R 30/06

comments comments

011211

HC 0041-06 Redner's Market Site Plan

MSA. S. 1829-5809

•

Robert L. Ehrlich, Jr. Governor

Michael S. Steele Lt. Governor



Martin G. Madden Chairman

> Ren Serey Executive Director

STATE OF MARYLAND CRITICAL AREA COMMISSION CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401 (410) 260-3460 Fax: (410) 974-5338 www.dnr.state.md.us/criticalarea/

November 27, 2006

Ms. Michele Bynum Harford County Government Department of Planning and Zoning 220 South Main Street Bel Air, Maryland 21014

Re: Redner's Fueling Station/Market - Site Plan

Dear Ms. Bynum:

I have received the above-referenced site plan for review and comment. As you know, this office has previously reviewed this plan, and now the applicant proposes to add a fueling station to the site plan. It is our understanding that this addition to the plan does not add additional impervious area over what was already proposed; therefore, the applicant is not required to recalculate the 10% Pollutant Reduction calculation. Consequently, I have reviewed the calculations previously submitted and they appear correct, including the area used for the site area. This office has no further comments concerning the Critical Area requirements.

Thank you for the opportunity to comment. Please telephone me at (410) 260-3478 if you have any questions.

Sincerely,

Lui a. Houge

Lisa A. Hoerger, Chief Project Evaluation Division

cc: HC 41-06

Robert L. Ehrlich, Jr. Governor

Michael S. Steele Lt. Governor



Martin G. Madden Chairman

> Ren Serey Executive Director

STATE OF MARYLAND CRITICAL AREA COMMISSION CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401 (410) 260-3460 Fax: (410) 974-5338 www.dnr.state.md.us/criticalarea/

January 30, 2006

Mr. Nick Walls Harford County Department of Planning and Zoning 220 South Main Streeet Bel Air, Maryland f21014

RE: Redner's Market Project Route 40 and Joppa Farm Road

Dear Mr. Walls:

This office has reviewed the applicant's proposed market in Joppatowne. This applicant is proposing to demolish some existing structures and build a new market. The site is 16.5 acres, is in an Intensely Developed Area and will impact approximately 5.677 acres of land.

To satisfy the 10 % calculations, the applicant has proposed a small wet pond to treat stormwater runoff. The applicant has satisfied the 10 % calculations and we have no additional comments.

If there are any questions, please feel free to call me at (410) 260-3483.

Sincerely,

Jaum me cleary

Dawnn McCleary Natural Resources Planner

cc: Pat Pudelkewicz Regina Esslinger HC 41-06

HC 41-06

C. PETE GUTWALD DIRECTOR OF PLANNING & ZONING

HARFORD COUNTY GOVERNMENT

Department of Planning and Zoning

January 12, 2006

Ms. Dawnn McCleary Chesapeake Bay Critical Area Commission 1804 West Street, Suite 100 Annapolis, Maryland 21401

RE: Redner's Market

Dear Ms. McCleary:

DAVID R. CRAIG HARFORD COUNTY EXECUTIVE

LORRAINE COSTELLO DIRECTOR OF ADMINISTRATION

Enclosed is a copy of the site plan for the proposed Redner's Market in Joppatowne. This proposal calls for the demolition of some existing structures and the creation of a new market. The property contains about 16.5 acres, however, this project only impacts approximately 5.677 acres of land. These numbers are reflected in the attached 10% Worksheet. A small wet pond is proposed to treat stormwater runoff.

Please review this project and return your comments to us as soon as possible. If you require any more information, please contact me at (410) 638-3103.

Sincerely,

15/20

Nick Walls Critical Area Planner

NW/dl Attach:

RECEIVED

CC: Shane Grimm, Chief, Site Plan and Building Permits Review

JAN 18 2006

CRITICAL AREA COMMISSION

MY DIRECT PHONE NUMBER IS

220 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 410.638.3000 • 410.879.2000 • TTY 410.638.3086 • www.harfordcountymd.gov THIS DOCUMENT IS AVAILABLE IN ALTERNATIVE FORMAT UPON REQUEST.

