Green River Reservoir Hydro

2021 Presentation

Agenda

- Brief Overview of MWL
- Brief Overview of MWL Hydro Facilities
  - Hydro Capacity
  - Hydro Location Map
  - Hydro Relationship Diagram
- Pictures of Green River Dam
- MWL: A Good Environmental Steward
- Hydro Relicensing
- The WQC Conditions and Green River Economics
- What's Next?

Brief Overview of MWL

- Municipal utility providing electric, water & sewer services. Not for profit.
- MWL provides clean, reliable electric service to approximately 4,000 customers in parts of seven different communities
- Our mission is to provide clean, reliable and affordable service to our customers.
- We are committed to providing our customers with clean power.
  - Hydro – MW&L owns three hydroelectric generators which has generated approximately 7 million kwh on average
  - Solar – MW&L has invested in solar generation (Buying Output from large solar project, Standard Offer projects and Net Metering projects)
  - In total, MW&L is 59% renewable*. The State has set a requirement that we are 75% renewable by 2032 and we are well on our way to reaching that goal.
- We are also deeply committed to keeping our electric rates as low as possible for our ratepayers.

*pending PUC approval

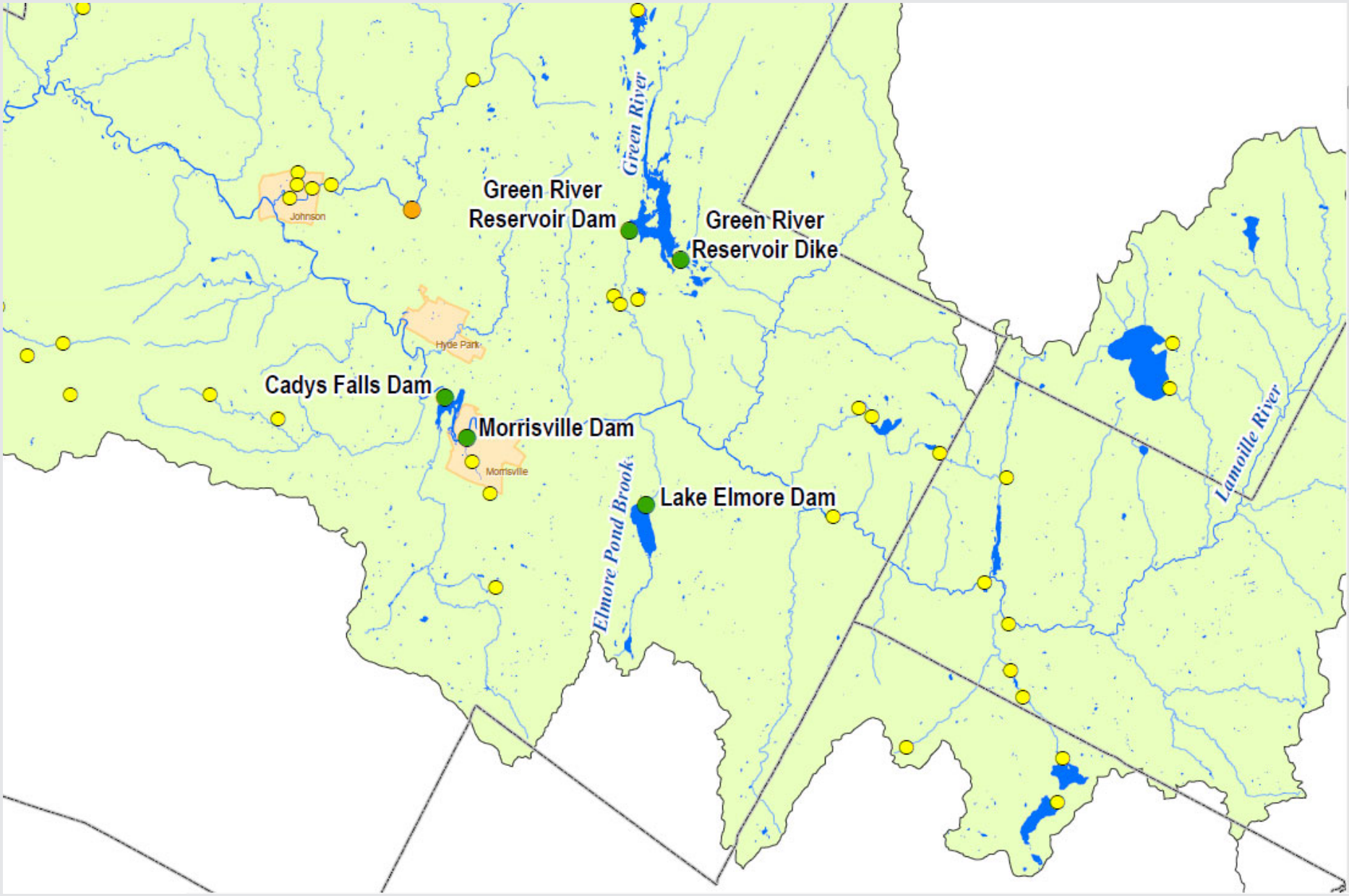
MWL Hydro

- Three Hydroelectric Plants
  - Cadys Falls,
  - Morrisville &
  - Green River

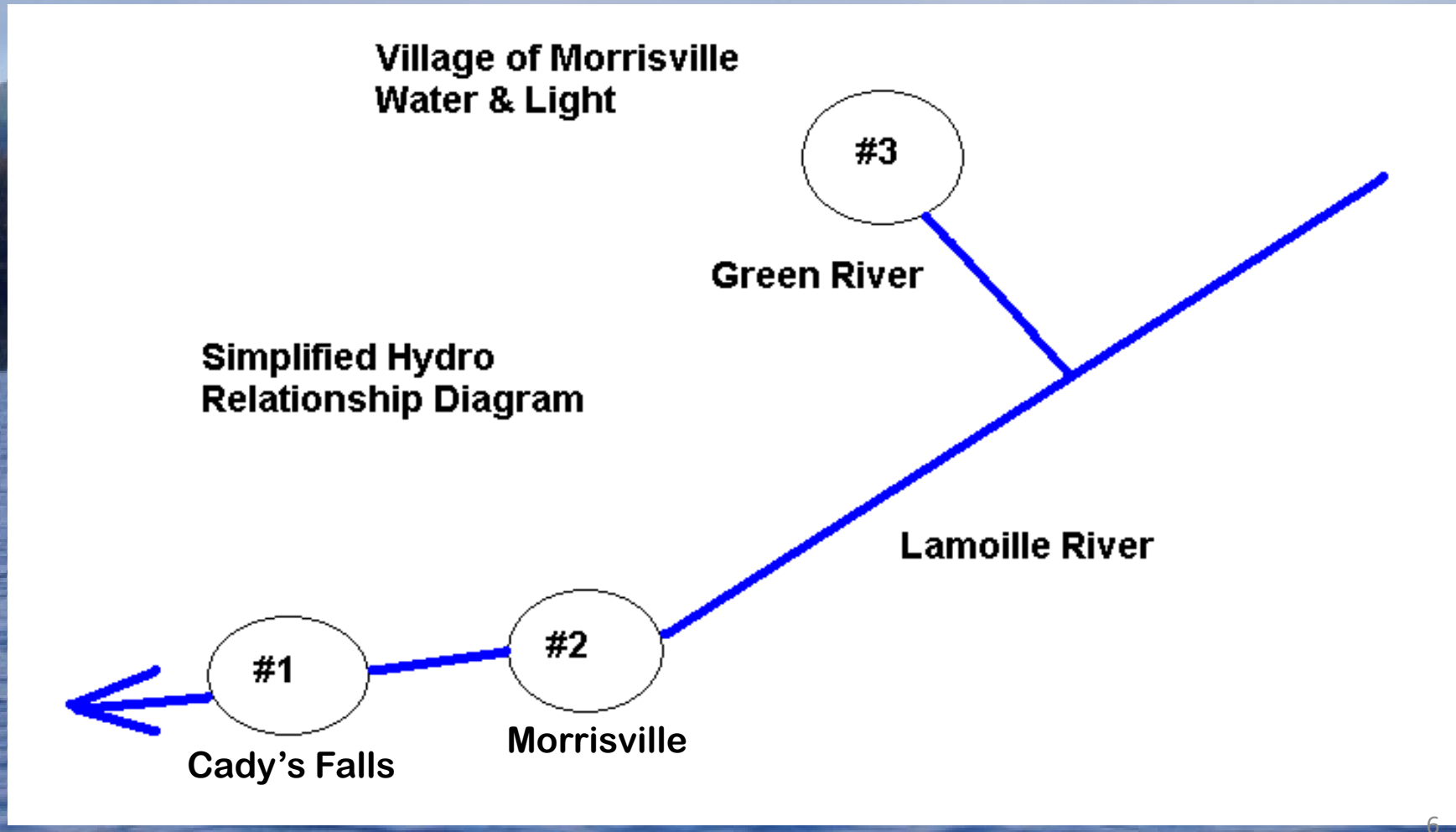
Plant	Generation (kWh/Year, 2015-2020)
Cady's Falls	2,000,000
Morrisville	4,000,000
Green River	1,000,000
Total	**7,000,000**

