

Obtaining a Regular Operations and Maintenance Certificate for Montclair Dam

Goal

- **Obtain a Regular Operation and Maintenance Certificate in order to operate Montclair Dam**
 - Currently operating with a Conditional Operation and Maintenance Certificate because the **Spillway does not comply VA Impounding Structure Regulations**
 - MPOA requested a two year extension to the Conditional O&M certificate, if approved - good until 30 Sep 2018

Requirement

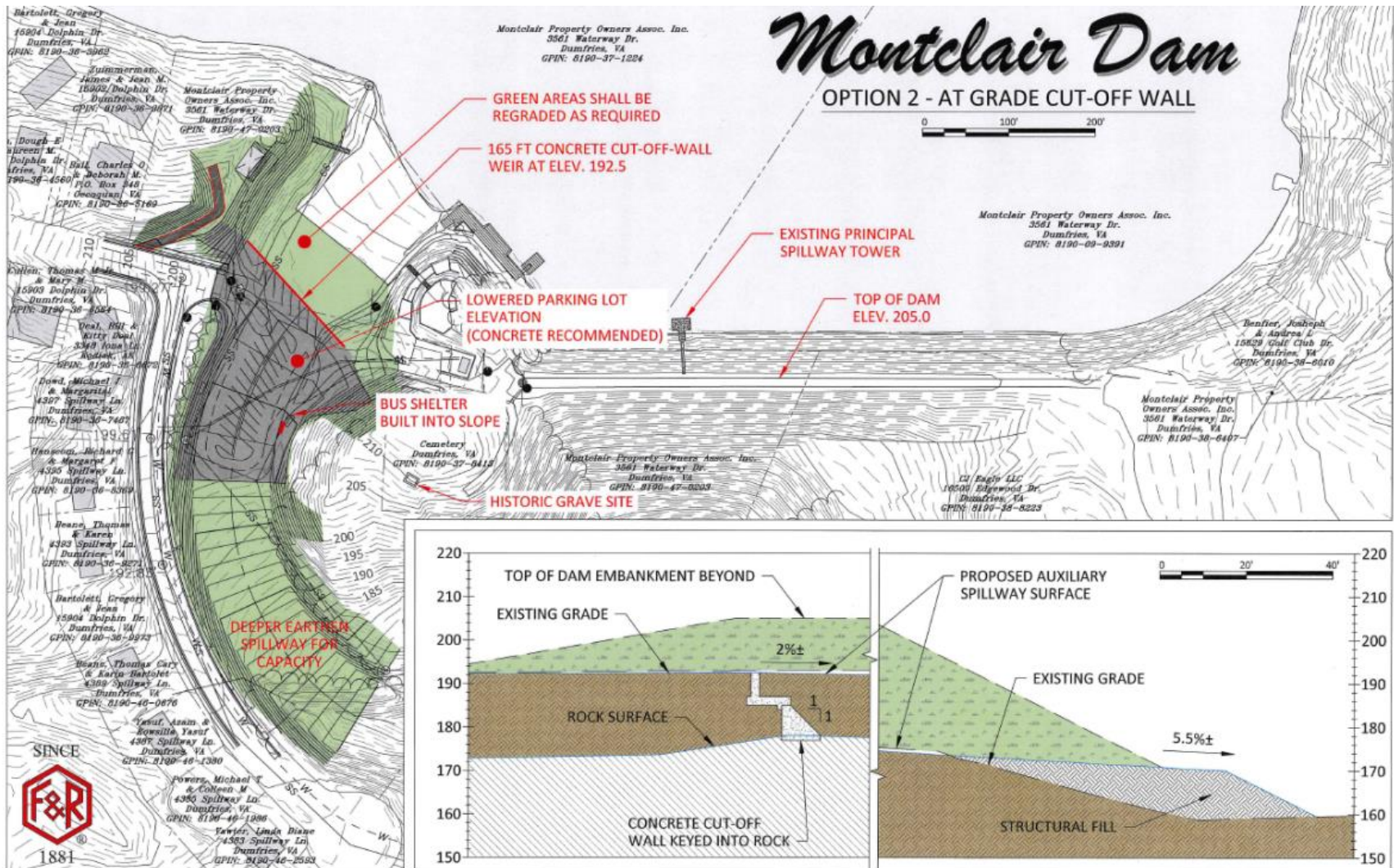
- In order to comply with VA Impounding Structure Regulations our Auxiliary Spillway (Dolphin Beach) **must be able to handle 90% of the water flow that would result from the flood caused by the new Probable Maximum Precipitation (PMP) values**
- New PMP values became effective on 23 Mar 2016
- MPOA has submitted the PMP certification form confirming the requirement
- Controlling PMP

