredge site is 1000 acres, all of which is below mean high tide. The area already has been dredged from a depth of 10 feet to a depth of 50 feet below mean low water (E. 38).

At common law riparian owners had no title or right to remove sand and gravel from deposits located off their respective shorelines. Chapter 362 of the 1888 Laws stated the following:

"Section 1. Be it enacted by the General Assembly of Maryland, That it shall not be lawful for any person

to dig, dredge, take and carry away any sand, gravel or other material from the bed of the Potomac river, from its mouth to the uppermost boundary line of Prince George's County, under a penalty of a fine not exceeding three hundred dollars, and confiscation of the boat, vessel, dredge and implements used in digging, dredging and carrying away such sand, gravel or other material, and imprisonment in the county jail for a period not exceeding six months, in the discretion of the court; one-half of said fine and one-half of the proceeds of the sale of such confiscated boat, vessel, dredge and implements to be paid by the sheriff to the informer, and the other half to the commissioners of public schools for the county."

In 1900, Mr. Smoot of the Smoot Sand and Gravel Corporation prepared and the Maryland General Assembly passed an exception to the aforesaid law. Chapter 577 of the Laws of 1900 provided that a riparian owner or a person or corporation with whom such owner contracts may extract sand and gravel or other material from the river bed opposite said lands of the riparian owner.¹ In 1906, Chapter 426 was enacted which extended the prohibition and exception to all of Maryland's navigable waters. Through the years this section of the law has undergone minor changes immaterial to this cause until it was repealed by the enactment of Chapter 241 of the 1970 Laws² (the "wetlands" statute).

Chapter 416 of the Acts of 1967 amended Article 96A, Section 12 (a) by striking out the exception for tidal waters and thereby making it necessary for anyone who proposes "in any manner to change the course, current or cross-

¹ See, Power, *Chesapeake Bay in Legal Perspective*, pp. 106-107 (1969).

² For a full history, see *Bostick v. Smoot Sand and Gravel Corp.*, 260 F. 2d 534 (4th Cir. 1958).

section of any stream or body of water, wholly or partly within this State" to obtain a permit from the Department of Water Resources. On August 31, 1970, the Honorable Daniel T. Prettyman of the Circuit Court for Worcester County, in the case of *Larmar Corp. v. Board of Public Works*, ruled that the aforesaid Chapter 416 was not titled properly and hence did not meet the requirements of Article III, Section 29 of the Maryland Constitution.³ It is, therefore, unnecessary for anyone seeking to dredge or fill in tidal waters thereby causing a change in the cross-section of any stream, to obtain a Water Resources permit under the aforesaid section.

The Appellant Corporation was formed under the laws of the District of Columbia subsequent to the purchase in January 1, 1961 of the Smoot Sand and Gravel Corporation (hereinafter referred to as Smoot) by the Dravo Corporation of Pittsburgh, Pennsylvania. It was created as a subsidiary of Dravo to carry on the Smoot dredging operation (E. 73). The company employs 105 people and operates 2 dredges, 70 barges, and 3 tugboats and maintains two distribution plants in Washington, D. C. (E. 81). Through the takeover in 1961, Potomac Sand and Gravel acquired certain dredging properties. One additional property located at Mattawoman Creek and consisting of 84 acres, has been bought since that time (E. 349). County taxes for the year 1970 on all the company's dredgeable property in Charles County amounted to \$1,351.81 (E. 80).

Potomac pays no royalties to the State of Maryland for the taking of said sand and gravel from State bottoms (E. 97). Appellant's engineering manager testified that it was "physically possible" to remove sand and gravel from fast-land areas at Mattawoman, but that the Company has no

^a This segment of the decision was affirmed in *Board of Public Works v. Larmar*, 262 Md. 24 (1971).

intention of so doing nor does it contemplate leasing the fastland sites to land mining operation (E. 114).

Potomac uses both the clam-shell and ladder dredging methods. In both, the aggregate is taken from the river bottom, together with the overburden brought aboard the dredge, and washed with river water in order to separate out the unusable clay particles and overburden which are then deposited overboard through the washing operation. Under normal conditions the Company dredges to a depth of 50 feet below mean low water (E. 114-116). The washed sand and gravel is then placed upon barges and transported to Potomac's stock pile area in the District of Columbia where it is sold for use in the building industry (E. 96). Potomac Sand and Gravel has sold approximately 1 million tons of material each year (T. 40. E. 79). The company, operating fairly close to demand, does not stock pile more than a two weeks supply of sand and gravel (E. 96).

The dredge, used in the operation, is approximately forty feet wide and one hundred and fifty feet long (E. 333). A yellow flume can be seen emanating from the dredging operation (E. 218, Def. Ex. C-7, 304).

It was uncontroverted that a long term effect of the dredging would be to remove the marsh or shallow-water habitats previously described and change these areas into deep water pools or a deep-water habitat. To the extent that the shallow-water areas serve as a nursery and resting area for migratory birds or as a source of food for aquatic life, they would be lost (E. 167, 168). Dredging would completely eliminate all vegetation in the permit area and would contribute to a caving-in effect in the areas directly adjacent to the dredge site. There would be an alteration of the natural secessional system (E. 238, 239^

The commercial dredging would result in increased water turbidity. As the water becomes more opaque or turbid, there would be a lessening of water quality, and a consequent reduction of light penetration into the water so as to reduce plankton production. As the sunlight, which penetrates the water, is reduced, the less photosynthesis or production of aquatic plants, important in the food chain for various species of fish, takes place.

Without vegetation to serve as a spawn attachment for fish, their eggs would not receive the necessary oxygen through tidal action, since attachment to vegetation is necessary to this process. Dredging would also mean the physical removal of any eggs, adhering to aquatic plants which come into immediate contact with the dredging operation. Since benthic organisms would be removed by the dredge, there would necessarily be a reduction in the food supply available to fish in the area. Movement of sediment, caused by the dredging operation, probably would cause damage to fish eggs and larvae. This damage could be either direct mechanical damages, which might be lethal to developing fish forms, or sediment attachment to the eggs or larvae, with the result that they would be surrounded by a coat of sediment and faced with a consequent depletion of oxygen (E. 164). It is likely that such sediment attachment would cause suffocation. Any dredging during the spawning season would have a disturbance factor to the spawning behavior of fishes in this zone (E. 252-256).

ARGUMENT

I.

CHAPTER 792 MEETS THE REQUIREMENTS OF THE FOURTEENTH AMENDMENT TO THE U. S. CONSTITUTION AND ARTICLE III, SECTION 40 OF THE MARYLAND CONSTITUTION AND ARTICLE 23 OF THE DECLARATION OF RIGHTS AND HENCE DOES NOT CONSTITUTE AN UNLAWFUL TAKING OF APPELLANT'S PROPERTY.

