

**POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON**

COLUMBIA RIVERKEEPER,
WASHINGTON CONSERVATION
ACTION, AMERICAN RIVERS, and
CONFEDERATED TRIBES AND BANDS
OF THE YAKAMA NATION,

Appellants,

v.

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY, and FREE
FLOW POWER PROJECT 101 c/o RYE
DEVELOPMENT,

Respondents.

PCHB No. 23-025c

FINDINGS OF FACT, CONCLUSIONS
OF LAW AND ORDER

1. INTRODUCTION

Appellants challenge a water quality certification that the Department of Ecology (Ecology) issued under Section 401 of the Clean Water Act for a hydropower project (Project) that would be built along the Columbia River. At the time, federal regulations limited the scope of such a certification (called a “401 Certification”) to assuring that a discharge from an activity into a water of the United States would comply with water quality requirements. *See* 40 C.F.R. §§ 121.1(f), 121.3 (2020). The Pollution Control Hearings Board (Board) held a hearing in this matter on September 23–26, 2024.

The Board concludes that Appellants have not met their burden to show that the 401 Certification fails to assure that discharge from the Project will comply with water quality

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1 requirements. Appellants contend that the Project will leak substantial amounts of polluted water
2 into the groundwater, which would eventually seep into the Columbia River. However, evidence
3 at the hearing showed that the Project is designed not to leak, and Appellants did not provide
4 credible evidence refuting the design's integrity. Additionally, because water contained in the
5 Project components must meet state water quality standards, Appellants have not shown that
6 leakage or seepage, if any occurred, would result in a violation of water quality standards in the
7 Columbia River. Furthermore, if the Project's components were to leak, evidence at the hearing
8 showed that Ecology would take steps to address the leakage, including implementing adaptive
9 management and possibly requiring more permits.

10 While the Project will affect Stream 7, Stream 8, and Swale Creek, Appellants have not
11 met their burden to show that the conditions included in the 401 Certification—including the
12 construction and monitoring of a mitigation channel—are insufficient to mitigate the Project's
13 effects on those water bodies. Finally, the evidence established that neither Pond 1 nor Pond 2 is a
14 water of the United States, and therefore both ponds are beyond the scope of Ecology's review for
15 the certification. The Board affirms the 401 Certification.

16 Two separate appeals were filed challenging the 401 Certification. Appellants Columbia
17 Riverkeeper, Washington Conservation Action, and American Rivers (collectively, the
18 Conservation Appellants) filed their appeal on June 21, 2023. Confederated Tribes and Bands of
19 the Yakama Nation (Yakama Nation) filed their appeal on the same day. The Board consolidated
20 the two appeals.

1 The Board deciding this matter was comprised of Board Chair Michelle Gonzalez and
2 Board Members Christopher G. Swanson and Gabriel E. Verdugo. Board Member Verdugo
3 presided for the Board. Attorneys Sadie J. Normoyle, Tannis Fox, Barbara Chillcott, and Andrew
4 Hawley appeared on behalf of the Conservation Appellants. Attorneys Ethan Jones, Anthony
5 Aronica, and Meredith Harris appeared on behalf of the Yakama Nation. Assistant Attorneys
6 General Janell Middleton and Ivy M. Anderson appeared on behalf of Ecology. Attorneys Jenna
7 Mandell-Rice, Sophia E. Amberson, Erin Anderson, Liberty Quihuis, and Patrick Daugherty
8 appeared on behalf of Respondent Free Flow Power Project 101 c/o Rye Development (FFP).

9 The Board received the sworn testimony of witnesses, reviewed admitted exhibits, and
10 heard argument on behalf of the parties. Based upon the evidence and arguments presented, the
11 Board enters the following findings of fact, conclusions of law, and order.

12 **2. BACKGROUND**

13 **2.1. The Goldendale Energy Storage Project**

14 The Project is a proposed pumped-water storage system that would generate electricity at
15 times of greater energy consumption by releasing water from an upper reservoir downhill to a
16 lower reservoir. *Ex. JX-1, p. 4.* During periods of lower energy demand, water would be pumped
17 back to the upper reservoir. *Id., p. 5.* The Project is expected to generate up to 1,200 megawatts of
18 electricity and is intended to provide balancing services and renewable energy flexible capacity to
19 utilities. *Ex. JX-2, p. 5.* The Project would be located along the Columbia River, but off-stream of
20 the river—no river or stream impoundments would be required. *Id.* Instead, due to the closed-loop
21 nature of the Project, water would be drawn from an existing pump station to initially fill the

1 system and additional water would be drawn only as needed to offset water lost due to evaporation
2 or leakage. *Ex. JX-1, p.4.*

3 The Project area encompasses approximately 681.6 acres. *Id., p. 5.* The Project's lower
4 reservoir would be located on the site of the former Columbia Gorge Aluminum smelter (CGA
5 Smelter Site). *Id., p. 4; Johnson Testimony, p. 426:9-13.* The CGA Smelter Site is contaminated
6 with sulfate and phosphate from the former smelter operations. *McDonald Testimony, p. 611:5-7.*

7 The parties do not dispute that the Project would affect Stream 7, Stream 8, and Swale
8 Creek. The Project would impact Stream 7 because construction of the upper reservoir would result
9 in the permanent loss of 0.041 acres of the stream and 1.006 acres of the stream's buffer area.
10 *Ex. JX-2, p. 102.* The Project would also permanently impact Stream 8 because 0.003 acres of the
11 stream and 0.100 acres of its buffer area would be excavated and backfilled during construction of
12 the upper reservoir. *Id.* Because both Stream 7 and Stream 8 drain into Swale Creek, the Project
13 would affect that water body as well. *Id., p. 106.* The Project plans contemplate the discharge of
14 reservoir water into Swale Creek to mitigate the Project's impacts on Stream 7, Stream 8, and
15 Swale Creek. *See Ex. JX-1, pp. 13-14.*

16 **2.2. Ecology's Environmental Impact Statement**

17 On December 21, 2022, Ecology issued an environmental impact statement (EIS) regarding
18 the Project. *Ex. JX-2, p. 3.* Ecology prepared the EIS "to evaluate the probable significant
19 environmental impacts from the construction and operation of the proposed project and its
20 contribution to cumulative environmental impacts." *Id.* According to the EIS, "the analysis of
21 potential impacts considered construction- and operation-related effects on wetlands and regulated

1 waters (and their associated buffers), and water quantity, water quality, and water uses and rights
2 for both surface water and groundwater.” *Id.*, p. 100.

3 Regarding the quality of the water in the system, the EIS states that “yearly evaporative
4 cycles would concentrate water quality constituent levels over time (e.g., heat, total dissolved
5 solids, metals, nutrients, and bacteria), despite the annual addition of fresh make-up water from
6 annual precipitation and purchases of water from the Columbia River.” *Id.*, p. 116. The Project’s
7 upper and lower reservoirs would be constructed with a synthetic liner system with leak-detection
8 capabilities meant to prevent leakage, such that “negligible seepage from the reservoirs is
9 anticipated.” *Id.*, p. 117. “[T]he lower reservoir is anticipated to include a double liner system to
10 further minimize any potential for leakage.” *Id.*, p. 48. As stated in the EIS, FFP plans to “include
11 hydrologic/groundwater level monitoring as a component of a broader water quality and response
12 plan.” *Id.*, p. 114. Ecology concluded that “[t]hrough compliance with laws and with
13 implementation of the mitigation measures described in [the EIS], there would be no significant
14 and unavoidable adverse impacts related to water resources from construction or operation of the
15 proposed project.” *Id.*, p. 267.

16 The EIS also states, however, that approximately 100 acre-feet¹ per year (AFY) of water
17 would leak from the Project’s underground infrastructure (piping, etc.), which would represent
18 return flow (or artificial recharge) into the basalt aquifer system. *Id.*, p. 113. The EIS assumes that
19
20

21 ¹ An acre-foot is the volume of water that would cover one acre of land to a depth of one foot. *Ex. JX-2*, p. 46.

