



Public Notice

DEQ Requests Comments on Proposed Water Quality Certification for Albany Hydroelectric Project

Date posted: 3/6/2026

The Oregon Department of Environmental Quality invites the public to provide written comments on a proposed issuance of a water quality certification for the City of Albany, Oregon Hydroelectric Project, known officially as a Clean Water Act Section 401 water quality certification.

How to provide public comment

Facility name: Albany Hydroelectric Project

Permit type: FERC Project P-11509 and P-15342

Comments due by: April 6, 2026 at 5 p.m.

Submit written comments:

By mail: Valerie Thompson, Oregon DEQ
700 NE Multnomah St, Suite 600, Portland OR
97232

[Your DEQ Online](#)

Summary

The City of Albany operates a small-scale hydropower project at the Vine Street drinking water treatment and distribution plant. The Albany Hydroelectric Project generates electricity using the same water diversion system that supplies water to the Vine Street Water Treatment Plant. The existing hydroelectric project has a minor hydropower license from the Federal Energy Regulatory Commission that was issued in 1998, expiring in 2048. The existing license FERC Project P-11509, includes all aspects of the water diversion system in addition to the hydropower generating equipment at Vine Street. The city is seeking authorization from FERC to continue operations of the small hydropower project under a new type of authorization that would reduce the project boundary to include only the hydropower generating equipment and be licensed under FERC Proposed Project P-15342. Albany would continue to implement environmental measures in the operation of the hydropower project and water diversion system that are expected to protect fish and water quality. DEQ is proposing to issue a water quality certification for the surrender of the existing license P-11509 and new authorization as a conduit exempt facility proposed as FERC Project P-15342.

About the project

The Albany Hydroelectric Project is located on the Calapooia River in Albany at about river mile 1, just upstream of the confluence with the Willamette River. The project boundary for the existing hydropower license P-11509 consists of: the historic Vine Street Water Treatment Plant; a run-of-the-river diversion dam (Lebanon Diversion Dam) on the South Santiam River; a fish ladder and a fishway located at the diversion dam; fish screens located at the diversion dam; headgates and flow-control structures; an 18-mile-long earthen canal known as the Albany-Santiam Canal; and hydropower generating equipment located at the Vine Street Water Treatment Plant. FERC issued the hydropower project license to the City of Albany in 1998. The city constructed the fish passage facilities and fish screen facilities at the intake into the canal as part of their FERC license obligations and began generating electricity after building those structures.

Proposed Action

On Jan. 31, 2024, the City of Albany submitted two concurrent applications to FERC. One application requests the surrender of the existing license for its hydroelectric generating facility at Vine Street and the associated water diversion and conveyance structures. The other concurrent application requests a type of authorization called a “small conduit exemption” that would allow continued operation of the hydroelectric generating components. The project boundary under the conduit exemption would be limited to the power generation equipment at the water plant, the diversion structure conveying water from the Albany-Santiam Canal to the generating equipment, and the discharge of the water from the hydropower turbine via draft tubes into the Calapooia River. Should the conduit exemption be approved by FERC, Albany would operate the Vine Street hydroelectric facility in the same manner as required by the existing license. Albany has agreed to implement the conditions of a Memorandum of Agreement, or MOA, negotiated among and signed by the city, DEQ, Oregon Department of Fish and Wildlife, Oregon Water Resources Department, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Confederated Tribes of Grand Ronde. The MOA requires the city to retain oversight and responsibility for environmental, fisheries and water quality protections that exist as part of the licensed Project P-11509 and would continue to be implemented by the city should the project be classified by FERC as a conduit exempt facility, which would be issued as Project P-15342. These required Environmental Measures stipulated in the MOA are both part of Albany’s DEQ application for certification and included as part of DEQ’s proposed Clean Water Act Section 401 Water Quality Certification.

Calapooia River

According to DEQ’s 2024 Draft Integrated Report data, there are several Category 5 impairments for the Calapooia River in the project vicinity – Shedd Slough to confluence with Willamette River – under Section 303(d) of the Clean Water Act. These include:

- Dissolved oxygen during spawning;
- iron as an aquatic life toxic;
- and phosphorus.

This assessment unit also has a Category 4 impairment for temperature year-round.

Much of the recent data available for purposes of DEQ’s water quality assessment for the Calapooia River originate from a sample point where Queen Avenue crosses the river, Sample Point ID 11180-ORDEQ.

South Santiam River

According to DEQ’s 2024 Draft Integrated Report data, the primary Category 5 impairments for the South Santiam River from Foster Dam to the confluence with the North Santiam River include:

- Temperature, listed for failing to meet standards for year-round temperature and spawning temperature to support aquatic life;
- and, BioCriteria.

The South Santiam assessment unit also has Category 4 impairments for methylmercury, identified due to levels in fish tissue that exceed human health criteria.

Albany-Santiam Canal

The Albany-Santiam Canal is not directly assessed as part of DEQ’s Integrated Report process.

The Calapooia and South Santiam rivers are included in the Willamette Subbasins Total Maximum Daily Load – Upper Willamette Subbasin, which was originally issued in 2024 to address updated temperature criteria and amended in May 2025. The 2006 TMDL for the Willamette River related to bacteria impairments, which also included temperature, continues to include load allocations for point and nonpoint sources, including forestry, agriculture, and urban runoff. Implementation of the 2006 TMDL is coordinated through Water Quality Management Plans developed by local partners and Designated Management Agencies. The Calapooia River is also included in the 2019 Willamette Basin Mercury TMDL, although DEQ documented the Calapooia River as attaining for this parameter in the 2024 Integrated Report.

Authority to modify certifications

Oregon Administrative Rule 340-048-0050(1)(d) allows DEQ to modify or revoke a certificate if “changes in conditions regarding the activity or affected waterways since the certification was issued affect or might affect compliance with water quality standards and requirements”.

What does a water quality certification do?

In Oregon, DEQ has the sole authority under Section 401 of the Clean Water Act to issue a Section 401 water quality certification. The applicant must identify effects that the proposed operation will have on water quality and DEQ may propose conditions to ensure that water quality standards will still be met. Should FERC authorize the conduit exemption, DEQ will work closely with Albany to implement the conditions contained in the Section 401 water quality certification.

What legal authorities apply?

- Federal Clean Water Act
- Oregon Revised Statutes 468B
- Oregon Administrative Rules Chapter 340, Divisions 041 and 048
- Code of Federal Regulations, Part 121

How could the project affect water quality?

As a conduit exempt hydropower facility, Albany will continue to operate the hydropower project in the same manner as currently authorized, and no new construction is proposed. To generate hydropower at Vine Street, Albany will continue to utilize water diverted from the South Santiam River, delivered via the Albany-Santiam Canal. When hydropower is being generated, water is discharged to the Calapooia River via operation of the hydroelectric turbine. Even when hydroelectric operation is curtailed, some water continues to be discharged to the Calapooia from the Albany-Santiam Canal due to water bypassing other users along the canal or from stormwater runoff into the canal.

Should FERC deny either of Albany’s applications, the City would withdraw the surrender application and continue to implement their current license requirements and the applicable conditions of DEQ’s 1995 water quality certification until such time that their FERC license is reauthorized or otherwise modified. As part of the FERC conduit exemption application and as part of the 401 certification application, Albany agreed to implement Environmental Measures stipulated by the MOA that include maintaining fish passage facilities at the Lebanon Diversion Dam on the South Santiam River, and will abide by other operational limits to protect fish and water quality.

DEQ considered the ways in which the proposed action may affect existing water quality. DEQ’s proposed water quality certification requires Albany to implement the required Environmental Measures of the MOA and to submit regular reports to DEQ regarding compliance with these measures. If DEQ determines the project causes a violation of Oregon’s water quality standards, DEQ can require Albany to implement additional measures to reduce impacts on water quality through an adaptive management approach.

What happens next?

To submit comments electronically, please visit Your DEQ Online. To submit a comment through Your DEQ Online, you can either set up an account by clicking “Register Account” or submit a comment without an account by clicking “Public Records and Services.” If you want to attach a file with your comment, you’ll need to create an account.

Once in the system, you may search for the public notice using the project name listed above or filtering the results by selecting “401 – Hydropower” as the Environmental Interest. Click the blue information ‘i’ in the far-right column of the project, and then select the tab labeled “comments.”

DEQ may hold a public hearing on the proposal if one is requested by 10 or more people or an organization representing 10 or more members. DEQ will review and consider all comments received. Following consideration of public comment, the certification may be issued as proposed, modified or denied.

You will be notified of DEQ's final decision if you submit written comments during the comment period. Otherwise, if you would like to receive notification, please contact DEQ Statewide 401 Hydropower Coordinator Valerie Thompson at 971-269-8293 or valerie.thompson@deq.oregon.gov.

For more information

Find more information by reviewing draft permit documents attached to this notice or contact Valerie Thompson at valerie.thompson@deq.oregon.gov with questions or to view documents in person at a DEQ office. [Sign up to receive information](#) about future 401 certification projects. Visit the [Your DEQ Online Help page](#) for more information on how to access public notice documents and submit comments through this platform.

Non-discrimination statement

DEQ does not discriminate on the basis of race, color, national origin, disability, age, sex, religion, sexual orientation, gender identity, or marital status in the administration of its programs and activities.

For translation and other formats, visit DEQ's [Civil Rights and Environmental Justice page](#).

PUBLIC NOTICE DRAFT
Oregon Department of Environmental Quality
Clean Water Act § 401 Water Quality Certification Conditions
for the City of Albany, Oregon Hydroelectric Project
Licensed as FERC No. P-11509; Proposed Conduit Exemption P-15342
Calapooia River, Linn County, Oregon
FEBRUARY 2026

Upon Federal Energy Regulatory Commission (FERC) issuance of a conduit exemption authorizing continued operation of the Albany, Oregon Hydroelectric Project (Project) at Vine Street (P-15342) and its approval of the surrender of the existing license of P-11509, the City of Albany (Albany) must comply with the following § 401 Certification conditions as established by the Oregon Department of Environmental Quality (DEQ).

1. Project Operations

Throughout the duration of the conduit exemption, Albany will operate the Project consistent with its described operations in the Application for Exemption for Small Conduit Hydroelectric Facility (application) and all of the requirements identified in Exhibit A to the Memorandum of Agreement (MOA) (attached hereto as Exhibit A), which is incorporated herein by reference in its entirety. To the extent that any conflict exists between Albany's application and the MOA, the MOA shall control.

The MOA provides the complete details of requirements for implementation of each of the following conditions:

- a. Albany will continue to operate and maintain the previously constructed vertical plate juvenile fish screen and bypass facility at the Albany-Santiam Canal (Canal) intake as described in Exhibit A.
- b. Albany will continue to operate and maintain the previously constructed river right bank fishway at the diversion dam as provided in Exhibit A.
- c. Albany will continue to operate and maintain the previously constructed river left bank fishway at the diversion dam as provided in Exhibit A.
- d. Albany shall submit any modification proposed for any of the fish passage structures or operations for review and approval by Oregon Department of Fish and Wildlife (ODFW), National Marine Fisheries Service (NMFS) and US Fish and Wildlife Service (USFWS).
- e. Albany will cease diversion of water into the Canal for hydropower generation purposes when such diversion would cause flow in the South Santiam River to fall below 1100 cubic feet per second as measured at the

U.S. Forest Service (USFS) stream gage at the Waterloo Station and provided in Exhibit A.

- f. Albany will continue to monitor South Santiam River flows at the Waterloo Station and maintain records of compliance with the required flow limitation described in Exhibit A.
- g. Albany will evenly ramp diversion flows during start-up and shut-down of the facilities that are the subject of the conduit exemption over the course of one hour for the protection of aquatic resources below the Albany-Santiam canal intake as provided in Exhibit A.
- h. Albany will continue to provide diversion flows to Marks and Hospital Sloughs and submit an annual report summary to the Governmental Parties as provided in Exhibit A.
- i. Following FERC's issuance of the conduit exemption, by January 31 and by January 31 of each year thereafter, Albany will provide an annual report to the Governmental Parties (ODFW, NMFS, USFWS, and DEQ) that summarizes the mitigation and monitoring activities and discusses any deviations from the requirements listed in Exhibit A that occurred during the prior calendar year.
- j. Albany agrees to perform reasonably diligent inspections of facilities described in Exhibit A. Albany shall take action as described in the MOA to respond to situations in which fish or wildlife are being killed, harmed or endangered by any of the facilities described in Exhibit A.
- k. Albany is required to meet with the Parties (ODFW, NMFS, USFWS, Confederated Tribes of the Grand Ronde of Oregon, and DEQ) in each of the succeeding 5 years to discuss implementation of the Environmental Measures of the MOA.

2. Turbidity

Albany shall provide notice to DEQ at least two business days in advance of restarting the turbine after any pause longer than 365 days and Albany shall implement visual water quality monitoring upon resumption of hydropower generation at any time hydropower generation has been continuously paused for more than 365 days. The visual water quality monitoring must, at a minimum, include the following measures:

- a) Upon planned restart of turbine operation, the City shall begin visual monitoring no more than two (2) hours prior to restart to capture baseline/background conditions; immediately at turbine restart (at the zero hour); and every 2 hours

thereafter for the first 8-hours of start-up according to the monitoring details in Table 1.

- b) Visual monitoring shall be conducted by an official staff or designated representative with demonstrable experience in water quality monitoring.
- c) Photographic documentation shall be obtained at a suitable vantage point for the discharge area in the Calapooia River, such as the SW Bryant Way bridge.

Table 1 - VISUAL TURBIDITY MONITORING		
Establish monitoring point and collect initial baseline visual data no more than 2 hours prior to turbine restart		
Monitoring Result	Action	Next Steps
No plume observed	Continue to monitor every 2 hours	Continue to monitor every 2 hours for a total of 4 observations over 8 hours.
Plume observed	Implement BMPs & continue to monitor every 2 hours	Consult with DEQ staff for action required to address any visible turbidity plume more than 4 continuous hours in duration

- d) Record all turbidity monitoring data collected, which must include: the location, date, time, and photograph for each observation.
- e) Prepare a narrative report discussing monitoring, actions taken, and the effectiveness of the actions. The narrative must also include documentation of any maintenance of the turbine that has been conducted consistent with the amount of time the turbine has been out of operation; maintenance shall be completed before the turbine returns to operation after any period of 365 days or more.
- f) If turbidity monitoring at the discharge point cannot be conducted due to dry conditions in the Calapooia River, the Applicant must provide photo documentation with a date and time stamp.
- g) Submit all notifications and turbidity monitoring records at the end of monitoring event to 401certifications@deq.oregon.gov. Include the FERC project number in the email subject line.

3. Temperature

As part of DEQ’s Temperature Total Maximum Daily Load (TMDL) for the Willamette River Subbasins, Albany is named as a Designated Management

Agency with responsibility to prepare a TMDL Implementation Plan associated with continued operations at the Lebanon Dam. Albany must develop and submit an approvable Implementation Plan to DEQ according to the applicable timelines and maintain compliance with the conditions of the Implementation Plan.

4. Protection of Beneficial Uses; Compliance with other Requirements of State Law

Protection of beneficial uses and compliance with other requirements of state law shall be met through implementation of the conditions of the MOA. Throughout the duration of the time Albany is authorized to operate a hydropower project, regardless of whether hydropower is generated, Albany must adhere to and implement each of the Environmental Measures identified in the MOA.

5. Adaptive Management

If DEQ determines available monitoring data indicates the project is causing or contributing to a violation of any water quality criteria, including but not limited to biocriteria, dissolved oxygen, pH, turbidity, or TDG, Albany shall develop and propose measures to address the violation as part of a water quality adaptive management plan.

- a. If DEQ determines monitoring data indicates that the project is causing or contributing to a violation of pH, DO, TDG or other water quality criteria, then within 120 days of DEQ notifying Albany of this exceedance, the City shall submit to DEQ a proposed adaptive management plan to address compliance with applicable criteria and allocations.
- b. Following DEQ approval, Albany shall implement the plan in accordance with the approved plan terms and schedule, including any modifications made to the plan by DEQ as a condition of its approval.
- c. If DEQ determines additional monitoring demonstrates that the project does not cause or contribute to violation of water quality criteria, the DEQ may allow Albany to cease monitoring for a period of time.

6. Spill Prevention Control and Countermeasures Plan

Albany must implement and maintain at all times a current Spill Prevention Control and Countermeasures Plan. In the event of a spill or release or threatened spill or release to waters of the state, Albany must immediately implement the plan and notify Oregon Emergency Response System (OERS) at 1-800-452-0311. If Albany becomes aware that the project may be causing a water quality violation due to spills or releases that results in distressed or dying fish, Albany must immediately:

- a. Cease operations of the hydropower project;
- b. Take appropriate corrective measures to prevent environmental damage;
- c. Collect water samples; and
- d. immediately notify DEQ, ODFW, and OERS.
- e. Albany shall manage work and staging areas in a manner that prevents the introduction of sediment, wastes, or hazardous materials into waters of the state in accordance with an Erosion and Sediment Control Plan.

7. General Conditions

- a. § 401 Certification Modification: Without limiting DEQ's discretion to take other actions in accordance with OAR Chapter 340, Division 48, and, as applicable, 33 USC 1341, DEQ may modify the Certification to add, delete, or modify Certification conditions as necessary and feasible to address:
 - i. Adverse or potentially adverse project effects on water quality or designated beneficial uses that did not exist or were not reasonably apparent when this Certification was issued;
 - ii. TMDLs;
 - iii. Changes in water quality standards;
 - iv. Any failure of Certification conditions to protect water quality or designated beneficial uses when the Certification was issued; or
 - v. Any change in the project or its operations that was not contemplated by this Certification that might adversely affect water quality or designated beneficial uses.
- b. Other Federal Permits: Upon applying for any federal license or permit authorizing a discharge to waters of the United States other than the new FERC license, Albany must provide written notice of such application and of any proposed changes or new activity requested to be authorized under the application since issuance of this § 401 Certification. DEQ will notify Albany and the applicable federal agency either that: (1) this § 401 Certification is sufficient for purposes of the federal license or permit; or (2) in light of new information related to the activity requested to be authorized under the application that may result in water quality impacts, there is no longer reasonable assurance of the activity's compliance with state water quality standards. In the latter event, DEQ will consider the new information, solicit and consider public and agency comment as required by law, and issue a 401 certification determination for purposes of the federal license or permit.
- c. Project Changes: Albany must notify DEQ of any change in ownership or to the project, including changes to project structures, construction,

operations, and flows. Albany must obtain DEQ review and approval before undertaking any such changes to the project that might affect water quality.

- d. Project Repair or Maintenance: Albany must obtain DEQ review and approval before undertaking project repair, rehabilitation, or maintenance activities that might affect water quality. DEQ may, at City of Albany's request, approve specified repair and maintenance activities on a periodic or ongoing basis.
- e. Project Inspection: Albany must allow DEQ such access as necessary to inspect the project area and project records required by this Certification at reasonable times as necessary to monitor compliance with § 401 certification conditions.
- f. Posting of § 401 Certification: Albany must post a copy of these certification conditions in a prominent location in the Vine Street Powerhouse.
- g. Water Quality Standards Compliance: Notwithstanding the conditions of this certification, no wastes will be discharged and no activities will be conducted which will violate state water quality standards.

Attachment A – Memorandum of Agreement

MEMORANDUM OF AGREEMENT

**FOR THE CITY OF ALBANY EXEMPTION FOR SMALL CONDUIT
HYDROELECTRIC FACILITY**

AMONG

CITY OF ALBANY, OREGON

**UNITED STATES FISH AND WILDLIFE SERVICE
NATIONAL MARINE FISHERIES SERVICE**

OREGON DEPARTMENT OF FISH AND WILDLIFE

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

**CONFEDERATED TRIBES OF THE GRAND RONDE COMMUNITY OF
OREGON**

This Memorandum of Agreement including attached Exhibit A incorporated in and made a part of this Memorandum of Agreement (referred to collectively as the "Agreement") is made by and among the City of Albany, Oregon, a municipal corporation of the State of Oregon ("Albany"), United States Fish and Wildlife Service ("USFWS"), National Marine Fisheries Service ("NMFS"), Oregon Department of Fish and Wildlife ("ODFW"), Oregon Department of Environmental Quality ("ODEQ"), and the Confederated Tribes of the Grand Ronde Community of Oregon ("CTGR"), each of which, once having signed this Agreement, are referred to individually as a "Party" and collectively as the "Parties." USFWS, NMFS, ODFW and ODEQ (but not Albany or CTGR who are also governmental entities) may be referred to collectively as the "Governmental Parties." USFWS and NMFS may be referred to as the "Federal Governmental Parties." ODFW and ODEQ may be referred to collectively as the "State Governmental Parties."

RECITALS

A. The Federal Energy Regulatory Commission ("FERC") issued Albany a Minor Hydropower Production License, Project Number 11509-000, dated October 23, 1998 (85 FERC ¶ 62,046) ("License"). Albany owns and operates the Minor Hydropower Production Facility ("Project") pursuant to the License.