Appellant contends Chapter 792 is confiscatory in that it constitutes a taking of their private property. Appellant in its testimony has not even established that private property is in fact affected by this anti-dredging statute. The Court below found that all the proposed dredge sites at all three locations (except 30% of the Mattaworaan Creek site which includes both fastland and private wetlands) fall within the definition of state wetlands. Article 66C, §719(a) of the Maryland Code (E. 37). The testimony is conclusive Chapter 792 would not restrict the use of Appellant's private property in any way at the Greenway tract, as Appellant has never intended, and does not now intend, to "dredge" its Greenway 5-90 foot strip of fastland. In fact, all Greenway dredging occurs 600-700 feet from shore (E. 43).

As the facts indicate, Craney Island was once a natural island that eroded away and was restored by the rip-rap method, thereby becoming a man-made island of approximately 20 acres. This 20 acres has gradually eroded away to the point where it is .26 of an acre (E. 38). The Attorney General's Opinion of January 25, 1956, written by Norman P. Ramsey, then Deputy Attorney General, determined that the owners of Craney Island did not gain those dredging rights sanctioned under former Article 27, Section 572 (later to become Section 485), and, therefore, predecessors of this appellant did not have the right or privilege to dredge out the area surrounding the island. Appella^{nt}

proposes to dredge 700 acres surrounding the island, the entire area of which is below mean high tide (hence in the public domain) and in relative close proximity to the Mason Neck Refuge.

Because of the nature of Appellant's operation, of necessity it must extract its aggregate from sub-aqueous deposits or those areas partially inundated and adjacent to deeper water. Appellant does not have direct access to fastland with its dredges because of the 10 foot draft of these vessels. Because it is a water-based operation, it is dependent upon the river and its tributaries for use as a vehicle for access to the deposits and, in turn, as a means of transportation to its place of business in the District of Columbia.

What then is the private property that is allegedly being confiscated by the state public local law? Giving the term "tidal waters and marshlands" in the statute the construction that it includes only those areas subject to regular tidal action,⁴ how can it be reasonably argued that it confiscates property of the appellant? Title of land below the high water mark as well as river and streams within the ebb and flow of the tide belong to the public. *Bd. of Public Works v. Larmar Corp.*, 262 Md. 24 (1971); *Day v. Day*, 22 Md. 530 (1865). Alternatively should this Honorable Court construe Chapter 792 to proscribe an activity on land above mean high tide, only one particular *use* would be prohibited and that use would be prohibited on a very minor part of the total deposit area of Appellant and on a very minor portion of Appellant's holdings in Mattawoman Creek (Dei Ex. B) (E. 113).

⁴ See opinion of Prettyman, J., *Larmar Corp. v. Board of Public Works*, Circuit Court for Worcester County, August 21, 1970, holding that "tidal marsh" is that area between high and low water through which normal tides ebbed and flowed.

In considering Appellant's land holdings and its projected dredge areas, the instant case is readily distinguished from *Dooley v. Town Plan Zoning Comm.*, 151 Conn. 304, 197 A. 2d 770 (1964), *Morris County Land Improvement Co. v. Township of Parsippany -Troy Hills*, 40 N.J. 539, 193 A. 2d 232 (1903) and *Comm. of Nat. Res. v. S. Volpe & Co.*, 349 Mass. 104, 206 N.E. 2d 666 (1965). In the first two cases mentioned above, all of the land was the private property of the various developers. In *Dooley v. Town Plan & Zoning. supra*, the local ordinance restricted the development of the property to specified uses which the Court found to render the property unusable. In the *Montis County* case, the Court found that the mandatory reclamation devices would not permit the productive use of the property. Rather, the Court found that the ordinance was designed to maintain the property in its natural state, for use for flood control and open space.

In *Comm. of Nat. Res. v. S. Volpe & Co., supra*, the Court considered the constitutionality of Massachusetts General Law, Chapter 130, Section 27A, which imposed a permit system not unlike that established in the Maryland Wetlands Act, prior to any filling or dredging areas adjacent to coastal waters. The defendant proposed to fill 49.4 acres which it owned in order to develop a residential marina complex. At the administrative level, the Director of Marine Fisheries denied the request to fill this area. The Court held that the evidence was insufficient to determine whether the regulation in this case was tantamount to a taking. It is interesting to note that upon remanding the case, the Court directed that evidence be presented as to the percentage of the 49.4 acres subject of the filling, which was below mean high water.

In ruling that Chapter 792 was not confiscatory, the Court below relied heavily upon *Goldblatt v. Town of Hempstead*.

369 U.S. 590 (1962) which contained a similar fact pattern to the present case, relative to the deposit area lying within the 100 acres of private wetlands or fastland in Mattawoman Creek. The factual background of that case revealed an ongoing pit mining operation since 1927. In 1945 the Town enacted certain regulations requiring safety devices for the pits. In 1958 the ordinance was amended to "prohibit any excavations below the water table". The ordinance completely prohibited the beneficial use to which the property had been devoted. It not only rendered the area of 20 acres encompassing the pit (lake) unusable but also prohibited further operations on the 18-acre tract surrounding and servicing the open-pit operation. In holding that the ordinance was not confiscatory, the Court stated in 369 U.S. 590 at 594:

"A prohibition simply upon the use of property for purposes that are declared, by valid legislation, to be injurious to the health, morals, or safety of the community, cannot, in any just sense, be deemed a taking or an appropriation of property for the public benefit. Such legislation does not disturb the owner in the control or use of his property for lawful purposes, nor restrict his right to dispose of it, but is only a declaration by the State that its use by any one, for certain forbidden purposes, is prejudicial to the public interests. . . . The power which the States have of prohibiting such use by individuals of their property as will be prejudicial to the health, the morals, or the safety of the public, is not — and, consistently with the existence and safety of organized society, cannot be — burdened with the condition that the State must compensate such individual owners for pecuniary losses they may sustain, by reason of their not being permitted, by a noxious use of their property, to inflict injury upon the community."

Mtigler v. Kansas, 123 U.S. 623, 8 S. Ct. 273, 31 L. Ed. 205 (1887) cited by the Court in *Goldblatt* is also factually

analogous to the instant situation. There the brewery owners contended that the general prohibition for the sale of beer would render their property, their breweries and equipment either worthless or of very minimal value. The Court stated in 123 U.S. 623. at 669:

"A prohibition simply upon the use of property for purposes that are declared by valid legislation to be injurious to the health, morals, or safety of the community, cannot, in any just sense, be deemed a taking or an appropriation of property for the public benefit. Such legislation does not disturb the owner in the control or use of his property for lawful purposes, nor restrict his right to dispose of it, but is only a declaration by the State that its use by anyone, for certain forbidden purposes, is prejudicial to the public interests. Nor can legislation of that character come within the Fourteenth Amendment in any case, unless it is apparent that its real object is not to protect the community or to promote the general well being, but, under the guise of police regulation, to deprive the owner of his liberty and property, without due process of law. The power which the States have of prohibiting such use by individuals of their property as will be prejudicial to the health, the morals, or the safety of the public, is not — and, consistently with the existence and safety of organized society, cannot be — burdened with the condition that the State must compensate such individual owners for pecuniary losses they may sustain, by reason of their not being permitted, by a noxious use of their property to inflict injury upon the community."

