

**THE HOGBACK WATERSHED RECREATION COMMISSION
SPECIAL MEETING - APRIL 11, 2019
OVERVIEW OF PRESENTATION - SCOTT JELLISON, P.E. – MDC CEO**

1.0 Previous Hogback Watershed Recreation Commission Meeting

- 1.1 Last meeting of the Hogback Watershed Recreation Commission (HWRC) was requested by the Metropolitan District (MDC) in October 2016.
- 1.2 The region was experiencing a prolonged drought at that time and statutory flow releases had led to a significant water deficit in Colebrook River Lake (CRL) and West Branch Reservoir.
 - 1.2.1 Water level in the West Branch Reservoir was approaching an elevation that would expose the CRL outlet tunnel.
 - 1.2.2 CRL is identified as a MDC “Potential Emergency Water Source”; however a CT DEEP Diversion Permit has not been issued by CT DEEP nor is this reservoir part of MDC’s safe yield calculation. In any case, water was not available at this time for emergency use.
 - 1.2.3 Due to measured inflows being well below the required flow releases, the MDC was evaluating whether to reduce or suspend statutory flow releases. It was agreed that a minimum elevation of 590.0 would be maintained in the West Branch Reservoir at the expense of the minimum 50 cfs flow release if necessary.
- 1.3 The drought demonstrated that CLR is not a viable “Potential Emergency Water Source” for the MDC during periods of drought.

2.0 Background on MDC’s Partnership with the United States Army Corps of Engineers (US ACE) at Colebrook River Lake Dam (CRLD)

- 2.1 MDC entered into an agreement with US ACE in 1965 regarding the construction of this multi-purpose reservoir and dam.
 - 2.1.1 MDC paid 35% of dam original construction costs over 50-years. Last payment was made in 2019.
 - 2.1.2 MDC pays 35% of annual O&M cost and future capital costs for duration of agreement.
- 2.2 MDC was granted the rights to 10 billion gallons of water storage space in CRL.
- 2.3 Agreement was modified in 1984 to allow MDC to install / operate hydroelectric power generation at the facility.
- 2.4 The 10 billion gallons of water storage space in CRL is currently utilized for the primary purpose of meeting riparian right obligations during the mandated periods of May 15 – October 31 and November 1 – March 15. Although the intended purpose was to be a “Potential Emergency Water Source” and a potential future drinking water source for the MDC, the operation of the flood control system by the US ACE and the minimum releases make the source unavailable during drought conditions.

3.0 Reason for Current HWRC Meeting

- 3.1 US ACE has informed the MDC of their intention to conduct a dam repair project at CRLD in 2019.

- 3.1.1 This project will require an approximately 70-foot drawdown in the MDC's West Branch Reservoir (tailwater to the Colebrook Hydro facility) to expose the CRLD outlet infrastructure.
- 3.1.2 This drawdown takes approximately 35-40 days to achieve, and a similar duration to restore.
- 3.1.3 US ACE will have hydraulic control of gates moving forward and will be responsible to maintain and release flows on MDC's behalf until January 1, 2020.
- 3.1.4 The project duration during the drawdown state has not been provided by the Army Corps, but scope of the work is significant in nature and the project duration is estimated to be several months.

4.0 Impact of US ACE Project on MDC Hydro Operations

- 4.1 The Colebrook Hydro facility cannot be operated through much of this foreseen project.
 - 4.1.1 Due to the physical arrangement of the turbine banks' installation at the Colebrook River Dam intake tower and the logistics of the Army Corps gate project, removal of the turbine assemblies from the structure will be required. This includes disconnection and removal of all high voltage and control cables from the intake tower.
- 4.2 The 1988 vintage turbine assemblies are currently at the end of their useful life.
 - 4.2.1 The estimated cost to repair or replace the turbines is significant.
- 4.3 Prior to making this investment, the MDC performed a life cycle analysis to determine whether or not to take advantage of the pending turbine removal to repair or replace the turbine assemblies. The following was included as part of the analysis:
 - 4.3.1 Recognition of 14 years Federal Energy Regulatory Commission (FERC) license term remaining, thus requiring significant relicensing costs/efforts starting in 9 years (based on FERC requirements).
 - 4.3.2 During a normal operating year (no drawdown) annual budgeted revenues are approximately \$225K, recognizing current generation and ISO-NE market rates being realized.
 - 4.3.3 Local personal property taxes for the hydro equipment are approximately \$100,000 under Town of Colebrook / MDC agreement terms. This agreement expires in 2019, and is subject to change.
 - 4.3.4 MDC operational costs for the facility, including the local personal property taxes described above, are nearly the same as annual revenue.
- 4.4 The analysis determined that the expected timeline to recover the costs that would be necessary to keep operating the hydro facility was greater than fifty years which is unacceptable.
 - 4.4.1 The current hydro equipment is thirty years old and in need of upgrade.
 - 4.4.2 In order to mitigate current and future financial, operational and project-based risks, the MDC concluded decommissioning this facility is the most prudent course of action moving forward.