1 70% of the underground leakage would enter the Columbia Tributaries watershed and 30% would
2 enter the Swale Creek watershed. *Id.*

3 **2.3. 401 Certification**

4 Appellants challenge the 401 Certification that Ecology issued for the Project. Section 401
5 of the Clean Water Act (CWA) generally requires “[a]ny applicant for a Federal license or permit
6 to conduct any activity . . . which may result in any discharge into the navigable waters” of the
7 United States to obtain a certification from the state governing the area where a discharge would
8 originate, unless certification is waived. 33 U.S.C. § 1341(a)(1). A 401 Certification affirms that
9 discharge would comply with various water-quality provisions of the CWA—including the
10 federally approved water-quality standards set by the state. *Id.*; *see also PUD No. 1 of Jefferson*
11 *County v. Wash. Dep’t of Ecology (Jefferson County)*, 511 U.S. 700, 707-08, 114 S. Ct. 1900, 128
12 L. Ed. 2d 716 (1994). FFP was required to seek certification under Section 401 because it applied
13 for a federal license—specifically, a hydropower license from the Federal Energy Regulatory
14 Commission (FERC). *Ex. JX-2, p. 39.*

15 When Ecology issued the 401 Certification for the Project, Environmental Protection
16 Agency (EPA) regulations—referred to in this appeal as the “2020 Rule”—applied to and
17 constrained the scope of Ecology’s analysis. The scope of 401 Certification under the 2020 Rule
18 “is limited to assuring that a *discharge* from a Federally licensed or permitted activity will comply
19 with *water quality requirements*.” 40 C.F.R. § 121.3 (2020) (emphases added). “Water quality
20 requirements” under the 2020 Rule are limited to “applicable provisions of §§ 301, 302, 303, 306,

1 and 307 of the [CWA], and state or tribal regulatory requirements for point source discharges into
2 waters of the United States.” 40 C.F.R. § 121.1(n) (2020).

3 Ecology issued the 401 Certification for the Project on May 22, 2023, certifying the Project
4 with conditions and subject to a Water Quality Certification Order. *Ex. JX-1, p. 2*. The
5 401 Certification requires FFP to acquire additional permits, stating that “[a]ll applicable water
6 quality permits required under the Water Pollution Control Act (RCW 90.48), or the federal
7 [CWA], must be obtained by the project proponent prior to discharge.” *Id., pp. 11-12*. Specifically,
8 FFP must submit a complete application for a National Pollutant Discharge Elimination System
9 (NPDES) permit before discharging any wastewater to the Swale Creek drainage. *Id., p. 11*. FFP
10 also must obtain and comply with a surface reservoir permit and a construction stormwater general
11 permit. *Id., pp. 12-13*. And FFP must conduct water quality monitoring in accordance with a Water
12 Quality Monitoring Plan (WQMP) in addition to implementing a dewatering plan and a mitigation
13 and planting plan. *Id., pp. 14-15*.

14 Under the 401 Certification, FFP also would be required to remove and dispose of the
15 contents of a waste disposal site called the West Surface Impoundment (WSI), which is within the
16 CGA Smelter Site. *Id., p. 5; Johnson Testimony, p. 425:2-17*. This includes addressing any
17 contaminated soils and decommissioning and replacing 15 groundwater monitoring wells
18 associated with the CGA smelter. *Ex. JX-1, p. 5*. Cleanup at the WSI must be conducted according
19 to a cleanup action plan (CAP), approved by Ecology, before conducting any ground disturbance
20 construction activities at the CGA Smelter Site. *Id., p. 13*.

1 The 401 Certification also specifies that it “does not authorize any discharge of waters that
2 cause or tend to cause pollution, as determined by Ecology, to waters of the state, including the
3 Swale Creek drainage and discharges to groundwater.” *Id.*, p. 11. FFP also “must provide all
4 known, available, and reasonable methods of prevention, control, and treatment to any discharge
5 of waters from the reservoir, per WAC 173-216, and as approved by Ecology prior to discharge.”
6 *Id.*, p. 12.

7 **2.4. Summary Judgment Orders**

8 The parties filed several motions for summary judgment, which the Board resolved in two
9 orders. In the first order, the Board affirmed that the 2020 Rule applied to Ecology’s
10 401 Certification and that Ecology’s consideration was therefore limited to whether “discharge”
11 would comply with “water quality requirements,” as defined in that rule. *Order on Cross-Mots.*
12 *for Summ. J.*, p. 34. Appellants’ contentions regarding “withdrawal” of water from the Columbia
13 River—which does not constitute a “discharge”—were dismissed on summary judgment because
14 they were beyond the scope of the 2020 Rule. *Id.* Within the scope of the 2020 Rule, however, the
15 Board concluded that genuine issues of material fact existed as to potential discharges into the
16 Columbia River and whether the 401 Certification would satisfy water quality standards in light
17 of Project discharges. *Id.* Legal issue 8, which pertained specifically to arguments regarding
18 withdrawal of water, was dismissed as moot based on the Board’s conclusion that the 2020 Rule
19 limited Ecology’s analysis to “discharge.” *Id.*

20 In the second order, the Board granted summary judgment to Respondents regarding
21 certain water bodies but concluded that genuine issues of material fact precluded summary

1 judgment as to Stream 7, Stream 8, Swale Creek, Pond 1, and Pond 2. *Second Order on Summ. J.*,
2 *p. 22.*

3 The Board held a hearing on the remaining issues, as limited by the summary judgment
4 orders.

5 3. ISSUES

6 The remaining legal issues at the hearing were:

- 7 1. Did the Department of Ecology comply with 33 U.S.C. § 1341(a)(1) and (d) when
8 issuing the Certification?
- 9 2. Does the Certification ensure that the Project complies with other appropriate state
10 laws?
- 11 3. What water bodies was Ecology required to consider under 33 U.S.C. § 1341 (to be
12 defined as “Impacted Waterbodies”)?
 - 13 a. Does the Certification ensure designated uses under WAC 173-201A-600 for
14 Impacted Waterbodies are protected in compliance with the state’s water
15 quality standards?
- 16 4. What existing uses, as defined by WAC 173-201A-020, apply to the Impacted
17 Waterbodies? Does the Certification protect those existing uses as required under
18 WAC 173-201A?
- 19 5. Does the Certification comply with narrative water quality criteria standards in
20 compliance with WAC 173-201A for the Impacted Waterbodies?
- 21 6. Does the Certification comply with numeric water quality criteria standards in
compliance with WAC 173-201A for the Impacted Waterbodies?

1 7. Does the Certification meet the requirements under the state’s antidegradation
2 requirements under RCW 90.48 and its implementing regulations?

3 *Fourth Am. Prehearing Order, pp. 4-5.*

4 **4. PRINCIPLES OF LAW**

5 **4.1. Clean Water Act 401 Certification**

6 The CWA aims to ““restore and maintain the . . . integrity of the Nation’s waters.”” *County*
7 *of Maui v. Haw. Wildlife Fund*, 590 U.S. 165, 170, 140 S. Ct. 1462, 206 L.Ed.2d 640 (2020)
8 (quoting 33 U.S.C. § 1261(a)). As explained above, Section 401 of the CWA generally requires
9 “[a]ny applicant for a Federal license or permit to conduct any activity . . . which may result in any
10 discharge into the navigable waters” of the United States to obtain a certification, or a waiver of a
11 certification, from the state governing the area where the discharge would originate. 33 U.S.C.
12 § 1341(a)(1). A 401 Certification confirms a discharge would comply with all applicable state and
13 federal water-quality standards. *See* 33 U.S.C. § 1341(a), (d); *see also Jefferson County*, 511 U.S.
14 at 707-08.

15 In Washington, the Legislature delegated the authority to issue 401 Certifications to
16 Ecology. *See* RCW 90.48.260. When issuing a 401 Certification, Ecology must set limitations and
17 monitoring requirements necessary to ensure the applicant will comply with all applicable water
18 quality limitations and any other appropriate requirements of state law. 33 U.S.C. § 1341(d).

19 The party challenging a 401 Certification “bears the burden of proving to the [Board], by
20 a preponderance of the evidence, that Ecology’s § 401 certification does not provide reasonable
21 assurance that state water quality standards will be met.” *Port of Seattle v. Pollution Control*

1 *Hearings Bd.*, 151 Wn.2d 568, 592, 90 P.3d 659 (2004); WAC 371-08-485(2)-(3). Mere
2 speculation or evidence raising only the possibility of an occurrence does not meet the
3 preponderance of evidence standard. *Friends of Grays Harbor v. City of Westport*, ELUHB
4 No. 03-001, 2005 WA ENV LEXIS 52, *48-49, COL 5 (Oct. 12, 2005). The “reasonable
5 assurance” standard applicable to a 401 Certification “does not require absolute certainty.” *Port of*
6 *Seattle*, 151 Wn.2d at 600. Rather, a 401 Certification is “inherent[ly] predictive” and “must
7 address future events and the likelihood that those events will result in violations of water quality
8 standards.” *Id.*

9 The Board considers the matter *de novo*, giving deference to Ecology’s expertise in
10 administering water quality laws and on technical judgments, especially where they involve
11 complex scientific issues. *Id.* at 592, 594-95. Similarly, Ecology’s interpretations of water quality
12 statutes and its own regulations are entitled to great weight, unless such interpretation conflicts
13 with the statute’s plain language. *Id.* at 595.