In responding to the breweries' argument that previous law connoted a right to operate and obligated the State not to outlaw their activity, the Court held at 669:

"It is true that when the defendants in these cases purchased or erected their breweries, the laws of the State did not forbid the manufacture of intoxicating liquor. But the State did not thereby give any assur-

ance, or come under an obligation, that its legislation upon that subject would remain unchanged. * * *. IT]he supervision of the public health and the public morals is a governmental power, 'continuing in its nature,' and 'to be dealt with as the special exigencies of the moment may require;' and that, 'for this purpose, the largest legislative discretion is allowed, and the discretion cannot be parted with any more than the power itself.' * * * 'If the public safety or the public morals require the discontinuance of any manufacture or traffic, the hand of the Legislature cannot be stayed from providing for its discontinuance by any incidental inconvenience which individuals or corporations may suffer.' " (Citation omitted.)

Moreover, the burden of proof is upon Appellant to affirmatively demonstrate that the subject legislation deprives them of all beneficial use of its private property. Economic hardship is insufficient. *Baltimore City v. Borinsky*, 239 Md. 611 (1965). Appellant, however, never intended to use his private property at any of the three locations except for an extremely limited portion of the Mattawoman tract. The testimony graphically indicates that the property was purchased merely to exercise the so-called riparian rights attached to that property as granted through Article 27, Section 485 of the Maryland Code, which, on July 1, 1970 was repealed through the enactment of the Wetlands Legislation, Article 66C, Sections 718-731 of the Code. See also *Bd. of Public Works v. Larmar Corp.*, *supra*. The above case confirmed that any rights or privileges, common law or otherwise, which the plaintiff may have had which were not exercised are revocable by legislative fiat. Not only was Appellant's burden not met, but the admission by Appellant that it was possible to develop or lease out these land-based deposits indicates another obvious alternate use for that part of the Mattawoman tract (E. 114). Appellant now argues in its brief

that the properties in Mattawoman Creek have no commercial value except for the dredging of sand and gravel. The record is devoid of facts which would lead to this conclusion, even if the Court considers the stricken material referred to by Appellant. See page 14 of Appellant's brief. In fact, the evidence discloses that access could be obtained to the private property in question (E. 114). This type of testimony does not carry the burden of showing the claimed constitutional invalidity.

Cities Service Co. v. Co. Comm'rs, 226 Md. 204 (1961), upheld an ordinance prohibiting the erection of a service station on plaintiff's property despite evidence showing additional expense and inconvenience for plaintiff's not to use their property in the intended way. The Court stated, on page 213:

"This is the contention that a refusal to permit it to construct its service building as planned amounts to a deprivation of its property without due process of law in violation of the Constitution of the United States and, we suppose, under Article 23 of the Maryland Declaration of Rights. There is evidence that it would be inconvenient and expensive to Cities Service not to be able to proceed to use the property for a filling station as planned, that its only use for the property is as a filling station and such use is the highest and best use of the land. *It does not, however, in our view, measure up to proof anywhere near to a showing that the application of the zoning law, as we interpret it, prevents any reasonable use of the property, nor do we -find any such proof.* Yet we think that is the test which the appellant would have to meet to show constitutional invalidity of the restriction. The fact that the property would be more valuable to the owner if free of the restriction, is not enough. *Walker v. Bd. of County Comm'rs of Talbot County*, 208 Md. 72, 95, 116 A. 2d 393, cert. den. 350 U.S. 902; *Serio v. Mayor & C. C. of Baltimore*, 208 Md. 545, 119 A. 2d 387; *Marino*

v. Mayor & C. C. of Baltimore, 215 Md. 206, 137 A. 2d 198; *Adler v. Mayor & C. C. of Baltimore*. 220 Md. 623. 631. 155 A. 2d 504." (Emphasis supplied).

Furthermore, the General Assembly, in Chapter 425 of the 1971 Laws, designated \$125,000.00 from the General Construction Loan of 1971 to the Department of Forests and Parks for the preparation of a master plan and revision of comprehensive State Forests and Parks master plan on a number of projects, including the contemplated Mattawoman Creek project.

Appellant concedes that preserving the subject property in a natural state serves a "public purpose". Appellee agrees that a public purpose would be served, but Chapter 792 confers no such blanket restriction. Unlike, *Maine v. Johnson*, 265 A. 2d 711 (1970), cited by Appellant, only one use would be proscribed. The *Johnson* case did not declare the wetlands regulations unreasonable *per se* but "upon the facts peculiar to the case" held them to be unreasonable exercise of the police power. The Court upheld the trial Judge's finding that absent the proposed fill the land had "no commercial value whatever". Moreover, it is interesting to note that the limited prohibition regarding the draining of sanitary sewage into the coastal wetland was specifically upheld.

Candlestick Prop., Inc. v. San Francisco Bay C. & D. Comm'n, 11 Cal. App. 3d 557, 89 Cal. Rptr. 897 (1970), was similar on the facts to *Maine v. Johnson*, *supra*, but upheld the denial of a fill permit for a parcel of land surrounded by other tracts either filled or in the process of being filled. The Court held in 89 Cal. Rptr. at page 905:

"It is a well settled rule that determination of the necessity and form of regulations enacted pursuant to the police power 'is primarily a legislative and not a

judicial function, and is to be tested in the courts not by what the judges individually or collectively may think of the wisdom or necessity of a particular regulation, but solely by the answer to the question is there any reasonable basis in fact to support the legislative determination of the regulation's wisdom and necessity?' *Consolidated Rock Products Co. v. City of Los Angeles*, 57 Cal. 2d 515, 522, 20 Cal. Rptr. 638, 642, 370 P. 2d 342, 347.) Furthermore, even if the reasonableness of the regulation is fairly debatable, the legislative determination will not be disturbed. (*Earnest v. Town of Ross*, 59 Cal. 2d 776, 783, 31 Cal. Rptr. 335, and cases cited therein.) Under the power of eminent domain property cannot be taken for public use without just compensation. However, under the police power property is not taken for use by the public; its use by private persons is regulated or prohibited where necessary for the public welfare."

Continuing at page 906:

"Without question, an undue restriction on the use of private property is as much a taking for constitutional purposes as appropriating or destroying it. (*Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 415-416, 43 S. Ct. 158, 67 L. Ed. 332; *People v. Associated Oil Co.*, 211 Cal. 93, 100, 294 P. 717.) However, it cannot be said that refusing to allow appellant to fill its bay land amounts to an undue restriction on its use. In view of the necessity for controlling the filling of the bay, as expressed by the Legislature in the provisions discussed above, it is clear that the restriction imposed does not go beyond proper regulation such that the restriction would be referable to the power of eminent domain rather than the police power. (See *Pacific Telephone etc. Co. v. Eshelman*, *supra*, 166 Cal. 640, 662, 137 P. 1119.)"

