



# Maryland

## Department of the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Horacio Tablada, Secretary  
Suzanne E. Dorsey, Deputy Secretary

May 25, 2023

Mr. Ryan Doheny, P.E., Acting Chief  
State Highway Administration  
Highway Hydraulics Division  
707 North Calvert St., Mailstop C-128  
Baltimore, MD 21202

Re: **MDE No. 08-SF-0042**  
AI No. 14484  
Contract No. PG6185470B (changed from PG6185170)  
**Modification No. 1 – Small Pond Approval for Pond 2 (BMP No. 160261)**  
**as part of readvertised project**

Dear Mr. Doheny:

The Maryland Department of the Environment (MDE) has reviewed the small pond submittal received April 25, 2023, requesting modification of the approval dated April 29, 2015 and extended on May 9, 2017 for the above referenced project in Prince George's County. The review was in accordance with Section 5-503 of the Environment Article, Annotated Code of Maryland regarding small ponds. As a result of the review, it has been determined that the following **is approved**:

**Pond 2 (BMP No. 160261) in accordance with the accompanying Small Pond Approval.** After beginning construction, MDOT-SHA terminated the contract and readvertised the project. The project has been redesigned. Sediment and Stormwater Approval for the modified project is being issued by the MDOT-SHA Plan Review Division. The following drawings associated with small Pond 2 are being approved by the MDE Plan Review Division: SW-07, SW-08, SW-09, SW-10, SW-10A, SW-11, SW-12, SW-13, SW-15, and PP-14. Pond 1 (BMP No. 160260) is being permitted by the Dam Safety Division.

The commencement and completion dates in Condition No. 1 of the April 29, 2015 Approval have been extended by the SHA Plan Review Division.

It is the responsibility of the MDOT-SHA to ensure that a copy of the approved modification shall be available at the construction site during the construction period. Please contact me at [amanda.malcolm@maryland.gov](mailto:amanda.malcolm@maryland.gov) or (410) 537-3563 with any questions or comments.

Sincerely,

Amanda P. Malcolm, P.E., Chief  
Sediment and Stormwater Plan Review Division  
Water and Science Administration

APM/JAE

cc: approval file

Jeffrey Knaub, P.E., Chief, SHA Plan Review Division



**Maryland**  
Department of  
the Environment

Wes Moore, Governor  
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary Designate  
Suzanne E. Dorsey, Deputy Secretary

Water and Science Administration  
Stormwater, Dam Safety, and Flood Management Program  
Plan Review Division

**SMALL POND APPROVAL**  
STATE/FEDERAL PROJECTS

IN ASSOCIATION WITH,  
**MDE/PRD NUMBER: 08-SF-0042**

APPROVED BY: *Amanda Miller* for  
Program Manager

**EFFECTIVE DATE: May 25, 2023** (Pursuant to Criteria Noted Below)  
IN COMPLIANCE WITH: Environment Article, Section 5-503(b) Annotated Code of Maryland,  
and COMAR 26.17.04.05G

APPROVAL IS HEREBY GRANTED: **MDOT – State Highway Administration**  
ADDRESS: 707 North Calvert St., Mailstop C-128  
Baltimore, MD 21202  
Attn: Ryan Doheny, P.E.

HEREINAFTER KNOWN AS OWNER,  
TO CONSTRUCT/REPAIR:

- **Wet Extended Detention Pond 2 – BMP No. 160261, located at latitude 38.8302 N, longitude -76.8525 E**  
**Receiving stream: Use Class I, Unnamed Tributary to Cabin Branch in Western Branch Watershed**  
**02-13-11-03**

ON THE PLANS AND SPECIFICATIONS PRESENTED FOR: Contract No. PG6185470B  
AI No. 144184

**MD 4 at Suitland Parkway Interchange Improvements in Prince George’s County**

PREPARED BY: Wallace Montgomery

This **SMALL POND APPROVAL** is granted subject to the following conditions:

**GENERAL CONDITIONS**

1. This Approval is valid only for use by the Owner. Permission to transfer the Approval shall be obtained in writing from the Department of the Environment (MDE).
2. This Approval does not preclude the need to obtain required authorizations or approvals from other State, Federal, or local agencies as required by law.
3. This Approval may be suspended or revoked by the MDE for cause, including violation of Approval conditions, obtaining an Approval by misrepresentation, failing to disclose a relevant or material fact, or change in conditions.
4. This Approval is subject to all laws and regulations now in effect and may be revoked if it becomes at variance with the laws of the State or the Owner fails to comply with the conditions of this Approval.
5. This Approval is granted in association with Stormwater Management and Sediment & Erosion Control Approval for MDE/PRD Number **08-SF-0042** from the MDOT-SHA Plan Review Division and is subject to all conditions of that Approval and Approved Plan, including the limits of construction completion and effective date.
6. This Approval is issued based on this structure being classified as a low hazard dam that meets the permit exemption requirements of §§5-503(b) of the Environment Article. Downstream development within the dam break flood zone may cause a change in the hazard classification and may require safety modifications to the structure and submittal of an Emergency Action Plan.

### CONSTRUCTION CONDITIONS

7. The Owner or his authorized agent shall notify the MDE Plan Review Division at least five (5) days prior to commencement of construction and no later than five (5) days following completion of construction at (410) 537-3563.
8. Construction shall comply with approved terms. The location, dimensions, and materials of the pond structure, as well as grading, excavation, and filling shall be in strict accordance with the plans and specifications approved by the MDE. The owner or authorized agent must obtain written approval from the MDE for any small pond modifications or changes. A Copy of the Approved Plan with any approved modifications and the Approvals shall be available at the construction site for reference during the construction period.
9. The design of the small pond(s) was made under the supervision of **Diane F. Durscher, Maryland P.E.** **Registration No. 24591, with Wallace Montgomery,** herein referred to as the Engineer-in-Charge (EIC). The EIC may be changed with written approval from MDE. Construction shall be under the supervision of the EIC, who shall notify the MDE upon the commencement of construction activities and thereafter maintain a record of the results of all field and laboratory material testing, delivery tickets for materials, shop drawings, and representative digital photographs of the work. The EIC or his representative shall be present and document their findings during all phases of construction including, but not limited to: a) site preparation; b) cutoff trench installation; c) spillway construction; d) embankment construction; and, e) completion of construction.
10. Within sixty (60) days following completion of construction, the EIC shall submit construction documentation, As-Built drawings, and a completed As-Built Submission Certification to the MDE Plan Review Division.
11. Following completion of construction, future repairs, additions, or modifications, apart from routine maintenance, shall require a separate approval from the MDE.

### OPERATION AND MAINTENANCE CONDITIONS

12. The Owner and any heirs, successors, or assigns are responsible for the safety of the dam and the continued operation, surveillance, inspection, and maintenance in accordance with the conditions described herein. The Owner shall promptly notify the MDE of significant changes in conditions.
13. In accepting the Approval, permission is hereby granted to representatives of the MDE to enter in or upon the subject premises at any reasonable time for the purpose of conducting inspections.
14. The small pond(s) shall be operated in accordance with the approved Operation and Maintenance Plan appended to this Small Pond Approval.
15. If the small pond is not operated or maintained in full compliance with this Approval, the Owner shall repair all or any part of the structure at his sole cost and expense, as directed by the MDE.
16. Inspections of the small pond(s) shall be made by the Owner and/or qualified engineer on a triennial basis. Records of each inspection shall be maintained by the Owner. Triennial inspection reports shall be submitted to the MDE Dam Safety Inspections Division within sixty (60) days of each inspection. Extensions may be granted under extenuating circumstances. Annual inspection reports, at a minimum, shall include a dam inspection checklist, photographs of the dam, an overall assessment of the condition of the dam and appurtenant works, and a review of the downstream danger reach to determine if any new structures exist.
17. Inspections of the facility shall also be made by the owner during and after storms with significant runoff to uncover any structural or operational problems. These inspections shall include checking the reservoir pool, spillway, and conduit to assure that they are free of any restricting debris. Records of these inspections shall be maintained by the Owner and submitted to the MDE Dam Safety Inspections Division with the triennial inspection report.
18. Maintenance work such as the removal of all new tree growth and mowing of the dam shall be scheduled as determined necessary during the Owner's inspections. Mowing of the dam shall be accomplished at least twice each year by the Owner. Any emergency maintenance shall also be accomplished by the Owner.
19. The Owner shall agree not to plant or allow the growth of any trees or woody vegetation on or around the dam. The growth of this vegetation shall be removed by the Owner.
20. The costs of the inspection, regular maintenance, and emergency repairs shall be accomplished by the Owner as warranted or at the direction of the MDE.