14 **4.2 State Water Quality Requirements**

15 Water quality standards provide “the regulatory basis for the establishment of water-
16 quality-based treatment controls and strategies. . . .” 40 C.F.R. § 131.2. Washington’s water quality
17 standards for surface waters are designed to be “consistent with public health and public enjoyment
18 of the waters and the propagation and protection of fish, shellfish, and wildlife[.]” WAC 173-
19 201A-010(1). The state’s water quality standards consist of narrative criteria protecting beneficial
20 uses of state waters, numeric criteria for conventional pollutants and toxic substances, and an
21 antidegradation policy. *Port of Seattle*, 151 Wn.2d at 590. In Washington, “[a]ll surface waters are

1 protected by numeric and narrative criteria, designated uses, and an antidegradation policy.”
2 WAC 173-201A-010(1)(a). “Based on the use designations, numeric and narrative criteria are
3 assigned to a water body to protect the existing and designated uses.” WAC 173-201A-010(1)(b).

4 “Existing uses” are “those uses actually attained in fresh or marine waters . . . whether or
5 not they are designated uses.” WAC 173-201A-020. “Designated uses” are “those uses specified
6 in [ch. 173-201A WAC] for each water body or segment, regardless of whether or not the uses are
7 currently attained.” *Id.* Designated uses for Washington’s surface waters include: (1) aquatic life
8 uses; (2) recreational uses; (3) water supply uses; and (4) miscellaneous uses. WAC 173-201A-
9 200(1)-(4). The designated use categories span a wide range of water use considerations, including
10 “[s]almonid spawning, rearing, and migration; primary contact recreation; domestic, industrial,
11 and agricultural water supply; stock watering; wildlife habitat; harvesting; commerce and
12 navigation; boating; and aesthetic values.” WAC 173-201A-600(1).

13 Narrative water quality criteria take the form of “a general statement that applies broadly
14 to multiple pollutant types as in ‘no toxics in toxic amounts.’” *Wash. State Dairy Fed’n v. Dep’t*
15 *of Ecology*, 18 Wn. App. 2d 259, 290 n.10, 490 P.3d 290 (2021) (quoting *Am. Paper Inst., Inc. v.*
16 *U.S. Env’tl. Prot. Agency*, 302 U.S. App. D.C. 80, 996 F.2d 346, 348 (1993)). Numeric water quality
17 criteria include parameters such as water temperature, dissolved oxygen, turbidity, total dissolved
18 gas, pH, fine sediment, and toxic substances. *See, e.g.*, WAC 173-201A-200; WAC 173-201A-
19 240. When multiple criteria are assigned for the same water body or at the boundary of water
20
21

bodies protected for different uses, the most stringent criteria must be applied. WAC 173-201A-260(3)(c)-(d).

The antidegradation policy maintains and protects all surface waters and their existing and designated uses against pollution. WAC 173-201A-300(2)(a), (e)(i)-(iii). The antidegradation policy applies three levels of protection for surface waters of the state, two of which are relevant to this appeal. *See* WAC 173-201A-300(2)(e). “Tier I is used to ensure existing and designated uses are maintained and protected and applies to all waters and all sources of pollution.” WAC 173-201A-300(2)(e)(i). “Tier II is used to ensure that waters of a higher quality than the criteria assigned in [chapter 173-201A] are not degraded unless such lowering of water quality is necessary and in the overriding public interest.” WAC 173-201A-300(2)(e)(ii). “Tier II applies only to a specific list of polluting activities.” *Id.*

4.3 NPDES Permits

Separate from 401 Certification, the CWA requires a discharger to obtain an NPDES permit to discharge pollutants from a point source. 33 U.S.C. §§ 1251(a), 1311(a), 1342(a). An entity with an NPDES permit must comply with the applicable state water quality standards, which may be more stringent than federal law requirements. 33 U.S.C. § 1370; 40 C.F.R. §§ 122.4(d),

1 122.1(a)(5). Additionally, state-issued NPDES permits must contain conditions requiring
2 compliance with state water quality standards. 40 C.F.R. § 122.44(d)(1).

3 **5. FINDINGS OF FACT**

4 **1.**

5 **5.1. The Project is designed to avoid leakage or seepage.**

6 Appellants contend that the Project will leak or seep substantial amounts of water into the
7 groundwater, which will eventually flow into the Columbia River and introduce pollutants into the
8 water body. *Conservation Appellants Br., p. 1; Yakama Nation Br., p. 1*. Contrary to Appellants'
9 arguments, the evidence at the hearing demonstrated that the Project's components are designed
10 not to leak or seep water.

11 **2.**

12 Respondents' experts provided credible evidence that the Project was designed to avoid
13 leakage or seepage. Dylan Stankus is an environmental engineer who testified at the hearing as an
14 expert in hydrological modeling and water quality monitoring. *Ex. F-7; Stankus Testimony,*
15 *p. 489:14-21*. Stankus was the project manager for the Project and oversaw development of plans
16 in pursuit of the 401 Certification. *Stankus Testimony, pp. 489:25-490:11*. Stankus explained that
17 both reservoirs would be lined to prevent leakage and seepage. *Id., p. 507:14-22; Ex. A-14, p. 54*.
18 The lower reservoir, which would be located on the CGA Smelter Site, would have two liners of
19 geomembrane separated by a layer of sand—such that if water leaked through the first layer, it
20 would be captured in the second layer and pumped back into the system. *McDonald Testimony,*
21 *pp. 619:25-620:12; Ex. JX-1, p. 4*.

1 3.

2 FFP also presented credible expert testimony that the tunnels connecting the two reservoirs
3 would not leak. Michael Wood is a professional geologist who has worked for 37 years in the field
4 of pumped storage hydropower. *Wood Testimony*, p. 634:18-22. He testified at the hearing as an
5 expert on the geology of pumped storage hydropower projects. *Id.*, p. 637:16-24. For
6 approximately 20 years, Wood was employed at another pumped storage facility, including as the
7 resident engineer responsible for tunnels and reservoirs. *Id.*, pp. 634:25-635:16. Wood explained
8 that the standard practice for constructing tunnels for hydropower projects incorporates steps to
9 prevent leakage—including consolidation or pressure grouting around the tunnel, installation of a
10 permanent liner system in the tunnel, and injecting grout between the final lining and the rock. *Id.*,
11 pp. 646:2-647:6.

12 4.

13 The evidence also showed that during the 401 Certification review, Ecology staff
14 investigated the Project's potential for leakage and seepage and were satisfied that the Project
15 would not leak or seep a significant amount of water. Loreé Randall is Ecology's Section Manager
16 for the Aquatic Permitting and Protection Section and was the team leader on the Goldendale 401
17 Certification. *Randall Testimony*, pp. 312:6-9, 313:2-6. She testified that Ecology dedicated time
18 to learning the construction methodology to determine that the Project would be a closed system
19 that would not leak or require a discharge permit. *Id.*, p. 341:8-12. Ecology's intent at the time of
20 the 401 Certification was to make sure the system would not leak from either the reservoirs or the
21 tunnel, and Ecology ensured the reservoirs would be lined to prevent leakage and equipped with

1 leak detection. *Id.*, p. 341:13-25. Consistent with Randall’s testimony that Ecology investigated
2 potential leakage during the 401 Certification review, Stankus testified that after FFP had applied
3 for 401 Certification, FFP’s engineers made a presentation “to Ecology to discuss the liners and
4 engineering solutions to prevent seepage and leakage.” *Stankus Testimony*, p. 507:14-22.

5 5.

6 Appellants did not provide evidence refuting Respondents’ explanation that the Project is
7 designed to avoid leakage or seepage—instead, they argue in their closing briefs that the Project
8 will leak millions of gallons of water, based on the early assumption found in the EIS that the
9 Project would leak 100 AFY. *See, e.g., Conservation Appellants Br.*, pp. 6-7; *Yakama Nation Br.*,
10 pp. 4-5. Yakama Nation cites testimony from its witness, Ramirez Groszowski, for example, for
11 her understanding that the Project would leak 100 AFY of degraded reservoir water, but she was
12 referring specifically to the EIS. *See Ramirez Groszowski Testimony*, pp. 34:24-35:9 (discussing
13 the EIS, *Exhibit JX-2*). Appellants also cite testimony from Ecology’s witnesses for the assertion
14 that the Project will leak a significant amount of water, but those witnesses either were testifying
15 about the assumption found in the EIS or were involved only in preparing the EIS—not the
16 401 Certification. *See, e.g., Park Testimony*, pp. 174:3-5 (confirming that the EIS estimated
17 approximately 100 AFY); *Haller Testimony*, pp. 203:4-6 (stating that the Project will likely leak
18 reservoir water into the groundwater), 202:10-13 (explaining that the witness did not contribute in
19 any way to the 401 Certification).