- Elmore
  - Dam only, no generation.

Hydro Location Map

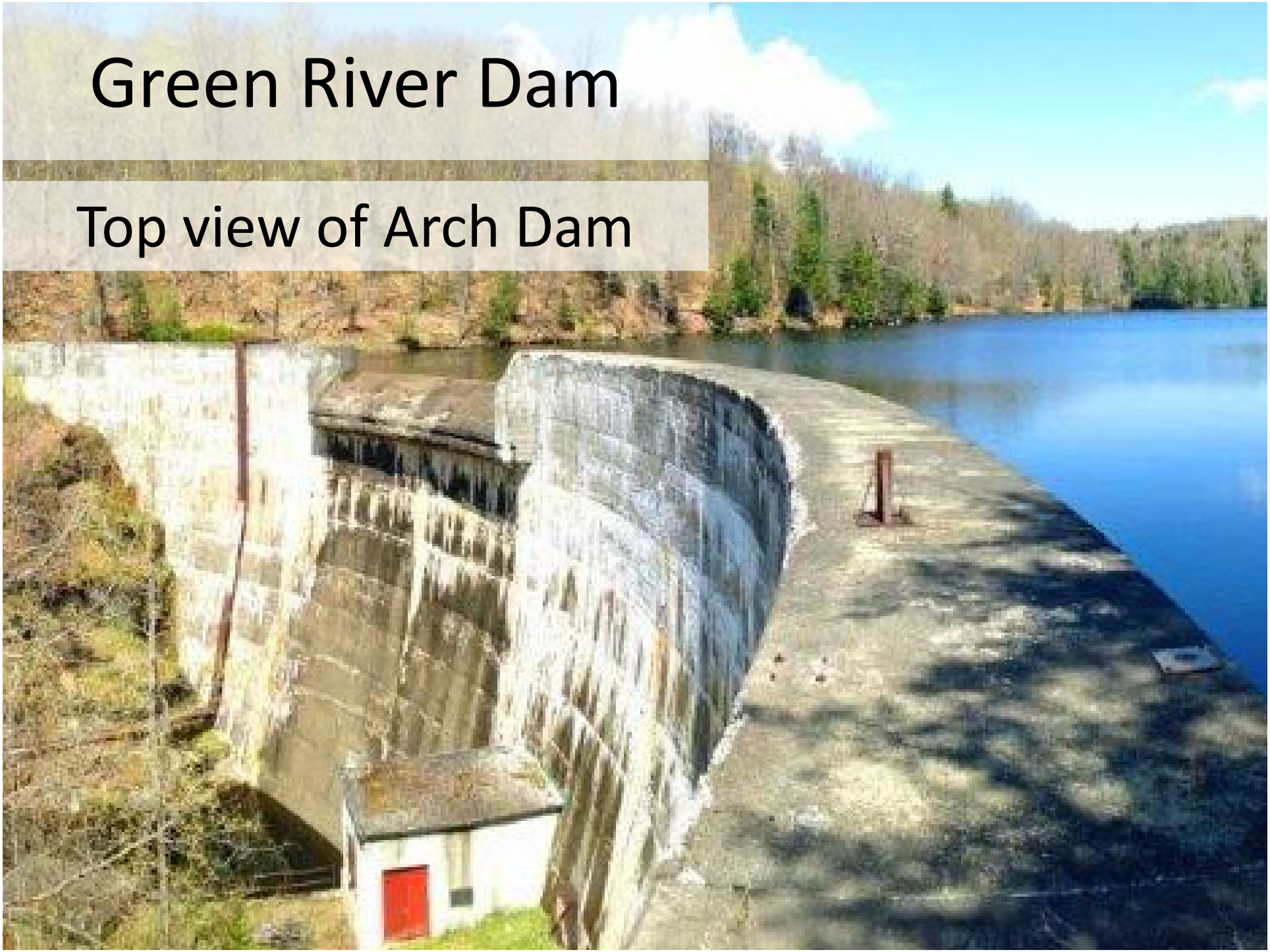


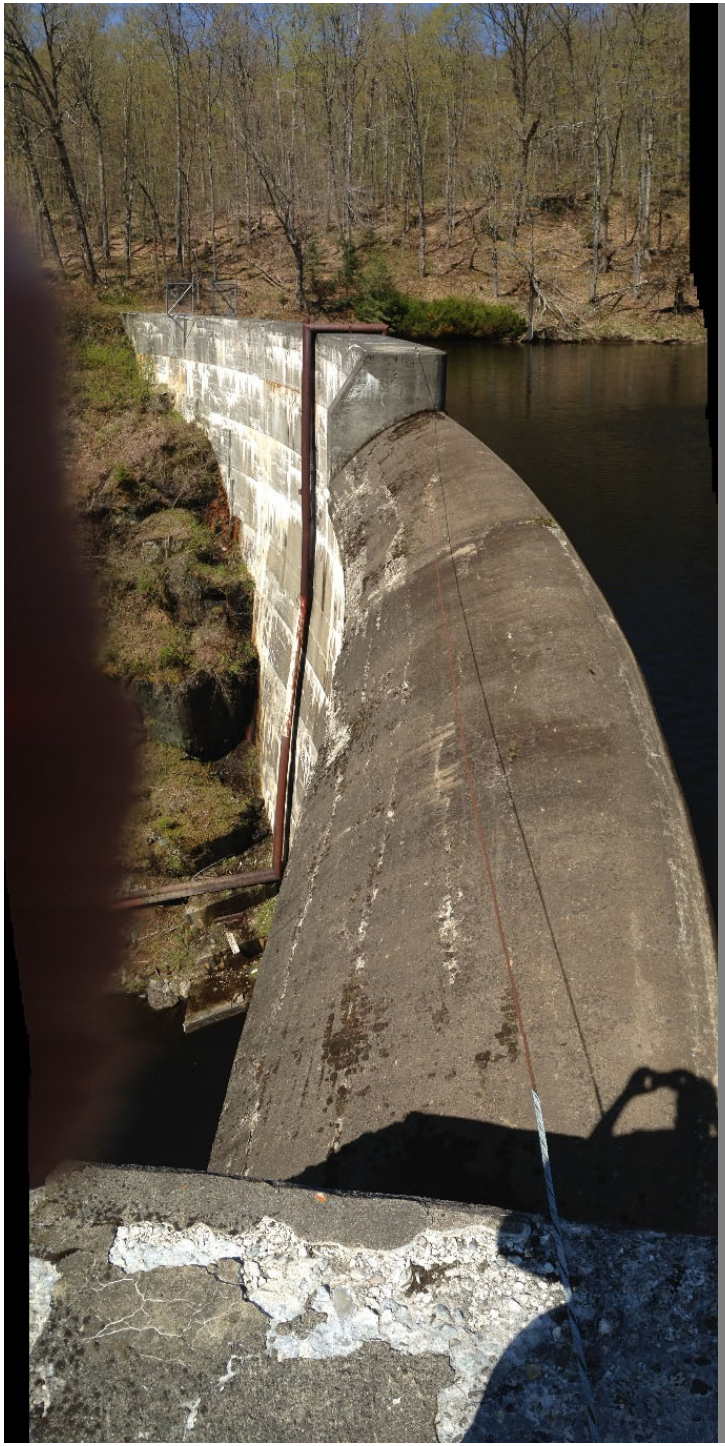
Morrisville Hydro Facilities



Green River Dam

Top view of Arch Dam





View of Spillway

Downstream Face of the Dam

10/12/2015

Face of the dam- taken from the power plant

MWL: A Good Environmental Steward

- MWL recognizes the value of the GRR and the unique wilderness like experience it offers visitors.
- In fact, MWL sold the State, as part of the State park system the 5,113 acres around the Green River reservoir for preservation at a reasonable amount of $490 per acre.
- MWL sold the State its Zack Woods property for conservation.
- Recognizing the importance of the wildlife habitat at GRR, MWL has limited the fluctuations of the water levels in order to protect the nesting habitats of the loons.

