

**Vermilion River Stewardship
Meeting Notes
Wabagishik Generating Station
Spillway Replacement Project – Vale**

Monday, 26 February 2018

9:00 am to 11:45 pm

Beaver Lake Sports & Cultural Club, 55 Club Road, Worthington, ON

VRS: Linda Heron, Sheri Johnson, Ron Basso, Marc Samson, Byron Basso, John Reid, Lesley Flowers, Debbie Somek, Mike McMahon

Vale: Allison Merla, Carolyn Hunt, Danica Pagnutti, Al Gereghy, Denis Duguay, Jim Jackson, Steve Fournier

Purpose:

Vale provided Vermilion River Stewardship members with an onsite tour of the Wabagishik Generating Station, including the spillway area and power house. After the tour we met at the Beaver Lake Sports & Cultural Club and Vale gave a presentation to inform VRS of the history, safety concerns, proposed new design, and supporting works and studies.

Background:

- Vale has 48 dams connected with their 4 power generating stations, producing approximately 20% of the power required for their mining operation
- Existing dam was built in 1908 by Lorne Power Company
- Main dam with spillway originally had 6 x 10' stop log openings and a log flume
- Modified over the years with ogees and replacing 2 of the stop log openings at the south end with a vertical-lift 'waste gate'
- Water levels and flows at all 4 facilities are monitored and controlled from Vale's Copper Cliff site
- The concrete structure shows significant signs of aging with cracking and checking
- Dam safety is the project driver - the integrity of the concrete structure raises safety and liability concerns, so Vale is proposing to replace the old spillway and gate structure and rebuild a new structure immediately downstream
- Operating strategy, water levels and flows will remain as is

Project:

- All design options were reviewed against goals to
 - Maintain current conditions and operations with no changes to water management or water levels upstream or downstream of the GS
 - It could pass 1:100 year flood and not fail under the 1:1000 year event
- Preferred spillway option was identified:
 - 3 x 17' vertical gates and 1 x 17' flap gate to be built immediately downstream of the existing spillway
 - Upstream stop logs

Proposed Project Timeline:

- 2017: Engineering Options, Supporting Studies and Initial Project Application to MNRF
- 2018: Access & Laydown & Detailed Eng., MNRF and NDCA authorizations and approvals
- 2019: Log Chute Removal – ½ spillway, coffer dams, erosion & sediment control

- 2020: Old spillway removal – ½ spillway
- 2021: West gravity dam, old waste gate removal.
- 2019 - 2021: MNRF Class EA, LRIA, DFO, NDCA & Transport Canada permits & approvals.

Studies:

- **Hydrodynamic modeling**
 - Water levels, flow regimes, sediment transport, Walleye spawning habitat
 - There is predicted to be very little change in the hydrodynamic impact of the new dam because operating strategy will stay the same, and the new dam will be immediately downstream of the old dam
- **Fish Community Study**
 - Kilgour & Associates completed Species at Risk and fish community study
 - Walleye spawning habitat will have minimal impact
 - Fish species: minnows, perch, pike, suckers, sunfish, bullheads
 - Characterized upstream and downstream Wabagishik Lake fish communities to fill WMP data gap and inform construction considerations
 - Electrofishing and shore work
 - Same species captured in both lake environments, silver redhorse sucker the only species that was captured downstream and not upstream
- **Species at Risk Surveys**
 - Survey program developed by MNRF
 - Basking turtle surveys – painted and snapping, no blandings
 - Barn swallow nesting – none
 - Eastern Whip-poor-will – none
 - 7 species of bats recorded
 - Foraging over wooded area, not considered roosting habitat
 - Clearing timelines recommended

It was an excellent presentation, and VRS representatives expressed appreciation for Vale's very open and inclusive approach to this proposed project!

Water Management Plan:

- Vale sent the finalized Water Management Plan to MNRF months ago and is waiting for it to be approved.

Action: Linda will contact Bruce Richards at MNRF for an estimated timeline of approval.

Next Steps:

Vale encouraged VRS to stay in touch throughout the project and perhaps we would have another tour within the project timeline to see their progress.