1 6.

2 The amount of leakage or seepage described in the EIS and now relied upon by Appellants
3 was only a conservative assumption that was used early in the permitting process. FFP’s Chief
4 Development Officer, Erik Steimle, testified that 100 AFY in seepage was an assumption made in
5 the FERC final license application to calculate the amount of water that FFP would need to
6 purchase. *Steimle Testimony*, pp. 302:17-303:7; *see also Ex. A-14*, pp. 54-55. That assumption was
7 incorporated in the EIS. *See Ex. JX-2*, p. 113.

8 7.

9 Later work by FFP and Ecology, during the 401 Certification review, established that the
10 Project would not leak or seep, or would seep at most only nominal amounts of water. Ecology’s
11 witnesses who were more directly involved in the 401 Certification testified to their understanding
12 that the Project would leak or seep at most minimal amounts of water—if any. *See, e.g., White*
13 *Testimony*, pp. 378:12-379:11; *Randall Testimony*, pp. 313:5-6, 341:3-25; *Roberts Testimony*,
14 pp. 389:6-18, 397:20-25; *see also Johnson Testimony*, pp. 447:25-448:14 (explaining that
15 Ecology included mitigation for seepage because “[a] project of this scale . . . hundreds of acres
16 with thousands of linear feet of a very broad 29-foot-diameter tunnel will have some seepage”).
17 The fact that Ecology had better developed its understanding of the Project’s potential for leakage
18 or seepage during the 401 Certification review is consistent with testimony from an Ecology
19 witness who worked on the 401 Certification and explained that Ecology has more information
20 and more refined plans at the time it conducts a 401 Certification compared to the scope used for
21 an EIS. *White Testimony*, p. 378:12-17.

1 8.

2 To support the argument that the Project would negatively affect water resources,
3 Appellants offered evidence regarding the effects that diminished water quality could have on
4 already threatened fish stocks. Keely Murdoch, the hydro-system oversight coordinator for the
5 Yakama Nation Fisheries Resource Management, testified that several stocks, including Snake
6 River Spring, Summer, and Fall Chinook as well as Mid-Columbia River Steelhead, are listed
7 under the Endangered Species Act (ESA). *Ex. A-30; Murdoch Testimony, p. 225:10-17.* Murdoch
8 stated that Steelhead in the Columbia River are currently listed as “threatened” under the ESA,
9 meaning the species is in decline and its habitat needs to be protected. *Murdoch Testimony,*
10 *p. 231:6-20.* Regarding the Snake River Fall Chinook, Murdoch explained that only one of the
11 three historical populations remains, and that population is threatened by hydropower, loss of
12 habitat, and diminished water quality. *Id., pp. 241:12-242:10.*

13 9.

14 Lake Celilo and Lake Umatilla—parts of the Columbia River—are critical habitat for
15 Snake River Fall Chinook, which Murdoch explained means that the habitat is necessary for
16 recovery of the species. *Id., pp. 242:24-243:12.* Lake Umatilla is listed under 303(d) of the CWA
17 because it does not meet standards for temperature, pesticides, and polychlorinated biphenyls in
18 tissue. *See Ex. JX-4, p. 32.* And Lake Celilo exceeds water quality standards for temperature and
19 total dissolved gas. *Id.; Murdoch Testimony, p. 257:12-19.* Murdoch opined that if water quality
20 worsens beyond its current condition, neither Lake Celilo nor Lake Umatilla would be able to meet

1 their designated uses, such as fish spawning, rearing, and migration. *Murdoch Testimony*,
2 pp. 256:21-257:1, 258:23-259:1.

3 10.

4 While Appellants submitted evidence of the current threats to fish stocks, they have not
5 shown that the Project will leak or seep significant amounts of water, which would potentially
6 diminish water quality and further threaten those fish stocks. Instead, Appellants rely on the
7 assumption that the Project will leak millions of gallons of water per year. *See, e.g., Yakama Nation*
8 *Br., p. 18* (“[T]his Project could leak more than 30 million gallons of polluted reservoir water into
9 the Columbia River each year through its tunnels and nobody would know it.”); *Conservation*
10 *Appellants Br., p. 8* (“The millions of gallons of water projected to leak from the Project each year
11 will be discharged into groundwater aquifers.”).

12 11.

13 The Board finds that the testimony from FFP’s experts supporting that the Project would
14 not leak was credible and more persuasive than the testimony offered by Appellants’ witnesses,
15 who principally relied on the assumption in the EIS that the Project would leak or seep 100 AFY.
16 At most, the evidence indicates there may be a nominal amount of seepage from the Project. *See,*
17 *e.g., Johnson Testimony, pp. 447:25-448:14; White Testimony, pp. 378:12-379:11.* But the record
18 does not support Appellants’ assertion that the Project is likely to leak a significant amount of
19 water and potentially diminish water quality.

12.

5.2. The 401 Certification includes conditions to protect water quality in the unlikely event of significant leakage or seepage.

While the Board finds that the Project as designed and considered during the 401 Certification review is not likely to result in significant leakage or seepage, conditions in the 401 Certification and features of the Project design exist to prevent detrimental effects on water quality if water in fact escaped Project components.

13.

First, FFP would be required to monitor and treat the water within the Project to meet state water quality standards. Specifically, the 401 Certification requires FFP to implement a WQMP for reservoir water and submit monitoring results to Ecology. *Ex. JX-1, pp. 14-16; Ex. R-3, pp. 9-15*. Under the WQMP, FFP would monitor specific contaminants as well as total dissolved solids and pH. *Ex. R-3, pp. 11-14*. The WQMP would require FFP to monitor the parameters set by Washington State for surface waters, as well as oil and grease (due to potential contamination from contact with Project turbines), and contaminants of concern associated with the WSI. *Stankus Testimony, pp. 502:18-503:8; see also Ex. R-3, p. 11* (“Considering there will be no public access to the Project’s reservoirs, the Project will adhere to Ecology Water Quality Standards for Surface Waters of the State of Washington (WAC 173-201A).”). Stankus opined that FFP would be aware of water quality concerns before an exceedance occurred because monitoring typically involves reviewing trends of concentration data. *Stankus Testimony, pp. 504:20-505:5*.

14.

Second, FFP would be required to promptly notify Ecology and take action if water within the system exceeded state quality standards. If monitoring indicates that a water quality standard was exceeded, FFP would be required to inform Ecology within 72 hours and take measures including adaptive management, with Ecology's approval. *Ex. R-3, p. 15; Stankus Testimony, p. 521:19-23*. If FFP's efforts do not address the concern, Ecology also could take enforcement action or require FFP to obtain additional permits. *Randall Testimony, p. 322:7-13*.

15.

Third, the Project's design incorporates a leak detection system to provide notice if leakage does occur. *Id., pp. 322:24-323:3*. And, if the Project leaks, Ecology would consider additional measures, such as requiring FFP to conduct additional water treatment, implement more steps to prevent leakage, or obtain a waste discharge permit. *See id., p. 323:6-17; Roberts Testimony, p. 410:8-18; Ex. JX-1, pp. 11-12*.

16.

Appellants contend that significant amounts of water could leak into the groundwater from the Project's tunnels without Ecology or FFP being aware, noting that leakage from the tunnels would not be directly monitored. *Yakama Nation Br., p. 18; Conservation Appellants Br., pp. 17-18*. This argument ignores the fact that, because the Project would be a closed-loop system, FFP would be able to detect if any water unexpectedly leaks from any part of the system. The only anticipated causes of water loss to the system are evaporation and discharge of water into a mitigation stream—both of which can be calculated. *Johnson Testimony, pp. 448:19-449:11*. FFP

1 would therefore be able to monitor leakage because it would cause an unexpected increase in water
2 loss. And if seepage or leakage resulted in increased movement of groundwater, an increase in
3 water quantity or change in water quality also would be detected in the monitoring network. *Id.*,
4 *pp. 446:18-447:2, 449:12-16.*

5 17.