| | Calculating Pollutant Removal Requirements ¹ |
|----------|---|
| Ste | p 1: Calculate Existing and Proposed Site Imperviousness |
| А, | Calculate Percent Imperviousness |
| 1) | Site Area within the Critical Area IDA, $A = 5.677$ acres |
| 2) | Site Impervious Surface Area, Existing and Proposed, (See Table 4.1 for details) |
| | while |
| | (a) Existing (acres) (b) Proposed (acres) |
| | Parking lots |
| | Driveways Sidewalks/paths |
| | Rooftops |
| | Decks |
| | Swimming pools/ponds C |
| | Impervious Surface Area 5.337 5.020 |
| 3) | Imperviousness (I) |
| | Existing Imperviousness, Ipre = Impervious Surface Area / Site Area |
| | ≈ (Step 2a) / (Step 1) |
| | = (5.337) / (5.677) = 94.0 % |
| | Proposed Imperviousness, Ipoet = Impervious Surface Area / Site Area |
| | = (Step 2b) / (Step 1) |
| | = (5.020) / (5.677) $= 88.4 %$ |
| B. De | fine Development Category (circle) |
|) | New Development: Existing Imperviousness less than 15% I (Go to Step 2A) |
| 2) | Redevelopment: Existing Imperviousness of 15% I or more (Go to Step 2B) |
|) | Single Lot Residential Development: Single lot being developed or improved; single family residential development; and more than 250 square feet of impervious area and associated disturbance (Go to Section 5, Residential Approach, for detailed criteria and requirements). |

-

.

| | p 2: | Ce | alculate the Predevelopment Load (Lpre) | | | |
|----|------------------|-------------|--|--|--|--|
| Α. | Ner | | Development | | | |
| | L _{pre} | = | (0.5) (A) | | | |
| | | 3 | (0.5) () | | | |
| | | = | lbs /year of total phosphorus | | | |
| | | | | | | |
| | Lpre | | Average annual load of total phosphorus exported from the site p | | | |
| | • | | Annual total phosphorus load from undevoloped lands (the time to | | | |
| 8. | Red | evelop | | | | |
| | Lpra | = | (R _v) (C) (A) (8.16) | | | |
| | R, | = | | | | |
| | | = | | | | |
| | Lpre | = | | | | |
| | | 3 | 12.452 Ibs/vear of total phosphone | | | |
| • | Wher | : 0: | 00 | | | |
| | L _{pro} | 2 | Average annual load of total phosphorus exported from the site pri- to development (Ibs/year) | | | |
| | Rv | 8 | Runoff coefficient, which expresses the fraction of rainfall which is converted into runoff | | | |
| | l _{pre} | = | Pre-development (existing) site imperviousness (i.e., i = 75 if site is 75% impervious) | | | |
| • | С | 8 | Flow-weighted mean concentration of the pollutant (total phosphon in urban runoff (mg/l) = 0.30 mg/l | | | |
| | A 8.16 | = 2 | Area of the site within the Critical Area IDA (acres) Includes regional constants and unit conversion factors | | | |

•

,

| Ste | Step 3: Ca | | Iculate the Post-Development Load (Lpost) | | | |
|------|----------------|-------|--|--|--|--|
| A. | Nev | v Dev | Development and Redevelopment: | | | |
| | Lpost | | (R _v) (C) (A) (8.16) | | | |
| | R _v | a | $0.05 + 0.009 (l_{post})$ | | | |
| | | | 0.05 + 0.009 (88.4) = 0.846 | | | |
| | Lpost | = | (0.846)(0.3)(5.677)(8.16) | | | |
| | | - | 11.757 Ibs/year of total phosphorus | | | |
| | Whe | re: | UL | | | |
| | Lpost | = | Average annual load of total phosphorus exported from the post- development site (lbs/year) | | | |
| | R _v | * | Runoff coefficient, which expresses the fraction of rainfall which is converted into runoff | | | |
| | Ipost | = | Post-development (proposed) site imperviousness (i.e., I = 75 if site is 75% impervious) | | | |
| | С | - | Flow-weighted mean concentration of the pollutant (total phosphorus in urban runoff (mg/i) = 0.30 mg/l | | | |
| | A 8.16 | - | Area of the site within the Critical Area IDA (acres) Includes regional constants and unit conversion factors | | | |
| ep 4 | l: | | Calculate the Pollutant Removal Requirement (RR) | | | |
| | RR | = | Lpost - (0.9) (Lpre) | | | |
| | | | (11.757) - (0.9) (12.452) | | | |
| | Where | | 0.550 Ibs/year of total phosphorus of 0.550 | | | |
| | RR | E | Pollutant removal requirement (Ibs/year) | | | |
| | Lpoet | - | development site (like/year) | | | |
| | Lpre | Ξ | Average annual load of total phosphorus exported from the site prior to development (Ibs/year) | | | |
| | | | | | | |
| | | | й. 1 | | | |
| | | | | | | |

Ľ

•

.

÷.