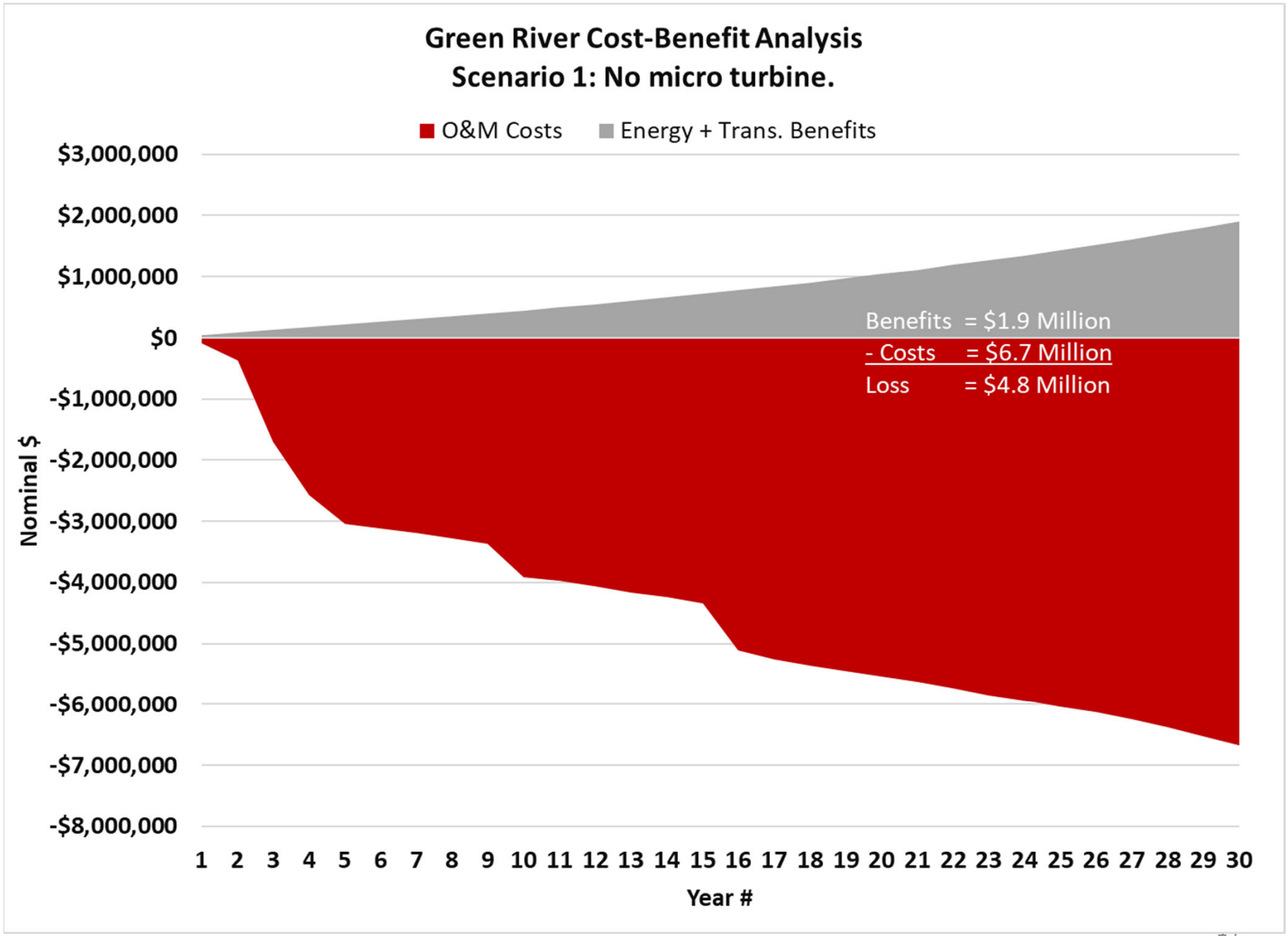
Year	Hydro Relicensing Actions
2009 - 2013	• FERC Relicensing effort commences; consultant hired, over 17 studies conducted in consultation with federal and state agencies • Filed License Application
2014 - 2015	• Meetings with ANR • FERC issues Draft Environment Assessment- Notes that VTANR recommendations will reduce GRR production by 50% • Delay Agreed to for Issuance of WQC
2016	WQC Issued MWL appeals WQC to Environmental Court
2017	MWL conducts Additional Studies • Bypass Flows; Green River Fish; Green River Drawdown
2018	• Trial in Environmental Court • Decision Issued • Appeal filed by VT ANR, TU and VNRC
2019	Appeal decided by Vermont Supreme Court
2020	MWL files a Petition with FERC to declare 401 certification requirement waived due to multiple withdrawals and resubmissions of certification requests.
2021	Following FERC denial of petition, MWL files a petition for court review before the D.C. Circuit Court of Appeals
November 2021	MWL notifies FERC that it is commencing consultation to amend the license application to withdraw the GRR facility from the license and begin the decommissioning process.