Attachment B

Names and addresses of contiguous property owners as provided by the applicant

Parcel	Name	Address
11S04W12-AA-04001	Petersen Family Trust	404 Vine St SW Albany, OR 97321
11S04W12-AA-01800	Pacific Power & Light	825 NE Multnomah St STE 1900 Portland, OR 97232
11S04W12-AA-02000	Jeffery McCaulou	823 4th Ave SW Albany, OR 97321
11S04W12-AA-03900	Walter Louis III	720 4th Ave SW Albany, OR 97321
11S04W12-AA-00800	Bennett Douglas	11220 E Hartley Ln Chattaroy, WA 99003
11S04W12-AA-02100	City of Albany	P.O. Box490 Albany, OR 97321

Parcel Map – provided by applicant

B. Albany intends to submit to FERC an Application to Surrender License for the Project and an Application for Exemption for Small Conduit Hydroelectric Facility (referred to collectively as the “Applications”). In addition, Albany intends to submit to ODEQ an application for Clean Water Act Section 401 certification for the Applications. Albany’s Application to Surrender License is contingent on FERC’s approval of its Application for Exemption for Small Conduit Hydroelectric Facility, and the Governmental Parties’ agreement herein is based upon that understanding.

C. The Parties desire Albany, and Albany intends, to continue to implement certain environmental measures if FERC issues an order accepting surrender of license and the License is terminated, and FERC issues Albany an order granting a small conduit hydroelectric facility exemption. These environmental measures are described in Exhibit A to this Agreement and referred to herein as “Environmental Measures.”

D. Albany and the Governmental Parties and CTGR have agreed to support both Applications subject to Albany’s commitment to implement certain environmental measures pursuant to this Agreement and to submit Applications that include its obligations to carry out the Environmental Measures.

NOW, THEREFORE, in consideration of their mutual covenants in this Agreement, the Parties agree:

SECTION 1. PURPOSE AND EFFECT OF THIS AGREEMENT

1.1 Purpose of Agreement.

The Parties have entered this Agreement for the purpose of resolving all issues that have or could have been raised by the Parties in connection with the Applications, specifically issuance of a FERC order accepting surrender of the License (“Surrender Order”) and a FERC order granting an exemption for small conduit hydroelectric facilities (“Conduit Order”) (referred to collectively as “the Orders”), and in connection with Albany’s operation of certain facilities pursuant to a Conduit Order. Pursuant to the Parties’ various statutory and regulatory authorities, including the federal government’s tribal trust responsibilities, this Agreement establishes Albany’s commitment to implement the Environmental Measures described in Exhibit A under this Agreement if FERC approves both Applications; provided further that the Parties understand and agree that in no event within these proceedings will Albany accept surrender of the License if FERC does not grant its request for a conduit exemption. Except as specifically provided below, each of the Parties agree that Albany’s performance of its commitments under this Agreement will be consistent with and is intended to fulfill Albany’s existing statutory and regulatory obligations relative to the FERC proceedings. Nothing in this Agreement shall preclude Albany from seeking in the future surrender of its existing License should the conduit exemption not be granted or from seeking termination of the conduit exemption if granted.

1.2 Limitations.

This Agreement establishes no principle or precedent with regard to any issue addressed in this Agreement, or with regard to any Party’s participation, in any other pending or future FERC proceeding. By entering this Agreement, no Party shall be deemed to have made any admission or waived any contention of fact or law that it did make or could have made in any FERC proceeding relating to issuance of the Surrender Order or the Conduit Order. This Agreement shall not be offered

in evidence or cited as precedent by any Party to this Agreement in any mediation, arbitration, litigation or other administrative or adjudicative proceeding, except in a proceeding to establish the existence of, or to enforce, or to implement this Agreement or to define the action for which a governmental authorization is requested. This Section 1.2 shall survive any termination of this Agreement and will continue to apply to any Party that withdraws from this Agreement pursuant to Section 6 of this Agreement.

1.3 Representations Regarding Consistency and Compliance with Statutory Obligations.

Except as specifically provided by this Agreement, the Governmental Parties represent that each believes as of the Effective Date that implementation of the Environmental Measures described in Exhibit A of this Agreement satisfy the federal and state requirements of Albany for the surrender of the License and continued operation and maintenance of certain facilities under the contemplated Conduit Order. Except as specifically provided by this Agreement, the Governmental Parties also each represent that as of the Effective Date that their individual statutory and other legal obligations and authorities are, or can be, met through implementation of this Agreement and development of any recommendations, conditions, prescriptions, determinations and certifications consistent with this Agreement that are submitted to FERC as part of the proceedings initiated by Albany's submittal of the Applications.

1.4 Reservation of Rights; No Predetermination

Nothing in this Agreement is intended or shall be construed to affect or limit any Governmental Party from complying with its obligations under applicable laws and regulations, or from considering and responding to comments received in any environmental review or regulatory process related to the Applications. This Agreement will not predetermine the outcome of any environmental or administrative review or appeal process related to the Applications.

1.5 Reserved Tribal Rights.

Nothing in this Agreement creates, expands, diminishes, impairs, predetermines or otherwise affects any right of the CTGR reserved or established by or in any treaty, executive order or statute. Further, nothing in this Agreement is intended to nor shall it create, expand, abrogate, diminish or otherwise alter the responsibilities and obligations of the United States, including FERC, toward the CTGR under any federal trust obligation, federal treaty, executive order or statute. The facilities that are the subject of the application for the Conduit Order are not located upon tribal reservation land.

1.6 Extent of Agency Authority.

Nothing in this Agreement expands or diminishes any existing authority or regulatory jurisdiction under applicable federal or state law or regulation. The Parties recognize that each Governmental Party has separate and distinct statutory authorities and that no agency is deemed, by virtue of concurrent approvals, to be sharing its statutory authority with any other agency or to be conceding that the approval of any other agency is required for exercise of the first agency's authority.

SECTION 2. COMMITMENTS OF ALBANY

2.1 Obligations After Effective Date.

Albany will submit to FERC Applications consistent with the drafts of the Applications provided to the Governmental Parties and CTGR, attached hereto as Exhibit B, which without limiting the generality of the foregoing, includes Albany's commitment to implement the Environmental Measures described in Exhibit A of this Agreement. In addition, Albany agrees to submit to the ODEQ an application for Clean Water Act Section 401 certification required for FERC issuance of the Conduit Order.

2.2 Obligations After Issuance of the Orders.

Following FERC's issuance of the Orders, Albany will continue to implement the following Environmental Measures as specifically described in Exhibit A which are summarized in Sections 2.2.1 through 2.2.9:

2.2.1 Fish Screen.

Albany will continue to operate and maintain the previously constructed vertical plate juvenile fish screen and bypass facility at the Canal intake as provided in Section A of Exhibit A.

2.2.2 Right Bank Fishway.

Albany will continue to operate and maintain the previously constructed river right bank fishway at the diversion dam as provided in Section B of Exhibit A.

2.2.3 Left Bank Fishway.

Albany will continue to operate and maintain the previously constructed river left bank fishway at the diversion dam as provided in Section C of Exhibit A.

2.2.4 Fishway Modifications.

Should Albany propose to modify any of the fish passage structures or operations described in Sections 2.2.1, 2.2.2 or 2.2.3 above (whether proposed by Albany or by another entity), Albany shall submit such modifications including design drawings for review and approval by ODFW, NMFS, and USFWS. Albany will provide at least 90 days for ODFW, NMFS and USFWS to review and approve, and will not modify the fishway structure or operations without such approval. Any disputes shall be addressed by the dispute resolution provisions in Section 5 of this Agreement.

2.2.5 Flow Limitations.

Albany will cease diversion of water into the Canal for hydropower generation purposes when such diversion would cause flow in the South Santiam River to fall below 1,100 cubic feet per second as measured at the United States Geologic Survey stream gage at the Waterloo Station as provided in Section D of Exhibit A.

2.2.6 Flow Monitoring.

Albany will continue to monitor South Santiam River flows at the Waterloo Station and maintain records of compliance with the required flow limitation described in Section 2.2.5 as provided in Section E of Exhibit A.

2.2.7 Flow Diversion Ramping.

Albany will evenly ramp diversion flows during start-up and shut down of the facilities that are the subject of the Conduit Order over the course of one hour for the protection of aquatic resources below the Albany-Santiam canal intake as provided in Section F of Exhibit A.

2.2.8 Slough Diversions.

Albany will continue to provide diversion flows to Marks and Hospital Sloughs and submit an annual report summary to the Governmental Parties as provided in Section G of Exhibit A.

2.2.9 Annual Reports.

Following FERC's issuance of the Orders, by January 31 and by January 31 of each year thereafter, Albany will provide an annual report to the Governmental Parties that summarizes the mitigation and monitoring activities and discusses any deviations from the requirements listed in Exhibit A that occurred during the prior calendar year.

2.2.10 Fish and Wildlife Emergencies.

Albany agrees to perform reasonably diligent inspections of facilities described in Exhibit A to this Agreement. Following FERC's issuance of the Orders, if at any time, unanticipated circumstances or emergency situations arise in which fish or wildlife are being killed, harmed, or endangered by any of the facilities described in Exhibit A to this Agreement, Albany shall immediately after becoming reasonably aware of such circumstances take appropriate action to prevent further loss. Albany shall, within 24 hours of Albany becoming reasonably aware of such circumstances, notify the nearest ODFW office and comply with the measures required by ODFW to prevent additional injury or mortality. Albany shall notify the Governmental Parties as soon as possible, but no later than ten (10) calendar days after each occurrence, and inform the Governmental Parties as to the nature of the occurrence and the measures taken. Subject to the dispute resolution provisions in Section 5 of this Agreement, ODFW, in coordination with the other Governmental Parties, may modify or add to these terms and conditions at any time for the protection of fish and wildlife and their habitats.

2.2.10.A Consistent with the Parties obligations in this subsection 2.2.10, Parties understand and agree that ODFW will submit the following clauses to FERC for its inclusion in the Conduit Order pursuant to Section 30(c) of the Federal Power Act, which all Parties agree are to be interpreted and applied consistent with this subsection 2.2.10.A of this Agreement:

1. If at any time, unanticipated circumstances or emergency situation arise in which fish or wildlife are being killed, harmed, or endangered by any of the project facilities, the exemptee shall, within 24 hours, notify the nearest ODFW office and comply with the measures required by ODFW to prevent additional injury or mortality. The exemptee

shall notify the Commission as soon as possible, but no later than 10 days after each occurrence, and inform the Commission as to the nature of the occurrence and the measures taken.

2. ODFW may modify or add to these terms and conditions at any time for the protection of fish and wildlife and their habitats.
3. The U.S Fish and Wildlife Service may modify or add to these terms and conditions at any time for the protection of fish or wildlife listed as threatened or endangered under the Endangered Species Act, or their designated critical habitat. The U.S. Fish and Wildlife Service may modify or add to these terms and conditions for the protection of any other fish or wildlife and their habitat if the exemptee has withdrawn from the memorandum of agreement titled “For the City of Albany Exemption for Small Conduit Hydroelectric Facility” entered into by exemptee, the U.S. Fish and Wildlife Service, and other parties effective [insert effective date of MOA], and the exemptee’s withdrawal is for reasons other than an unresolved dispute under that agreement regarding an action by the U.S. Fish and Wildlife Service.

SECTION 3. COMMITMENTS OF THE PARTIES

3.1 Actions Consistent with the Agreement.

Subject to Section 3.2 below, the Parties agree to not take any action inconsistent with this Agreement and to use reasonable efforts to support, in all FERC proceedings in which the Parties participate, regulatory actions consistent with this Agreement. For purposes of this Agreement, the term “Inconsistent” means any action, recommendation, comment, request, or determination that materially, either individually or cumulatively, conflicts with, adds to, omits portions of, or prevents implementation of, the commitments made in this Agreement.

3.2 New Information.

Subject to the dispute resolution provisions in Section 5 of this Agreement, a Party may take any action including but not limited to filing in any FERC proceeding relating to the facilities that are the subject of the Conduit Order or of this Agreement, a recommendation, comment, request or determination that may be Inconsistent with this Agreement, provided: (a) that any such action, recommendation, comment, request or determination must be based on New Material Information, and (b) prior to taking the action or making the filing, the Party planning to take the action or file any such recommendation, condition, request or determination has provided the other Parties with notice as provided in Section 8.11 of this Agreement, and, if reasonably possible, the opportunity to give notice to initiate and to complete dispute resolution under Section 5 of this Agreement. For purposes of this Agreement, “New Material Information” means information relevant to environmental effects, including without limitation effects on fish species or other water quality effects, which was not known and could not have reasonably been known on the Effective Date of this Agreement.

SECTION 4. COORDINATION AND ACCESS

4.1 Cooperation.

The Parties agree to cooperate in implementing this Agreement. In addition to any periodic reporting obligations included in this Agreement, Albany will provide the Parties with copies of all public filings made to all regulatory agencies regarding implementation of the measures required under this Agreement.

4.2 Inspection and Notice.

Albany will permit the Parties, at any reasonable time, access to, through and across the lands and works for the purpose of inspecting the powerhouse and tailrace as well as facilities described in Exhibit A to this Agreement and records pertaining to the implementation of the Environmental Measures or operation of the facilities addressed in this Agreement. Albany will allow such inspections only after the Party requesting the inspection provides Albany reasonable notice of such inspection and agrees to follow Albany's applicable safety and security procedures when engaged in such inspection.

SECTION 5. DISPUTE RESOLUTION

5.1 General.

The Parties intend that disputes under this Agreement be resolved as expeditiously and informally as possible. Each Party shall cooperate in good faith promptly to schedule, attend and participate in the dispute resolution procedures. The Parties agree to devote such time, resources and attention to the dispute resolution procedures as are needed to attempt to resolve the dispute at the earliest possible time. Each Party shall implement promptly all final agreements reached through the dispute resolution procedures, consistent with the Party's applicable statutory and regulatory responsibilities.

5.2 Dispute Resolution Procedures.

A Party claiming a dispute shall give notice of the dispute within twenty (20) calendar days of the Party's actual knowledge of the dispute, act, event or omission that gives rise to the dispute as provided in Section 8.11 of this Agreement. The Party claiming a dispute shall convene a minimum of one (1) meeting within twenty (20) calendar days after such notice to attempt to resolve the dispute. If within fifteen (15) calendar days after the meeting, a Party notifies the other Parties that such informal meeting failed to resolve the dispute, the Parties may agree to attempt to resolve the dispute using a neutral mediator. The neutral mediator will be selected by the Parties participating in the mediation. The mediator shall mediate the dispute in accordance with the instructions and schedule provided by the Parties. Any of the time periods may be reasonably extended or shortened by agreement of the Parties, or as necessary to conform to the procedure of an agency or court with jurisdiction over the dispute. Unless otherwise agreed among the Parties, each Party shall bear its costs for its own participation in the dispute resolution. In all cases, the Parties shall proceed expeditiously to allow each Party to meet any regulatory, statutory or judicial deadline regarding the subject matter of the dispute.

5.3 Compliance with Applicable Law During Dispute.

Nothing in this Section 5 shall limit or restrict a Party's ability to comply with applicable law during the dispute resolution process. Further, nothing in the Section 5 shall affect or limit the rights reserved by the Governmental Parties in Section 1.4 of this Agreement.

5.4 Enforcement After Dispute Resolution.

If dispute resolution is unsuccessful, any Party may seek specific performance of this Agreement by any other Party in a court of competent jurisdiction, or, to the extent allowed by applicable law, any other remedy. No Party, however, shall be liable in damages for any breach of this Agreement.

SECTION 6. WITHDRAWAL FROM AGREEMENT

6.1 Withdrawal of Party from Agreement.

A Party may withdraw from this Agreement only as expressly provided in this Section 6. A Party may withdraw from this Agreement only if another Party has taken an action materially Inconsistent with this Agreement and the perceived inconsistency was not resolved after pursuing dispute resolution pursuant to Section 5 of this Agreement. A Party intending to withdraw as allowed by this Section 6 must provide sixty (60) days' advance written notice of its intent to withdraw and the reasons therefore. In addition, when a Party ceases to exist and has no successors or assigns, it will be deemed to have withdrawn from this Agreement, but such withdrawal will not give any other Party the right to withdraw.

6.2 Continuity After Withdrawal.

The withdrawal of a Party other than Albany does not terminate this Agreement for the remaining Parties or give any other Party the right to withdraw. However, if one of the Governmental Parties withdraws from this Agreement, any other Party may elect to withdraw without initiating dispute resolution after providing notice within 60 days of the withdrawal of the Governmental Party. The withdrawal of Albany under Section 6 of this Agreement will terminate this Agreement.

SECTION 7. TERM AND TERMINATION

7.1 Effective Date.

This Agreement shall become effective upon execution of this Agreement by all Parties ("Effective Date").

7.2 Term; Five-Year Meetings.

This Agreement will remain in full force and effect from the Effective Date until terminated as provided in this Agreement. Albany will meet with the Parties in each of the succeeding five (5) year-period to discuss implementation of this Agreement.

7.3 Termination.

This Agreement shall terminate by its own terms if FERC denies either of Albany's application for the Surrender Order for the License or application for the Conduit Order for continued operation of the Project as a small conduit hydroelectric facility, or if Albany refuses to accept either the Surrender Order or the Conduit Order. This Agreement also may be terminated by unanimous written agreement among the Parties, by withdrawal of Albany, or by FERC termination of the conduit exemption provided in the Conduit Order.

SECTION 8. GENERAL PROVISIONS

8.1 Entire Agreement; Joint Drafting.

This Agreement, together with Exhibit A attached hereto and made a part hereof, is the entire agreement of the Parties with regard to the facilities and operation thereof that are the subject of this Agreement and the facilities and operation thereof that will be subject of the Conduit Order, if issued by FERC and accepted by Albany. This Agreement is made on the understanding that each term is in consideration and support of every other term, and that each term is a necessary part of the entire Agreement. This Agreement has been jointly drafted by the Parties and shall not be construed against any Party on account that it was the drafter hereof.

8.2 Amendments.

This Agreement may be amended by unanimous written consent of the Parties. Any Party may request all other Parties to commence negotiations for a period of up to ninety (90) calendar days to amend this Agreement in whole or in part, and Parties shall carry out such negotiations consistent with their obligations set forth in Section 5 above.

8.3 Signatory Authority.

Each signatory to this Agreement certifies that he or she is authorized to execute this Agreement and to bind the Party he or she represents legally to the extent allowed under relevant authority, and each Party represents that such Party will be fully bound by the terms hereof upon signature without any further act, approval or authorization by such Party.

8.4 No Third-Party Beneficiaries.

Without limiting the applicability of rights granted to the public pursuant to applicable law, this Agreement does not create any right or interest in the public, or any member of the public, as a third-party beneficiary of this Agreement, and does not authorize any non-Party to maintain a suit at law or in equity pursuant to this Agreement. The duties, obligations and responsibilities of the Parties with respect to third parties will remain as imposed under applicable law.

8.5 Successors, Transferees and Assigns.

This Agreement will apply to and be binding on the Parties and their successors, transferees and assigns to the extent allowed by law. Upon completion of a succession, transfer or assignment and notice provided to all Parties pursuant to Section 8.11 of this Agreement, the initial Party will no

longer be a Party to this Agreement. No change in ownership of the facilities that are the subject of this Agreement will in any way modify or otherwise affect any other Party's interests, rights, responsibilities or commitments under this Agreement. A transferring or assigning Party will provide notice to the other Parties at least sixty (60) calendar days before completing such transfer or assignment.

8.6 Failure to Perform or Delay Due to Force Majeure.

No Party will be liable to any other Party for breach of this Agreement as a result of a failure to perform or for a delay in performance of any provision of this Agreement if such performance is delayed or prevented by Force Majeure. The term "Force Majeure" means any cause reasonably beyond the performing Party's reasonable control which could not be avoided with the exercise of due care, whether unforeseen, foreseen, foreseeable or unforeseeable, and which occurs without the fault or negligence of the Party whose performance is affected by Force Majeure. Increased cost for performance of any action required by this Agreement will not be deemed to constitute Force Majeure. The Party whose performance is affected by Force Majeure will notify the other Parties in writing within seven (7) calendar days after becoming aware of any event that such performing Party contends constitutes Force Majeure. Such notice will identify the event causing the delay or anticipated delay, estimate the anticipated length of the delay, state the measures taken or to be taken to minimize the delay, and estimate the timetable for implementation of the measures. The performing Party will make reasonable efforts to resume performance of this Agreement promptly and, when able, to resume performance of its commitments and give the other Parties written notice to that effect.

8.7 No Consent to Jurisdiction; Agreement Not to Assert a Party is a Necessary and Indispensable Party.

By executing this Agreement, no Party is consenting to the jurisdiction of any state, federal or tribal court; provided however that in any dispute involving this Agreement no Party may assert that the failure to join a Party, and the inability to join that Party due to federal, state, or tribal sovereign immunity, as applicable, prevents judicial determination of the rights of a Party or enforcement of this Agreement under a theory that such Party is a necessary and indispensable party.

8.8 No Partnership.

Nothing in this Agreement will be construed to constitute the Parties as principal and agent, employer and employee, partners, joint venturers, co-owners, or otherwise as participants in a joint undertaking. No Party has the right or authority to assume or to create any obligation or responsibility for or on behalf of another Party except as specifically provided in this Agreement.

8.9 Responsibility for Costs.

Albany will be solely responsible for payment of costs of actions required of Albany by this Agreement. Albany has no obligation to reimburse or otherwise to pay any other Party for its assistance, participation, oversight or cooperation in any activities pursuant to this Agreement, or relating to the Surrender Order or Conduit Order.

8.10 Availability of Funds.

8.10.1 Federal Governmental Parties.

Implementation of this Agreement for a Federal Governmental Party is subject to the requirements of the Anti-Deficiency Act, 31 USC 1341-1519, and the availability of appropriated funds. Nothing in this Agreement is intended or shall be construed to require the obligation, appropriation or expenditure of any money from the U.S. Treasury. The Parties acknowledge that the Federal Governmental Parties are not required under this Agreement to perform any action pursuant to this Agreement which would necessitate expending any federal agency's appropriated funds unless and until an authorized official of each such agency affirmatively acts to commit such expenditures, as evidenced in writing.