# POND SUMMARY SHEET

## Maryland Department of the Environment Dam Safety Program

### Part 1: General Information

#### APPROVAL TYPE

- |  |   |
|--|---|
| <input type="checkbox"/> New Small Pond                    | <input type="checkbox"/> As-Built Acceptance                            |
| <input type="checkbox"/> Modify/Repair/Retrofit Small Pond | <input type="checkbox"/> Other (Specify below):                         |
| <input type="checkbox"/> Geotechnical Investigation        | <div style="border: 1px solid black; height: 40px; width: 100%;"></div> |
| <input type="checkbox"/> Work in Reservoir Only            |   |
| <input type="checkbox"/> Remove Small Pond                 |   |

#### PROJECT NAME / LOCATION

Project Name:	Latitude	(decimal deg)
MDE/SCD/SHA	Longitude	(decimal deg)
File No.:	Stream Name	
Pond/BMP ID No.:	Use Class	
*Cold Water Resource Area Map: <a href="https://bit.ly/3gXAI3U">https://bit.ly/3gXAI3U</a>	Cold Water?	<input type="checkbox"/> Y / <input type="checkbox"/> N

#### PROPERTY OWNER INFORMATION

Owner Company:	Phone Number:
Point of Contact:	Email:
Street Address:	

#### ENGINEER IN CHARGE INFORMATION

Engineer:	Phone Number:
Company:	Email:
Street Address:	Maryland P.E. No.:

### Part 2: Structure Information

#### HAZARD POTENTIAL CLASSIFICATION

<i>Hazard Classification</i>	<i>Breach Analysis Method</i>	Population at Risk
<input type="checkbox"/> High	<input type="checkbox"/> Screening	*If relying on a previously approved breach analysis, provide a copy with application
<input type="checkbox"/> Significant	<input type="checkbox"/> Simplified	
<input type="checkbox"/> Low	<input type="checkbox"/> Standard	
<input type="checkbox"/> Low/Small Pond	<input type="checkbox"/> Other _____	

#### POND CHARACTERISTICS

<input type="checkbox"/> Excavated	<i>Distance Below Pond to:</i>	
<input type="checkbox"/> Embankment	Property Line	(feet)
<input type="checkbox"/> Both	Public Road	(feet)
<input type="checkbox"/> Superwide	Will embankment serve as roadway/railway?	<input type="checkbox"/> Y / <input type="checkbox"/> N

# POND SUMMARY SHEET

## PURPOSE OF STRUCTURE (Check all that apply)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Stormwater Management-Wet Pond | <input type="checkbox"/> Tailings / Dredged Material | <input type="checkbox"/> Water Supply/Irrigation |
| <input type="checkbox"/> Stormwater Management-Dry Pond | <input type="checkbox"/> Sediment Control            | <input type="checkbox"/> Wildlife/Fish           |
| <input type="checkbox"/> Infiltration                   | <input type="checkbox"/> Flood Control               | <input type="checkbox"/> Fire Control            |
| <input type="checkbox"/> Submerged Gravel Wetland       | <input type="checkbox"/> Recreation                  | <input type="checkbox"/> Other (Specify Below)   |
| <input type="checkbox"/> Bioretention                   | <input type="checkbox"/> Wastewater                  |  |

## PROPERTIES OF DAM AND RESERVOIR

Length of Dam	(feet)	Surface Area (normal pool)	(acres)
Crest Width	(feet)	Surface Area (brim full)	(acres)
Embankment Ht.	(feet)	Storage (normal pool)	(acre-ft)
(Height measured from lowest upstream point to crest of dam)		Storage (IDF)	(acre-ft)
Dam Crest Elev.	Datum: NAVD 88 Vertical	Storage (brim full)	(acre-ft)
Normal Pool Elev.		Side Slopes, US	H : 1V
IDF Pool Elev.		Side Slopes, DS	H : 1V
Freeboard	(feet)		
Drainage Area	(acres)		

IDF = Inflow Design Flood (24-hr, 100-year for low hazard, 1/2 PMF for significant hazard, PMF for high hazard)

## SPILLWAY CHARACTERISTICS

<i>Principal Spillway Type</i>	<i>Auxiliary Spillway Type</i>	<i>Auxiliary Spillway Protection</i>
--------------------------------	--------------------------------	--------------------------------------