Finally, *Commonwealth v. Tewksbury*, 11 Met 55, 52 Mass. 55 (1846), cited extensively by the Court below, con-

trols this case. Both the statute in *Tewksbury* and Chapter 792 involve an absolute prohibition of a narrow activity, both relate to specific subdivisions, both apply penal sanctions, and both revised previous enactments regulating the same subject. The one difference is that the Court in *Tewksbury* construed the statute to prohibit a riparian owner from taking sand and gravel *from his own land*. Should we reach that plateau in this case, *Tewksbury* is specifically on point, for the Court there stated:

"All property is acquired and held under the tacit condition that it shall not be so used as to iniure the equal rights of others, or to destroy or greatly impair the public rights and interests of the community; under the maxim of the common law, *sic utere tuo ut alienum non laedas*. When the injury is plain and palpable, it may be a nuisance at the common law, to be restrained and punished by indictment. As where one bordering on a navigable river should cut away the embankment on his own land, and divert the water-course so as to render it too shallow for navigation. But there are many cases where the things done in particular places, or under a particular state of facts, would be injurious, when, under a change of circumstances, the same would be quite harmless. As the use of a warehouse for the storage of gunpowder, in a populous neighborhood, or for the storage of noxious merchandise, or the use of buildings for the carrying on of noxious trades, dangerous to the safety, health or comfort of the community. Whereas, in other situations, there would be no public occasion to restrain any use which the owner might think fit to make of his property. In such cases, we think, it is competent for the legislature to interpose, and by positive enactment to prohibit a use of property which would be injurious to the public, under particular circumstances, leaving the use of similar property unlimited, where the obvious considerations of public good do not require the restraint. This is undoubtedly a high power.

and is to be exercised with the strictest circumspection, and with the most sacred regard to the right of private property, and only in cases amounting to an obvious public exigency. Still, we think, the power exists, and has long been exercised in cases more or less analogous." Pages 57-58.

In comparison with the factual situations of *Tewksbury Goldblatt*, and the *Candlestick Property* cases, Chapter 792's limited application to one use in part of the 100 acres in Mattawoman Creek cannot be construed as confiscatory.

II.

CHAPTER 792 IS A VALID EXERCISE OF THE POLICE POWER MEETING THE REQUIREMENTS OF DUE PROCESS OF LAW.

In large measure, Appellant relies upon the prior enacted "Wetlands Act", Article 66C, Sections 719 through 730 of the Maryland Code Annotated to support its theory that Chapter 792 is unreasonable and, therefore, in violation of procedural due process. The protection of the State's natural resources is a valid aim for exercise of the police power. See *Corsa v. Tawes*, 149 F. Supp. 771 (D.C. Md. 1956); *Maryland Coal and Realty Co. v. Bureau of Mines*, 193 Md. 627 (1949); see also *Lawton v. Steele*, 152 U.S. 138 (1894); *Stevens v. State*, 89 Md. 669 (1899).

In examining the importance of the wetland areas, the Court below noted the ecological value of these estuarine areas, found that Chapter 792 benefits all the citizens of Maryland and that the means to accomplish this purpose are reasonable (E. 48). *U. S. v. Moretti*, 331 F. Supp. 151 (D.C. Fla., 1971), describes the value of the wetlands areas as graphically as a biological treatise, but in lay terms. The Court stated on page 156:

"Relatively shallow bay areas, such as Florida Bay at Hammer Point, in their natural state, serve as 'nur-

series' for many higher forms of aquatic life. Typically, the immature or larva forms of higher fish are swept or deposited in the shallow areas where they find protection and food which sustain them until they have sufficiently matured to survive in the deeper waters. In the shallow areas, they feed upon algae, fungi, and other simple life forms.

"All forms of animal life depend upon growing plant communities as their food source. Specifically, in this area, the mangrove plants and the organic peaty bottom are absolutely essential to sustain an energy flow and a healthy marine ecosystem. Where mangrove communities exist, the energy input into the estuarine ecosystem is from the dead mangrove leaves and their biological degradation as they enter the waters. The decay and breakdown of those leaves supplies the energy upon which the lower forms of animal life feed and which in turn are utilized by the higher forms of marine life for their existence. In that sense, the mangrove plant supported by the peaty bottom is an essential element in the life cycle and the base of the pyramid upon which all higher forms of life in the bay areas rest. The destruction of the mangroves, therefore, results in the destruction of bay and sea life. Likewise, removal of the peat bottom exposes the dead sand and rock bottom which can sustain no life.

"Furthermore, the defendant's extensive dredging of canals done without protective measures being taken, releases large amounts of silt, which is composed of crushed rock and sand. This silt is spread about the bay by tide, wave action and wind and as it is dispersed, settles back upon the bay bottom. This creates a situation where once the sand and rock was covered by the peat bottom, the silt covers the peat. In effect, this acts to suffocate the peat and other living vegetable forms. Further, as all plants require sunlight to carry out the process of photosynthesis, the clouding of the water by silt through the dredging operations blocks off sunlight which impedes and injures the growth of

plant life in the bay. The destruction of peat, besides the effects already mentioned, also results in the killing of sea grasses, another form of vegetation in this area which serves to protect and nourish forms of animal life.

"The activities of the defendants in the Hammer Point area resulted in all of the above damage to Florida Bay. The broad effects of such harm cannot result in anything but damage to commercial and sport fishing and a diminishing of the natural beauty and enjoyment of this area."

Fish and game are originally the property of the State and belong to the people in their sovereign capacity. *Leonard v. Earle*, 155 Md. 252 (1928). The public also has vested rights in a navigable stream such as the rights of fishery and navigation that cannot be abridged or restrained by Charter or grant. *Bruce v. Director, Dept. Chesapeake Bay Affairs*, 261 Md. 585 (1971). Not only is the subject law designed to protect the public welfare but it also safeguards a legitimate proprietary interest. The State seeks to protect its own property, the marine species dependent upon the marsh habitat and the wildlife which lives and feeds in the marshes. The effect of the subject legislation will preserve those shallow water areas vital to sustain life. "The power of the State to control, regulate and utilize its navigable waterways and the lands lying beneath them, when acting within the terms of the (public * trust is absolute." *Marks v. Whitney*, 3 ERC 1437, Cal. Sup. Ct, Dec. 9, 1971.

Through the exercise of this police power, the State may impose burdens and restraints upon the exercise of private rights as are reasonably necessary to secure the general health and safety. *Maryland Coal and Realty Co. v. Bureau of Mines*, *supra*. One attacking the reasonableness of such

exercise carries an onerous burden in forging its attack, for the exercise of the police power will be upheld if any state of facts, either known or reasonably assumed, affords support for this exercise. *Goldblatt v. Town of Hempstead, supra*. The invalidity of these regulations must be established beyond reasonable doubt. *Cohen v. Bredehoeft*, 290 F. Supp. 1001 (D.C.S.D. Tex., 1968 i).