8.10.2 State Governmental Parties.

The Parties understand and agree that any obligation of any State Governmental Party to make any payment or expend any funds under this Agreement attributable to commitments performed under this Agreement is contingent upon the State Governmental Parties receiving from the Oregon Legislative Assembly (including but not limited to its Emergency Board) appropriations, limitations or other expenditure authority sufficient to allow the State Governmental Parties, in the exercise of their reasonable administrative discretion, to continue the commitments contemplated by this Agreement.

8.10.3 Confederated Tribes of the Grand Ronde Community of Oregon.

Implementation of this Agreement for the CTGR is subject to the availability of authorized and appropriated funds. Nothing in this Agreement is intended or shall be construed to require the obligation, appropriation or expenditure of any money from the CTGR.

8.11 Notice.

Any notice required by this Agreement shall be given in writing, shall be effective when actually received, and may be given by hand delivery, by e-mail, or by United States mail, first class postage prepaid, addressed to the Parties as follows:

If to Albany:
City Manager
City of Albany, Oregon
P.O. Box 490
Albany, Oregon 97321
Chris.bailey@cityofalbany.net

If to USFWS:

Kessina Lee, State Supervisor
Oregon Fish and Wildlife Office
U.S. Fish and Wildlife Service
2600 SE 98th Ave, #100
Portland, Oregon 97266
Kessina.Lee@fws.gov
fwl ofwo@fws.gov

If to NMFS:

Dr. Kim Kratz, Assistant Regional Administrator
Oregon/Washington Coastal Area Office, NOAA Fisheries West Coast Region
1201 NE Lloyd Blvd, Suite 1100
Portland, Oregon 97217
kim.kratz@noaa.gov

If to ODFW:

John Zauner, Hydropower Program Lead
Oregon Department of Fish and Wildlife
4034 Fairview Industrial Drive SE
Salem, Oregon 97302
John.r.zauner@odfw.oregon.gov

John Cox, North Willamette Hydropower Coordinator
Oregon Department of Fish and Wildlife
17330 SE Evelyn Street
Clackamas, Oregon 97015
Jonathan.a.cox@odfw.oregon.gov

If to ODEQ:

Valerie Thompson, 401 Hydropower Program Coordinator
Oregon Department of Environmental Quality
700 NE Multnomah St., Ste. 600
Portland, OR 97232
Valerie.Thompson@deq.oregon.gov

If to CTGR:

Torey Wakeland, Interim Ceded Lands Program Manager
Ceded Lands Division
Confederated Tribes of the Grand Ronde Community of Oregon
9615 Grand Ronde Road
Grand Ronde, Oregon 97347
Torey.Wakeland@grandronde.org

8.12 Section References.

Any reference to another section of this Agreement includes all subsections of the section referred to.

8.13 Section Titles for Convenience Only.

The titles for the sections and paragraphs of this Agreement are used only for convenience of reference and organization, and will not be used to modify, explain or interpret any of the provisions of this Agreement or the intentions of the Parties.

8.14 Signing in Counterparts.

This Agreement may be executed in any number of counterparts, and each executed counterpart will have the same force and effect as an original instrument as if all the signatory Parties to all of the counterparts had signed the same instrument. Any signature page of this Agreement may be detached from any counterpart of this Agreement without impairing the legal effect of any signatures and may be attached to another counterpart of this Agreement identical in form having attached to it one or more signature pages.

8.15 Waiver.

Waiver by any Party of the strict performance of any term or covenant of this Agreement, or of any right under this Agreement, is not a continuing waiver, and must be in writing.

8.16 Severability

In case any one or more of the provisions contained in this Agreement shall be deemed invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

[END OF TEXT / SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF the Parties have entered into this Agreement as of the Effective Date defined in Section 7.1 above.

CITY OF ALBANY



Peter Troedsson
City Manager, City of Albany

12/7/2023

Date

IN WITNESS WHEREOF the Parties have entered into this Agreement as of the Effective Date defined in Section 7.1 above.

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Keith Andersen

11/29/2023

Keith Andersen, Western Region Administrator
Oregon Department of Environmental Quality

Date

IN WITNESS WHEREOF the Parties have entered into this Agreement as of the Effective Date defined in Section 7.1 above.

OREGON DEPARTMENT OF FISH AND WILDLIFE



Curt Melcher, Director
Oregon Department of Fish and Wildlife



Date

IN WITNESS WHEREOF the Parties have entered into this Agreement as of the Effective Date defined in Section 7.1 above.

NATIONAL MARINE FISHERIES SERVICE



11/8/2023

Dr. Kim W. Kratz,
Assistant Regional Administrator
Oregon/Washington Coastal Office
NOAA Fisheries West Coast Region

IN WITNESS WHEREOF the Parties have entered into this Agreement as of the Effective Date defined in Section 7.1 above.

U.S. FISH AND WILDLIFE SERVICE

KESSINA LEE Digitally signed by KESSINA LEE
Date: 2024.01.18 14:55:10
-08'00'

Kessina Lee, State Supervisor
Oregon Fish and Wildlife Office
U.S. Fish & Wildlife Service

Date



The Confederated Tribes of the Grand Ronde Community of Oregon
Cultural Resources Department
Historic Preservation Office
9615 Grand Ronde Road
Grand Ronde, OR 97347-9712

Phone: (503) 879-2226
Toll Free: 1-800-422-0232
Fax: (503) 879-2126
Email: THPO@grandronde.org

December 12, 2023

City of Albany
ATTN: Mark Yeager, Project Manager
PO Box 490
Albany, OR 97321

Submitted via email to:
Mark.Yeager@albanyoregon.gov

RE: City of Albany - FERC License Surrender and Small Conduit Exemption Memorandum of Agreement

Dear Mr. Yeager,

Thank you for contacting the Confederated Tribes of the Grand Ronde Community of Oregon (Grand Ronde or Tribe) regarding the City of Albany's Federal Energy Regulatory Commission License Surrender and Small Conduit Exemption Memorandum of Agreement (MOA). Grand Ronde appreciates the opportunity to sign the MOA among the City of Albany, US Fish & Wildlife Service, National Marine Fisheries Service, Oregon Department of Fish and Wildlife and the Oregon Department of Environmental Quality.

Grand Ronde has participated in consultation for the applications and has reviewed the MOA. While the Tribe supports and concurs with the environmental measures and stipulations contained in the MOA, we have no enforcement authority or responsibility in the agreement, and have determined that our signature to the MOA is not required.

We request this letter be included in the MOA in lieu of a signature page for the Tribe.

If you have any questions please feel free to contact Cheryl Pouley at (503) 879-1667 or via email at cheryl.pouley@grandronde.org.

hayu masi (many thanks),

Torey Wakeland
Interim Ceded Lands Manager

Cheryl K. Pouley
Cultural Protection Coordinator

EXHIBIT A

This Exhibit A describes in detail City of Albany's ("Albany") obligations to implement certain environmental provisions previously established under a Minor Hydropower Production License, Project Number 11509-000, dated October 23, 1998 (85 FERC ¶ 62,046) ("License") even after the FERC grants a surrender of that License, the License is terminated, and the FERC authorizes operation of certain facilities under a small conduit hydroelectric facility exemption ("Conduit Order").

- A. Fish Screen.** Albany will continue to operate and maintain the previously constructed vertical plate juvenile fish screen and bypass facility at the Canal intake in accordance with the attached Article 411 Operational Compliance Monitoring Plan (Attachment 1) which will be used as a guide for future operation and maintenance activities related to the juvenile fish screen and bypass facility. Maintenance will include, at a minimum, routine physical inspection twice per week as well as continuous electronic monitoring of the trash rack, fish screens, screen cleaner, control system components and bypass pipe entrance. Maintenance will also include periodic removal of debris as necessary and all preventative maintenance prescribed by the equipment manufacturer for the screen cleaning mechanism and instrumentation.

To maintain the performance of the fish screens, velocity measurements will be taken on a minimum of 5-year intervals using flows into the canal of approximately 220 cfs. Normal and sweeping velocity measurements will be taken at the ¼ points on each screen panel (nine point measurement) and four inches from the screen face. Point velocity values will be normalized to reflect the total discharge as measured by the U.S. Geological Survey (USGS) canal gage just downstream of the headgates (14187600). In addition, measurements will be taken two feet downstream from the upstream end of the screen (potential area of reverse flow), and two feet from the bypass end of the screens (potential area of excessive velocity). Velocities will also be measured at the center of the bypass entrance, from floor to water surface at 2-inch intervals. Should there be any area along the screens where agency velocity criteria (0.4 fps) are exceeded at the maximum design canal flow (220 cfs), Albany will consult with National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and ODFW, collectively referred to as "fisheries agencies," regarding how to proceed.

The fisheries agencies will be invited to witness the testing of the fish screens. The results of the testing will be documented in a draft report which Albany will forward to the fisheries agencies. The fisheries agencies will have thirty (30) calendar days to review and provide comments on the draft report. Albany will then prepare a final report and will include responses to fishery agencies comments, a description of modifications, if any, to the fish screens that are proposed, and an explanation of how these modifications are expected to result in improved performance.

- B. Right Bank Fishway.** When river flows allow access, the right bank fishway will be physically inspected a minimum of twice per week for debris collection and general operation. As required, the fishway will be removed from service, cleaned and large debris that would impede fish passage will be removed. The cleaning operation will be done following

consultation with fisheries agencies as to timing of the cleaning so as not to interfere with fish passage. The right bank fishway will have its downstream entrance option (high flow or low flow) positioned seasonally following consultation with the fisheries agencies. Albany will follow the attached Article 411 Operational Monitoring Compliance Plan (Attachment 1) which will be used as a guide for all future operation and maintenance activities related to the right bank fishway.

Every five years, the right bank fishway will be hydraulically evaluated at two river flow rates, one between 600 and 1,000 cfs and the second between 7,000 and 8,000 cfs. Forebay and tailwater levels will be verified as will the water surface level in each fishway pool. Flow patterns in each pool will be observed and documented. Point velocity measurements will be made at the center of each orifice. Hydraulic performance of the attraction water system will also be evaluated. This evaluation will include observation of the function of the energy dissipation impact wall and baffles as well as the flow through the diffuser.

The fisheries agencies will be invited to witness the testing of the fishway. The results of the testing will be documented in a draft report which Albany will forward to the fisheries agencies. The fisheries agencies will have thirty (30) calendar days to review and provide comments on the draft report. Albany will then prepare a final report and will include responses to fisheries agencies comments, a description of modifications, if any, to the fishway that are proposed, and an explanation of how these modifications are expected to result in improved performance.

C. Left Bank Fishway. When river flows allow, the left bank fish ladder will be physically inspected a minimum of twice per week for debris collection and general operation. As required, the fish ladder will be removed from service, cleaned and large debris that would impede fish passage will be removed. The cleaning operation will be done following consultation with fisheries agencies as to timing of the cleaning so as not to interfere with fish passage. Albany will inspect the fish ladder during summertime low flow conditions and replace any flashboards that have been damaged. Albany will follow the attached Article 411 Operational Compliance Monitoring Plan (Attachment 1) which will be used as a guide for all future operation and maintenance activities related to the fish ladder.

Every five years, the fish ladder will be hydraulically evaluated at two river flow rates, one between 600 and 1,000 cfs and the second between 7,000 and 8,000 cfs. Forebay and tailwater levels will be verified as will the water surface level in each fishway pool. Flow patterns in each pool will be observed and documented. Point velocity measurements will be made at the center of each orifice near the left fishway wall.

The fisheries agencies will be invited to witness the testing of the fish ladder. The results of the testing will be documented in a draft report which Albany will forward to the fisheries agencies. The fisheries agencies will have thirty (30) calendar days to review and provide comments on the draft report. Albany will then prepare a final report and will include responses to fisheries agencies comments, a description of modifications, if any, to the fish ladder that are proposed, and an explanation of how these modifications are expected to result in improved performance.

D. Flow Limitations. Albany will cease diversion of water into the Canal for hydropower generation purposes when such diversion would cause the flow in the South Santiam River to fall below 1,100 cubic feet per second as measured at the USGS stream gage (No. 14187500) at the Waterloo station. This minimum flow may be temporarily modified if required by operation emergencies beyond control of Albany, and for short periods upon agreement between Albany and the fisheries agencies.

E. Flow Monitoring. Albany will continue to operate and maintain an Albany-installed level sensor housed in the same Waterloo station on the South Santiam River as the level sensor operated by the U.S. Army Corps of Engineers. The U.S. Geological Survey (USGS) maintains the recorder and radio relay system for USGS gage 14187500 at the Waterloo location. The signal from Albany's level sensor at Waterloo is conveyed to the Albany's Diversion Dam Control Building where it is logged and used to control diversions into the Canal as part of the Supervisory Control and Data Acquisition (SCADA) system. The USGS rating curve for Waterloo is used to compute flow as a function of recorded depth. USGS regularly updates the rating curve for this location.

Flows diverted into the Albany-Santiam Canal are continuously monitored and logged into the SCADA system using the USGS-maintained level sensor in the Canal at Headgate Road approximately 766 feet downstream of the Canal head gates (USGS gage No. 14187600). The SCADA system monitors and records data on at least a 15-minute interval basis. Albany will continue to operate and maintain the SCADA system responsible for logging all flow data in the South Santiam River and flow diversions into the Albany-Santiam Canal.

Albany will continue to follow the provisions and monitoring protocols contained within the attached 2011 Article 404 Operational Compliance Monitoring Plan (Attachment 2), and Albany will continue to provide annual reports to fisheries agencies, and in addition, provide such reports to DEQ.

F. Flow Diversion Ramping. During start-up and shut down of the generating facilities, Albany shall evenly ramp diversion flows in the Canal for hydroelectric operations over a 1-hour period for protection of aquatic resources in the South Santiam River below the Albany-Santiam Canal intake. Description of the control strategy to adjust flow in the Canal during hydroelectric operations is also contained in the attached 2011 Article 404 Operational Compliance Monitoring Plan (Attachment 2). To control diversions into the Canal and to maintain compliance with the minimum South Santiam River flow requirements, the SCADA system automatically and remotely modulates the individual slide gate positions on the Headgate Control Structure to adjust canal flow and to avoid rapid changes in flow diversions into the Canal. In response to an operator-initiated change in the amount of flow to be diverted into the Canal, the control system makes small, incremental changes in the opening and closing position of the headgates. These gate position adjustments occur approximately every ten minutes, and result in approximately 10-15 cfs flow increase or decrease at a time. After each of these intervals, the SCADA system logic checks the actual flow into the Canal using information from USGS gage 14187600 and compares it to the operator set point. Once the measured flow is within 5 cfs of the set point, no further adjustments will be made. Using the SCADA control logic, a diversion change of 125 cfs would require approximately 1.5 to 2 hours, easily meeting the 1-hour ramping requirement.

The ramping rate may be temporarily modified if required by operating emergencies beyond Albany's control or for short periods upon mutual agreement with the fisheries agencies.

G. Slough Diversions. Albany will provide and maintain flow diversions into Marks and Hospital Sloughs (Sloughs) as part of year-round operations. Albany proposes to continue its monitoring and documentation program for the two slough diversions as follows:

1. Inspections at least one time per week in wet season and two times per week in the low flow season at each diversion structure, Albany Gates, and CZ Gates
2. Routine inspection includes documenting flows at each diversion and at Albany Gates
3. Routine documentation includes noting SCADA levels recorded at Albany Gates on days structures are physically inspected
4. Documented diversion flows into the Sloughs are entered into a tracking database.

An annual summary report will be prepared and provided to the fisheries agencies by March 15 of the following year. The report will include tables of monthly minimum, average, and maximum diversion flows at Marks and Hospital Sloughs. The annual report will also include a brief narrative of maintenance activities or operational problems that may have occurred during the prior year.

H. Slough Flows. Albany will comply with the following:

1. A year-round target flow range of 4 – 12 cfs for Marks Slough shall be the flow range which demonstrates compliance.
2. A year-round target flow range of 4-12 cfs for Hospital Slough shall be the flow range which demonstrates compliance for any given month. However, reasonable efforts to achieve a seasonal variation of average monthly flows as listed below will be made:
 - a. January – March: 10 cfs
 - b. April: 6 cfs
 - c. May – October: 4 cfs minimum
 - d. November: ~~5~~ 6 cfs
 - e. December: 10 cfs
3. A “flushing” flow of 120 cfs will be provided in Marks Slough.
4. A “flushing” flow of 25 cfs to up to 30 cfs will be provided in Hospital Slough. This flow may increase in the future if sufficient changes are made within the slough and to the diversion structure to safely allow a higher flushing flow. Sufficient changes may include removal or replacement of in-stream infrastructure or blockages that currently result in flooding at flows above 30 cfs (e.g., undersized culverts, etc.), and any changes to the diversion structure required to safely divert higher flows into the slough. If the risk of flooding is reduced or eliminated and Albany staff determines the diversion structure can safely convey higher flows, then the City will work with the fisheries agencies towards meeting the goal of substantially increasing flushing flows in Hospital Slough.
5. The duration of these flows will be for a minimum of 12 hours, and preferably for at least 24 hours.

6. Three attempts to provide flushing flows will be made every other calendar year between October and June. If the three attempts are unsuccessful in a given year, additional attempts will be made the following year.
7. Pre- and post- flushing flow photos will be taken in any year that a flushing flow is anticipated at photo points 1-3 and 5-7 already used by Albany in the project assessment.
8. Photos will include both upstream and downstream views from each photo point that was established during the pilot study.
9. Email notification including the photos will be sent to the fisheries agencies once the flow is completed. If Albany is unable to conduct flushing flows in a select year, an email will be sent to fisheries agencies providing an explanation and plans for achieving the flow the following year.
10. If the opportunity or potential to remove culverts or improve flow or slough habitat conditions arises or becomes feasible, Albany will work with the fisheries agencies towards meeting this goal.
11. If flushing flows are not achieved in either Marks or Hospital Sloughs over a three-year period, Albany will arrange a meeting to discuss the issues that are preventing the flows from occurring and work with the fisheries agencies to resolve any problems as quickly as possible.
12. If fisheries agencies determine that flushing flows are not resulting in the desired creation of habitat for native fish species, then they can initiate discussions with the City of Albany regarding alternative actions and solutions.
13. Albany will work collaboratively with the fisheries agencies to make diversion flow operational changes in an effort to achieve flushing flow goals. However, nothing in this agreement obligates the City to make any capital investments to either modify the slough channels (e.g., remove flow restrictions) or to make modifications to the slough diversion structures to achieve the fishery agency flushing flow goals.

Attachment B

Names and addresses of contiguous property owners as provided by the applicant

Parcel	Name	Address
11S04W12-AA-04001	Petersen Family Trust	404 Vine St SW Albany, OR 97321
11S04W12-AA-01800	Pacific Power & Light	825 NE Multnomah St STE 1900 Portland, OR 97232
11S04W12-AA-02000	Jeffery McCaulou	823 4th Ave SW Albany, OR 97321
11S04W12-AA-03900	Walter Louis III	720 4th Ave SW Albany, OR 97321
11S04W12-AA-00800	Bennett Douglas	11220 E Hartley Ln Chattaroy, WA 99003
11S04W12-AA-02100	City of Albany	P.O. Box490 Albany, OR 97321

Parcel Map – provided by applicant

February 2026

**Draft Evaluation and Findings
Report Section 401 Water
Quality Certification for the
Albany Hydroelectric Project
(P-11509/P-15342)**



This document was prepared by
Oregon Department of Environmental Quality
Section 401 Hydropower Certification Program
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1.0 Introduction

The Oregon Department of Environmental Quality (DEQ) prepared this Evaluation and Findings Report in response to an application for water quality certification submitted by the City of Albany (Applicant, or the City) in conjunction with Federal Energy Regulatory Commission (FERC) licensing actions for the City of Albany, Oregon Hydroelectric Project (FERC Project P-11509). The City is applying for certification from the DEQ for both the surrender of an existing FERC license (P-11509) and for approval of a small conduit hydroelectric facility exemption (identified as FERC project P-15342).

Applicant currently operates a minor hydropower project in conjunction with the City's drinking water treatment and distribution system. The project boundary for the existing hydropower license (P-11509) consists of the historic Vine Street Water Treatment Plant; a run-of-the-river diversion dam (Lebanon Diversion Dam) on the South Santiam River; one fish ladder and one fishway; fish screens; headgates; flow-control structures; and an 18-mile-long earthen canal known as the Albany-Santiam Canal (Canal)¹. FERC issued the hydropower project license to City in 1998, but many components of the Project were constructed by others in the 1900s or before. Applicant constructed fish passage facilities and fish screen facilities at the intake into the canal as part of their FERC license obligations, and began generating electricity after completion of construction of those structures. As recently as September 2024, FERC completed environmental inspections of the Albany Hydroelectric Project and the project was "found to be in overall compliance with the license articles related to fish and wildlife, recreation, public safety, and cultural resources, including the water quality certification (WQC) under section 401 of the Clean Water Act" (FERC 2024).

¹ This canal is also referred to as the Santiam-Albany Canal in some City of Albany documentation and on some mapping services. In FERC filings, the canal is identified as the Albany-Santiam Canal and will be referred as such throughout this document to the extent practicable. Some materials or references provided by City of Albany may include the alternate name.