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Riser & Barrel        | <input type="checkbox"/> Earthen Channel       | <input type="checkbox"/> Grass                 |
| <input type="checkbox"/> Weir Wall             | <input type="checkbox"/> Rock Channel          | <input type="checkbox"/> Riprap Class:         |
| <input type="checkbox"/> Weir & Channel        | <input type="checkbox"/> None                  | <input type="checkbox"/> Gabions               |
| <input type="checkbox"/> Other (specify below) | <input type="checkbox"/> Other (specify below) | <input type="checkbox"/> Other (specify below) |

### *Principal Spillway Material*

- |                                       |   |  |                                      |
|---------------------------------------|---|--|--------------------------------------|
| <input type="checkbox"/> RCP          | <input type="checkbox"/> CMP / BCCMP            | <input type="checkbox"/> Alum (CAP)        | <input type="checkbox"/> PVC / HDPE  |
| <input type="checkbox"/> Ductile Iron | <input type="checkbox"/> Cast-in-place concrete | <input type="checkbox"/> Pre-cast concrete | <input type="checkbox"/> Other _____ |

### *Riser & Barrel*

Barrel Diameter (in.)	Capacity at IDF (cfs)
Riser Dimensions	Anti-flotation FS

### *Weir Wall / Weir & Channel*

Weir Length (ft)	Overtopping FS
Weir Coefficient	Sliding FS

### *Auxiliary Spillway*

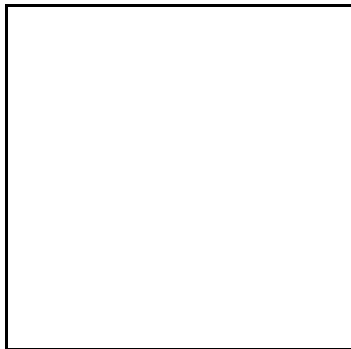
Crest Elevation	Capacity at IDF (cfs)
Bottom Width (ft)	Maximum Velocity (ft/sec)
Side Slopes	H : 1V

**SMALL POND AS-BUILT SUBMISSION CERTIFICATION**

**MDE Project Approval No.** \_\_\_\_\_**-SF-**\_\_\_\_\_

Submission Date \_\_\_\_\_

I (We) hereby certify that  (DESCRIBE WORK) \_\_\_\_\_ of  (POND NAME/ID) \_\_\_\_\_ in  (COUNTY) \_\_\_\_\_ County was completed on \_\_\_\_\_, 20\_\_\_\_, in accordance with the plans and specifications approved by the **Maryland Department of Environment, Plan Review Division**. Further, I (We) certify that the As-Built plans are true and accurate and within acceptable deviation tolerances. These determinations have been based upon on-site observation of construction, conducted by me or by a project representative under my direct supervision. Any minor differences between the As-Built plans and the approved construction plans are considered to have a negligible effect on the safety of the dam including hydraulic performance or the minimum freeboard criteria.



Very truly yours,

**[Name of Engineer-in-Charge]**  
Engineer-In-Charge

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. \_\_\_\_\_, Expiration Date: \_\_\_\_\_.

Signature of Owner

\_\_\_\_\_  
**[Applicant (person)]**  
**[Name of State/Federal Agency]**

\_\_\_\_\_  
Title

**\*\*The use of the word "certify" by a registered professional engineer practicing within the standard of care expected of professionals in the industry performing similar services on projects of like size and complexity at that time in the region constitutes an expression of professional opinion regarding those facts or findings which are the subject of the certification, and does not constitute a warranty or guarantee, either expressed or implied.\*\***

# SMALL POND OPERATION AND MAINTENANCE PLAN

**Owner:** MDOT – State Highway Administration

**Project Name:** MD 4 at Suitland Parkway Interchange Improvements in Prince George’s County

**Pond Address:** NW corner of intersection between Central Park Drive and Presidential Pkwy

**MDE Approval Number:** 08-SF-0042

**Pond ID/BMP No.:** Pond 2 – BMP No. 160261

The purpose of the Operations and Maintenance (O&M) Plan is to ensure that the small pond continues to operate in a safe and effective manner and that problems are prevented or quickly identified and corrected. O&M shall be performed in conformance with this plan.

The term “Owner” used in these operation and maintenance plan guidelines refers to the property owner(s) where the pond embankment, spillway, and appurtenant works are located.

## OPERATION

### **I. Support Data**

- A.) Background Information – The Owner shall maintain a complete up-to-date as-built plan and design specifications for the dam. A copy of the completed Small Pond Sheet (MD-14) should be available.
- B.) Record Keeping – Written records of maintenance and observations shall be kept. Photographs are valuable for recording observations and changes.