6 The Yakama Nation also argues that the Project components will leak water that is polluted
7 with contaminants from the intake pond and degraded from evaporative cycles and contact with
8 asphalt in the Project's conveyance tunnels. *Yakama Nation Br.*, p. 6. However, this argument does
9 not reflect the persuasive evidence that the Project components are designed not to leak, as
10 discussed above in Section 5.1, and the fact that reservoir water would be required to meet state
11 water quality standards. *See id.*, p. 8 (contending that the WQMP is limited to monitoring dissolved
12 solids, nutrients, and heavy metals in the Project reservoir "rather than providing assurance that
13 the 100 AFY of leakage will not adversely affect aquatic life in the Columbia River").

14 18.

15 The Yakama Nation also contends that the Project will exacerbate movement of
16 groundwater contaminated from the CGA Smelter Site into the Columbia River. *See id.*, *pp. 13-*
17 *14.* The preponderance of the evidence does not support the Yakama Nation's argument. To the
18 extent the Yakama Nation relies on the assertion that Project components will leak and increase
19 movement of existing CGA Smelter Site contaminants, as discussed above, the Project was
20 designed not to leak. *See* FF 1. Furthermore, even if the Project leaked a nominal amount of water,
21 the evidence does not support the finding that a minimal amount of groundwater leakage could

1 affect movement of contaminated groundwater. The Project's lower reservoir—located on the
2 CGA Smelter Site—would be approximately 4,000 feet from the Columbia River. *Foss Testimony*,
3 *p. 535:15-16*. David Johnson, an engineer and Ecology's site cleanup manager for the CGA
4 Smelter Site, testified that a significant amount of water would need to leak from the Project to
5 move contaminated groundwater. *See Johnson Testimony, pp. 420:11-12, 421:7-11, 465:3-15*.
6 Similarly, Shane McDonald, FFP's expert in hydrogeology who supervised groundwater modeling
7 for the Project, testified that modeling was conducted to determine the effects on groundwater
8 movement if the Project leaked at the lower reservoir, where the WSI is located. *McDonald*
9 *Testimony, pp. 605:20-21, 607:20-608:2, 619:25-620:18*. The modeling showed that if discharge
10 into groundwater were doubled or even increased tenfold in the area of the WSI, there would be
11 no significant change in the direction or velocity of flow coming from the WSI into the area of the
12 contaminated groundwater. *Id., p. 620:16-25*. The Board finds Johnson and McDonald provided
13 credible evidence that a significant amount of water would be required to leak from the Project to
14 affect the flow of any contaminated groundwater. Appellants, in contrast, did not offer modeling
15 or other evidence that a nominal amount of leakage or seepage from the reservoir could affect the
16 movement of contaminated groundwater.

17 19.

18 Additionally, FFP's clean-up of the affected portion of the CGA Smelter Site would be
19 conducted *before* Project construction, such that even if Project components did leak into
20 groundwater, the source of the contamination would have been mitigated. *See id., pp. 616:23-*
21 *617:3; Johnson Testimony, pp. 432:23-433:3*. Johnson testified that the groundwater and surface

1 water cleanup levels in the CAP would be based on water quality standards. *Johnson Testimony*,
2 *pp.* 427:18-428:9. Ecology anticipates that the CAP would be attached to an agreed or consent
3 decree, such that FFP would be legally bound to achieve the cleanup standards in the CAP. *Id.*,
4 *p.* 430:12-17. The CAP would also require compliance monitoring, obligating FFP to show that
5 groundwater cleanup standards have been achieved. *Id.*, *p.* 432:6-9. Ecology expects that removing
6 the waste from the site will expedite the cleanup of the underlying groundwater from the current
7 estimate of 30 to 100 years down to two to ten years. *Id.*, *pp.* 440:11-13, 442:16-20. While the
8 Yakama Nation relies on testimony from its expert that the cleanup plans “will not necessarily
9 specify” removal of all source material within the Project site, *Ramirez Groszowski Testimony*,
10 *p.* 69:10-17, it is undisputed that FFP will be required to meet clean-up standards in the CAP—
11 which will be based on state water quality standards—before the Project is constructed.

12
13 20.

14 The Yakama Nation also claims that because the Project’s conveyance tunnels would drill
15 through a watershed barrier, the Project would permanently shift the hydraulic gradient toward the
16 Columbia River and enable movement of higher groundwater into the Columbia River watershed
17 or into the river. *Yakama Nation Br.*, *p.* 13. However, Respondents presented expert testimony that
18 known engineering measures exist to combat any bridging of aquifers, *see Johnson Testimony*
19 *p.* 457:5-24, and Appellants did not offer any competing evidence showing that such engineering
20 measures would be inadequate.
21

21.

The Yakama Nation also argues that the WQMP fails to account for all the pollutants that are of concern in the CGA Smelter Site. *Yakama Nation Br.*, pp. 17-18. An expert for the Yakama Nation testified that primary contaminants of concern at the CGA Smelter Site include cyanide and that certain areas of the site contain polychlorinated biphenyls (PCBs), among other contaminants. *Ramirez Groszowski Testimony*, p. 47:15-22. The Yakama Nation notes that those pollutants are not listed in the WQMP. *See Ex. R-3*, pp. 11-13. However, Appellants have not offered evidence that those pollutants are present in the areas of the CGA Smelter Site that the Project would impact or that they are present at high enough levels to require monitoring under the WQMP. To the contrary, Stankus testified that cyanide was not included “due to low levels below the current cleanup levels” and that neither cyanide nor PCBs are “currently constituents of concern in that cleanup area of the site.” *Stankus Testimony*, pp. 508:15-509:6. Additionally, the list of contaminants that will be subject to temporary monitoring has not yet been finalized—the contaminants of concern will be determined after Ecology issues the CAP, which will identify contaminants of concern and their cleanup levels for groundwater. *Ex. R-3*, p. 12. Appellants have not shown that the WQMP failed to include relevant pollutants.

22.

The Board finds that, even in the unlikely event that the Project leaks, the Project design and the 401 Certification include adequate measures to protect water quality.

23.

5.3. The 401 Certification requires mitigation of impacts to Stream 7, Stream 8, and Swale Creek.

The Board finds that conditions in the 401 Certification will mitigate the Project's impacts on Stream 7, Stream 8, and Swale Creek.

24.

The Project would affect Stream 7, Stream 8, and Swale Creek. *Ex. R-4, pp. 22-26; R-5, pp. 3-4; White Testimony, pp. 348:17-349:1.* Respondents determined that 891 of the 995 linear feet of Stream 7 located within the Project boundary would be impacted due to the construction of the reservoir and the rock face dam. *Ex. R-4, p. 19; White Testimony, p. 349:7-15.* Likewise, the Project would affect 75 of the 990 linear feet of Stream 8 due to construction of the rock face dam. *Ex. R-4, p. 19; White Testimony, pp. 354:19-24, 355:21-22.* The Project's direct impacts on Stream 7 and Stream 8 would indirectly affect Swale Creek. *Ex. JX-2, p. 106; White Testimony, p. 356:14-19.*

25.

The Board finds that the mitigation channel is designed to offset any loss of functions and values that are anticipated to occur due to the Project's impacts to Stream 7 and Stream 8. *See Ex. R-4, pp. 25-26; Peel Testimony, pp. 480:18-481:8.* Prior to the issuance of the 401 Certification, FFP conducted a stream flow duration assessment to determine the functions and values of Stream 7 and Stream 8. *White Testimony, pp. 356:25-357:9.* Following that assessment, FFP designed a mitigation channel that will be 1,100 linear feet long, four inches deep, and eight inches wide,

1 anticipating that over time water will erode the initial channel width and increase it to about 12-24
2 inches wide. *Ex. R-4, p. 25; White Testimony, p. 357:14-19, 358:12-23.* Consequently, the
3 mitigation channel is 134 linear feet longer than the impacted portions of Stream 7 and Stream 8.
4 *White Testimony, p. 357:14-17.*

5 26.

6 The mitigation channel is designed to have the same or greater hydrogeologic complexity
7 as the existing stream systems in terms of sinuosity, ripples, pools, and runs. *Id., pp. 358:24-*
8 *361:22.* It would convey water, provide habitat for macro invertebrates and existing plants, and
9 facilitate the movement of fine materials. *Ex. R-4, pp. 22-23, 25-26; White Testimony, p. 357:14-*
10 *361:22.* The mitigation channel would replace cobbles to create a similar substrate to that found
11 in existing stream systems, which would slow water flow, reduce erosion, create sinuosity and
12 channel complexity, and provide habitat and microclimate for aquatic species. *Ex. R-4, p. 26;*
13 *White Testimony, pp. 358:24-359:11.* Additionally, a 25-foot buffer would be planted along each
14 side of the stream, composed of two different shrub species, eight grass species, and nine forb
15 species. *Ex. R-4, pp. 23-25; White Testimony, p. 359:12-22.*

16 27.