Figure 1: Existing FERC P-11509 Project Boundary

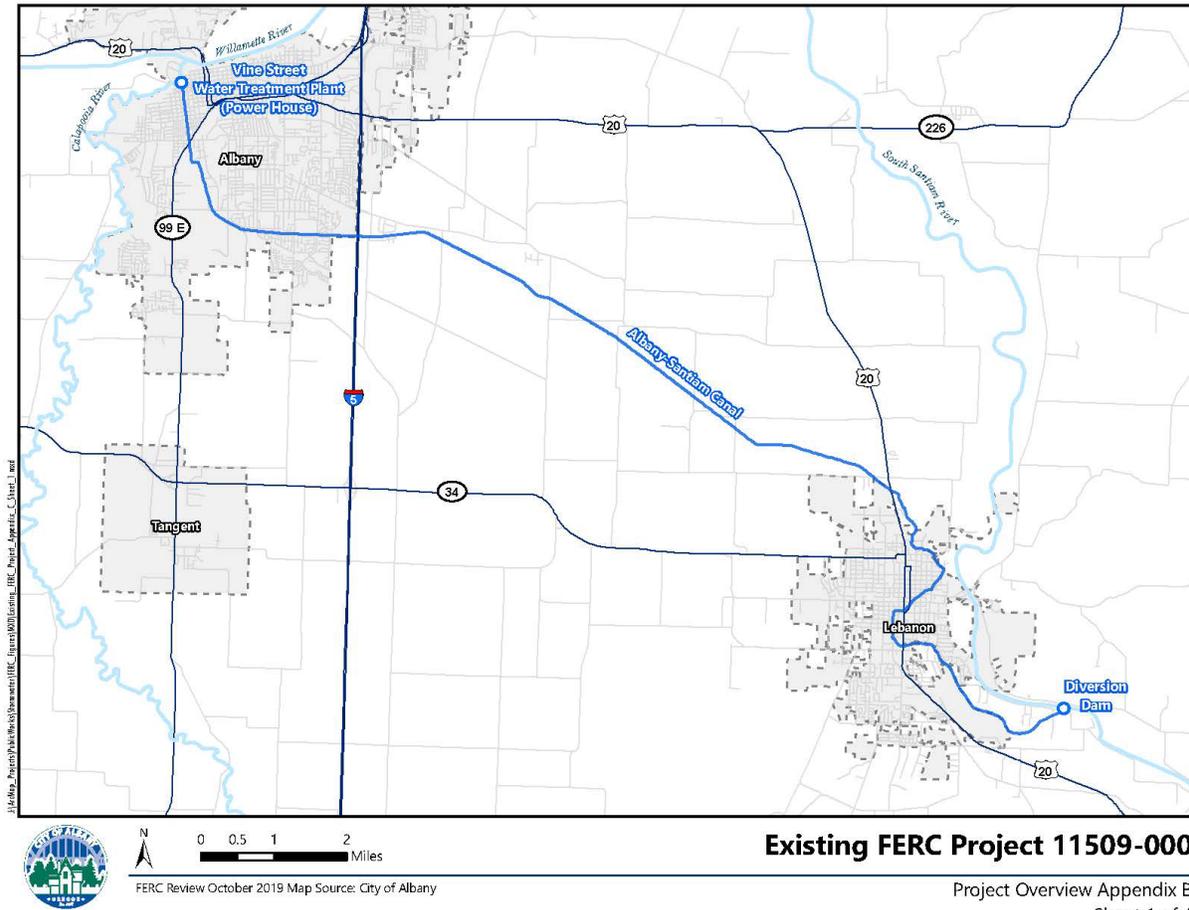
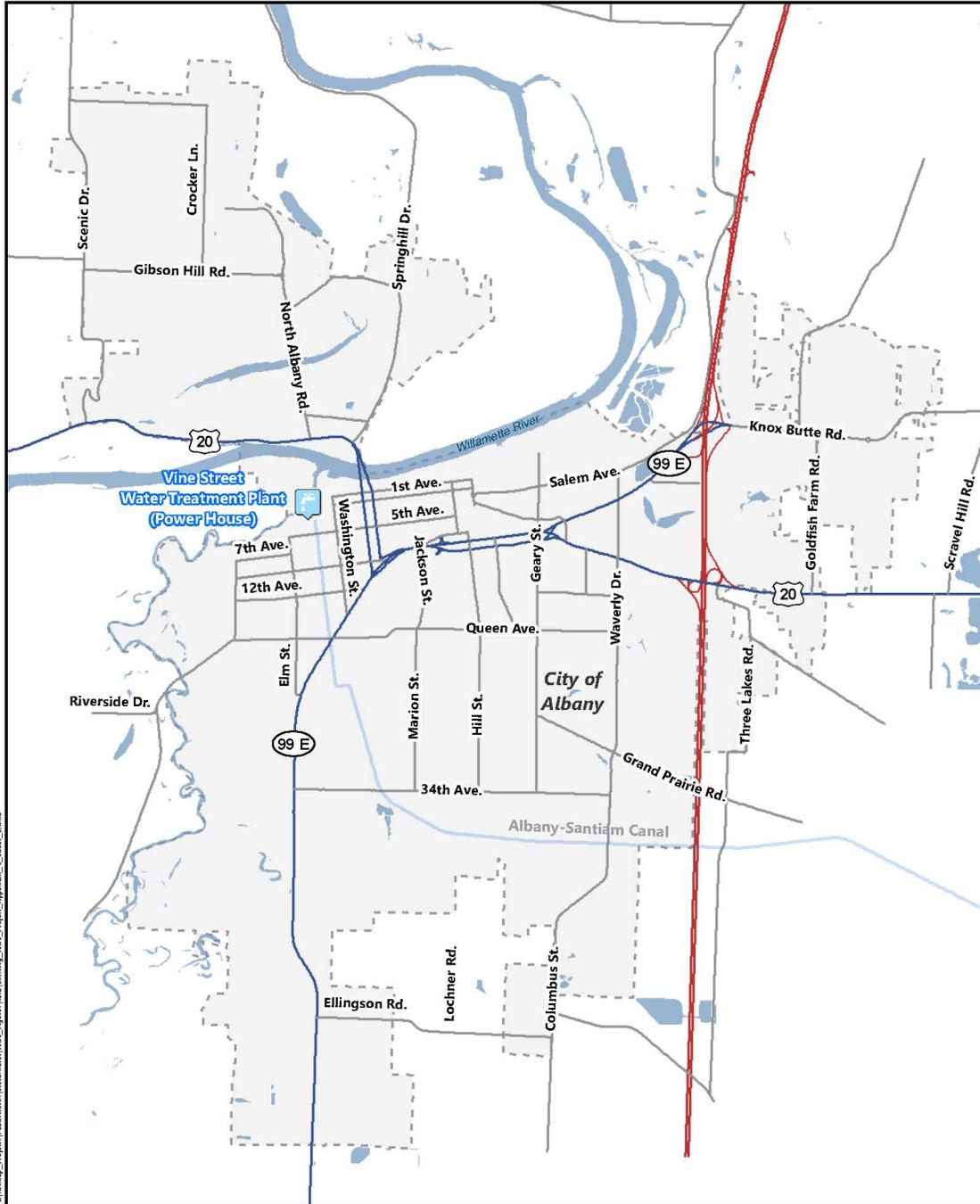
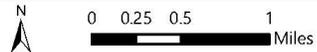


Figure 2: Existing Project P-11509 Vicinity Map – Albany



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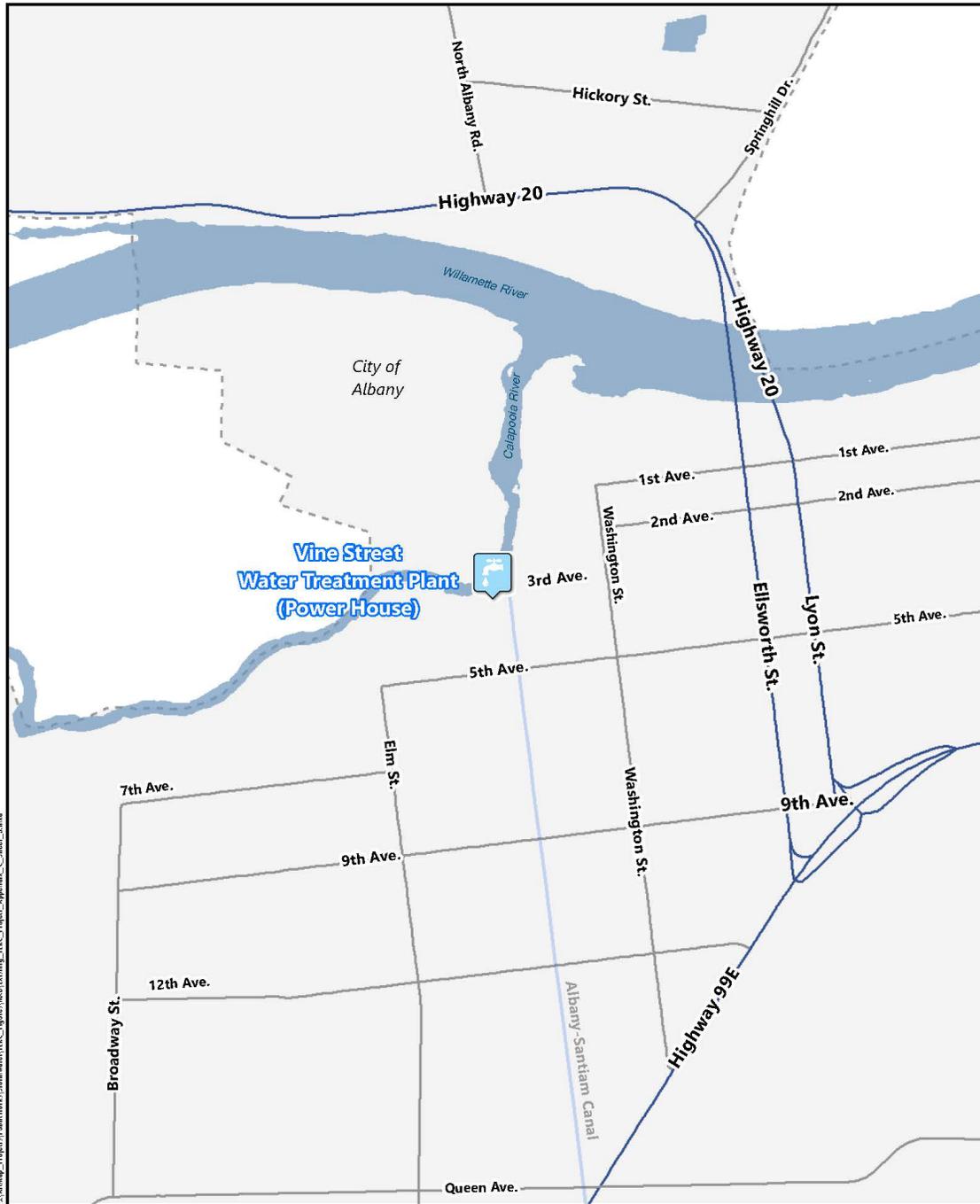


FERC Review October 2019 Map Source: City of Albany

Existing FERC Project 11509-000

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Figure 3: Existing Project P-11509 Vicinity Map - Vine Street



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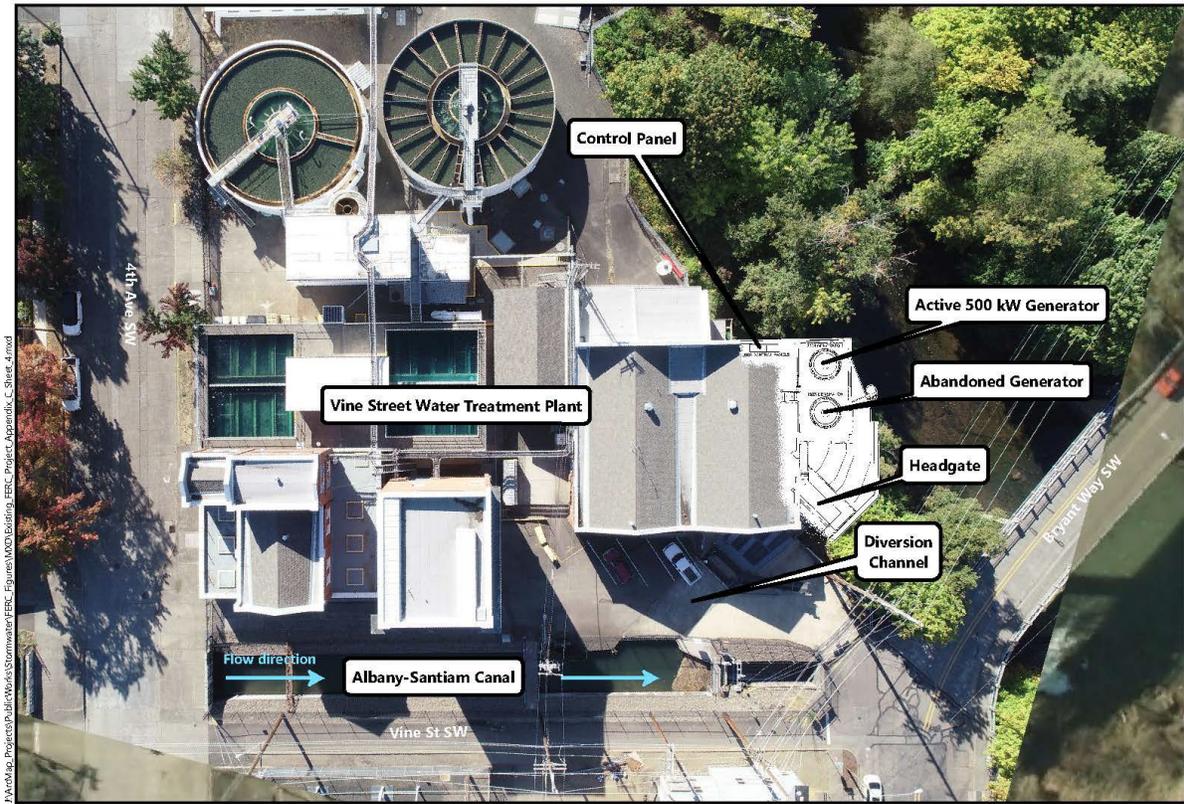


FERC Review October 2019 Map Source: City of Albany

Existing FERC Project 11509-000

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Figure 4: Existing Project P-11506 Aerial View of Vine Street Treatment Plant



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Map not to scale

FERC Review October 2019 Map Source: City of Albany

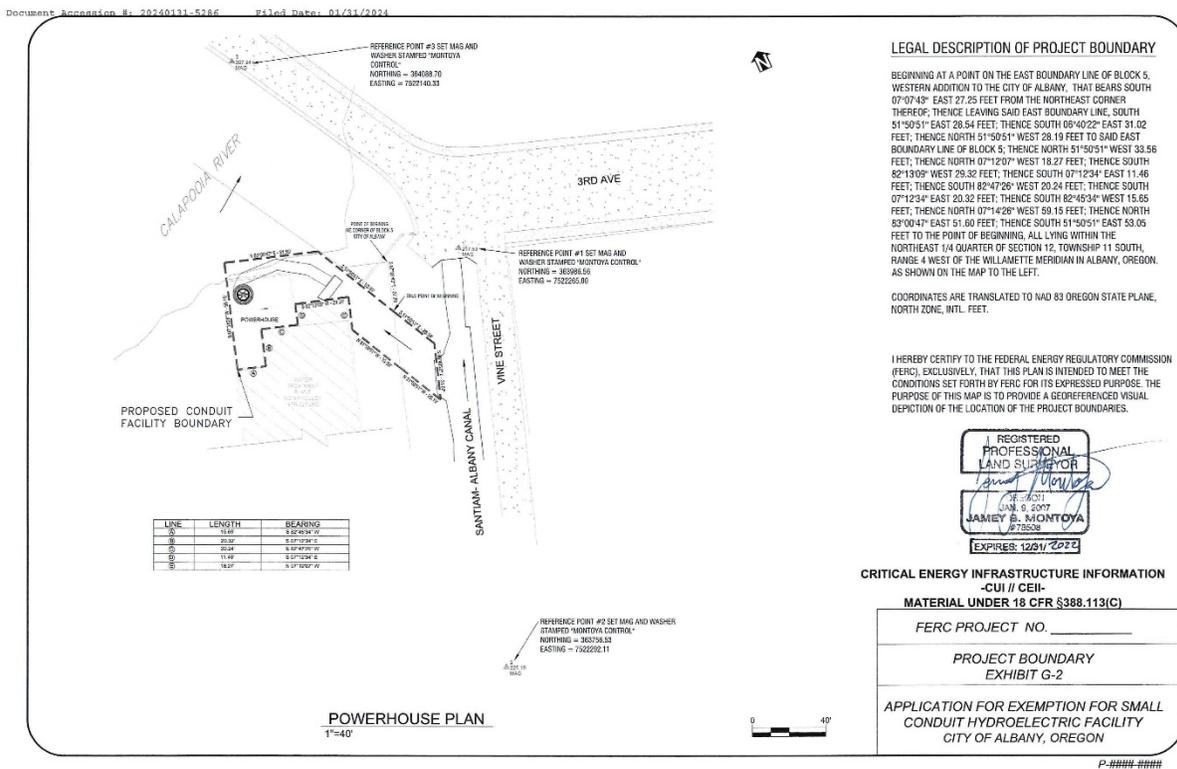
Existing FERC Project 11509-000

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On January 31, 2024, the City submitted to FERC two concurrent applications related to its existing hydroelectric facility (P-11509). One application requests the surrender of the existing license for its hydroelectric generating facility at Vine Street and the associated water diversion and conveyance structures. The other concurrent application requests a small conduit exemption for the continued operation of the hydroelectric generating components located at the Vine Street water treatment plant. Should FERC approve both applications, the conduit exemption would allow the City to continue to operate the hydroelectric project and the project boundary would be limited to the power generation equipment co-located at the water plant, the diversion structure conveying water from the Albany-Santiam Canal to the generating equipment, and the discharge of the water from the turbine via draft tubes into the Calapooia River. Should the conduit exemption be approved by FERC, the City would operate the Vine Street hydroelectric facility in the same manner as required by the existing license. Further, in the City’s application to FERC and its DEQ application for water quality certification, the City

agreed to implement the conditions of a Memorandum of Agreement (MOA) (Attachment A) negotiated among and signed by City of Albany, DEQ, Oregon Department of Fish and Wildlife (ODFW), Oregon Water Resources Department (WRD), National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (USFWS) and Confederated Tribes of the Grand Ronde (CTGR). The MOA requires the City to retain oversight and responsibility for environmental, fisheries and water quality protections that exist as part of the licensed project (P-11509) and would continue to be implemented by the City should the project be classified by FERC as a conduit exempt facility (which would be issued as P-15342). Specifically, as a condition of the MOA, the City must implement the Environmental Measures (as detailed in Exhibit A of the MOA). These required environmental measures stipulated in the MOA are both part of the City's application to DEQ for certification and included as part of DEQ's required conditions in the proposed Clean Water Act Section 401 Water Quality Certification.

Figure 5 – Proposed Conduit Exempt Facility Boundary



On November 18, 2024, FERC Requested that the City provide additional information as part of their submittals, as well as documentation of an application to DEQ for water quality certification. On April 15, 2025, DEQ received an application from the City for water quality certification. Per FERC regulations and Section 401 of the Clean Water Act, DEQ has one year

from receipt of the application to render a decision on the Applicant's request for water quality certification. On August 14, 2025, FERC provided notice of its determination of the reasonable period of time for DEQ to act on the City's water quality certification application as April 15, 2026.

The purpose of this DEQ report is to evaluate any water-quality effects of the City's surrender of its existing FERC license (P-11509) and its planned activities that will be subject to its requested small conduit hydroelectric facility exemption (P-15342). As allowed by Section 401 of the Clean Water Act, DEQ may include in a federal license conditions, as necessary, to comply with Oregon water quality standards, applicable portions of the Clean Water Act, and other relevant provisions of state law.



Photo Caption: The drinking water diversion occurs at the point of the round, wheel-shaped screen in the middle of the photo. The hydropower water diversion occurs at the point of the vertical barred screen on the right side of the photo.



Photo Caption: Albany Hydroelectric Project draft tube point of discharge into the Calapooia River. Project is shown during non-operational condition. October 2025.

2.0 Requirement for Certification

2.1 Applicable Federal and State Law

Section 401 of the Federal Clean Water Act (Clean Water Act or CWA), 33 USC §1341, establishes requirements for state certification of proposed projects or activities that may result in any discharge of pollutants to navigable waters. Before a federal agency, such as FERC, may issue a permit or license for any project that may result in any discharge of pollutants to navigable waters, the state must certify that the proposed project will comply with applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA and any state regulations, including state water quality standards, adopted to implement these sections. The state may condition any granted certificate to assure compliance with state water quality standards and other appropriate water quality-related requirements of state law.

Oregon state law provides that the Environmental Quality Commission may perform all necessary acts to implement the Federal CWA, as amended and federal regulations or guidance issued pursuant to that act, including promulgation of rules (ORS 468B.035). DEQ is the agency of the State of Oregon authorized to implement certification functions prescribed by Section 401 of the CWA for state waters. DEQ must act on an application for certification in a manner consistent with the following federal and state requirements:

Federal requirements

Federal Clean Water Act Sections 301, 302, 303, 306, and 307: These sections prescribe effluent limitations, water quality related effluent limitations, water quality standards and implementation plans, national standards of performance for new sources, and toxic and pretreatment effluent standards.