### **II. Inspections**

- A.) Inspection Guidelines – The Owner shall make a visual inspection at least once a year. Inspections shall be made after extreme rainfall events. The Owner is encouraged to have an inspection by a registered professional engineer at least once every three (3) years.
- B.) Dam Inspection Checklist – A dam inspection checklist shall be included as part of the O&M Plan and completed at least triennially. A visual inspection shall be conducted on an annual basis to detect blockages of the principal spillways that would cause the facility to not function as designed. In addition, if there are any visible trees, shrubs, or other woody growth on the embankment at time of annual inspection, they shall be removed prior to the next inspection.

### **III. Emergency Procedures**

- A.) Surveillance – Inspect for overtopping failures, piping or seepage failures, and structural failures. If any of the following conditions are noted, emergency procedures are warranted; muddy water is flowing from the downstream slope or toe; cracks or depressions are forming on the embankment; or flood flow over the top of the embankment is imminent.
- B.) Mitigation – Provide for lowering the reservoir or sandbagging before overtopping. Action to be taken for piping includes lowering the pool and attempting to plug the upstream end with suitable material.
- C.) Notification – Time permitting, consult a professional engineer experienced in dam design and operation to determine the extent of the damage and necessary repairs. Before major repairs, contact the MDE Plan Review Division for approval. In the case of anticipated dam failure, notify the appropriate local, state, or federal fire and rescue or police department regarding the potential emergency. The ultimate responsibility for implementation of a warning plan, that includes the danger reach, rests with dam owner.

## MAINTENANCE

### **IV. Embankment**

- A.) Vegetation – Proper vegetation is required on earth dams. The proper selection of grasses, seeding rates, planting dates, and vegetation maintenance is available in the current MD Standards and Specifications for Soil Erosion and Sediment Control.
- B.) Tree and Brush – Trees and shrubs are not allowed on the embankment. Trees that have been allowed to grow on the dam shall be removed completely, including all roots in accordance with Dam Safety Policy Memorandum No. 1.
- C.) Mowing and Brush Removal – Mowing is necessary to control the establishment of woody growth and to maintain the vegetative cover. The embankment, a fifteen (15) foot wide buffer strip adjacent to the toe on the upstream and downstream sides of the embankment, and the area within 25 feet of the control structure(s) need to be mowed.
- D.) Erosion and Slope Protection – The rate of erosion is directly related to the lack of vegetation. Prompt repair of eroding areas is required. Vegetation should be inspected in the early spring and late summer, and any bare or eroded areas repaired and reseeded. Problem erosion areas of pedestrian traffic or abundant contact should be controlled with filter cloth and rock riprap. The upstream face of a dam can be protected from wave erosion by the same method.
- E.) Seepage – Controlling the quantity and velocity of seepage in minimizes damage to the dam. Regular monitoring to detect wet areas, “spring” flow, “piping”, and “boils” on the downstream embankment is necessary. Excessive seepage pressure can threaten the downstream slope stability. Seepage flow which is muddied by soil is evidence of “piping” and “boils”. When this occurs, complete failure may happen within hours, and professional advice must be obtained immediately. Typical methods used to control the quantity of seepage are installation of an upstream blanket or the installation of drainage trenches or drains. Non-emergency repairs shall be approved by the MDE Plan Review Division before installation.
- F.) Stability – Large cracks, slides, sloughing, and excessive settlement are signs of embankment distress and indicate that remedial work is required. Soil added to restore an embankment must be properly “keyed” into the base material. Repair of these conditions is not considered routine maintenance and must be approved by the MDE Plan Review Division.
- G.) Rodent Guard – Control of rodents such as beavers, groundhogs, and muskrats is required as they can damage structural integrity and performance of the embankment and spillway. Groundhog and muskrat burrows serve as pathways for seepage. Beavers may plug the spillway and raise the pool level. Rodent removal and elimination of burrows is required when encountered.
- H.) Crest of Dam – The crest of dam should be graded to direct surface drainage into the impoundment. When access roads cross the dam, any ruts that develop should be repaired as soon as possible.