17 Respondents also showed that the mitigation channel is designed to release water in a
18 manner that mimics the functions of Stream 7 and Stream 8. The mitigation channel would receive
19 storm water flows after precipitation events, which would then feed into Swale Creek. *Ex. R-4, pp.*
20 *25-26; White Testimony, p. 362:1-16.* The stormwater runoff that would have been channeled into
21 Swale Creek through the 63 acres of land excavated to create the upper reservoir would be

1 mitigated through the release of treated water from the upper reservoir into the mitigation channel.
2 *Ex. R-4, p. 26.* This mitigation process would result in no net loss of water in the hydrologic system.
3 *Ex. R-4, p. 26; White Testimony, p. 362:7-16.* The release of water through the mitigation channel
4 would occur eight months out of the year, from October to May. *Ex. R-4, p. 26; White Testimony,*
5 *pp. 362:22-363:5.* Approximately 0.83 acre-feet of water would be discharged from the mitigation
6 channel into Swale Creek during that eight-month period at a rate of ten gallons per minute, over
7 one-half hour to four hours per day. *Ex. R-4, p. 26; Roberts Testimony, p. 391:11-18.*

8 28.

9 Additionally, the 401 Certification addresses temperature requirements for salmon
10 spawning. The 401 Certification mandates that from February 15 through June 1, the seven-day
11 average daily maximum temperature of the reservoir water discharged into the mitigation channel
12 cannot exceed 16 degrees Celsius. *See Ex. JX-1, pp. 13-14; Roberts Testimony, p. 394:13-20.* And
13 the vegetation planted in the mitigation channel's buffer zone would establish a microhabitat,
14 which would create a microclimate to reduce local ambient air temperature and regulate water
15 temperature. *Ex. R-4, p. 28; White Testimony, p. 360:7-13.* Once the vegetation became
16 established, it would help shade the water in the channel from solar radiation, further moderating
17 water temperature within the channel. *White Testimony, p. 360:14-18.* Likewise, the cobbles
18 placed within the channel would create microhabitat and help cool localized water temperatures.
19 *Id., p. 360:19-21.*

29.

The evidence at the hearing also established that the water from the upper reservoir would be treated to meet water quality standards before being discharged into the mitigation channel. The 401 Certification mandates that reservoir water discharged into Swale Creek must be within the pH range of 6.5-8.6 and achieve dissolved oxygen levels of 10 mg/l or 95% saturation. *Ex. JX-1, pp. 13-14.* Ecology explained that these conditions, coupled with temperature requirements discussed in FF 28, “ensure[] compliance with water quality standards to protect surface waters of the state.” *Id., p. 14.* Furthermore, because the water discharged from the upper reservoir into the mitigation channel is considered wastewater from an industrial system, FFP must obtain an NPDES permit and treat, monitor, and discharge the water in accordance with that permit. *Id., p. 11; Ex. R-4, p. 27; Roberts Testimony, pp. 392:1-394:20.* As a part of the NPDES permit process, Ecology would set discharge limits that would maintain water quality standards and impose additional monitoring requirements beyond those established in the 401 Certification. *Roberts Testimony, p. 392:7-13.* This water quality monitoring combined with the distance the water must travel to get to Swale Creek would ensure that the water discharged from the reservoir into the mitigation channel does not degrade Swale Creek’s water quality. *White Testimony, pp. 364:12-365:12; Roberts Testimony, pp. 392:14-19, 393:17-23; Brizendine Testimony, pp. 572:6-573:2.*

30.

Additionally, the mitigation channel would be monitored for five years to ensure it replaces the functions of Stream 7 and Stream 8 and achieves the performance standards identified in the monitoring plan. *White Testimony, pp. 363:6-18; see also Ex. JX-1, pp. 14-15.* If the mitigation

1 channel fell short of performance standards, Ecology would adopt an adaptive management plan
2 to ensure compliance with the monitoring plan. *Ex. JX-1, p. 15; White Testimony, pp. 363:25-*
3 *364:2*. FFP also would conduct water quality monitoring to assess baseline conditions of Project
4 intake water, in-stream conditions at Stream 7 and Stream 8, and discharge criteria for water added
5 to the mitigation channel to ensure it meets state water quality standards before being discharged.
6 *Ex. R-4, p. 31; White Testimony, p. 364:12-22.*

7 31.

8 Appellants argue the 401 Certification will not adequately address the Project’s potential
9 impacts on fisheries and water quality in Swale Creek, but their concerns regarding Swale Creek
10 are primarily focused on the effects of unintentional groundwater discharges—not on intentional
11 discharges from the mitigation channel. *See, e.g., Murdoch Testimony, pp. 268:11-273:18; see*
12 *also Yakama Nation Br., p. 20* (“The Yakama Nation has significant fisheries concerns with the
13 anticipated Project discharge of degraded reservoir water to the Columbia River *through*
14 *groundwater* because both Swale Creek and the Columbia River are already impaired for
15 pollutants and . . . require significant improvement rather than further degradation.” (emphasis
16 added)); *see also Conservation Appellants Br., pp. 11-12* (describing how a significant percentage
17 of discharge will reach navigable waters because of the connection between groundwater and
18 surface waters in the Project area). The Yakama Nation argues that untreated groundwater
19 discharges into Swale Creek could further degrade Swale Creek’s water quality by reducing
20 dissolved oxygen levels, increasing nutrient levels, affecting pH, and increasing temperature,
21 which could compromise salmonid health and habitat. *Yakama Nation Br., p. 19-20; Murdoch*

1 *Testimony, pp. 227:21-239:23, 260:23-273:17.* As discussed in Sections 5.1 and 5.2, however, the
2 Board finds the Project will not leak significant amounts of water and that, if such leakage occurs,
3 the 401 Certification is properly conditioned to protect water quality. And, as the Yakama Nation's
4 witness acknowledged, if reservoir water is treated to address contaminants, then any leakage that
5 could occur would not be considered a discharge of contaminants. *Ramirez-Groszowski Testimony,*
6 *pp. 83:23-84:2.*

7 32.

8 Appellants also provided evidence about the importance of Swale Creek to fish stocks, but
9 they did not show how the mitigation described at the hearing and in the 401 Certification would
10 be inadequate to address any of the Project's impacts on that waterbody. Swale Creek is a surface
11 water body with multiple designated uses, including salmonid spawning, rearing, and migration.
12 *Ex. JX-2, p. 85; Murdoch Testimony, pp. 260:23-261:7.* The Yakama Nation explained that Swale
13 Creek is identified as a minor spawning area for Klickitat Steelhead—meaning it is necessary
14 habitat for species recovery—and that further water quality degradation would impair salmonid
15 species recovery efforts. *Yakama Nation Br., p. 19-20; Murdoch Testimony, pp. 262:10-266:2.*
16 Ecology has designated approximately twelve miles of Swale Creek—from the mouth to Harms
17 Road—as requiring supplemental protection for salmonid spawning and incubation, resulting in
18 more stringent water temperature standards. *Ex. JX-2, p. 85; Murdoch Testimony, pp. 261:8-24.*
19 The lowermost three miles of Swale Creek do not meet water quality standards for temperature.
20 *Ex. JX-2, p. 85.* Murdoch testified that water temperature affects all phases of the salmonid
21 freshwater lifecycle including migration, spawning, incubation, fry emergence, growth and

1 rearing, and smoltification. *Murdoch Testimony*, p. 228:1-8. Murdoch opined that mitigation
2 conditions on surface water discharges were not sufficient because they did not contemplate
3 groundwater leakage into Swale Creek and did not adequately address temporal incubation
4 considerations for salmonid species. *Id.*, pp. 266:8-273:17.

5 33.

6 While Appellants offered evidence of current threats to species in Swale Creek, the Board
7 finds that Appellants did not meet their burden to show that the 401 Certification would be
8 insufficient to address potential impacts from the Project's discharges. Rather, the
9 401 Certification specifically sets requirements for concerns raised by Appellants—including
10 temperature, pH range, and dissolved oxygen levels of all intentional discharges from the
11 mitigation channel into Swale Creek—and FFP's Draft Mitigation Plan requires monitoring
12 parameters for discharge flow rate, temperature, dissolved oxygen, pH, turbidity, and bacteria.
13 *Ex. JX-1*, pp. 13-14; *Ex. R-4*, pp. 31-32. The Board finds that conditions in the 401 Certification
14 are sufficient to address impacts of the Project's discharge.

15 34.