State requirements

OAR 340-041 and **340-048-0005 to 340-048-0050**: the Environmental Quality Commission (EQC) adopted these rules to prescribe the state's water quality standards (OAR 340-041) and procedures for receiving, evaluating, and taking final action upon a Section 401-certification application (OAR 340-048).

ORS 197.180(1): This statute requires state agency actions to be consistent with acknowledged land use plans and implementing regulations, or if a plan is not acknowledged, compatible with state land use goals. Findings must support the state agency action.

ORS 468B.040: This statute prescribes procedural requirements and findings with which DEQ must comply as it makes a decision on a Section 401 certification application. This statute references the federal law requirements, state water quality rules, and other water-related requirements of state law regarding hydroelectric projects including but not limited to those set forth in Section 7 below.

2.2 Generally Applicable State Water Quality Standards

Oregon water quality standards are contained in Oregon Administrative Rule (OAR) Chapter 340, Division 41 entitled "Department of Environmental Quality Water Pollution Division 41 Water Quality Standards: Beneficial Uses, Policies, and Criteria for Oregon." The water quality standards in Division 41 are composed of three elements: **beneficial uses**, **numeric and narrative criteria**, and the **antidegradation policy**. In addition, DEQ develops Total Maximum Daily Loads for waterbodies not attaining water quality standards, as explained below.

Designated Beneficial Uses

The Federal Clean Water Act and Oregon water quality standards require that water quality be protected and maintained such that existing and potential beneficial uses of public waters are not impaired or precluded by degraded water quality. The regulatory approach is: (1) identify existing and potential beneficial uses (2) develop and adopt numeric and narrative criteria necessary to protect and sustain existing and potential beneficial uses; (3) establish and enforce discharge effluent limitations for each source permitted to discharge treated wastes into public waters to ensure water quality standards are not violated and beneficial uses are not impaired; and (4) establish and implement "best management practices" for a variety of land management activities to minimize water quality degradation and impairment of beneficial uses.

Table 1 identifies the beneficial uses to be protected in the Willamette Basin, which includes the Santiam and Calapooia subbasins.

Narrative and Numeric Criteria

Oregon's numeric and narrative criteria establish the levels necessary to support all designated beneficial uses. The development of water quality standards is a continuing process and is based on best available information at the time. Numeric criteria for water quality standards such as temperature and dissolved oxygen may vary seasonally to support specific life-stage developments of sensitive aquatic uses species such as salmonid species. Oregon Administrative Rules (OAR 340-041) include water quality criteria that apply to specific reaches and seasons, to a particular basin, and statewide.

Anti-Degradation Policy

Oregon's antidegradation policy (OAR 340-041-0004) applies to all surface waters. The goal of the antidegradation policy is to prevent unnecessary further degradation of water quality and to protect, maintain, and enhance the quality of existing surface waters to ensure the full protection of all existing beneficial resources. For waters that meet applicable water quality standards, the policy states that the existing water quality shall be maintained and protected unless the Environmental Quality Commission (EQC) makes certain rigorous findings of need. For water bodies that do not meet certain criteria, the policy prohibits further degradation.

Total Maximum Daily Loads

Waterbodies which fail to meet water quality criteria are designated as water quality limited pursuant to CWA §303(d). The U.S. Environmental Protection Agency requires States to develop total maximum daily loads (TMDL) for waters identified as water quality limited. A TMDL identifies the maximum pollutant load that a water body may receive and still meet water quality standards necessary to support all designated beneficial uses. TMDLs quantify wasteload allocations for point sources and load allocations for non-point sources. Oregon's rules for developing, issuing and implementing TMDLs are in OAR 340-042-0025-through 340-042-0080. For hydroelectric projects located on a water quality limited waterbody, a Section 401 certification may serve as the means for implementing allocations assigned to the project.

Table 1 - Designated Beneficial Uses in the Willamette Basin

 <p style="text-align: center;">OAR 340-041-0340 Table 340A Designated Beneficial Uses Willamette Basin</p>										
Beneficial Uses	Willamette River Tributaries						Main Stem Willamette River			
	Clackamas River	Molalla River	Santiam River	McKenzie River	Tualatin River	All Other Streams & Tributaries	Mouth to Willamette Falls, Including Multnomah Channel	Willamette Falls to Newberg	Newberg to Salem	Salem to Coast Fork
Public Domestic Water Supply ¹	X	X	X	X	X	X	X	X	X	X
Private Domestic Water Supply ¹	X	X	X	X	X	X	X	X	X	X
Industrial Water Supply	X	X	X	X	X	X	X	X	X	X
Irrigation	X	X	X	X	X	X	X	X	X	X
Livestock Watering	X	X	X	X	X	X	X	X	X	X
Fish & Aquatic Life ²	X	X	X	X	X	X	X	X	X	X
Wildlife & Hunting	X	X	X	X	X	X	X	X	X	X
Fishing	X	X	X	X	X	X	X	X	X	X
Boating	X	X	X	X	X	X	X	X	X	X
Water Contact Recreation	X	X	X	X	X	X	X ³	X	X	X
Aesthetic Quality	X	X	X	X	X	X	X	X	X	X
Hydro Power	X	X	X	X	X	X	X	X		
Commercial Navigation & Transportation							X	X	X	

¹ With adequate pretreatment and natural quality that meets drinking water standards.
² See also Figures 340A and 340B for fish use designations for this basin.
³ Not to conflict with commercial activities in Portland Harbor.

Table produced August, 2005

3.0 Application Information

3.1 Name and Address of Project Owner (Applicant)

Applicant:

Mark Yeager for
City of Albany, Oregon
P.O. Box 490
Albany, Oregon 97321

Authorized Representative:

Kristin Preston
Interim Public Works Director
P.O. Box 490
Albany, Oregon 97321

3.2 Documents Filed in Support of Section 401 Application

Information which must be included in an application for the 401 water quality certification is presented in OAR 340-048-0020(2). The City of Albany filed the following documents in support of its section 401 water quality certification application:

- Application for exemption for small conduit hydroelectric facility, submitted to FERC
- Oregon DEQ Evaluation Report and Findings on the Application for Certification Pursuant to Section 401 of the Federal Clean Water Act (1995)
- FERC Draft Environmental Assessment (1998)
- Land Use Compatibility Statement (2025)
- Memorandum of Agreement among Albany, USFWS, NMFS, ODFW, ODEQ, CTGR (Attachment A)
- Albany (Lebanon) Diversion Dam and Hydropower Project Operational Compliance Monitoring Plan (2008)
- Certificate of Water Right
- Adjacent land owners (See Attachment B)

3.3 Project Description

Waters of the State

Waters of the state included within the existing project boundary are the South Santiam and the Calapooia Rivers, and the Albany-Santiam Canal². The Albany-Santiam Canal diverts water from

²

the South Santiam River and eventually discharges water to the Calapooia River. Under the proposed small conduit hydroelectric exemption, the City will continue to divert water from the South Santiam River to the Albany-Santiam canal, and use this water to generate hydroelectricity at the Vine Street facility, which will result in discharges to the Calapooia River. The table below shows the average annual and seasonal flows in cubic feet per second (cfs) for the South Santiam and Calapooia watersheds.

Table 2 Typical Flows Recorded in South Santiam and Calapooia Watersheds

Watershed	Average Annual Flow (cfs)	Average Summer Flow (cfs)	Average Winter Flow (cfs)
Calapooia @ Albany	902	117.5	1,950
South Santiam @ Waterloo	2,961	926	5,326

Source: ODA 2023

Water Rights

Water diverted into the Canal is controlled by water rights issued by the Oregon Water Resources Department. The City of Albany holds rights and permits for a total of 31.7 million gallons, which include an 1878 right to 13.3 million gallons per day (mgd) and a 1979 permit for 18.4 mgd (City of Albany 2017). The City of Albany has certification for up to 190 cubic feet per second for operation of the hydroelectric generation (Certificate 81570; via transfer T-9373).

Aquatic Resources in Project Vicinity

The South Santiam and Calapooia Basins support anadromous salmon species protected by the federal Endangered Species Act: winter steelhead and spring Chinook salmon, summer steelhead, fall chinook, resident trout species, and many introduced warm water species. Aquatic species in the lower South Santiam River and the lower Calapooia River include native and non-native fish and amphibians. The South Santiam River is screened at the point of diversion at the Lebanon Diversion Dam into the Albany-Santiam Canal to minimize potential of fish transfer via water diverted to the canal, and also screened at the point of diversion from the Albany-Santiam Canal to the hydroelectric generating facility.

The state of Oregon maintains a list of native species classified as “sensitive” according to Oregon’s Sensitive Species Rule (OAR 635-100-0040). The “sensitive” designation refers to species that are facing threats to habitat, have small or declining populations, and/or are of concern for other reasons. Four fish species and one amphibian found in the project area are listed as State Sensitive according to the latest version of the Sensitive Species List from the

Oregon Department of Fish and Wildlife (ODFW 2021). Listing of a species as sensitive by the state has no direct impact on federal listing under the Endangered Species Act. Two native fish species are listed as threatened under the ESA (ODFW 2025) in the Calapooia and South Santiam rivers. **See Table 3.** While the Oregon Chub was listed as threatened under the ESA at the time of the City’s original Hydropower License Application, the population has since recovered and been delisted from the ESA. The following table sets out the Oregon State sensitive fish and amphibian species within the vicinity of the Project.

Table 3 Oregon State Sensitive Species in Willamette Valley Ecoregion

Species Common Name	Species Scientific Name	State Status	Federal Status
Oregon Chub	<i>Oregonichthys crameri</i>	Sensitive	None
Lamprey	<i>Lampetra spp.</i>	Sensitive	None
Winter Steelhead	<i>Oncorhynchus mykiss</i>	Sensitive - Critical	Threatened
Spring Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	Sensitive-Critical	Threatened
Northern Red-legged Frog	<i>Rana aurora</i>	Sensitive	None

Existing Project Facilities

The existing FERC-licensed City of Albany, Oregon Hydroelectric Project (P-11509) currently includes a range of facilities and features associated with the diversion and delivery of water. Additional information concerning these features is contained in the City’s applications to FERC for license surrender and conduit exemption (City of Albany 2024). The Project includes the following:

- a. Run-of-the-river diversion dam (Lebanon Diversion Dam) on the South Santiam River
- b. An 18-mile-long earthen conveyance canal (the Albany-Santiam Canal)
- c. Fish passage facilities at the Lebanon Diversion Dam on the South Santiam River
- d. Fish screens at the intake to the canal to prevent fish from the South Santiam River from being entrained into the diversion and transported through the canal system.
- e. Water conveyance features (that is, conveyance features used to direct water to the drinking water system and conveyance features used to direct water to the turbine)
- f. Hydroelectric generation components (that is, the turbine and associated electric appurtenances)

- g. Bypass discharge including Albany-Santiam Canal discharge and the draft tube discharge from the turbine; both discharging to the Calapooia River.

The Lebanon Diversion Dam and Albany-Santiam Canal inlet are in Linn County, approximately RM 20.8 on the South Santiam River, Section 19 T12S, R1W. The existing powerhouse and Albany-Santiam Canal outfall are in Albany, Linn County, on the Calapooia River, between RM 0 and RM 1, Section 12, T11S, R4W. All the existing Project facilities are located on public lands. Adjacent landowners were identified by the Applicant and provided in Attachment B.

Water Delivery and Treatment Related Features

The Albany-Santiam Canal was initially constructed in 1872 for the purpose of transporting goods, but this use was soon discontinued, and its purpose has been limited to water conveyance for most of its existence (City of Albany 2017). The hydroelectric facility was brought online in 1892, and the Vine Street Water Treatment Plant (WTP) was built in 1912. The run-of-river Lebanon Diversion Dam was constructed in the 1920s as part of the system to provide drinking water and irrigation water through the canal (Albany 2025). It was not created to provide storage. The City's water system was originally constructed and operated by Pacific Power and Light (PPL, a privately owned utility corporation). The City purchased the system from PPL in 1984. The purchase from PPL included the 18-mile Albany-Santiam canal, the hydroelectric generating equipment, and the Vine Street WTP, along with the entire water distribution system including reservoirs that were in place at the time. The water system currently supplies water to more than 18,300 customer accounts, both within city limits as well as to customers outside the urban growth boundary (Albany 2025).

The primary use of the Lebanon Diversion Dam and Albany-Santiam Canal is to deliver source water to the Vine Street treatment plant, which has provided drinking water to Albany residents since 1912 (Albany 2025). In its 401 application, the City has indicated that it intends to continue to operate the Vine Street water treatment plant using the water diverted from the South Santiam River via the Albany-Santiam canal. This water diverted from the South Santiam River was previously also used for drinking water treatment purposes by the City of Lebanon, and for irrigation water for agricultural lands adjacent to the Albany-Santiam Canal. The Canal also provides augmentation flows to some local streams where the Canal crosses over those streams. Water that is not used for any of these purposes is then discharged from the terminus of the Albany-Santiam Canal to the Calapooia River just north of the Vine Street facility. This discharge point of the canal is near the SW Bryant Way bridge over the Calapooia River, and just upstream of the confluence with the Willamette River.

Hydropower Related Features and Operations

The hydropower facility that the City purchased from PPL consisted of two turbine generators, one operational 500 kW turbine generator, and one turbine generator of the same capacity that had been abandoned many years earlier and was non-operational at the time of purchase. In their original hydropower license application, Albany did not propose to rehabilitate the second generator, and the project capacity of the existing license is 500 kW (P-11509). In addition to the turbine generator, the hydropower facility includes a concrete diversion channel with trash racks, wooden plank covers and a headgate; one penstock; the original 1924 powerhouse housing the turbines; and electrical switchgear and associated appurtenances.

The City uses up to 190 cfs from the Albany-Santiam Canal to operate the hydroelectric facility. As a requirement of the existing hydropower license (P-11509), and as a condition of the MOA, the City must maintain an instream minimum flow of 1100 cfs in the South Santiam River. If at any time of the year a withdrawal of 190 CFS would cause flows in the South Santiam River downstream of the Lebanon Dam to drop below 1100 cfs, the City must cease operation of the hydroelectric facility. Because of the flow restrictions and requirements, hydropower generation does not typically occur in late summer months depending on annual conditions.

The hydraulic capacity of the hydroelectric facility is 190 cfs, but flows into the facility may be as low as 70 cfs. The typical range of flows into the Albany-Santiam Canal for hydropower use range from 130-190 cfs, but does not often exceed 156 cfs (Bach et al 2013) . Flows into the Albany-Santiam Canal are measured at the point of diversion from the South Santiam River using a USGS stream gage, and flows into the hydropower facilities are calculated using total head, wicket gate opening percentage, and derived from equipment operations.

During hydroelectric generation operations, water from the Canal is diverted via the concrete channel into the powerhouse area. The water enters over the headgate, flows down through the penstock, activating the turbine and is then discharged into the Calapooia River. The powerhouse does not have a defined tailrace. Draft tubes extend vertically down from the turbines, approximately 25 feet from the turbine deck to just below the normal low river level in the Calapooia River. The turbine discharge occurs upstream of the point where excess water from the Albany-Santiam Canal empties into the Calapooia River.

Whether hydropower is generated or not, approximately 12 to 87 cfs of water from the Albany-Santiam Canal enters the Calapooia River, which can be characterized as "spill". This spill represents water not withdrawn by other authorized Canal users (City of Lebanon, irrigators, supplemental instream flows) and may also include stormwater inflows. In the winter and wetter seasons, this spill is a small fraction of the Calapooia River's total flow. In summer and drier conditions, the Calapooia River has very low flows, and canal spill can often exceed the existing flows in the river. Even when minimum flow requirements in the South Santiam River limit water

diversion for hydropower (that is, when South Santiam falls below 1100 cfs), the amount of spill from the canal generally stays within the 12 to 87 cfs range.

When hydropower is active, up to 190 cfs of water is discharged into the Calapooia River. This water is discharged via “draft tubes” that are directly connected to the hydropower turbine and function as a tailrace would for a more typical hydropower facility with a dam. In wetter or average water years, this draft tube discharge is a small portion of the Calapooia’s flow. In drier or low water years, the draft tube discharge can be a significant portion of the Calapooia’s flow and may significantly exceed the Calapooia’s flow in late summer and fall. As noted above, during hydropower generation, the water discharged through the draft tubes is in addition to spill from the canal.

The City has not produced electricity from the Vine Street project since the system was temporarily shut down on May 17, 2024 (*City of Albany, personal communication 2025*). The City has been working through developing a renewed ‘Interconnect Agreement’ with PacifiCorp related to the generation of electricity. (Hanso 2025; Mark Yeager, personal communication November 2025). The City intends to resume regular electricity production pending a new agreement with PacifiCorp.

Proposed Action

As previously described, on January 31, 2024, the City of Albany submitted two concurrent applications to FERC. One application requests the surrender of the existing license (P-11509) for the hydroelectric project and the concurrent application requests FERC approval of the hydropower related features as a Small Conduit Hydroelectric facility (proposed as P-15342). The City states in their application materials that the overall purpose of the City of Albany, Oregon Hydropower project, as currently licensed by FERC, is to serve primarily as the domestic water supply facility for the City of Albany and City of Lebanon. The City states that the hydropower project facilities are co-located at the Vine Street water treatment plant and are more appropriately operated under a conduit exemption classification (per 18 CFR section 4.30(b)(30)), given the primary purpose of the dam, water intake, canal and other conveyance features are to provide municipal drinking water treatment and distribution and not hydropower.

The City is proposing no new construction nor change in operations of the hydroelectric facilities in its application for a Small Conduit Hydroelectric Exemption. The City asserts that should FERC issue an order authorizing the exemption, then the federally-licensed project facilities would only include the diversion canal at the Vine Street water treatment plant and the hydropower generation equipment co-located at the water plant as described above.

In development of the applications to FERC, the City of Albany engaged in discussions about the proposed conduit exemption action with state and federal agencies and Tribes. These discussions identified specific requirements that the City agreed to continue to implement should FERC approve the exemption application. These requirements are outlined in an MOA negotiated among and signed by City of Albany, DEQ, ODFW, OWRD, NMFS, USFWS, and CTGR. In the application to FERC, and in its application for 401 certification, the City confirmed that the Environmental Measures outlined in the MOA would be implemented should the conduit exemption be granted by FERC. Should either of the City's applications to FERC be denied, the City would withdraw the surrender application and continue to implement their current license requirements and the applicable conditions of DEQ's 1995 water quality certification until such time that their FERC license is re-authorized or otherwise modified.

The following list summarizes the Environmental Measures in the MOA, including its Exhibit A:

1. Albany will continue to operate and maintain the previously constructed vertical plate juvenile fish screen and bypass facility at the Canal intake as described in Exhibit A.
2. Albany will continue to operate and maintain the previously constructed river right bank fishway at the diversion dam as provided in Exhibit A.
3. Albany will continue to operate and maintain the previously constructed river left bank fishway at the diversion dam as provided in Exhibit A.
4. Albany shall submit any modification proposed for any of the fish passage structures or operations for review and approval by ODFW, NMFS and USFWS.
5. Albany will cease diversion of water into the Canal for hydropower generation purposes when such diversion would cause flow in the South Santiam River to fall below 1100 cubic feet per second as measured at the USFS stream gage at the Waterloo Station and provided in Exhibit A.
6. Albany will continue to monitor South Santiam River flows at the Waterloo Station and maintain records of compliance with the required flow limitation described in Exhibit A.
7. Albany will evenly ramp diversion flows during start-up and shut-down of the facilities that are the subject of the conduit exemption over the course of one hour for the protection of aquatic resources below the Albany-Santiam canal intake as provided in Exhibit A.
8. Albany will continue to provide diversion flows to Marks and Hospital Sloughs and submit an annual report summary to the Governmental Parties as provided in Exhibit A.
9. Following FERC's issuance of the Orders, by January 31 and by January 31 of each year thereafter, Albany will provide an annual report to the Governmental Parties (DEQ, ODFW, NMFS, USFS) that summarizes the mitigation and monitoring activities and

discusses any deviations from the requirements listed in Exhibit A that occurred during the prior calendar year.

10. Albany agrees to perform reasonably diligent inspections of facility described in Exhibit A. Albany shall take action as described in the MOA to respond to situations in which fish or wildlife are being killed, harmed or endangered by any of the facilities described in Exhibit A.
11. Albany is required to meet with the Parties in each of the succeeding 5 years to discuss implementation of the Environmental Measures of the MOA.

In the City's application for 401 certification, the City has proposed to continue to operate its diversion facilities, its hydroelectric facilities, and the associated Albany-Santiam canal in the same manner as required by the existing FERC license articles and as documented in the MOA. In the 401 application, the City also proposes to implement a number of environmental measures described in the enforceable MOA (Attachment A) that in some instances limit the above-described proposed activities but that may also result in a discharge to waters of the state. Further, while the existing FERC license expires in 2048, a Small Conduit Hydroelectric Exemption does not expire. In sum, the City has proposed activities that are subject to a federal license that may result in a discharge to state waters that requires 401 certification.

3.4 Federal Energy Regulatory Commission Licensing

The City originally applied for their hydropower license in 1994. In 1998, FERC issued a minor license for the City of Albany, Oregon Hydroelectric Project (P-11509) for a 50-year term. DEQ issued a 401 certification in 1995 which was incorporated into the license. The existing license, should it not be surrendered, would expire in 2048.