### **V. Spillway and Outlet Works**

- A.) Conduits – All conduits should be inspected thoroughly once a year. Inspect for improper alignment (sagging), elongation, displacement at joint, cracks, leaks, surface wear, loss of protective coatings, corrosion, and blockage.
- B.) Trash Racks – The trash rack unit should be checked periodically and especially after storm events. Accumulated debris should be removed, and maintenance performed if necessary. Under no circumstances should the trash rack be removed for an extended period. Annual maintenance for corrosion protection should be provided.
- C.) Concrete – Surfaces should be inspected for cracking, spalling, displacement or movement, and deterioration by weathering, chemical reactions or leaching. Extensive cracking, slab or wall movement, large areas of exposed reinforced steel and severe undermining require professional advice

and Dam Safety Permits Division approval before repairs can be made. Minor repairs of patching, grouting, and coatings can be performed during routine maintenance.

D.) Vegetated Earth Spillways – An emergency spillway is designed to pass infrequent large flood flows around the dam to prevent overtopping. The vegetative cover should be maintained the same as the embankment to provide a vigorous grass cover. Prompt repair of erosion damage and removal of flow obstructions are required.

E.) Outlet – Erosion at the spillway outlet is common maintenance problem. Severe undermining, displacement of pipes, and dam failure can occur. Often the outlet is adequate for normal flow, but not for extreme storm flows. Periodically, and especially after storm events, the stilling basin, plunge pool, or rip rap energy dissipator should be inspected. Provide prompt repair of damages.

F.) Drains/Mechanical Equipment – Drains should always be operable to provide draw down in the case of an emergency for necessary repairs. The gate or valve controlling the drain should be operated fully at least once a year or as recommended by the manufacturer. It should be inspected, and all appropriate parts lubricated and repaired before operations. Annual maintenance of metal operating mechanisms should be performed by keeping parts greased or painted to prevent corrosion. All equipment controls should be checked for proper security to prevent vandalism.

## **VI. Reservoir**

A.) Pool Level – When it is necessary to draw down the pool level, it should be done gradually over a period of time to prevent slope failures. An annual inspection of the pond/lake perimeter should be made. Potentially damaging fallen trees, debris, and sediments should be removed. Periodic removal of floating debris to prevent clogging of the spillways should be done. During extended periods of severe freezing, weather inspection for ice damage or ice formation at the spillways and outlets should be performed.

## **VII. Additional Requirements**

Exercise isolation valves for water main that runs under principal spillway.

Dam: \_\_\_\_\_ Weather: \_\_\_\_\_ Date: \_\_\_\_\_

Inspector: \_\_\_\_\_ Pool Level: \_\_\_\_\_

MARYLAND DAM INSPECTION CHECKLIST	Y	N	Monitor Repair
<b>1. CREST</b>			
Ground cover in good condition			
Settlements Depressions Cracks			
<b>2. UPSTREAM SLOPE</b>			
Ground cover in good condition			
Riprap in good condition			
Erosion Animal Burrows Trees Shrubs			
Settlements Depressions Bulges Cracks			
<b>3. DOWNSTREAM SLOPE</b>			
Ground cover in good condition			
Erosion Animal Burrows Trees Shrubs			
Settlements Depressions Bulges Cracks			
Seepage _____ gpm			
<b>4. INTERNAL DRAINAGE SYSTEM</b>			
Seepage/drain flow: Left _____ gpm Right _____ gpm Other _____ gpm			
Does seepage contain fines?			
<b>5. ABUTMENT CONTACTS</b>			
Trees Shrubs Erosion			
Seepage _____ gpm			
<b>6. SPILLWAY/RISER STRUCTURE</b> Concrete or Metal Pipe			
Spalling Cracking Corrosion Erosion Scaling Exposed Reinforcement			
Joints: Displacement Leakage Loss of joint material			
Trash racks: Operational Broken Bent Rusted Debris Obstructed			
Sluice/Drain gates: Operational Broken Bent Corroded Leaking			
<b>7. SPILLWAY CONDUIT</b> Concrete or Metal Pipe			
Debris Cracking Leakage Spalling Exposed reinforcement			
Joints: Displacement Leakage Loss of joint material			
<b>8. STILLING BASIN/PLUNGE POOL</b> Riprap or Concrete			
Spalling Cracking Erosion Scaling Exposed Reinforcement Joint Deterioration			
Undercutting Eroding			
Outlet channel condition:			
Tailwater elevation and flow condition:			
<b>9. EMERGENCY SPILLWAY</b>			
Ground cover in good condition			
Erosion Trees Shrubs Obstructions			
<b>OVERALL CONDITION:</b> Excellent Good Fair Poor Unsafe			