In upholding an Oklahoma statute regulating ophthalmologists and optometrists, *Williamson v. Lee Optical of Okla.*, 348 U.S. 483, Justice Douglas stated on page 487:

"The Oklahoma Law may exact a needless, wasteful requirement in many cases. But it is for the legislature, not the Courts to balance the advantages and disadvantages of the new requirement."

Continuing on pages 487 and 488:

"But the law need not be in every respect logically consistent with its aims to be constitutional. It is enough that there is an evil at hand for correction and that it might be thought that the particular legislative measure was a rational way to correct it.

"The day is gone when this Court uses the Due Process Clause of the Fourteenth Amendment to strike down state laws regulatory of business and industrial conditions because they may be unwise, improvident or out of harmony with a particular school of thought." (Citations omitted.)

In support of their contention that Chapter 792 is unreasonable, Appellant cites *Grossman v. Baumgarten*, 242 N.Y.S. 2d 910 (1963). That case held that the total prohibition of both sterile and non-sterile tattooing bore no reasonable relationship to the goal of reducing the incidents of serum hepatitis. The other out-of-state cases cited by Appellant do not merit lengthy consideration because of the disparity in those factual situations from this case.

It is appropriate to say, however, that where the purposes of state legislation do not serve the public in general, and where purported regulation turns into a complete prohibition in excess of the power delegated, both enactments would fail under the "due process" tests.

As noted previously the goals in preserving the shallow water area in Charles County benefit all citizens of this State. The value of these wetland areas is discussed in *U. S. v. Baker*, *F. Supp.* (No. 70 Civ. 2773) D.C. S.D. N.Y., July 29, 1971). The court stated as follows:

"In the first place, there is no doubt about the value of the area in its original wetlands condition, that is, the value of having it in that condition. There are ecological values which are intended to be protected by the Act which confers jurisdiction here and by recent Acts enacted by the Congress which are referred to in the papers of the Government.

"There is educational value to the wetland condition of the area as is established by the affidavit in support of the motion on the part of educators who have actually used the marsh for that purpose and others whose backgrounds are such as to make it clear that there is such value. There is economic value to the wetlands which, as I understand it from the papers — this is undisputed — help to cleanse the ecological system of the river itself. One of the affidavits indicated that such a cleansing system may be valued at something between \$10,000 and \$30,000 a year. There are values as to wildlife which, of course, fall within the ecological subhead that I have mentioned but which should be specified, namely, certain types of fish which spawn and breed in the area — I recall shad and I think bass, but I'm not sure of the latter — which have economic value in themselves. There are other types, birds which nest in the area, and there are various forms of plant life which can only be found in such areas.

"There is no doubt, to proceed to a further factor, that the marsh has been damaged by the fill and that if it were to continue in its present condition the damage would be literally irreparable."

The value of the subject areas has been well demonstrated in this case and, when contrasted with the admitted results of the dredging operation, the aims and effects of the statute are clear, meaningful and, without a doubt, reasonable. It is true that Potomac Sand and Gravel would suffer an economic disadvantage by not being able to serve the Washington market. The disadvantage to Dravo Corporation would, of course, be far less extensive, and Appellant chose not to offer evidence on this point. As has been noted through the years, the test of reasonableness is dependent on a weighing process of advantages to the State against the burden to the regulated subject. The scale tips overwhelmingly in favor of the State in this case.

III.

CHAPTER 792 IS NOT A SPECIAL LAW IN CONFLICT WITH THE PUBLIC GENERAL LAW AND HENCE DOES NOT VIOLATE ARTICLE III, SECTION 33 OF THE MARYLAND CONSTITUTION.

Chapter 792 was passed and enacted as a public local law. It pertains to all dredging for sand and gravel and other aggregate in one county of the State. Although the formal classification of the law is local rather than general, this is not conclusive. Both the subject matter and the words of the statute themselves connote a predominantly local interest. Local laws have been defined as being confined to definite territorial limits. *Cole v. Secretary of State*, 249 Md. 425 (1968).

It has long been the policy of the State of Maryland to enact local laws affecting only certain counties or to ex-

ernpt certain other counties or localities from the operation of general laws or of some of the provisions thereof. The passage and enactment of a local public law by the Legislature subsequent to a state-wide general regulation is discussed in *Herman v. Mayor & C. C. of Baltimore*, 189 Md. 191 (1947). There the Court decided that the Home Rule Amendment did not control the rule that a public local law had priority over a previously enacted public general law. See Article 1, Section 13 of the Maryland Code; *City of Baltimore v. Sitnick & Firey*, 254 Md. 303 (1969). It is evident from the decision of the *Board of Public Works v. Larmar*, *supra*, that a public local law. Sections 15A and 15B of the Public Local Laws of Worcester County, may coexist with the state wetlands regulation. This subject matter is open to supplemental legislation; Maryland has traditionally held steadfast to the concurrent power theory of legislation between local subdivision and State authority. *City of Baltimore v. Sitnick & Firey*, *supra*; see Moser, "County Home Rule — Sharing the State's Legislative Power with Maryland Counties", 28 *U. Md. L. Rev.*, 327 (Fall 1968); see also, *American National Bldg. & Loan Ass'n v. Mayor & C. C.*, 245 Md. 23 (1966).

In *Stevens v. State*, 89 Md. 669 (1899), a law prohibiting the possession, the exposure for sale, etc. of game animals out of season in Baltimore City and certain other designated counties, was challenged as an invalid regulation of the police power on grounds of equal protection and also as a special law. That case, citing *Lawton v. Steele*, 152 U.S. 138, recognized that the preservation of game and fish has always been treated as within the proper domain of the police power and that it is not unconstitutional because of its unequal operation upon the inhabitants of the several

parts of the State. Nor does such a law discriminate against Baltimore City residents by reason of the fact that a number of other counties were exempted from its operation. A public local law is not a special law within the meaning of Article III, Section 33 of the Constitution. *County Com'rs v. Meekins*, 50 Md. 28 (1878).

Cole v. State, *supra*, which held a law establishing the Peoples Court in Cecil County to be a valid public local law, quoted from the landmark decision, *State ex rel. Webster v. County Com'rs of Baltimore City*, 29 Md. 516 (1868). Citing the words of Judge Alvey on page 430:

"The special laws contemplated by the Constitution, are those that provide for individual cases. Local laws of the class to which the Act under consideration belongs, on the other hand, are applicable to all persons, and are distinguished from Public General Laws, only in this that they are confined in their operation to certain prescribed or defined territorial limits, and the violation of them must, in the nature of things, be local. It is not, therefore, by any means, necessary, in order to give a Statute the attributes of a public law, that it should be equally applicable to all parts of the State. All that is required to make it a public law of general obligation, is, that it shall apply to all persons within the territorial limits prescribed in the Act. That is the character of the Act before us, and of that large portion of the Statute law of our State, comprised in the codified division under the title of 'Public Local Laws.' "

In contrast with the description of a public local law, a special law is one which is made for individual cases or one created for less than a class of persons or subjects requiring the laws appropriate to peculiar conditions or circumstances. *State v. Baltimore & O. R. Co.*, 113 Md. 179 (1910). *Baltimore City v. Allegany Co.*, 99 Md. 1

(1901), relied upon by Potomac, held that the statewide application of a tax on stock held in Allegany County Corporations was not a local law. This attempt to give Allegany County all local taxes on stock of county-based companies also created a subclassification for Allegany County Corporations. In *Beaucharwp v. Somerset Co.*, 256 Md. 541 (1969), also relied upon by Potomac, the facts of the case itself dictate that a subclassification within the County itself was created for there was only one sub-district in Somerset County and only one American Legion Post within that subdistrict, though there were two other American Legion Posts within the County itself.