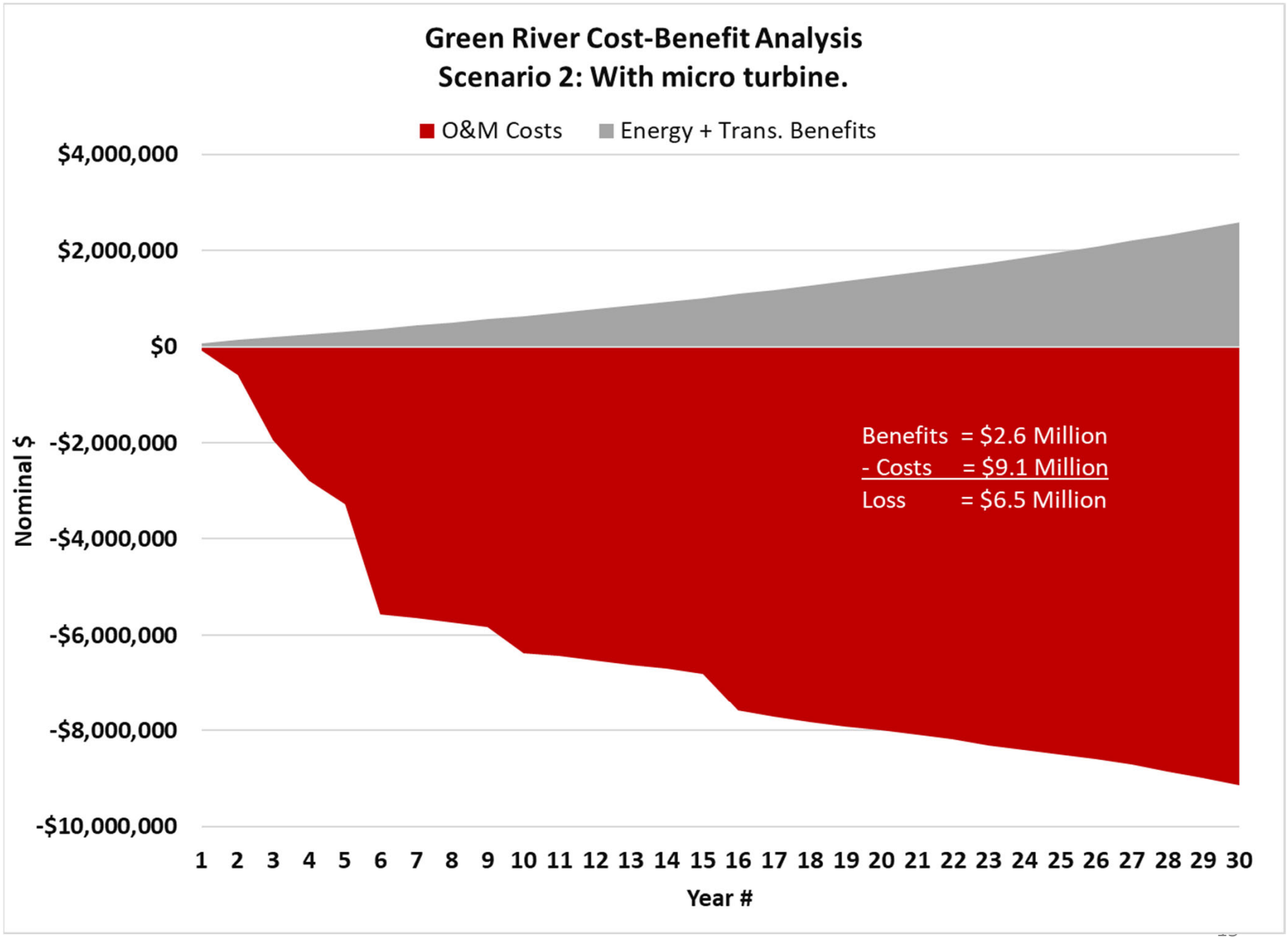
The WQC and Green River Economics

- The drawdown, complexity of operating conditions and discharge limits are the driving factors that make running the facility under the new WQC uneconomical.

- Based on an economic impact assessment prepared by HL Turner, the upgrades and filing requirements set forth by the WQC would cost MW&L an additional $1.8 million.

- The following two slides illustrate two scenarios.
  1. Scenario 1: Green River Cost-Benefit Analysis, no micro turbine.
  2. Scenario 2: Green River Cost-Benefit Analysis, with micro turbine.