16 **5.4. The Project will not impact Pond 1.**

17 The evidence at hearing showed that Pond 1 will not be impacted by the Project. There is
18 no evidence that the Project will result in discharge to Pond 1. Furthermore, Pond 1 is outside of
19 the Project footprint, and Appellants provided no evidence to contradict Respondents' showing
20 that neither the Project's construction nor its operation would affect the pond. *See White*
21 *Testimony*, pp. 365:17-366:8.

1 35.

2 Any Conclusion of Law deemed properly to be considered a Finding of Fact is hereby
3 adopted as such.

4 Based on the foregoing findings of Fact, the Board enters the following:

5 **6. CONCLUSIONS OF LAW**

6 1.

7 The Board has jurisdiction over the parties and subject matter of this appeal pursuant to
8 RCW 43.21B.110(1).

9 2.

10 **6.1. The Columbia River is not an impacted water body for purposes of the**
11 **401 Certification. (Issue 3)**

12 Issue 3 asks the Board to identify the impacted water bodies that Ecology was required to
13 consider under 33 U.S.C. § 1341. *Fourth Am. Prehearing Order, p. 4.* Section 1341 governs
14 401 Certifications, which, as explained above, were constrained under the 2020 Rule to assuring
15 that a “discharge” would comply with “water quality requirements.”

16 3.

17 Appellants contend that the Columbia River is an impacted water body based on the
18 assertion that the Project will leak or seep millions of gallons of polluted reservoir water into the
19 groundwater, which they argue will transport contaminants into the Columbia River.
20 *See Conservation Appellants Br., pp. 1, 8; Yakama Nation Br., p. 1.*

1 4.

2 As explained above in the Findings of Fact, however, Appellants have not shown that the
3 Project will leak or seep polluted water. To the contrary, the evidence established that the Project
4 is designed not to leak. FF 1, 2, 3, 7, 11. And, because water in the reservoir would be required to
5 meet state water quality standards, Appellants have failed to show that leakage—if any occurred—
6 would contribute to a violation of water quality standards in the Columbia River. FF 12, 13, 17,
7 19. Furthermore, the evidence showed that a negligible amount of seepage or leakage would not
8 affect the flow of groundwater into the Columbia River and potentially exacerbate the flow of
9 existing groundwater contaminants into the river—a substantial amount of leakage would be
10 required, which is not supported by the record. FF 18. Finally, the Project incorporates a leak
11 detection system, and if leakage occurred, Ecology would take remedial action, potentially
12 requiring FFP to obtain additional permits. FF 15.²

13 5.

14 The Conservation Appellants also argue that, even if the Project will not leak polluted water
15 into groundwater that is hydrologically connected to the Columbia River, the 401 Certification is
16 nevertheless fatally flawed because it does not require groundwater monitoring to detect whether
17

18 ² Appellants argue that leakage from the Project into groundwater should be considered the functional equivalent of
19 a direct discharge to the Columbia River, relying on *County of Maui*, 590 U.S. 165. *Conservation Appellants Br.*,
20 pp. 8-13; *Yakama Nation Br.*, pp. 14-16. Appellants' contention that Project discharges constitute the functional
21 equivalent of direct discharges, however, again relies on the incorrect assumption that the Project will leak millions
of gallons of contaminated water into the underlying groundwater. *See, e.g., Conservation Appellants Br.*, p. 13
("Millions of gallons of polluted water to be discharged through the groundwater to the Columbia River are the
functional equivalent of a point-source discharge under *Maui*."). Because the evidence does not show that the
Project will result in leakage to groundwater, there is no basis for considering whether such discharge would be the
functional equivalent of a direct discharge to the Columbia River under *County of Maui*.

1 any leakage in fact occurs. *Conservation Appellants Br.*, p. 19-20. However, the cases that the
2 Conservation Appellants cite for this argument concerned instances where water pollution was
3 likely and courts found that monitoring was necessary. In *Food & Water Watch v. United States*
4 *EPA*, for example, “[t]he record before the EPA showed that leaky containment structures—
5 especially lagoons—are sources of groundwater pollution,” yet the permit included no monitoring
6 provisions for underground discharges. 20 F.4th 506, 517 (9th Cir. 2021). And *Washington State*
7 *Dairy Federation v. Dep’t of Ecology* concerned practices that Ecology acknowledged could lead
8 to surface water discharges and that were allowed under the permits, yet Ecology failed to provide
9 for adequate monitoring of those practices. 18 Wn. App. 2d 259, 300-01, 490 P.3d 290 (2021). In
10 contrast, the record in this appeal demonstrates that the Project components were designed not to
11 leak, and the 401 Certification requires FFP to monitor the water contained within the Project for
12 compliance with state water quality standards. FF 1, 2, 3, 7, 11, 13, . Furthermore, because FFP
13 would know the volume of water in the Project components at a given time as well as the calculated
14 amount of water expected to be lost through evaporation or discharge into the mitigation channel,
15 it would be able to determine whether water is being lost for other reasons, such as leakage or
16 seepage. FF 16.

17 6.

18 Based on the findings in this Order, the Board concludes that the Columbia River is not an
19 impacted water body that Ecology was required to consider in the 401 Certification.

1 7.

2 **6.2. Pond 1 and Pond 2 are not impacted water bodies for purposes of the**
3 **401 Certification. (Issue 3)**

4 The Yakama Nation contends that Pond 1 and Pond 2 are “impacted water bodies” that
5 Ecology was required to consider in its 401 Certification. *See Yakama Nation Br., p. 3.* Under the
6 2020 Rule, the scope of Ecology’s 401 Certification was limited to assuring that a discharge from
7 an activity into a water of the United States would comply with water quality requirements. *See* 40
8 C.F.R. §§ 121.1(f), 121.3 (2020). “Artificial lakes or ponds created by excavating or diking dry
9 land to collect and retain water and which are used exclusively for such purposes as stock watering,
10 irrigation,” are not “waters of the United States.” *See* 33 C.F.R. § 328.3(b)(5).

11 8.

12 The evidence shows that Pond 1 and Pond 2 are not waters of the United States because
13 they are both artificial features created for watering cattle. *White Testimony, pp. 365:20-366:15;*
14 *Peel Testimony, p. 475:6-8.* Additionally, Pond 1 is located outside the Project boundary and the
15 Project will not affect it. FF 34.

16 9.

17 The Board concludes that neither Pond 1 nor Pond 2 is an impacted water body that
18 Ecology was required to consider in its 401 Certification.

10.

6.3. Ecology imposed sufficient conditions regarding Stream 7, Stream 8, and Swale Creek to comply with water quality standards. (Issues 3.a, 4, 5, 6, 7)

As discussed above in Section 5.3, the Project would impact Stream 7, Stream 8, and Swale Creek. The Board concludes, however, that sufficient conditions are imposed in the 401 Certification to comply with water quality standards.

11.

The Prehearing Order identifies five legal issues regarding whether the 401 Certification complies with water quality standards. Issue 3.a asks whether the 401 Certification ensures designated uses under WAC 173-201A-600 for impacted water bodies are protected in compliance with the state's water quality standards. Issue 4 asks which existing uses, as defined in WAC 173-2201A-020, apply to the impacted water bodies and whether the 401 Certification protects those existing uses. Issues 5 and 6, respectively, ask whether the 401 Certification complies with narrative and numeric water quality criteria standards in compliance with WAC 173-201A for the impacted water bodies. Issue 7 asks whether the 401 Certification meets the requirements of the state's antidegradation policy under RCW 90.48 and its implementing regulations.

12.

The designated uses of Swale Creek include salmonid spawning, rearing, and migration; primary contact recreation; domestic, industrial, and agricultural water supply; stock watering; wildlife habitat; harvesting; commerce and navigation; boating; and aesthetic values. *Ex. JX-2, p. 85; Murdoch Testimony, pp. 260:23-261:7.* Ecology designated approximately twelve miles of

1 Swale Creek from the mouth to Harms Road as waters requiring supplemental protection for
2 salmonid spawning and incubation. *Ex. JX-2, p. 85; Murdoch Testimony, p. 261:8-18.* Ecology's
3 designation mandates more stringent water quality standards for water temperature in the
4 designated area. *Ex. JX-2, p. 85.* The lowermost three miles of Swale Creek do not meet applicable
5 water quality standards for temperature and are on the 303(d) list as a Category 5 water body for
6 temperature, which indicates the water is impaired for pollutants and requires significant
7 improvements to support Steelhead populations. *Id.; Murdoch Testimony, pp. 255:9-14, 261:20-*
8 *262:4.*

9 13.