The proscription within Article III, Section 33 was enacted to prevent or restrain the passage of what were commonly called "private acts" for the relief of particularly named parties or to provide for individual cases. The statute books disclose acts which were frequently passed for the relief of named individuals which released them from their debts and obligations to the State. Article III, Section 33 was aimed against these abuses and the object was to restrain the passage of such acts. It has always been held that the enactment of a law to serve a particular need or to meet a public evil — which promotes some public interest for which a general law is inadequate is not a special law within the meaning of that term. *Norris v. Baltimore*, 172 Md. 667 (1937).

In the instant case, the provisions of Chapter 792 are countywide. They pertain to anyone who would propose to dredge for sand and gravel and other aggregate or minerals in Charles County. All members of a class are included within the confines of the statute, and it is irrelevant that Appellant at present is the only company currently affected by the statute.

CONCLUSION

Chapter 792 contains a limited proscription. It prohibits the dredging of sand and gravel from the "tidal waters or marshlands of Charles County". The Legislature has concluded that these areas in Charles County are worthy of protection, that these shallow water areas abundant with life should be safeguarded. The subject enactment will effectuate that purpose. Considering that almost all the proposed dredging would occur in State wetlands, the extent and manner in which the operation would be pursued, the devastation and changes that the operation will wage, this exercise of the State police power is proper.

Upon these premises, the findings and decision of the lower Court should be affirmed.

Respectfully submitted,

FRANCIS B. BURCH,
Attorney General,

HENRY R. LORD,
Deputy Attorney General,

WARREN K. RICH,
Special Asst. Attorney General,
For Appellees.

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In The
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September Term, 1972

No. 35 (Adv.)

POTOMAC SAND AND GRAVEL COMPANY,
Appellant,

v.

GOVERNOR OF MARYLAND, Et Al.,
Appellees.

Appeal from the Circuit Court for Anne Arundel
County (Matthew S. Evans, Judge)

BRIEF OF AMICICURIAE

**TIMOTHY J. BLOOMFIELD
GEORGE W. WISE
ALVIN EZRIN**

Attorneys for Amici Curiae

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BRIEF OF AMICI CURIAE

I.

INTERESTS OF THE AMICI CURIAE

This Amicus Brief is submitted on behalf of the Maryland Conservation Council, National Audubon Society, Southern Maryland Audubon Society, Mason Neck Citizens Association, Izaak Walton League of America, Inc., Virginia State Division, Great Falls Conservation Council, Conservation Council of Virginia, Inc., and Northern Virginia Conservation Council, Inc., all of which were more particularly

described in the Petition for Leave to Appear as Amici Curiae which was filed before this Court on April 19, 1972. Each of these organizations was created for the purpose of conserving, protecting, and preserving the natural resources of the United States, the State of Maryland, or the State of Virginia. Pursuant to that purpose, these organizations have been active at all levels of government, including legislative, administrative, and judicial actions which affect the environment.

Water pollution in general and the preservation and protection of tidal waters and marshlands, both of which are often referred to as wetlands, in particular have received active attention from these organizations. Wetlands are an essential source of nutrients and a habitat for numerous forms of life ranging from the tiniest organisms to larger living creatures such as finfish, shellfish, and waterfowl. They also serve as a source of income and recreation for all citizens of our nation.

In light of their belief that these important functions of our wetlands must be preserved, the above-named organizations have joined together as amici curiae to present their views on the important law which is the subject of this appeal.

As noted in the Petition for Leave to Appear as Amici Curiae in this appeal, the amici joined together and filed an amicus brief before the lower court in this case. The amici do not intend in the brief before this Court to restate the law as set out in their lower court amicus brief. Rather, the **amici intend to stress the nature of Chapter 792**, Laws of Maryland, 1971 (Article 9, Code of Public Local Laws of Maryland (1969 Ed.), Section 337A) (Hereinafter "Chapter 792") and why that nature of Chapter 792 makes it a valid exercise of the state's police power.

II.**ARGUMENT**

CHAPTER 792 IS A CONSTITUTIONAL EXERCISE OF THE LEGISLATIVE POWER BECAUSE IT WAS ENACTED TO PROTECT THE ECOLOGY OF CHARLES COUNTY'S TIDELANDS AND MARSHLANDS AND IS, THEREFORE, A VALID EXERCISE OF THE STATE'S POLICE POWER.

The Amici Curiae are in complete agreement with appellant's statement of the controlling legal principle in the present case.

Under these tests a legislative enactment which infringes on the right of an individual to conduct a legitimate business enterprise must in some manner advance the welfare of society as a whole. Due Process initially requires a reasonable connection between a statutory restriction and the public welfare.

Appellant's brief, pp. 8-9.

In one short paragraph, appellant has crystallized the central issue in the instant case: When the public welfare is at stake, can a legislative enactment subordinate private interests, business or otherwise, in order that the public welfare be advanced?

As expected, appellant in the same paragraph has answered that question in a fashion consistent with its business interests. Appellant's answer is a simple denial that the necessary connection exists between advancing the public welfare and the statutory restriction. In fact, appellant merely concludes that appellant's business is outlawed "without in any way protecting society or the public welfare." Appellant's brief at p. 9.

Yet, appellant on p. 14 of its brief states: "It cannot be doubted that forcing appellant to leave its land in a natural state serves a public purpose." Thus, in one breath, appellant says there is no connection between advancing the public welfare, and a restriction on appellant's use of its land, which restriction in this case is a limited one. In another breath appellant recognizes that leaving the land in its natural state serves a public purpose.

The public purpose behind Chapter 792 is clear. The limited prohibition enunciated in that legislation is designed to protect and to conserve the tidelands and marshlands of Charles County. In essence, Chapter 792 is an environmental statute which embodies a valid exercise of the police power to protect exhaustible natural resources and to prevent harm to the ecology which such exhaustion would cause.

Chapter 792 is one step in an ever-growing number of governmental actions to protect, conserve, and preserve our nation's natural resources. Anyone who is alert to and aware of trends and occurrences in our daily lives is all too well informed of the increasing crescendo of the movement to prevent further deterioration of the earth's ecological balance.