Green River Cost-Benefit Analysis
Scenario 1: No micro turbine.
O&M Costs
Energy + Trans. Benefits
$3,000,000
$2,000,000
$1,000,000
$0
-$1,000,000
-$2,000,000
-$3,000,000
-$4,000,000
-$5,000,000
-$6,000,000
-$7,000,000
-$8,000,000
Nominal $
Benefits = $1.9 Million
- Costs = $6.7 Million
Loss = $4.8 Million
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Year #

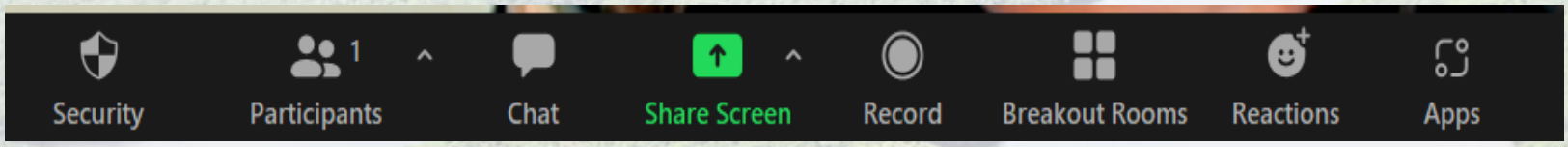

Green River Cost-Benefit Analysis
Scenario 2: With micro turbine.
O&M Costs
Energy + Trans. Benefits
$4,000,000
$2,000,000
$0
-$2,000,000
-$4,000,000
-$6,000,000
-$8,000,000
-$10,000,000
Nominal $
Benefits = $2.6 Million
- Costs = $9.1 Million
Loss = $6.5 Million
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Year #

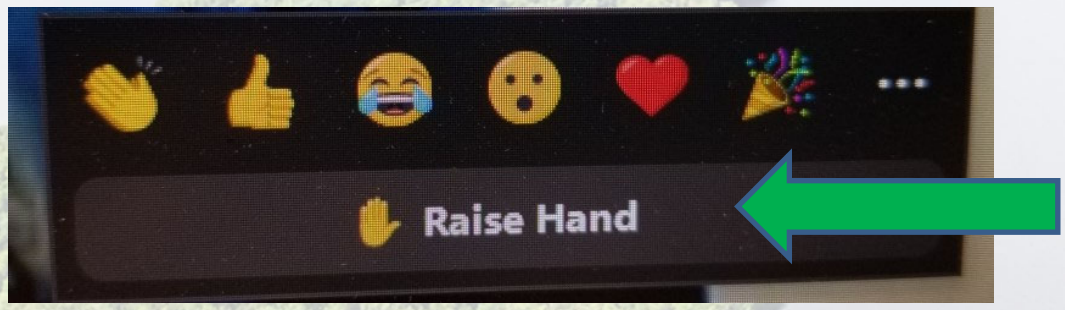
What's Next?

- MWL started the process by filing notice with FERC to communicate we are hiring a consultant to amend the current license application and begin the process to decommission the Dam. At this point we are not sure what decommissioning looks like
  - Partial removal of spillway so that dam is safe year-round at a lower reservoir level
  - Open Gate and allow the water to return to its natural condition
  - Remove dam altogether
- We are not sure what the cost to decommission looks like but it could be as much as $1 M
- While we can not ask MWL customers to pay for a projected $4.8 million loss to operate the hydro facility, dam ownership, preservation of the reservoir and the State Park is an appropriate role for the State of Vermont. There is precedent for State ownership of a hydro dam - Washington Coop uses a dam owned and maintained by the State of Vermont.
- We would like to sell the dam to the State of Vermont. We believe strongly that this is the best solution for preserving the reservoir and the State Park for people and wildlife to enjoy for years to come. Federal dollars potentially provide a unique opportunity for this to occur.
- We need your help to make state ownership a reality. Please contact your legislators, the Governor and the Secretary of the Agency of Natural Resources and ask them to have the State purchase the dam so this incredible resource can be used by all Vermonters for generations to come.

Questions??

- Please use the raise your hand feature in ZOOM





- E-mail the Secretary of ANR and the governor as follows:

  Sec of ANR Julie.moore@Vermont.gov , the Governor https://vermont.force.com/vermontce/s/governor-office-ce. Or call the Governor at 1-802-828-3333.

  Please copy MWLVT-GRR@mwlvt.com on your communications.