

7.0 SUMMARY

7.1 Bradford Island Fishway

Bradford Island Fishway reliability assessment and cost estimate is summarized in Table 7.1. The table is organized by the overall failure rating. The rank established is only for the top five features in each branch that were included in the cost estimate. The overall failure rating for some features in A-Branch that were not part of the top five ranked higher than the top five B-branch features with the exception of FV4-3 and FV4-4. Although those features were not included in the cost estimate, they are included in the summary Table 7.2 along with the overall ranking.

Some features were omitted from the top five for various reasons. See paragraph 5.2.1.2 for an explanation of the omitted features. These features are included in the summary Table 7.2 with their overall failure rating.

Table 7-1 - Bradford Island Summary

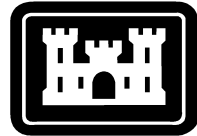
Overall Ranking	Overall Failure Ratings	Features	Comments	Rank	Cost Estimate Totals
1	20000	Fish Valve and Bulkhead for FV1-1 and FV1-2	Bulkhead slot is not square. Valve seals need replacement and the valve structure is unknown.	A1	\$ 633,000
2	13500	Fish Valve FV3-7	Structural members are bent.	A2	\$ 227,000
3	12500	Collection Channel Diffuser Gates and Floor Gratings	Features were grouped together due to the difficulty in dewatering and accessing them.	A3	\$3,917,000
6	6750	Fish Valve FV4-3 and FV4-4	Failure of structural members.	B1	\$ 502,000
9	5625	A-Branch North AWS Conduit	Joints have failed and are in need of repair.	A4	\$1,302,000
10	5400	Crane at South AWS Intake	Required for maintenance of the South AWS system.	A5	\$3,141,000
14	3375	B-Branch Floor Grating supplied by South AWS Conduit	Primary cause of failure for floor grating is corrosion of both the grating and the anchors attaching the grating to the fishway floor.	B2	\$ 795,000



Overall Ranking	Overall Failure Ratings	Features	Comments	Rank	Cost Estimate Totals
16	1500	B-Branch South AWS Conduit	Condition is unknown. Similar in construction to A-Branch North AWS Conduit, so it is assumed that same levels of repairs are needed.	B3	\$1,366,000
17	1500	B-Branch Floor Grating supplied by North AWS	See comment regarding floor grating above.	B4	\$ 233,000
19	1350	Junction Pool Floor Panels	Primary cause of failure for floor panels is corrosion of both the grating and the anchors attaching the grating to the fishway floor.	B5	\$ 48,000

Table 7-2 - Bradford Island Summary Items not Included in the Cost Estimate

Overall Ranking	Overall Failure Ratings	Features	Comments	Reason the Feature was Excluded from the Cost Estimate
4	10800	A-Branch Diffuser Gates FG3-3 to FG3-9	Likely cause of failure is a broken actuator / stem and gate guide failure.	Established Plans and Specifications.
5	10800	B-Branch Diffuser Gates FG3-18 to FG3-25	Likely cause of failure is a broken actuator / stem and gate guide failure.	Established Plans and Specifications.
7	6250	A-Branch South AWS Conduit	Part of the powerhouse structure.	Condition is unknown and needs inspection.
8	6000	B-Branch North AWS Conduit	Part of the spillway structure.	Condition is unknown and needs inspection.



Overall Ranking	Overall Failure Ratings	Features	Comments	Reason the Feature was Excluded from the Cost Estimate
11	4860	B-Branch Diffuser Gates FG3-29 to FG3-33	Likely cause of failure is a broken actuator / stem and gate guide failure.	Established Plans and Specifications.
12	4500	Fish Valve FV3-8	Likely cause of failure is a failure of structural members.	Fell outside of the top 5 features for A-Branch
13	4500	A-Branch Floor Grating supplied by North AWS Conduit.	Primary cause of failure for floor grating is corrosion of both the grating and the anchors attaching the grating to the fishway floor.	Fell outside of the top 5 features for A-Branch
15	3000	Powerhouse Fish Lock	Seismic event could cause a structural failure.	Requires seismic study to be completed.
18	1500	Spillway Fish Lock	Seismic event could cause a structural failure.	Requires seismic study be completed.

7.2 Cascade Island Fishway

LATER – OPTIONAL TASK