<u>6 Hr. PMP</u>	<u>12 Hr. PMP</u>	<u>24 Hr. PMP</u>
26.3	30.1	30.1

Actions

- 6 Jun 2016 - Froehling and Robertson, Inc (F&R, Inc) completed a Preliminary Engineering Report (PER) to determine the feasibility of expanding the auxiliary spillway capacity by using a concrete cutback protection wall. Three options provided
- **23 Jun 2016 - MPOA BoD selects option 2 from the PER**

Option 2



Actions

- 20 Jul 2016 - F&R submits a proposal to MPOA for an engineering design (option 2) that would bring the Auxiliary Spillway into compliance
 - MPOA and F&R discussed changes/concerns
- 5 Aug 2016 - F&R explained proposed option selected by MPOA to the VA Department of Conservation and Recreation (DCR) Regional Dam Safety Engineer (Dr Wang)
 - Dr Wang gives his informal support for the plan

MPOA Actions

- 12 Aug 2016 - F&R submits an updated proposal for the Engineering Design
- 14 Sep 2016 - BoD meeting
 - Consider F&R proposal to complete an Engineering Design for the Montclair Dam Auxiliary Spillway in order to comply with VA Impounding Structure Regulations
 - Cost \$70,700*

*Actual cost for Design and Bid Specification Development from Froehling & Robertson

F&R Proposal

- Set of design plans
- Refined construction cost estimate
- Obtain required permits
- Two site visits to meet with MPOA, VDOT, PWC Service Authority and PWC Storm Water Management
- Prepare final bid documents for construction phase

Actions

- If MPOA BoD approves proceeding with the F&R proposal, then...
- Dec 2016
 - F&R completes design work and with MPOA approval submits Alteration Permit Application to the Virginia Soil and Water Conservation Board (SWCB)
- Apr 2017
 - VA SWCB review and approval
 - Application approval could take up to 120 days

Actions

- May 2017
 - Prepare bid documents for the construction phase
 - Construction Cost estimate - approx \$655,500*
 - Parking Lot
 - Concrete - \$200,000*
 - Asphalt - \$65,000*
 - MPOA BoD consider authorizing funding for construction phase
- Jun 2017
 - Release Request for Proposal
 - Consider contracting F&R to perform construction phase project administration, materials testing and post construction reporting
 - Cost estimate - \$33,000 *
- July 2017
 - Review bid proposals

*Preliminary costs estimates from F&R; Cost will not be realized until reviewed and approved by the
MPOA Board of Directors

This is a draft timeline based on preliminary estimates and assumptions.

Actions

- Aug 2017
 - Select Contractor for Construction phase
- Sep 2017
 - Begin construction (approx 4 months in to complete)
- Jan 2018
 - Construction complete
- Feb 2018
 - Final Record Report submitted to VA DCR
- Jun 2018
 - Submit application for a Regular Operations and Maintenance Certificate

Recommendation

- Approve next phase of Auxiliary Spillway project
 - Engineering Design - \$70,700*
 - Concrete vs Asphalt Parking Lot
- Total Cost**

– Construction Cost	\$655,500
– Concrete Parking Lot	\$200,000
– Engineering Cost	<u>\$103,000***</u>
– Total	\$958,500

*Actual cost for Design and Bid Specification Development from F&R

**Preliminary Cost Estimates from F&R; Cost will not be realized until reviewed and approved by the MPOA Board of Directors

***Includes Engineering Design cost of \$70,700

References

- VA Impounding Structure Regulations
- Probable Maximum Precipitation Study for Virginia and Associated PMP Evaluation Tool and Database
- Report of inundation study Montclair Dam dated July 11, 2014
 - Includes spillway analysis
- Preliminary Engineering Report to determine the feasibility of expanding the spillway capacity dated Nov 6, 2015. Updated Jun 6, 2016
- 12 Aug 2016 - F&R submits an updated proposal for the Engineering Design