•

4108798239 P.05/05

| Select BMP Options using the screening matrices provided in the Chapter 4 of the 2000 Maryland Stormwater Design Manual. Calculate the load removed for each option. BMP Type (L _{post}) X (BMP _{RE}) X (% DA Served) = LR War Pane 11.757 X 50 % X 31.7 % = 1.863 Ibs/year | Step 5: | Identify Feasible BMP(s) | | |
|---|-------------------------------------|---|---|-----|
| BMP Type (Lpost) X (BMP_RE) X (% DA Served) = LR Wer Pono 11.757 X 50 $\frac{7}{6}$ X 31.7 $\frac{7}{6}$ = 1.863 lbs/year | Select BMP Optic Maryland Stormw | ons using the screening matrices provided vater Design Manual. Calculate the load re | in the Chapter 4 of the 2000 moved for each option. | |
| | | | | |
| | Wer POND | <u> </u> | <u>%</u> = <u>1.863</u> lbs/ye | ar |
| x x z ibs/year Load Removed, LR (total) = <u>1.863</u> ibs/year Pollutant Removal Requirement, RR (from Step 4) = <u>0.550</u> ibs/year Where: Load Removed, LR = Annual total phosphorus load removed by the proposed BMP (lbs/year) Lpost = Average annual load of total phosphorus exported from the post-development site (lbs/year) BMP _{RB} = BMP removal efficiency for total phosphorus, Table 4.8 (%) % DA Served = Fraction of the site area within the critical area IDA served by the BMP (%) RR = Pollutant removal requirement (lbs/year). f the Load Removed is equal to or greater than the Pollutant Removal Requirement computed in Step 4, then the on-site BMP complies with the 10% Rule. | | | | |
| Load Removed, LR (total) = 1.863 lbs/year Pollutant Removal Requirement, RR (from Step 4) = 0.550 lbs/year Where: Load Removed, LR = Annual total phosphorus load removed by the proposed BMP (lbs/year) Lpost = Average annual load of total phosphorus exported from the post-development site (lbs/year) BMP _{RB} = BMP removal efficiency for total phosphorus, Table 4.8 (%) % DA Served = Fraction of the site area within the critical area IDA served by the BMP (%) RR = Pollutant removal requirement (lbs/year). f the Load Removed is equal to or greater than the Pollutant Removal Requirement computed in Step 4, then the on-site BMP complies with the 10% Rule. | | xx | = ibs/ye | əar |
| Pollutant Removal Requirement, RR (from Step 4) = <u>0.550</u> lbs/year Where: Load Removed, LR = Annual total phosphorus load removed by the proposed BMP (lbs/year) Lpost = Average annual load of total phosphorus exported from the post-development site (lbs/year) BMP _{RB} = BMP removal efficiency for total phosphorus, Table 4.8 (%) % DA Served = Fraction of the site area within the critical area IDA served by the BMP (%) RR = Pollutant removal requirement (lbs/year). f the Load Removed is equal to or greater than the Pollutant Removal Requirement computed in Step 4, then the on-site BMP complies with the 10% Rule. | | XX | = lbs/ye | ar |
| Where: Load Removed, LR = Annual total phosphorus load removed by the proposed BMP (lbs/year) Lpost = Average annual load of total phosphorus exported from the post-development site (lbs/year) BMP _{RB} = BMP removal efficiency for total phosphorus, Table 4.8 (%) % DA Served = Fraction of the site area within the critical area IDA served by the BMP (%) RR = Pollutant removal requirement (lbs/year). f the Load Removed is equal to or greater than the Pollutant Removal Requirement computed in Step 4, then the on-site BMP complies with the 10% Rule. | | Load Removed, Li | R (total) = <u>1.863</u> lbs/ye | ar |
| Where: Load Removed, LR = Annual total phosphorus load removed by the proposed BMP (lbs/year) Lpost = Average annual load of total phosphorus exported from the post-development site (lbs/year) BMP _{RB} = BMP removal efficiency for total phosphorus, Table 4.8 (%) % DA Served = Fraction of the site area within the critical area IDA served by the BMP (%) RR = Pollutant removal requirement (lbs/year). f the Load Removed is equal to or greater than the Pollutant Removal Requirement computed in Step 4, then the on-site BMP complies with the 10% Rule. | F | | | |
| Image: Lipost = Average annual load of total phosphorus exported from the post-development site (ibs/year) BMPRs = BMP removal efficiency for total phosphorus, Table 4.8 (%) % DA Served = Fraction of the site area within the critical area IDA served by the BMP (%) RR = Pollutant removal requirement (ibs/year). f the Load Removed is equal to or greater than the Pollutant Removal Requirement computed in Step 4, then the on-site BMP complies with the 10% Rule. | | | | |
| | f the Load Remove | ed is equal to or greater than the Delivered | Descent des | |
| | | | , | X |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

