## Summary as of August 2021:

The Brant Lake outlet replacement has hit some setbacks. These setbacks are related to permitting, specifically the original Flood Control Permit #4 (FC-4) that was issued to BLIA in 1986. Due to the discrepancies between the current outlet construction and what was allowed and required in FC-4, there is considerable "clean-up" work to get us back to square one so we can be issued a new flood control permit. FC-4 required that all 9 downstream crossings have a minimum of 950 CFS. Some of the crossings never met that CFS, or at least needed additional information. In June 2021, we hired Banner Engineering to survey downstream crossings that needed additional flow information. That survey report found that 2 of the 9 downstream crossings do not meet the flow capability threshold that was required in FC-4. As such, a new flood control permit will not be issued to GFP from DANR until those crossings meet the flow requirements of the existing permit. In August 2021, we again hired Banner to provide design options and cost estimates to get the 2 crossings up to par. When that report is complete, we will begin the process of upgrading the 2 crossings so we can move forward.

Due to the downstream crossing issues we are dealing with, the timeline for outlet replacement will be set back. A realistic timeline is downstream crossing alteration in 2022 and outlet replacement in 2023. Although these flood control permit setbacks have considerably increased the overall cost and timeline of outlet replacement, GFP is committed to getting this project completed and will see it through to the end. We appreciate BLIA being a partner through it all.

If there are any questions, feel free to email Kip Rounds.

## Brief Timeline of the Brant Lake Outlet Structure and Replacement Project:

- 1928 Outlet structure was constructed and was intended to function as a concrete fish barrier. The structure was not effective as a fish barrier, so it was modified to function more as an outlet structure.
- Mid-1980s Significant flooding occurred at Brant Lake, which prompted discussions among GFP, DANR, and BLIA about altering the outlet to reduce flooding. BLIA hired a civil engineer to draw up plans for outlet modification.
- November 1985 BLIA applied for a flood control permit to widen the outlet. Flood control permit number FC-4 was granted, which allowed BLIA to widen the outlet by 30' and lower 30' of the existing outlet 6". FC-4 also stated that BLIA would be responsible for all future outlet maintenance and repairs.
- 1987 Under FC-4, the outlet was modified to its current design.
- **February 2017** GFP fisheries staff noticed the outlet was in disrepair and likely in the early stages of failing.
- February 15, 2017 GFP staff (Engineering, Fisheries, Enforcement, Parks) and DANR inspected the outlet and noted severe deterioration and water flowing underneath the top of the outlet, between the interface of the original concrete top (1928) and the concrete poured on top of it during a later modification (1980s).

- June 2017 GFP Fisheries staff met with BLIA to discuss issues with the outlet and FC-4 language that states BLIA is responsible for maintenance and repairs.
  - o Several meetings and conversations between GFP and BLIA have taken place since.
- Fall 2017 GFP hired Banner Engineering to complete a site investigation of the outlet and preliminary plans for outlet replacement. Banner estimated the cost of outlet reconstruction at \$184,900.
- 2019 GFP budgeted for the Brant Lake outlet replacement (FY20).
- 2020 GFP Engineering discovered the outlet was widened by 34' in 1987, instead of 30' that was permitted in FC-4. This leaves two options; (1) the outlet needs to be reconstructed to fit what was originally allowed in FC-4 (30') or a new flood control permit must be granted to allow the outlet to be reconstructed to its current dimensions (34'). It was mutually agreed that a new flood control permit would be requested in order to reconstruct the outlet to its current dimensions.
- **2020** At BLIA's request, GFP agreed to assume ownership of FC-4. An official transfer of ownership was filed in November 2020. This transfer of ownership placed responsibility of outlet replacement on GFP, along with the requirements stated in FC-4.
- **2020** GFP applied for a new flood control permit with DANR that would allow to reconstruct the outlet to its current dimensions (34').
- 2021 GFP contracted Banner Engineering to survey downstream crossings that needed additional information in order for a new flood control permit to be issued. Flood Control Permit #4, which was issued to BLIA in 1986, required all 9 downstream crossings to have a minimum of 950 CFS flow capability.
- **2021** The Banner report determined that 2 of the 9 crossings need to be altered in order to increase total CFS to satisfy FC-4 requirements.
- 2021 GFP contracted Banner Engineering to provide a survey report of the 2 crossings in question to provide design options and cost estimates to increase flow at both crossings.
  - We are currently waiting on the results of this survey report.