The protection, preservation and conservation *of all* phases of the earth's environment is one of the most crucial issues of today. Proof of the widespread concern over our environment has been the action and reaction at all levels of government to protect the environment. On the federal legislative level alone, Congress has recently enacted far-reaching environmental legislation, of which three examples are: The National Environmental Policy Act of 1969,¹ The

¹ 42 U.S.C. Section 5321 et seq.

Environmental Quality Improvement Act of 1970,² and The Water Quality Improvement Act of 1970.³

Recent significant action in the executive branch of the federal government has been taken to protect the environment. The Environmental Protection Agency was established to provide technical and policy guidance to other federal agencies and to state and local governments on environmental matters. And, the Council on Environmental Quality was established to coordinate the activities of federal government agencies which affect the environment.

Recent court decisions have also recognized the significance and importance of protecting the environment, even when private interests must be restricted in furtherance of such protection. Representative of such holdings is the following language from *Zabel v. Tabb*,⁴ a case in which the United States Court of Appeals for the Fifth Circuit reversed a district court injunction requiring the Army Corps of Engineers to issue a permit allowing property owners to fill tidelands:

By an injunction requiring the issuance of a permit to fill-in eleven acres of tidelands in the beautiful Boca Ciega Bay in the St. Petersburg-Tampa, Florida area for use as a commercial mobile trailer park, the District Judge held that

² 42 U.S.C. Sections 437[^].

³ 33 U.S.C. Section 1151.

⁴ 430 F.2d 199 (CAS 1970). See also, *Izaak Walton League v. Macchia*, 329 F. Supp. 504 (D.C. NJ. 1971); *Candelstick Prop., Inc. v. San Francisco Bay C & D Comm'n.*, 11 Cal. App. 3d557, 89 Cal. Rptr. 897 (1970).

the Secretary of the Army and his functionary, the Chief of Engineers, had no power to consider anything except interference with navigation. There being no such obstruction to navigation, they were ordered to issue a permit even though the permittees acknowledge that "there was evidence before the Corps of Engineers sufficient to justify an administrative agency finding that [the] fill would do damage to the ecology or marine life on the bottom." We hold that nothing in the statutory structure compels the Secretary to close his eyes to all that others see or think they see. *The establishment was entitled, if not required, to consider ecological factors and, being persuaded by them, to deny that which might have been granted routinely, five, ten or fifteen years ago* before man's explosive increase made all, including Congress, aware of civilization's potential destruction from breathing its own polluted air and drinking its own infected water and the immeasurable loss from a silent-spring-like disturbance of nature's economy. [Emphasis supplied.] 430 F.2dat 200-201.

The use of terms such as "environmental", "ecological", and "pollution control" to describe the type of action taken by a legislature in the exercise of the police powers to promote the public welfare are only new terms to describe similar actions which legislatures have taken in the past. The decisions in *Goldblatt v. Hempstead*,⁵ a case concerning an ordinance which prohibited excavation below the water table and in *Hadacheck v. Sebastian*,** which involved prohibiting of the manufacture of bricks within a

⁵ 369 U.S. 590 (1961).

⁶ 239 U.S. 394 (1915).

city's limits, were not couched in terms of protecting the environment or the ecology. But, it is clear that in today's enlightened awareness, those are the terms which would have been used in those decisions.⁷

The despoliation of wetlands is a part of the overall ecological problem and is a problem of enormous concern. Wetlands are necessary for the survival of various forms of water life such as finfish, shellfish and of plants, animals and waterfowl. Thus, wetlands are of significant economic and recreational value to the general public. The record in this case is replete with evidence attesting to the importance of wetlands to the public welfare, and the Court below so found (*infra* p. 12).

The declarations and public policy section of the 1970 Maryland Wetlands Act puts the importance of wetlands in their proper perspective:

§718. Declarations and public policy.

It is declared that in many areas of the State much of the wetlands have been lost or despoiled by unregulated dredging, dumping, filling, and like activities, and that the remaining wetlands of this State are in jeopardy of being lost or despoiled by these and other activities; that such loss or despoilation will adversely affect, if not entirely eliminate, the value of such wetlands as sources of nutrients to finfish, Crustacea and shellfish of significant economic value; that such loss or despoilation will destroy such wetlands as habitats for plants and animals of significant economic value and will eliminate or substantially reduce marine commerce, recreation and aesthetic

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Cf. *Illinois v. Gty of Milwaukee, Wisconsin, et al.* ____U.S. ____.(1972), No. 49, Orig. (Slip opinion).

enjoyment; and that such loss or despoilation will, in most cases disturb the natural ability of tidal wetlands to reduce flood damage and adversely affect the public health and welfare; that such loss or despoilation will substantially reduce the capacity of such wetlands to absorb silt and will thus result in the increased silting of channels and harbor areas to the detriment of free navigation. Therefore, it is declared to be the public policy of this State, taking into account varying ecological, economic, developmental, recreational and aesthetic values, to preserve the wetlands and to prevent the despoilation and destruction thereof.

National concern over the preservation and protection of wetlands is also manifest in the increase of court cases being instituted by conservation groups against dredge and fill operations⁸ and by persons who have been denied permits to dredge and fill because of ecological reasons.⁹

The ecological importance of wetlands is further demonstrated in the study of our nation's estuaries which was undertaken by the Department of Interior in response to the Estuary Protection Act.¹⁰ By that Act Congress gave the Secretary of Interior special responsibilities for studying estuaries and developing means to protect, conserve, and restore them.

Estuaries include wetlands and are, therefore, a valuable national resource. Perhaps, the best description of estuaries and their importance is found in the cover letter of the National Estuary Study which was directed to the

⁸ E.g., *Izaak Walton League v. Macchia*, *supra*, note 4.

⁹ *Zabel v. Tabb*, *supra*, note 4.

¹⁰ 16U.S.C. section 1221 et seq.

Secretary of the Interior by the Directors of the Bureau of Commercial Fisheries and Bureau of Sport Fisheries and Wildlife in the Department of Interior:

Estuaries are among the Nation's most essential resources! They constitute a unique part of America's national heritage. They have value to all of the people, not merely to residents of the coastal and great lakes areas.

Estuaries are more productive than the best farm lands. They form a link in the production of the vast majority of the fish taken in the sport and commercial harvest and the marine areas off-shore and in the estuaries themselves. Estuaries are vital for the conservation and welfare of migratory birds, and international resource for which the Federal Government has special responsibility.

Estuaries contain a combination of fresh water and sea water nourished by nutrients from the land and from the sea. They are richer than either by itself. Their diversity supports an enormous wealth and variety of fish, birds, mammals, and other living organisms.

Estuaries have a form of natural beauty found nowhere else. They constitute the only open, wilderness-type areas in the vicinity of the largest metropolitan centers of the Nation. Thus, the preservation of estuaries would help fulfill one of your major goals-the provision of places for getting out of doors to enjoy nature near the concentration of our people.