5.0 Future of MDC at CRLD

- 5.1 Drought of 2016 proved that CRL water is not available when needed – it is not a realistic or dependable "Potential Emergency Water Source."
- 5.2 The MDC is experiencing declining water consumption.

- 5.2.1 When the MDC-US ACE 50-year agreement was made in 1965, water supply planners had forecasted a much higher future water demand for the MDC.
- 5.2.2 April 2019 Monthly Average Day Demand was lowest since mid 1960s.
- 5.2.3 MDC has no need for this water now or in the future
- 5.3 MDC has no existing infrastructure to get CRL water to MDC water supply system.
 - 5.3.1 Getting CRL water to existing MDC water supply infrastructure would require construction of a tunnel, new pipelines and a CT DEEP Diversion Permit.
 - 5.3.2 Costs would be in the order of \$600 MM to \$700 MM.
 - 5.3.3 Pumping water from the Farmington River during a non-drought emergency, assuming MDC drinking water reservoirs are incapacitated, would require the river meet an Average Daily Demand of 50 MGD. There are no guarantees MDC releases can meet this capacity; therefore the water necessary to make up the difference is not the MDC's water to take. Further, the water at this location does not meet current CT DPH water quality standards and would be in direct violation of CGS Section 22a-417 as several water pollution control facilities discharge upstream from the specified pumping location.
- 5.4 The CRLD project is complete. The last payment for dam construction was made in 2019
- 5.5 The eight (8) MDC member towns currently pay 35% of annual O&M and future capital costs for a Federal dam project.
 - 5.5.1 These costs were over \$800,000 in 2019.
 - 5.5.2 The dam is now fifty years old and maintenance needs are expected to continue to increase, possibly significantly.
 - 5.5.3 MDC has no ability to control these costs
- 5.6 Hydroelectric generation is no longer viable for the MDC at CRL.
 - 5.6.1 The turbines are at end of useful life.
 - 5.6.2 Annual revenue from power sales has been decreasing
 - 5.6.3 Life cycle analysis determined continued investment is not financially prudent

6.0 West Branch Flow Releases

- 6.1 MDC currently assists US ACE in making flow releases at CRLD.
- 6.2 MDC statutory flow releases are made at Goodwin Dam only.
 - 6.2.1 MDC will continue to make statutory releases at Goodwin Dam.
- 6.3 MDC maintains private Riparian Agreement with remaining riparian rights owner.
 - 6.3.1 Riparian releases are above and beyond statutory releases
- 6.4 US ACE has tentatively indicated that storage levels and flow releases at CRLD will remain consistent with MDC operation.

7.0 MDC Current Actions

- 7.1 MDC has notified US ACE the "Project" by agreement has ended through the last debt service payment made in 2019. MDC will not renew the 1965 agreement and leave CRLD by October 1, 2019.
- 7.2 MDC is currently in process to surrender its FERC license for Colebrook hydro.
- 7.3 MDC has no plans to sell land in Colebrook and would need CT DPH approval to do so.
- 7.4 MDC is currently drafting a Work Plan related to the US ACE work at CRLD
- 7.5 The next HWRC meeting is tentatively scheduled for May 20, 2019 at 10 AM.
- 7.6 MDC will provide HWRC members with US ACE personnel contact info so that they can be invited to the next Hogback Commission meeting.