Upon receipt of the 1998 FERC license, the City implemented the required construction of fish passage measures, approved by NMFS, USFWS, and ODFW, as well as other facility modernization actions associated with the hydropower plant and diversion dam. After completion of required measures, Albany began hydropower generation at the facility in 2008. These structures have been maintained and operated according to the terms of the 1998 license, although hydroelectric generation has not occurred since May 2024. FERC found that the project was compliance with the environmental requirements of their existing license based on a site inspection conducted by FERC in 2024 (FERC 2024).

3.5 Other Water Quality Studies

The City did not provide any new water quality studies or new data as part of their application, based on their position that the application is for an administrative change in federal

authorization of the Project and will not result in any operational changes of the hydroelectric facility, nor result in any new discharge to waters of the US or waters of the state.

DEQ finds that the assertion that the City's application is for an administrative change in a FERC license is incorrect as a matter of law and fact. The City has clearly identified activities within the relevant applications that will continue pursuant to a Small Conduit Hydroelectric Exemption, which if approved by FERC, will result in a discharge to waters of the state. As noted above, the City is proposing to continue to divert water from the South Santiam River for hydroelectric generation in the Albany-Santiam Canal that will be discharged into the Calapooia River.

The City is not proposing any additional water quality monitoring specifically associated with the proposed action. However, the City monitors a WQ parameters according to OHA requirements to assure drinking water standards are attained at the Vine Street WTP (City of Albany 2024).

DEQ has, in the absence of recent data submitted by the application, evaluated publicly available data as described in more detail in subsequent sections. City of Albany and Lebanon water treatment plant records provide information about flows to the treatment plant and hydro project. These records were used during the original FERC licensing process to establish the authorizable effects of the hydropower project on the South Santiam and Calapooia Rivers' flows under a Small Conduit Hydroelectric Exemption would have. The Proposed Action will continue to affect water quality in the South Santiam River, Albany-Santiam Canal and the Calapooia River.

DEQ reviewed publicly available water quality data and reports to support the evaluation and findings presented in this report. Multiple gages are used to quantify flows in the existing project area:

- South Santiam: Waterloo gage 2.5 miles above the canal intake
- Albany-Santiam Canal: City of Albany gage, at canal intake
- Calapooia River: USGS gage, 3.0 miles above the canal tailrace

DEQ also reviewed the following documents related to the City of Albany's hydropower project or Vine Street Water Treatment Plant to complete this evaluation and findings report:

- Albany Hydroelectric Project Total Dissolved Gas Monitoring Report 2009-2010 P-11509 (Parametrix 2010).
- P-11509 Project Operations and Compliance Monitoring Plan Report (City of Albany 2008).
- City of Albany Water Master Plan (City of Albany 2024)
- City of Albany Source Water Assessment (DEQ 2019)
- FERC Environmental Inspection Report (FERC 2024)

DEQ identified several additional documents prepared by others related to water quality in the South Santiam River watershed and Calapooia River watershed, which are identified in the references section at the end of this report.

Water Master Plan Implications

The City of Albany Water Master Plan, approved in 2024, includes a viability study for the Vine Street system, and concludes that it may someday be preferable to construct a new water treatment plant located near the Vine Street facility, and the Vine Street facility may be decommissioned (City of Albany 2024). In addition to receiving drinking water from the South Santiam River system through Vine Street water treatment plant, the City of Albany separately produces drinking water from the Albany-Millersburg treatment plant. As part of the Water Master Plan process, the City reported that their consultant inspected the hydroelectric turbine, then in operation for 13 years, to evaluate its performance and provide recommendations for its operation. The consultant evaluation revealed that the turbine is not performing to its expected level due to corrosion of the wicket gate system. DEQ notes that should the City decide to examine options such as decommissioning, future rehabilitation, repair or removal of any of the faulty or non-functioning hydropower generation equipment, additional federal and state permitting as well as evaluation for potential water quality impacts will likely be required.

4.0 Water Quality Status and Applicable Standards

Oregon water quality regulations are contained in OAR chapter 340, Divisions 41 through 53. The requirements and standards set forth in Division 41 were adopted to protect existing and potential beneficial uses of public waters. Protected beneficial uses have been identified for the Willamette Basin. Water quality standards contain both numeric limits and narrative criteria.

4.1 Potentially Affected Waters and Resources

Waters of the State

In this report, DEQ evaluates how the Proposed Action may cause or contribute to exceedances of specific water quality standards based on waters of the state potentially affected by the Proposed Action. In this case, waters of the state include those waters associated with the reservoir and dam on the South Santiam River, the Albany-Santiam canal, and the Calapooia River. The source water for drinking water treatment and water for hydropower generation is the South Santiam River, which is diverted and transported to the Vine Street facility via the Albany-Santiam Canal. Water used in generation of hydroelectricity at the Vine Street treatment plant is discharged into the Calapooia River. The discharge points from the Albany-Santiam Canal and

the powerhouse to the Calapooia are located just above the confluence with the Willamette River. Because the South Santiam and Calapooia Rivers are tributaries of the Willamette River, the Proposed Action occurs within the Willamette Basin, which is a factor used in identifying applicable beneficial uses and water quality criteria.

Aquatic Resources in Project Vicinity

Within the Santiam and Calapooia subbasins, winter steelhead and spring Chinook salmon are native anadromous species. Summer steelhead and fall Chinook salmon are also found within this basin, along with native resident trout species, many introduced warmwater species, and local amphibians and macroinvertebrates. Per the terms of the 1998 FERC license and DEQ's original 401 water quality certification, the City of Albany conducted a macroinvertebrate sampling program in 2008 which generally concluded the Calapooia near the point of discharge maintained a moderately healthy community with no indication that the discharge from the hydropower operation was influence species composition or richness in a statistically significant manner (Herrera 2009). See additional details concerning presence of sensitive state and federally-listed aquatic species in the project vicinity, provided in Section 3.

4.1 Beneficial Uses in the Willamette Basin

The South Santiam and Calapooia Rivers are within the Willamette Basin for the purposes of identification of beneficial uses. Designated beneficial uses in the Calapooia River are: public, private and domestic water supply; irrigation; livestock watering; wildlife and hunting; fishing; fish and aquatic life; boating; water contact recreation; aesthetic quality; and hydropower [OAR 340-41-0340, Table 340A].

The Willamette mainstem is designated for Salmon and Steelhead Spawning Use, from Oct 15-April 30. The South Santiam River upstream of the diversion is listed as Core Cold Water Habitat, while downstream of the diversion is Salmon and Trout Rearing and Migration. The Calapooia River is not designated as Salmon and Steelhead Spawning Use. The City's 401 application, which includes environmental measures that the City will continue to implement under the enforceable MOA, identifies that the City will maintain operational limitations and protections at the Lebanon Diversion Dam at the South Santiam River, fish screens, fishways, and the Albany-Santiam canal.

Figures 6 through 9 present the fish use designations in the Project vicinity as Salmon and Trout Rearing and Migration and Cool Water Aquatic Life (OAR 340-041-0340, Figures 340A and 340C).

Figure 6 - Fish Use in the Willamette Basin (incl. South Santiam and Calapooia Rivers)

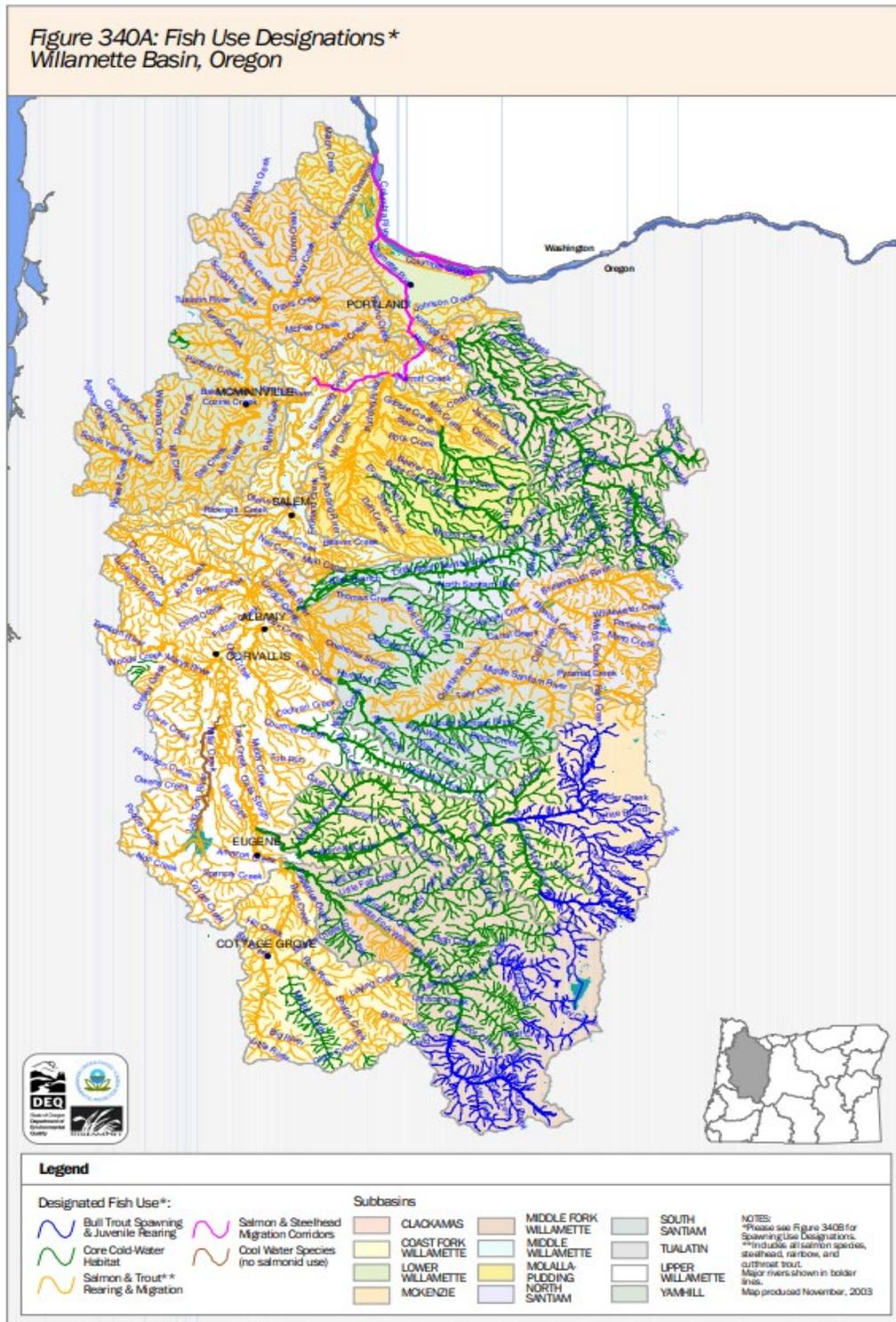


Figure 7 Closer view of fish use on Calapooia and Willamette Rivers

Year-Round Temperature Fish Uses

Amended Year-Round Temperature Use Map (2023)

- Cool Water Species
- Borax Lake Chub (Warm Water Species)
- Bull Trout Spawning & Juvenile Rearing
- Core Cold Water Habitat
- Salmon and Trout Rearing & Migration
- Salmon and Steelhead Migration Corridors
- Oceans and Bays
- Redband or Lahontan Cutthroat Trout
- Out of Jurisdiction / Not Designated

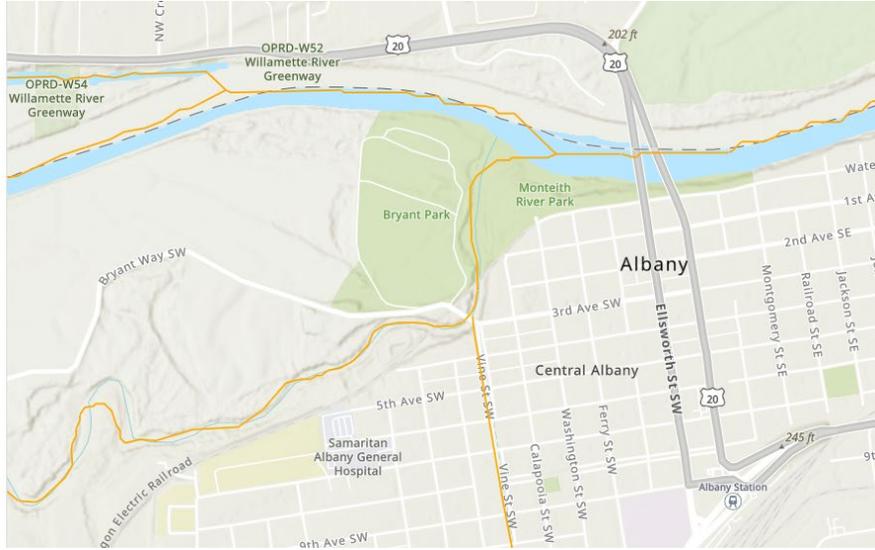


Figure 8 Fish use above and below the diversion dam on the South Santiam River

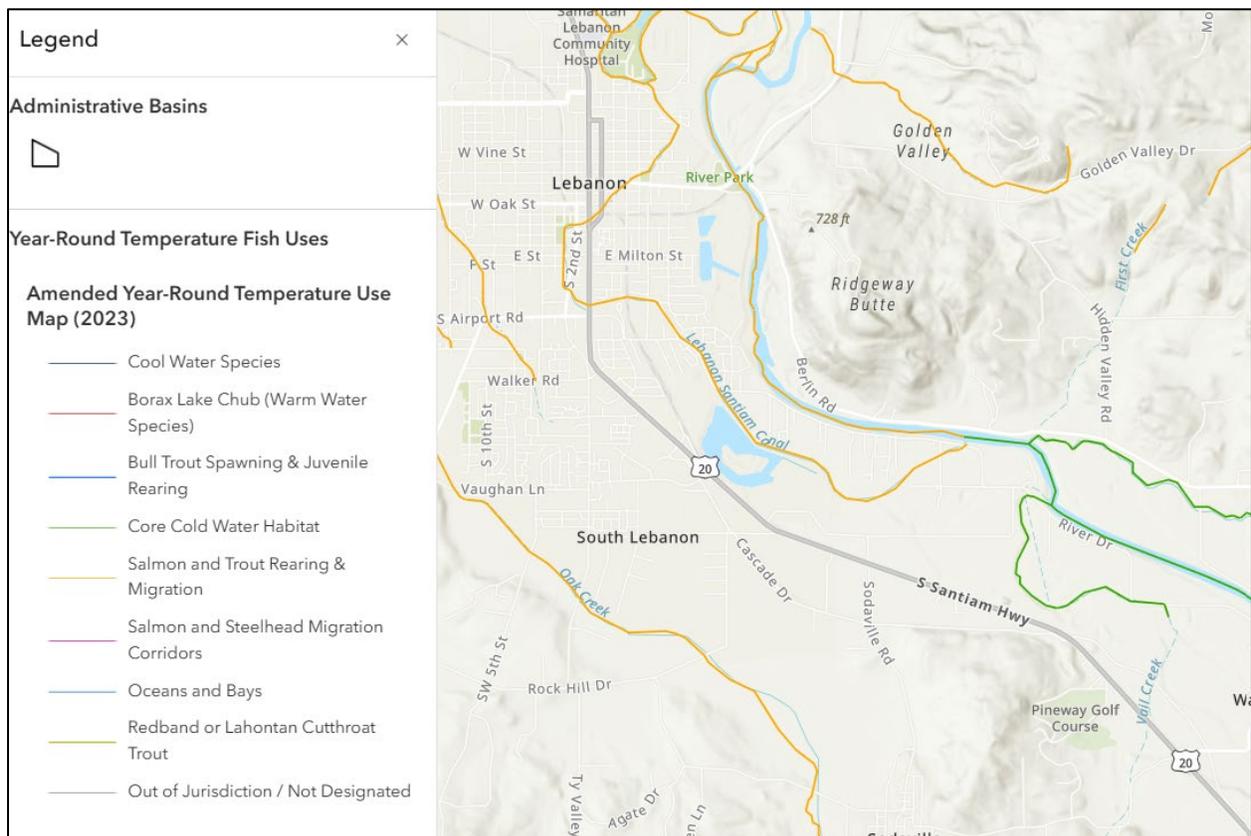


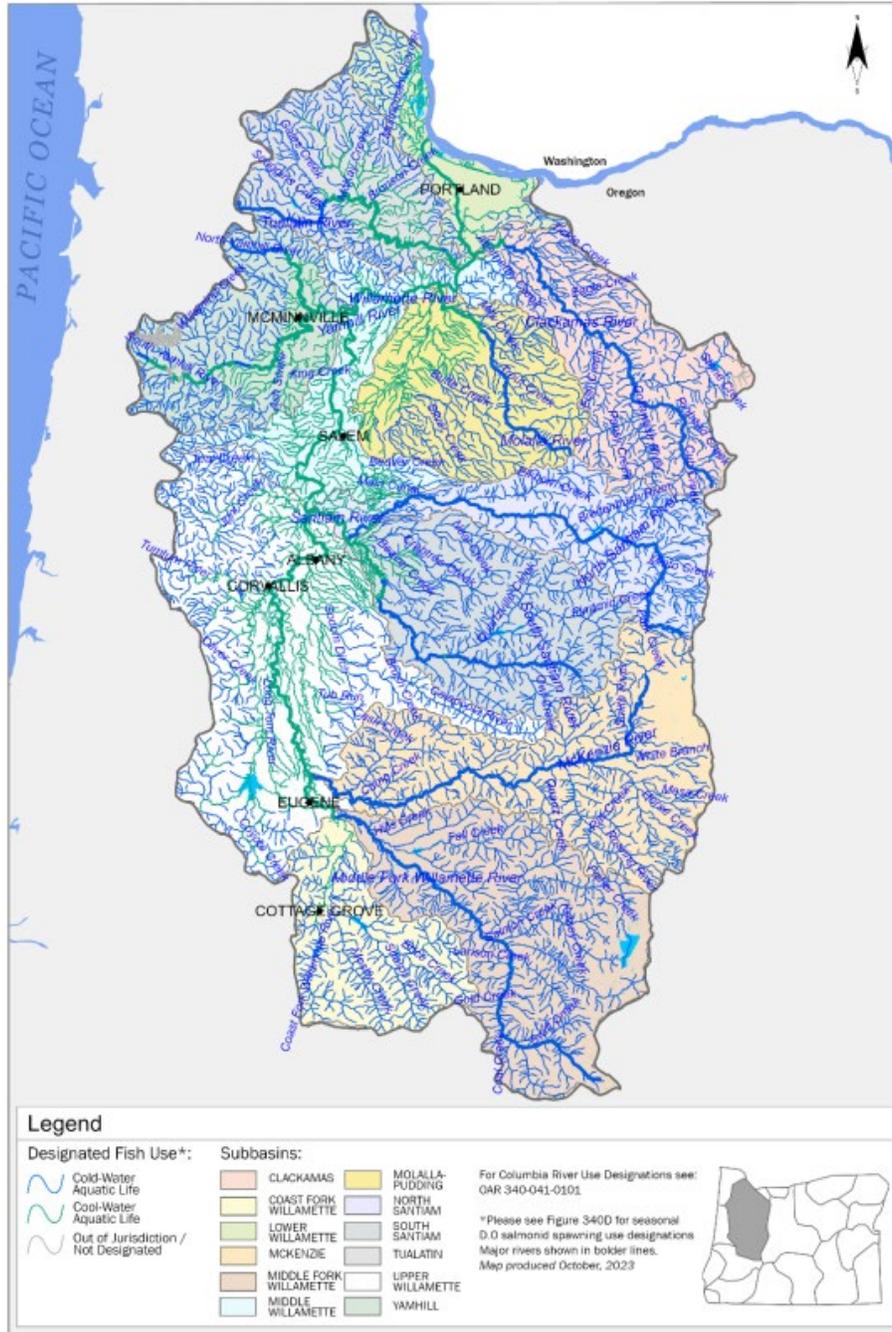
Figure 9 - Dissolved Oxygen fish use designations in the Willamette Basin



State of Oregon Department of Environmental Quality

OAR 340-041-0340 – Figure 340C

Year-Round Dissolved Oxygen Fish Use Designations Willamette Basin, Oregon



4.2 Water Quality Impairments

As previously explained, the Calapooia River and South Santiam River are both within the Willamette Basin for the purposes of identification of beneficial uses and therefore water quality parameters of potential concern. However, water quality impairments are identified based on specific assessment units. The federal Clean Water Act requires Oregon to report on the quality of its surface waters every two years. The 2022 Integrated Report was approved by USEPA on Sep. 1, 2022 and is now current and in effect. The 2024 Integrated Report has been completed and considered "state final", but as of this report preparation, the 2024 Integrated Report has not yet been approved by the USEPA. Information concerning impairments provided here is based on the 2024 State-Final Integrated Report.

Impairments (303(d) Listings)

Calapooia River. According to DEQ's 2024 Integrated Report data, there are several Category 5 impairments for the Calapooia River in the Project vicinity (Shedd Slough to confluence with Willamette River; Assessment Unit OR_SR_1709000304_02_103821) under Section 303(d) of the Clean Water Act. These include:

- Dissolved Oxygen (spawning)
- Iron (Aquatic Life Toxics), and
- Phosphorus.

This assessment unit also has a Category 4 impairment for temperature, year-round.

Much of the recent data available for purposes of DEQ's water quality assessment for the Calapooia River originates from a sample point at Queen Avenue in Albany (Sample Point ID 11180-ORDEQ). This sample location is upstream of the City's discharge from hydropower generation and discharge from the Albany-Santiam Canal, such that the City's operations at Vine Street for drinking water and hydropower are not expected to affect water quality at this sampling location.