Enormous numbers of Americans depend on or use the estuaries. At least half of the 200 million people of the Nation can utilize them for recreation, including millions who migrate to the

estuaries from inland states to fish, sail, or otherwise enjoy their recreational bounties. Many others enjoy the fruits of their rich production on the dinner table. Truly, estuaries are a national resource.¹¹

Speaking of the current situation regarding the condition of estuaries, this letter goes on to state:

Estuaries are in jeopardy. They are being damaged, destroyed and reduced in size at an accelerating rate by physical alteration and by pollution. They are favorite places for industry, which finds the land cheap, water transportation easy, and waste disposal convenient. They are also favorite places for residential developers who find it exceedingly profitable to dredge and fill an estuary and thus destroy part of it in order to appeal to the desire of affluent Americans who **live near the water in houses which are** accessible by both boat and automobile.

Except for a few in Alaska, every one of the Nation's estuaries have been modified by man. Twenty-three percent have been severely modified, fifty percent moderately modified, and twenty-seven percent slightly modified.

We conclude that it is the national interest for the Interior Department to initiate now a positive approach to protection, restoration, and sound use of the natural resources of estuaries.¹²

The National Estuary Study is a seven-volume work which is published by from the United States Department

¹¹ National Estuary Study, Volume 1, pp. 1-2 (1970).

¹² *Id.* at p. 2.

of Interior Fish and Wildlife Service. Of particular interest to this case are the passages concerning dredging and filling, with particular respect to the Chesapeake Bay Estuary. Page 53 of Volume Two of this Study shows the Chesapeake Bay Estuary extends up the Potomac River to Washington, D.C. and that the area containing the tracts on which plaintiff desires to dredge is in the *severely modified portion* of the Potomac River.

The injury caused by dredging for sand and gravel from estuaries is described in the study as follows:

Extraction of sand, gravel, shell, and fill materials, as previously noted, removes productive bottom habitats. It removes the animals and plants growing on the bottom and spreads silt and fines that smother other bottom habitats. It changes basin topography, altering currents and related factors. It also creates turbid water conditions that reduce photosynthetic plant growth dependent on it.

* * * *

Further, dredging for sand, gravel, and fill from estuaries can result in long-lived changes in currents, circulation, mixing, salinity, dissolved oxygen, and productivity of bottoms. The short-term gains from mining of sand, gravel, shell, and similar low-value materials may often be inadequate to justify the threats to renewable resources that will continue to produce for us forever if we will but see to their proper protection and management. Such mining activities should, therefore, be conducted in recognition of their impact on the environment so as to maximize social benefits. They should be controlled so that this is assured, or prohibited if they would cause

such great damage that justification of the mining is doubtful.¹³

The report reaches the following conclusion regarding the effects of channel dredging alone in the Chesapeake Estuary:

In Maryland, the loss of wetlands was estimated at 7%, and in Virginia 5%, during the period of 1954-1966.¹⁴

The lower court's opinion recognized the potential harm that would be caused by appellant's proposed dredging: various species of fish would be without their life support; rare native vegetation would be destroyed; plant life necessary to produce oxygen and to serve as a food source for fish would be reduced due to a decrease in sunlight because of increased turbidity; and the loss of wildlife which would be frightened away by noise or driven away by loss of a food supply.¹⁵

There is and can be no doubt that legislative action to protect wetlands from the harmful effects of dredging is a valid exercise of the state's police power. The loss of wetlands with the attendant loss of fish, wildlife, and vegetation would have an adverse effect on the public welfare. Once the wetlands are lost and the ecological damage occurs, the public loses a valuable source of recreation and commercial pursuits and the general public welfare is irreparably damaged.

The State of Maryland has the right to protect lands submerged under its waters. This Court has sustained on numerous occasions State ownership of submerged lands

¹³ *Id* Volume 2, p. 138.

¹⁴ *Id.* Volume 3, p. 86.

¹⁵ Lower Court Opinion at pp. 15-16.

and found that these lands are held for the public benefit.¹⁶

Navigable water and the land thereunder have always been a part of the public domain. . . . the public has had an interest in the navigable stream such as the right of fishery and navigation, which cannot be abridged or restrained by charter or grant.

After the Revolution all lands which had belonged to the Lord Proprietary became absolutely vested in the state and were held for the public benefit; "* * * [N]ot, however, as under the government of the province, as the estate and for the private emolument of an individual but for the use of the public ***." It is well established that the title of land below the high water marks, as well as rivers or streams within the ebb and flow of the tide, belong to the public.¹⁷

Court decisions, such as *Larmar*, which have upheld the state's ownership of and the holding of submerged land for the benefit of the public usually have referred to such public benefits and rights in terms of navigation and fishery.

Protection of the public rights to navigation and fishery are traditional rights which the legislature and the courts have always protected. But, the public benefit in submerged lands should not be inflexibly tied to those rights. Rather, as new and important public rights in submerged lands are uncovered, the legislature and the courts should move to protect them also.

¹⁶ E.g., *Board of Public Works v. Larmar*, 277 A.2d 427 (1971).

¹⁷ *Id.* at p. 437.

It is clear that the ecology of wetlands is a public right which must be protected under the state's ownership of submerged lands. The California Supreme Court sustained the state's right and need to protect the wetlands ecology in *Marks v. Whitney*,¹⁸ in upholding the standing of an owner of fastland to oppose the contention of an owner of tidelands that the latter has the right to fill and develop his tidelands. After stating the law of California, which parallels Maryland law, to the effect that the owner of the soil under water owns the land subject to public rights, the court stated:

Public trust easements are traditionally defined in terms of navigation, commerce and fisheries. They have been held to include the right to fish, hunt, bathe, swim, to use for boating and general recreation purposes the navigable waters of the state, and to use the bottom of the navigable waters for anchoring, standing, or other purposes. * * * The public has the same rights in and to tidelands.

The public uses to which tidelands are subject are sufficiently flexible to encompass changing public needs. In administering the trust the state is not burdened with an outmoded classification favoring one mode of utilization over another There is a growing public recognition that one of the most important public uses of the tidelands—a use encompassed within the tidelands trust—is the preservation of those lands in their natural state, so that they may serve as ecological units for scientific study, as open space, and as environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the

¹⁸ 491 P.2d 374 (1971)

area. It is not necessary to here define precisely all the public uses which encumber tidelands.¹⁹

The foregoing establishes that wetlands are an extremely important part of and play a vital role in the ecological balance of our nation's waters. The continued destruction of our wetlands can only lead to disastrous results for the various forms of life which depend on wetlands and in turn for mankind itself. Chapter 792 is an important step towards protection of Charles County's wetlands. That type of protection, which may cause some harm to private interests, must be allowed as a valid exercise of the police power.

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CONCLUSION

Chapter 792 constitutes a valid exercise by the legislature of the police power of the State of Maryland in the protection of the public interests. Therefore, the decision and decree of the lower court should be affirmed.

Respectfully,

Timothy J. Bloomfield
George W. Wise
Alvin Ezrin

Attorneys for Amici Curiae

¹⁹ *Id.* at p. 380.