10 As discussed in Section 5.3, FFP is designing a mitigation channel that would discharge
11 water into Swale Creek to mitigate the loss of portions of Stream 7 and Stream 8. *Ex. R-4, pp. 22-*
12 *27; White Testimony, pp. 360:23-362:16.* The evidence established that the mitigation channel
13 would have equal if not greater stream functions and values. *See, e.g., White Testimony, pp.*
14 *356:20-362:16.* The design considers stream complexity, vegetation, stream bed material, and
15 channel length. *Ex. R-4, pp. 25-26; White Testimony, pp. 358:24-359:22, 362:1-3.* The design also
16 specifies the volume of water discharged from the mitigation channel to mimic pre-construction
17 precipitation and runoff. *Ex. R-4, p. 26; White Testimony, p. 362:1-21.* Moreover, the
18 401 Certification requires that all water released into the mitigation stream channel must be treated
19 and meet state water quality standards for Swale Creek prior to discharge. *Ex. JX-1, pp. 11, 13-14*
20 *(water must meet specified water quality criteria and be discharged in accordance with an NPDES*
21 *permit); Roberts Testimony, pp. 392:1-393:23; see also Ex. R-4, p. 27.*

14.

Additionally, as discussed in FF 29 and 33, Ecology's 401 Certification requires that discharges into Swale Creek must meet applicable water quality standards for limiting factors such as pH, dissolved oxygen, turbidity, bacteria, and temperature. *Ex. JX-1, pp. 13-14; see also Ex. R-4, p. 27.* Specifically, the 401 Certification mandates the seven-day average daily maximum temperature value for water discharged from the reservoir into the mitigation channel cannot exceed 16 degrees Celsius from February 15 to June 1. *Ex. JX-1, pp. 13-14.* Ecology's temperature standards are designed to protect Swale Creek's designated uses. *Roberts Testimony, pp. 391:23-395:7.* Likewise, the 401 Certification mandates that water discharged into Swale Creek through the mitigation channel must be within the pH range of 6.5-8.6 and achieve dissolved oxygen levels of 10 mg/l or 95% saturation. *Ex. JX-1, pp. 13-14.* The mitigation channel would be monitored to ensure that the discharged water meets water quality standards and that the channel provides functions and benefits that meet or exceed those previously provided. *Id., pp. 13-15; Ex. R-4, pp. 31-34; Randall Testimony, p. 330:8-12.* Furthermore, any discharge into the mitigation channel must be done in compliance with an NPDES permit, which may only be issued when a discharge will comply with state water quality standards. *Ex. JX-1, pp. 11, 13-14; Ex. R-4, pp. 27, 31; Randall Testimony, p. 319:6-16; see also Port of Seattle, 151 Wn.2d at 603 ("NPDES permits may be issued only where the discharge in question will comply with state water quality standards.").*

15.

Moreover, Ecology's antidegradation review will ensure Swale Creek's water quality is not degraded and all applicable water quality standards are met. For CWA purposes, Ecology is

1 the state water pollution control agency and has the authority to establish and administer permits
2 and certifications under the act. RCW 90.48.260(1). Ecology issues 401 Certifications under its
3 authority established in RCW 90.48.120, which grants it the ability to enforce the conditions of
4 401 Certifications. RCW 90.48.120(1); *Randall Testimony, pp. 316:19-317:1*. Before issuing a
5 401 Certification, Ecology performs a Tier I antidegradation review and imposes conditions on the
6 401 Certification to ensure protection of beneficial uses and water quality standards of the
7 applicable water body. *Randall Testimony, p. 330:13-24*. Tier I antidegradation review ensures
8 that existing and designated uses are maintained and protected. WAC 173-201A-310(1). Similarly,
9 because the Project will be a new NPDES permitted facility, if Ecology determines there is
10 potential to degrade water quality in Swale Creek, Ecology will perform a Tier II antidegradation
11 review to ensure water quality standards are met. *Roberts Testimony, pp. 394:21-395:7*. Tier II
12 antidegradation review ensures that “[w]henver a water quality constituent is of a higher quality
13 than a criterion designated for that water[,] . . . new or expanded actions . . . that are expected to
14 cause a measurable change in the quality of water . . . may not be allowed unless [Ecology]
15 determines that the lowering of water quality is necessary and in the overriding public interest[.]”
16 WAC 173-201A-320(1).

17 16.

18 Appellants did not prove by a preponderance of the evidence that the 401 Certification
19 lacks sufficient mitigation measures to ensure all applicable water quality standards will be met
20 for Stream 7, Stream 8, and Swale Creek. Appellants did not provide detailed analysis of
21 deficiencies in the 401 Certification that would result in a failure to meet water quality standards

1 for Stream 7, Stream 8, and Swale Creek as defined in legal issues 3.a, 4, 5, 6, or 7. Rather,
2 Appellants raised concerns about potential impacts discharges from the mitigation channel into
3 Swale Creek could have on fish and aquatic habitat. *See Murdoch Testimony, pp. 260:23-273:18,*
4 *288:13-289:19.* As discussed in FF 31, Appellants' concerns were primarily focused on
5 unintentional groundwater discharges from the upper reservoir into Swale Creek, and, eventually,
6 the Columbia River. However, for the reasons explained in Sections 5.1 and 5.2, the Board found
7 the Project is not likely to leak, and in the unlikely event of leakage, the 401 Certification contains
8 sufficient conditions to protect water quality.

9 17.

10 To the extent Appellants challenge the 401 Certification because it relies on future permits
11 or on potential adaptive management or compliance actions, the Board rejects those arguments.
12 401 Certifications are not required to guarantee absolute certainty, and it is permissible for
13 401 Certifications to rely in part on permitting and actions such as adaptive management that will
14 take place only if needed. *See Port of Seattle, 151 Wn.2d at 606.*

15 18.

16 The Board concludes, therefore, that Ecology imposed sufficient conditions regarding
17 Stream 7, Stream 8, and Swale Creek to ensure compliance with all applicable water quality
18 standards.

19.

6.4. The 401 Certification ensures that the Project would comply with other appropriate state laws. (Issue 2)

Issue 2 concerns whether the 401 Certification ensures that the Project would comply with other appropriate state laws. In their closing briefs, Appellants did not identify state laws that would fall under this issue. The Board resolves issue 2 in favor of Respondents.

20.

6.5. Ecology complied with 33 U.S.C. § 1341(a)(1) and (d) when issuing the 401 Certification. (Issue 1)

Issue 1 asks whether Ecology complied with 33 U.S.C. § 1341(a)(1) and (d), statutory provisions governing 401 Certifications and limitations required to be included in 401 Certifications. Aside from the more specific issues discussed in the remainder of this Order, Appellants have not offered argument or authority supporting the conclusion that Ecology failed to comply with these provisions.

21.

Accordingly, the Board concludes that Ecology complied with 33 U.S.C. § 1341(a)(1) and (d).

22.

Any Finding of Fact deemed to be a Conclusion of Law is hereby adopted as such.

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7. CONCLUSION

After considering the evidence and arguments of the parties, the Board concludes that the water bodies Ecology was required to consider in preparing the 401 Certification—as limited by the 2020 Rule—were Stream 7, Stream 8, and Swale Creek. Appellants have not met their burden of showing that the 401 Certification will not meet its purpose under the 2020 Rule: assuring that discharge from the Project will comply with water quality requirements. *See* 40 C.F.R. § 121.3 (2020).³ The Board concludes that Ecology complied with 33 U.S.C. § 1341(a)(1) and (d) in issuing the 401 Certification.

Having so found and concluded, the Board enters the following:

³ In their closing briefs, each party asked the Board to determine whether the 401 Certification provides “reasonable assurance” that the Project will comply with water quality standards. *See Conservation Appellants Br.*, p. 20; *Yakama Nation Br.*, p. 2; *Ecology Br.*, p. 1; *FFP’s Br.*, p. 2. In this Order, the Board primarily uses the language found in the 2020 Rule, which asks whether “a Federally licensed or permitted activity *will comply* with water quality requirements” and does not include the term “reasonable assurance.” *See* 40 C.F.R. § 121.3 (2020) (emphasis added). The EPA used the term “will comply” rather than “reasonable assurance” to follow the language that Congress chose when it enacted Section 401, but the agency explained it had no reason to conclude that this language difference would “materially change the way in which certifying authorities, including the EPA, process certification requests, so long as certifying authorities act in good faith and in accordance with CWA section 401.” 85 Fed. Reg. 42,210, 42,278 (July 13, 2020). The Board notes that it does not find any material difference between the terms “will comply” and “reasonable assurance,” as used in this appeal.