South Santiam River. According to DEQ's 2024 Integrated Report data, the primary Category 5 impairments for the South Santiam River from Foster Dam to the confluence with the North Santiam River (Assessment Unit OR_SR_1709000608_02_103925) include:

- Temperature: Listed for failing to meet standards for year-round temperature and spawning temperature to support aquatic life
- BioCriteria

The South Santiam assessment unit also has Category 4 impairments for methylmercury - identified due to levels in fish tissue that exceed human health criteria.

Albany-Santiam Canal. The Albany-Santiam Canal is not directly assessed as part of DEQ's Integrated Report process.

TMDL Status

The Calapooia River and South Santiam River are included in the **Willamette Subbasins TMDL (Upper Willamette Subbasin)**, which was originally issued in 2024 to address updated temperature criteria and amended in May 2025. The 2006 TMDL for the Willamette River related to bacteria impairments (which also included Temperature) continues to include load allocations for point and nonpoint sources, including forestry, agriculture, and urban runoff. Implementation of the 2006 TMDL is coordinated through Water Quality Management Plans (WQMPs) developed by local partners and Designated Management Agencies. The Calapooia River is also included in the 2019 Willamette Basin Mercury TMDL, although the Calapooia River is documented as attaining for this parameter (DEQ 2024).

4.3 Water Quality Parameters of Potential Concern

This section provides a summary of each water quality parameter potentially impacted by the Proposed Action. **Table 4** summarizes the parameters of concern and potential for water quality impacts. Section 5 provides DEQ's more detailed evaluation of the Proposed Action's potential water quality impacts based on these parameters of potential concern, and identifies any measures required to protect water quality.

Table 4 2 - Summary of Water Quality Parameters of Potential Concern

Parameter	Summary of Criteria	Potential Impact
Statewide Narrative Criteria: Oily sheens not allowed	OAR 340-041-0007 Statewide Narrative Criteria: (12) Objectionable discoloration, scum, oily sheens, or floating solids, or coating of aquatic life with oil films may not be allowed;	The Proposed Action is to continue hydropower operation, including diversion, turbine generation, and associated discharges. To date, operation of the Project has not been associated with any oily sheens noted or reported in the Calapooia River. The environmental measures agreed to in the MOA and proposed as part of the 401 application will support attainment of this criteria.
Biocriteria	OAR 340-041-0011 Biocriteria Waters of the State must be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities.	The Proposed Action is to continue hydropower operation, including diversion, turbine generation, and associated discharges. To date, operation of the Project has not been demonstrated to adversely affect biological communities in the Calapooia River. The environmental measures agreed to in the MOA and proposed as part of the 401 application will support attainment of this criteria.
Dissolved Oxygen	OAR 340-041-016 Sufficient concentrations of dissolved oxygen are necessary to support aquatic life.	The Proposed Action is to continue hydropower operation, including diversion, turbine generation, and associated discharges. To date, operation of the turbine per the terms of the FERC license since electricity generation began in 2008 has not been demonstrated to adversely impact dissolved oxygen in the Calapooia River, and the discharge of aerated cooler water through the turbine was previously found to be beneficial to DO levels (DEQ 1998). The environmental measures agreed to in the MOA and proposed as part of the 401 application will support attainment of this criteria.
pH	OAR 340-041-0021	The Proposed Action is to continue hydropower operation, including diversion,

Parameter	Summary of Criteria	Potential Impact
	Activities may not create changes to water quality that cause pH excursions beyond ranges necessary to support beneficial uses.	turbine generation, and associated discharges. To date, operation of the turbine per the terms of the FERC license since electricity generation began in 2008 has not been demonstrated to result in pH exceedances in the Calapooia River. The environmental measures agreed to in the MOA and proposed as part of the 401 application will support attainment of this criteria.
Temperature	OAR 340-041-0028 Criterion is intended to minimize the risk to cold-water aquatic ecosystems from anthropogenic warming, to encourage the restoration and protection of critical aquatic habitat, and to control extremes in temperature fluctuations due to anthropogenic activities.	The Proposed Action is to continue hydropower operation, including diversion, turbine generation, and associated discharges. To date, operation of the turbine per the terms of the FERC license since electricity generation began in 2008 has not been demonstrated to have an effect upon temperature the Calapooia River. The environmental measures agreed to in the MOA and proposed as part of the 401 application will support attainment of this criteria.
Total Dissolved Gas	OAR 340-041-0031 Activities may not cause supersaturation of atmospheric gases in waters of the state at levels that exceed state numeric criteria.	The Proposed Action is to continue hydropower operation, including diversion, turbine generation, and associated discharges. Monitoring conducted after operation of the turbine per the terms of the FERC license after electricity generation began in 2008 did not demonstrate increases in TDG above standards in the Calapooia River (Parametrix 2010). The environmental measures agreed to in the MOA and proposed as part of the 401 application will support attainment of this criteria.
Turbidity	OAR 340-041-0036 No more than a ten percent cumulative increase in natural stream	The Proposed Action is to continue hydropower operation, including diversion, turbine generation, and associated discharges. To date, operation of the turbine

Parameter	Summary of Criteria	Potential Impact
	turbidities may be allowed, as measured relative to a control point immediately upstream of the turbidity causing activity.	per the terms of the FERC license since electricity generation began in 2008 has not been demonstrated to result in formation of turbidity in the Calapooia River. The environmental measures agreed to in the MOA and proposed as part of the 401 application will support attainment of this criteria.

The analysis in Section 5 addresses each parameter of concern based on the details of the Proposed Action and a summary of the applicant’s position. In this report, DEQ is evaluating the water quality effects of continued operation of the City’s hydropower facilities, including diversion of water from the South Santiam River, hydroelectric generation, associated discharges to the Calapooia River, and including the continued implementation of environmental measures described in Section 3 of this evaluation and findings report.

As a condition of a water quality certification, DEQ is requiring the City to seek authorization from DEQ prior to any subsequent repair, modification, construction or other activities including but not limited to any activities that necessitate in-water work associated with the Project.

4.4 Water Quality Standards Not of Concern

This section identifies water quality standards not expected to be violated by the operation of the Proposed Action. As explained below, as conditioned and if operated in compliance with operations proposed in its application, DEQ is reasonably assured that the water quality standards identified in this section will not be violated by the Proposed Action.

The Proposed Action does not include activities or components relevant to **OAR 340-041-0007 (3) – (8); (15)**. The Proposed Action is unlikely to discharge substances or include activities that would be expected to affect the following water quality standards:

- Antidegradation OAR 340-041-0004
 - Oregon’s Antidegradation Policy prevents unnecessary water quality degradation from new or increased point and nonpoint sources of pollution. The Proposed Action does not include any new or increased point or nonpoint sources of pollution.
- Fungi OAR 340-041-0007(9)

- The Proposed Action does not include activities that are likely to discharge substances that promote fungal growth.
- Taste & Odors OAR 340-041-0007(10)
 - DEQ is not aware of any reports of objectionable taste or odor or toxic conditions associated with the existing Project that are deleterious to fish or affect the palatability of water, fish, or shellfish. The Proposed Action that involves continued diversion, hydropower generation, and associated discharges consistent with prior operations will therefore be unlikely to affect these characteristics.
- Bottom or Sludge Deposits OAR 340-041-0007(11)
 - According to this criterion, the formation of appreciable bottom or sludge deposits or the formation of any organic or inorganic deposits deleterious to fish or other aquatic life or injurious to public health, recreation, or industry may not be allowed. DEQ is not aware of any reports of sludge or bottom deposits associated with the existing Project. The Proposed Action that involves continued operation remains unlikely to generate sludge or bottom deposits.
- Aesthetic conditions OAR 340-041-0007(13)
 - The Proposed Action is a continuation of existing canal discharge and hydropower operations of a historic facility. The Proposed Action is not expected to create aquatic conditions that are offensive to the human senses of sight, taste, smell, or touch.
- Radioisotopes OAR 340-041-0007(14)
 - The Proposed Action does not utilize, store, or produce radioactive material.
- Bacteria OAR 340-041-0009
 - The Proposed Action will not discharge sewage or animal wastes into the Calapooia River or involve activities that may contribute to bacterial pollution. The Proposed Action is likely to maintain compliance with the bacteria criteria because data demonstrates current operations, which will continue under the Proposed Action, did not violate the bacteria criteria.
- Nuisance Algae Growth OAR 340-041-0019
 - The Proposed Action does not include any water impoundment. Both the South Santiam River and Calapooia River drain lands that are heavily influenced by cultivated land agriculture. The Proposed Action is likely to maintain compliance with the nuisance algae growth criteria because data demonstrates current operations, which will continue under the Proposed Action, did not violate the criteria nor cause conditions likely to promote the growth of nuisance algae that could be attributed to project operations.

- Toxic Substances OAR 340-041-0033
 - The Proposed Action does not include use of toxic materials. Available data for water quality at the Vine Street Treatment Plant and data previously submitted for the Project indicates compliance with water quality criteria for metals (Albany 2025). The Proposed Action is likely to maintain compliance with the toxic substances criteria because data demonstrates current operations, which will continue under the Proposed Action, did not violate the toxic substances criteria.

5. Water Quality Standards Compliance Evaluation

5.1 Statewide Narrative Criteria: Highest and Best Practical Treatment, etc.

For the purposes of the Proposed Action, the following sub-sections of the standard at **OAR 340-041-0007** may be affected:

(1) Notwithstanding the water quality standards contained in this Division, the highest and best practicable treatment and/or control of wastes, activities, and flows must in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels.

(12) Objectionable discoloration, scum, oily sheens, or floating solids, or coating of aquatic life with oil films may not be allowed;

Application of Standard

The statewide narrative water quality standard is intended to protect human health and aquatic life from adverse effects of conditions caused by water quality degradation. The criteria require that activities provide highest and best practicable treatment and control of wastes to maintain overall water quality at the highest possible levels and deleterious conditions at the lowest possible levels. The statewide narrative standard restricts activities that may negatively affect the chemical, biological, or physical characteristics of water necessary to maintain support for all designated beneficial uses. Narrative criteria may be translated into specific limitations to ensure a proposed activity is consistent with the specific beneficial uses and attributes of a particular body of water. The South Santiam River and Calapooia River are water quality-limited for a number of parameters as noted in Section 4. As a result, these rivers are subject to the non-degradation standard with respect to those listed parameters. The antidegradation standard applies to other parameters on the Calapooia River and South Santiam River.

The statewide narrative standard for highest and best treatment provide protection for humans and aquatic life from adverse effects resulting from the presence of deleterious conditions. These standards require the highest and best practicable control of flows to maintain overall water quality at the highest possible levels and other deleterious conditions at the lowest possible level. Further, these standards prohibit deleterious conditions to fish or other aquatic life. Deleterious conditions may include chemical, biological, or physical changes to water quality

that result from modifications to flow regimes and impoundments. Narrative criteria may be translated into specific limitations to ensure a proposed activity is consistent with the specific beneficial uses and attributes of a particular body of water.

Applicant's Position

The Applicant proposes to continue current operations and asserts that therefore no new or different impacts to affected waterways will occur. The Applicant asserts in their submittal that there is no need to conduct an updated evaluation of current conditions or compliance with water quality standards, as the facility has been operational since 2008 and in compliance with the 401 WQC and License requirements with no documented impacts to water quality.

DEQ Evaluation

Both the lower Calapooia and lower South Santiam watershed are dominated by agricultural land use. The Calapooia River is a significant contributor of nitrates to the Willamette River, with levels spiking during rainy season due to fertilizer runoff. The South Santiam is included in an Agricultural Water Quality Management Area, and has similar nutrient concerns along with bacterial concerns. Lower reaches of the South Santiam and the Calapooia rivers suffer from streambank erosion and high road densities, leading to elevated turbidity. This sedimentation is a primary risk identified for the source water serving the Albany-Santiam Canal (DEQ 2019).

The water diversion from the South Santiam through the Albany-Santiam Canal and discharge to the Calapooia via the Canal or the draft tubes is not likely to exacerbate nutrient levels or bacterial levels, which may persist in the South Santiam and Calapooia rivers regardless of operations of the Proposed Action. The South Santiam Watershed Council, South Santiam Ag Water Quality Local Action Committee, Calapooia Watershed Council, and other watershed focused groups are all actively engaged in implementation of best management practices in their respective basins for the purposes of addressing nutrient and bacterial concerns in these waterways³.

The South Santiam River flows are heavily influenced by the operation of USACE reservoirs at Foster Dam and Green Peter Dam. Flows in the Calapooia River vary greatly throughout the year due to seasonal precipitation and summer use of water (CWC 2004). The average monthly January Calapooia River flow in Albany is 55 times the average August monthly flow, and nearly

³ As demonstrated via reporting presented on websites for the [Calapooia Watershed Council](#) and [South Santiam Watershed Council](#);;

90% of the runoff occurs during the six wettest months (November through April) (CWC 2004). Habitat restoration opportunities and targets for the lower Calapooia River are focused on improvement of riparian habitat and managing runoff from agricultural operations. Elevated temperature and fecal bacteria concentrations have been measured in the Calapooia River but are predominantly reported upstream of the discharge points associated with the Proposed Action (RDG 2011).

The state water quality standards that apply to this project from **OAR 340-041-0007** include temperature, dissolved oxygen, turbidity and pH. These standards provide protection for humans and aquatic life from adverse effects resulting from the presence of deleterious conditions. These standards require the highest and best practicable control of flows to maintain overall water quality at the highest possible levels and other deleterious conditions at the lowest possible level. Further, these standards prohibit deleterious conditions to fish or other aquatic life. Deleterious conditions may include chemical, biological, or physical changes to water quality that result from modifications to flow regimes and impoundments. Narrative criteria may be translated into specific limitations to ensure a proposed activity is consistent with the specific beneficial uses and attributes of a particular body of water.

DEQ findings

DEQ analyzed data for dissolved oxygen, E. coli, pH, total phosphorus, temperature, and total suspended solids in the Management Area (DEQ. 2022). Data are from DEQ, US EPA, and USGS databases for 2001 through 2020. DEQ determined status for stations in five-year periods and trends for stations with at least eight years of data collected at the same time of year. Three locations relevant to the Proposed Action are shown to have sufficient data to calculate recent status and trends and are most likely to help characterize agricultural impacts on water quality in the Management Area (**See Table 5**). Additionally, the effect of the project on TDG was determined to be insignificant based on monitoring completed once the hydroelectric generation became operational (Parametrix 2008).

Table 5 – Summary of water quality standard attainment status 2016-2019; 2000-2019 trends

Site	Parameter					
	e. coli	pH	DO	Temp	Total Phos (mg/L)	TSS (mg/L)
	Attainment Status and Trend				Median/Max ^a	Median/Max ^b
Calapooia River at Hwy 99E	No	Yes	Yes	-	0.03, 0.2	3.5; 50
Calapooia River at Queens Rd (Albany)	No	Yes	Yes ↑	-	0.04; 0.21	6; 64
South Santiam River at Hwy 226	Yes	Yes	Yes ↑	-	0.01; 0.04	2; 7

Notes: a) DEQ has no benchmark for total phosphorus in this Management Area; ODA benchmark for potential water quality concerns = 0.08 mg/L. b) DEQ has no benchmark for total suspended solids in this Management Area. ↑ = statistically significant improving trend. Original Table Source: ODA 2023

The Proposed Action will be operated consistent with the environmental measures established in the MOA. These measures include maintenance of minimum water flows which were specifically identified to ensure that the Proposed Action would continue to support beneficial uses in the South Santiam River and Calapooia River and support aquatic species in these waters.

Based on the information and analysis presented in this report, the state standards that apply to this project from **OAR 340-041-0007** are unlikely to be adversely affected by continued operation of the project as described in the City’s application, the Proposed Action. DEQ finds that overall water quality is being maintained at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors are being maintained at the lowest possible levels with the incorporation of these environmental measures. Based on the analysis of available information, DEQ is reasonably assured that existing water quality will be maintained at a level where beneficial uses will be protected, provided each of the Environmental Measures included in the MOA is implemented as prescribed.

5.2 Biocriteria

OAR 340-041-0011: Waters of the State must be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities.

Application of Water Quality Standard

This narrative criterion was established because compliance with individual criteria may not fully capture synergistic effects resulting from multiple stressors and cumulative impacts on aquatic species and resident biological communities. The biocriteria standard complements parameter-specific standards by extending broad protections to all designated beneficial uses with the implicit assumption that protection of the most sensitive beneficial use provides protection to all uses. Application of the biological criteria intends to assess the overall impact to the aquatic community from water quality changes attributable to an anthropogenic activity.

Present Conditions

The designated beneficial uses of a waterway inform how DEQ assesses overall stream conditions. For most waterways, aquatic life use is the most sensitive use, particularly anadromous fish stocks. Several water quality criteria are considered in determining whether the stream is supporting this use, including the specific water quality parameters detailed in this report. In the Calapooia River, aquatic life is the most sensitive use, particularly anadromous fish stocks. Several criteria are considered in determining whether the stream is supporting this use, including specific water quality parameters, which are detailed in this evaluation and findings report. Even though some water quality parameters may limit productivity, sensitive species may be present. As noted, in segments of the Calapooia River, water quality parameters do not fully support designated uses all of the time, as demonstrated by 303(d) listings (DEQ 2024). Biological communities of the Calapooia river have evolved over time to contend with fluctuating water levels due to natural seasonal variation and variations in precipitation and temperature patterns that may be attributable to climate change.

In 2019, DEQ and the Oregon Health Authority (OHA) completed a process to evaluate and update Albany's drinking water source assessment for the watershed for South Santiam water that is diverted to the Vine Street drinking water treatment plant (DEQ and OHA 2019). Land use practices in the Calapooia watershed have long included agriculture, forest use and urban development (DEQ and OHA 2019). These land uses may affect water quality through increased erosion and sediment delivery to streams, increased nutrient loads from fertilizers and animal wastes. These inputs may in turn result in decreased dissolved oxygen and increased stream temperatures related to removal of riparian vegetation. The information in the source water

assessment can be used to guide future efforts to protect drinking water resources, for example by promoting community implementation of best management practices to reduce runoff of potential pollutants, or working with various interested parties to identify potential riparian restoration actions.

Applicant's Position

The City of Albany maintains that the Project complies with the biocriteria standard and other narrative water quality criteria. In 2024, Albany met or exceeded all state and federal standards for safe drinking water (Albany 2024).

The Applicant proposes to continue current operations and asserts that therefore no new or different impacts to affected waterways will occur. The Applicant asserts in their submittal that there is no need to conduct an updated evaluation of current conditions or compliance with water quality standards, as the facility has been operational since 2008 and in compliance with the 401 WQC and License requirements with no documented impacts to water quality.

DEQ Evaluation

As noted in DEQ's 1995 evaluation of the project for the initial license, the project was conditioned to preserve minimum flows in the South Santiam River and to provide flows for the Mark's and Hospital Sloughs to protect the ecological integrity of those waterways. The MOA includes continuation of all flow requirements to ensure that these important minimum flows are maintained. The ongoing operation of the hydroelectric project will occur with implementation of the MOA environmental measures. This is expected to protect beneficial uses in the Calapooia River and other waterways because fish screening and minimum flows were established for the protection of water quality and habitat for benefit of aquatic species.

Previous studies completed by the City as part of the 401 water quality certification conditions showed that the discharge from the Albany-Santiam canal had no significant affect on the macroinvertebrate community structure in the Calapooia River, and conditions were considered typical of urban streams (Herrera 2009). However, no newer macroinvertebrate data has been located.

DEQ Findings

The project was previously conditioned by DEQ to preserve minimum flows for protection of ecological integrity of South Santiam River, Marks and Hospital Sloughs, and for protection of fish passage. In the previous evaluation report, DEQ determined that the flow of South Santiam

river water into the Calapooia River near the confluence of the Willamette may marginally improve the ecological integrity of that reach (DEQ 1995).

No adverse water quality concerns have been noted and no information has been identified that would indicate that continued project operations would have deleterious effects to biotic community and ecological integrity of the South Santiam or Calapooia rivers.

As part of the implementation of MOA Environmental Measures, the City shall provide reporting to DEQ and other Governmental Parties (DEQ, ODFW, NMF, USFWS) annually, and additional coordination shall occur at 5-year intervals. If after evaluating any of the reporting results provided by the City, DEQ determines that the resident biological community below the diversion dam on the South Santiam River or in the Calapooia River in the vicinity of the discharge locations is likely impaired or in poor condition, based on comparison to the 2009 baseline in the Herrera study, the City shall develop, implement and evaluate measures to address the biocriteria standard as part of an adaptive management plan. The inclusion of this adaptive management plan will ensure that the project does not cause or contribute to a violation of the biocriteria standard. Following DEQ approval, the City shall implement the plan.

Based on the available information, DEQ finds that federal requirements of 40 CFR 131.12 have been met; that state requirements at **OAR 340-041-0011** have been met and DEQ is reasonably assured that the Project will comply with the biocriteria, provided the environmental measures of the MOA and other water quality certification conditions are implemented. Therefore, DEQ has reasonable assurance that the project will not cause or contribute to a violation of the biocriteria standard, as long as all environmental measures contained within the MOA and 401 application are carried out.

5.3 Dissolved Oxygen

OAR 340-041-0016 Dissolved oxygen (DO): No wastes may be discharged, and no activities may be conducted that either alone or in combination with other wastes or activities will cause violation of the following standards: The changes adopted by the Commission on January 11, 1996, become effective July 1, 1996. Until that time, the requirements of this rule that were in effect on January 10, 1996, apply:

(1) For water bodies identified as active spawning areas in the places and times indicated on the following Tables and Figures set out in OAR 340-041-0101 to 340-041-0340: Tables 101B, 121B, and 190B, and Figures 130B, 151B, 160B, 170B, 180A, 201A, 220B, 230B, 260A, 271B, 286B, 300B, 310B, 320B, and 340B, (as well as any active spawning area used by resident trout species), the following criteria apply during the applicable

spawning through fry emergence periods set forth in the tables and figures and, where resident trout spawning occurs, during the time trout spawning through fry emergence occurs:

- (a) The dissolved oxygen may not be less than 11.0 mg/l. However, if the minimum intergravel dissolved oxygen, measured as a spatial median, is 8.0 mg/l or greater, then the DO criterion is 9.0 mg/l;
- (b) Where conditions of barometric pressure, altitude, and temperature preclude attainment of the 11.0 mg/l or 9.0 mg/l criteria, dissolved oxygen levels must not be less than 95 percent of saturation;
- (c) The spatial median intergravel dissolved oxygen concentration must not fall below 8.0 mg/l.

(2) For water bodies identified by the Department as providing cold-water aquatic life, the dissolved oxygen may not be less than 8.0 mg/l as an absolute minimum. Where conditions of barometric pressure, altitude, and temperature preclude attainment of the 8.0 mg/l, dissolved oxygen may not be less than 90 percent of saturation. At the discretion of the Department, when the Department determines that adequate information exists, the dissolved oxygen may not fall below 8.0 mg/l as a 30-day mean minimum, 6.5 mg/l as a seven-day minimum mean, and may not fall below 6.0 mg/l as an absolute minimum (Table 21);

(3) For water bodies identified by the Department as providing cool-water aquatic life, the dissolved oxygen may not be less than 6.5 mg/l as an absolute minimum. At the discretion of the Department, when the Department determines that adequate information exists, the dissolved oxygen may not fall below 6.5 mg/l as a 30-day mean minimum, 5.0 mg/l as a seven-day minimum mean, and may not fall below 4.0 mg/l as an absolute minimum (Table 21).

Application of Water Quality Standard

Dissolved oxygen is a fundamental natural water characteristic that is essential for maintaining conditions necessary to support and sustain aquatic life. The concentration of dissolved oxygen necessary to support healthy aquatic life may vary based on the biological requirements of each organism. Minimum dissolved oxygen requirements may vary further based on life stage developments characteristics. For this reason, DEQ recognizes five classes of dissolved oxygen criteria for beneficial use protection. The dissolved oxygen concentration needed to support each of these recognized classes is presented in OAR 340-041-0016, Table 21, "Dissolved

Oxygen and Intergravel Dissolved Oxygen Criteria". Providing that data exist to demonstrate adequate support for recognized beneficial uses, Table 21 may interpret these criteria based on mean dissolved oxygen data, intergravel dissolved oxygen concentrations, or the percent oxygen saturation if barometric pressure, altitude or temperature preclude attainment of numeric criteria.

The fish use map given in OAR 340, Division 041 Figure 340C indicates water bodies in the vicinity of the site are Cool Water habitat. The species use and level of protection for these criteria include mixed native cool-water aquatic life, such as sculpins, smelt, and lampreys. Salmonids and other cold-water biota may be present during part or all of the year in the Calapooia River. The Applicant presented information to FERC identifying the aquatic (fish and amphibian) species known to occur within the project area (ROI Exhibit E, Albany 2024; see summary provided in Section 3 of this report).

Present Conditions

In 2010, Parametrix completed reporting as part of the FERC license requirements on TDG monitoring that was conducted for the Albany hydroelectric project. The sampling program included collection of temperature and DO data in the Calapooia upstream and downstream of the turbine draft tube tailrace and discharge of the Albany-Santiam Canal. According to the 2010 Parametrix report, DO levels were in compliance with water quality standards during all sampling events (Parametrix 2010).

DEQ's 2024 Integrated Assessment of the Calapooia from the Shedd Slough to Willamette River indicates that this assessment unit is impaired for DO during the spawning season from January 1 – May 15. While there is a DO Impairment in the Calapooia Assessment Unit which includes the point of discharge from the hydropower facility to the Calapooia River, there is no current data available to establish any connection between the data used to establish the impairment and the operation of the Albany Hydro project.

Applicant's Position

The Applicant proposes to continue current operations and asserts that therefore no new or different impacts to affected waterways will occur. The Applicant asserts in their submittal that there is no need to conduct an updated evaluation of current conditions or compliance with water quality standards, as the facility has been operational since 2008 and in compliance with the 401 WQC and License requirements with no documented impacts to water quality associated with DO. The previous model evaluations indicated that DO levels in the Calapooia and Willamette rivers were unaffected by the project (DEQ 1995).

DEQ Evaluation

As noted in the 1995 DEQ Evaluation and Findings Report, the temperature of water taken from the South Santiam River at Lebanon would usually be colder than receiving waters in the Calapooia. This is due to the continued and on-going discharge of colder water from the USACE-operated Green Peter and Foster Reservoirs upstream of the diversion dam on the South Santiam River. Whereas the lower Calapooia River is characterized by lower topography and a much broader floodplain, the South Santiam River drains much higher elevation watershed and the reservoirs do stratify (USGS 2021; CWC 2004). Water temperatures in the canal and in the Calapooia River below the canal outfall were previously found to be decreased by varying levels depending on the time of year and percent of flow provided by the Albany-Santiam canal or via the draft tube tailrace to the Calapooia (DEQ 1995) and conditions likely remain similar although the temperature difference may no longer be as distinctive due to changing climatic conditions. Any aeration through the hydroelectric facility along with lower water temperatures would still be expected to increase dissolved oxygen (DO) levels in the Calapooia River below the canal outfall. This was previously considered to be a beneficial effect (DEQ 1995) that could continue as a result of hydropower operations given the lack of change in reservoir operations (USGS 2021).

The Calapooia River is known to be high in nitrogen from surface runoff and groundwater discharge from agricultural cultivation of grasses; however, targeted research in 2005 concluded that agriculture practices were not contributing to the quality of water in the Albany-Santiam canal and therefore Albany drinking water (Young 2009). The delivery of additional slightly colder and aerated water to the Calapooia River below the canal outfall could assist in supporting beneficial uses in the Calapooia River.

DEQ Findings

Major factors influencing water temperatures linked to USACE dams and on-going agricultural practices identified in the 1995 Evaluation and Findings report remain widespread within the South Santiam and Calapooia watersheds. As demonstrated by outcome and project reporting, significant work has been undertaken by the South Santiam Watershed Council and the Calapooia Watershed Council among other groups to implement restoration projects and promote best practices with grass seed and other commodities growth in these watersheds⁴. DEQ finds that the development and urbanization conditions within the South Santiam and

⁴ See projects completed by [Calapooia Watershed Council](#) and [South Santiam Watershed Council](#)

Calapooia remain similar to those present when the project was evaluated by DEQ in 1995; based on reports of restoration, DEQ finds that conditions are not likely to have significantly declined within these watersheds since the 1995 evaluation. The Proposed Action proposes continued diversion, hydropower generation, and associated discharges.

For DEQ's 1995 water quality certification, no significant effects on dissolved oxygen concentrations were expected in the South Santiam River, canal or sloughs as a result of the Proposed Action. It is still accurate that the water discharging from the Albany-Santiam canal or through the turbine draft tubes may increase dissolved oxygen concentrations in the lower Calapooia River, particularly as a result of the City's hydropower operations during the warm, low flow time of year for the Calapooia River. However, this effect would be uncommon since the hydropower project is unlikely to be operating during low flows to maintain the South Santiam River minimum flow as required by the MOA.

While the Project has reported no exceedances of DO, no current data related to DO levels in the Calapooia River in the vicinity of the Project has been made available or identified. If future monitoring data obtained by DEQ indicates that DO criteria are not being met below the Project outfall, then within 120 days of DEQ notifying the City of this exceedance, the City shall submit to DEQ a proposed DO adaptive management plan to address compliance with applicable criteria and allocations.

If DEQ determines monitoring indicates the DO criteria are not met, the City shall develop and propose measures to address the DO criteria exceedance as part of the adaptive management plan. The City shall develop and submit to DEQ an adaptive management plan to ensure that project does not cause or contribute to a violation of the DO criteria. Following DEQ approval, the City shall implement the plan in accordance with the approved plan terms and schedule, including any modifications made to the plan by DEQ as a condition of its approval. If DEQ determines the monitoring demonstrates that the DO criteria are met, then DEQ may allow Albany to cease monitoring for a period of time.

Based on the available information, DEQ finds that federal requirements of 40 CFR 131.12 have been met; that state requirements at OAR 340-041-0016 have been met and DEQ is reasonably assured that the Project will not cause or contribute to a violation of the DO criteria, provided the environmental measures of the MOA and other water quality certification conditions are implemented. Therefore, DEQ is reasonably assured that the Proposed Action, as conditioned, under a FERC conduit exemption will not adversely effect DO levels in the South Santiam or Calapooia Rivers.

5.4 Temperature

OAR 340-041-0028

(1) Background. Water temperatures affect the biological cycles of aquatic species and are a critical factor in maintaining and restoring healthy salmonid populations throughout the State. Water temperatures are influenced by solar radiation, stream shade, ambient air temperatures, channel morphology, groundwater inflows, and stream velocity, volume, and flow. Surface water temperatures may also be warmed by anthropogenic activities such as discharging heated water, changing stream width or depth, reducing stream shading, and water withdrawals.

(2) Policy. It is the policy of the Commission to protect aquatic ecosystems from adverse warming and cooling caused by anthropogenic activities. The Commission intends to minimize the risk to cold-water aquatic ecosystems from anthropogenic warming, to encourage the restoration and protection of critical aquatic habitat, and to control extremes in temperature fluctuations due to anthropogenic activities. The Commission recognizes that some of the State's waters will, in their natural condition, not provide optimal thermal conditions at all places and at all times that salmonid use occurs. Therefore, it is especially important to minimize additional warming due to anthropogenic sources. In addition, the Commission acknowledges that control technologies, best management practices and other measures to reduce anthropogenic warming are evolving and that the implementation to meet these criteria will be an iterative process. Finally, the Commission notes that it will reconsider beneficial use designations in the event that man-made obstructions or barriers to anadromous fish passage are removed and may justify a change to the beneficial use for that water body.

(3) Purpose. The purpose of the temperature criteria in this rule is to protect designated temperature-sensitive, beneficial uses, including specific salmonid life cycle stages in waters of the State.

(4) Biologically Based Numeric Criteria. *Unless superseded by the natural conditions criteria described in section (8) of this rule, or by subsequently adopted site-specific criteria approved by EPA, the temperature criteria for State waters supporting salmonid fishes are as follows:*

(a) The seven-day-average maximum temperature of a stream identified as having salmon and steelhead spawning use on subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 130B, 151B, 160B, 170B, 220B, 230B, 271B, 286B, 300B, 310B, 320B, and 340B, may not exceed 13.0 degrees Celsius (55.4 degrees Fahrenheit) at the times indicated on these maps and tables;

(b) The seven-day-average maximum temperature of a stream identified as having core cold water habitat use on subbasin maps set out in OAR 340-041-101 to 340-041-340:

Figures 130A, 151A, 160A, 170A, 180A, 201A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A, may not exceed 16.0 degrees Celsius (60.8 degrees Fahrenheit);

(c) The seven-day-average maximum temperature of a stream identified as having salmon and trout rearing and migration use on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A, may not exceed 18.0 degrees Celsius (64.4 degrees Fahrenheit);

(12) Implementation of the Temperature Criteria.

(e) Other Nonpoint Sources. The department may, on a case-by-case basis, require nonpoint sources (other than forestry and agriculture), including private hydropower facilities regulated by a 401 water quality certification, that may contribute to warming of State waters beyond 0.3 degrees Celsius (0.5 degrees Fahrenheit), and are therefore designated as water-quality limited, to develop and implement a temperature management plan to achieve compliance with applicable temperature criteria or an applicable load allocation in a TMDL pursuant to OAR 340-042-0080.

Application of Water Quality Standard

The temperature standard protects waters of the state against anthropogenic thermal loading which may undermine support for existing and designated beneficial uses. Water temperatures that are acutely or chronically above biologically based levels can harm aquatic organisms that depend upon cold water to live or reproduce. This is particularly true of Oregon's native "cold-water" fish such as salmon, bull trout, rainbow trout, cutthroat trout, steelhead trout and certain amphibians including frogs and salamanders. Elevated temperatures may also adversely affect other important water quality parameters including dissolved oxygen, pH, and increase algae and fungi productivity.

DEQ adopts biologically based numeric temperature criteria to support specific life stage and development activities of species that may currently occupy or have historically occupied certain ranges. DEQ applies the temperature criterion as a seven-day average maximum statistic calculated as the average of the daily maximum temperatures from seven consecutive days ("7-day average maximum", or 7dAM). The maximum 7dAM is the 7dAM for the warmest 7 consecutive days (week) of the year.

The fish use in this reach is designated as salmon and trout rearing and migration. Based on this designated use, the biologically-based numeric criterion of 18° C applies year-round. Oregon's temperature standard further protects water quality by restricting activities that impact

waterbodies that meet or exceed applicable criteria. Waterbodies that meet or exceed the applicable biologically-based temperature criteria may not be warmed more than 0.3° C above ambient water temperatures.⁵

Present Conditions

Water temperature in the South Santiam River at the diversion dam is affected by releases from USACE-regulated dams and retention reservoirs. This results in spring and early summer temperatures that are somewhat cooler than would otherwise be expected, and fall temperatures that would be slightly warmer than expected without presence of dams (Sullivan and Rounds 2021). The Calapooia River is part of the Willamette Basin and is included in DEQ's recently adopted Willamette Subbasins Temperature Total Maximum Daily Load (TMDL), which was approved by the EPA in September 2024. This TMDL replaces older TMDLs for temperature and establishes new temperature limits and management strategies for the region to address heat pollution and protect aquatic life.

The typically colder waters of the South Santiam, due to presence of the USACE dams upstream, can be expected to cause cooler water temperatures in the canal and potentially in the Calapooia below the outfall depending on the time of year and volume of flow discharged to the Calapooia River. With other factors held constant, aeration through the hydroelectric facility along with lower water temperatures may increase dissolved oxygen (DO) levels in the Calapooia River below the canal outfall. In DEQ's 1995 Evaluation and Findings Report for the WQC, this was considered to be a potential beneficial effect from operations of the Project. As explained above, the City is proposing to continue to divert water from the South Santiam, transfer water via the Albany-Santiam canal, generate hydroelectricity at the hydropower

⁵ OAR 340-041-0028(11): "The cold-water protection narrative criteria in subsection (a) do not apply if (A) there are no threatened or endangered salmonids currently inhabiting the water body; (B) The water body has not been designated as critical habitat; and (C) The colder water is not necessary to ensure that downstream temperatures achieve and maintain compliance with the applicable temperature criteria." Discharge from the proposed Pumped Storage Project enters the Slide Creek impoundment portion of the North Umpqua River. The proposed action directly influences water quality conditions in the North Umpqua River including the reach below Soda Springs Dam that is designated critical habitat for coho salmon. Since volitional upstream and downstream passage was provided in 2012, access for coho salmon and other migratory species has been extended to Slide Creek Dam, which currently represents the upstream extent of migratory accessibility.

project, and discharge water to the Calapooia River. Given these Project operations are not proposed to change under a conduit exemption, and because major influences on water quality (agricultural practices and dam operations) within the watersheds do not appear to have significantly expanded, it is likely that aeration through the hydroelectric facility and lower water temperatures are likely to continue to have minimal impact on water temperatures and may at times improve dissolved oxygen (DO) levels in the Calapooia River below the canal outfall.

As noted in earlier sections, the Calapooia River and South Santiam rivers have impairments for temperature based on DEQ's current Integrated Report (DEQ 2024). When there are water quality impairments, DEQ is directed by the Clean Water Act to develop water quality restoration plans called Total Maximum Daily Loads. A temperature TMDL was developed for the Willamette basins in 2006, but was replaced by a new TMDL for temperature in 2024. DEQ's analysis as part of the Temperature TMDL for Willamette Subbasins, approved by EPA in 2024, shows some of the general permit registrants, including City of Albany's drinking water treatment plant (DEQ WQ File number 66584, NPDES permit 200-J), have reasonable potential to increase stream temperature above the criteria, particularly on streams with very low flow rates. For this reason, those 200-J NPDES permittees were assigned a waste load allocation in the TMDL. EPA and state regulations require that TMDLs assign an allocation if an entity or activity is identified as a potential source of pollutants. In cases where a 200-J registrant does not discharge or was estimated to have a de minimis temperature impact (≤ 0.005 deg-C above the applicable criteria at critical conditions) those registrants were not considered significant sources and not assigned a waste load allocation. All but one of the 200-Js permit holders discharging to waters included in the Willamette River TMDLs were determined to have de minimus temperature impact and were not assigned a WLA.

As part of the TMDL, City of Albany is identified as a "large dam and reservoir owner" that must monitor water temperatures above and below the Lebanon diversion dam. The City's obligations for monitoring will be associated with operation of the dam for the purpose of providing drinking water. Under these TMDL obligations, the City will be required to prepare a temperature monitoring plan for review and approval by DEQ that will include regular reporting on results and progress. As a Designated Management Agency (DMA), the City must also address site specific effective shade surrogate measure targets to meet nonpoint source load allocations. As part of the Temperature TMDL, the City will be required to complete continuous temperature monitoring upstream and downstream of the reservoir at the Lebanon Dam/South Santiam Diversion, with four years of data collected during the critical period. The City must also characterize potential for or actual reservoir stratification. DEQ would discuss any other potential requirements with the City following temperature data collection and analysis.

Applicant's Position

The Applicant proposes to continue current operations and asserts that therefore no new or different impacts to affected waterways will occur. The Applicant asserts in their WQC application that there is no need to conduct an updated evaluation of current conditions or compliance with water quality standards, as the facility has been operational since 2008 and in compliance with the 401 WQC and License requirements with no documented impacts to water quality.

DEQ Evaluation

Flows in the Calapooia River vary greatly seasonally and interannually. In a dry year, flows in September and October are approximately 20-25 cfs; in a wet year, flow can range from 200-2010 cfs. The most likely effects from increased canal flow would occur during the summer when the Calapooia River is low. As part of DEQ's 1995 Evaluation of the City's prior proposed activities, DEQ determined that the long-term operation of the Project (P-11509) was unlikely to have any adverse effects to the Calapooia River related to temperature or DO. Further, DEQ previously found that while increased water velocities through the Albany-Santiam canal as a result of adding flow for hydropower generation would potentially increase turbidity levels at the outfall into the Calapooia River. However, the increases were not expected nor documented to be significant with the higher flows, and other water quality standards in the Calapooia River were not expected to be significantly affected by flows through the Albany-Santiam Canal unless conditions changed in the South Santiam River, upstream from the diversion at the dam. Further, DEQ's 1995 evaluations determined that the discharge to the Calapooia River would not result in any adverse effects to anadromous salmonid species due to colder water temperatures (from USACE dam discharge and flow management) or false attraction.

Hydroelectric generation at the Vine Street project site is restricted to periods when the Santiam River would be flowing at above 1100 cfs, which is not known to occur during critical summer months when water temperature exceedances would be expected. Operation of the hydroelectric system components would not be expected to contribute to the temperature exceedance as there is insignificant heat generation experienced by discharging the water through the turbine. If FERC authorizes the Proposed Action, the City's waste load allocation as part of the drinking water treatment system will be addressed through implementation of that 200-J permit and a TMDL Implementation Plan required by DEQ.

DEQ Findings

In the 1995 Findings report, DEQ determined that operation of the Project (P-11509) was unlikely to have any adverse effects to the Calapooia River related to temperature. As part of continuing operations of the drinking water diversion, the City will be required to develop a temperature management plan per the requirements of the Willamette Subbasin TMDL for the purposes of managing temperatures associated with water used in operation of the Vine Street Water Treatment Plant.

In addition, the City of Albany has committed in the 401 application to implement terms and conditions of the negotiated MOA, therefore, operation of the hydropower project would be limited to conditions when water temperature exceedances are unlikely to occur given background temperatures of both the South Santiam and Calapooia rivers. Therefore, no effects to temperature are expected from the Proposed Action.

Accordingly, since all operational measures associated with ongoing protection of anadromous fish species and maintenance of flow requirements are proposed to be implemented by the Applicant in its 401 application and are enforceable measures in the MOA, DEQ finds that temperature exceedance due to the Proposed Action is unlikely to occur given those measures. DEQ therefore has reasonable insurance of temperature criteria attainment under the flow limitations as required by the MOA and the City's compliance with the allocations and DMA responsibilities identified in the Willamette Subbasin Temperature TMDL.

5.5 pH

OAR 340-041-0345 Basin-Specific Criteria (Willamette): Water Quality Standards and Policies for this Basin

pH Water Quality Standard

pH (hydrogen ion concentration) values may not fall outside the following ranges for freshwaters: 6.5–8.5

Application of Water Quality Standard

This standard applies to the Project-affected waters for surface waters in canals, waterways and streams, and in Project impoundments. Most streams in Oregon have pH values falling between 6.5 and 8.5. Seasonal fluctuations may occur in the pH number due to substances entering the water from land or bio-chemical activity in the water. The Calapooia and South Santiam rivers pH standard is set at this range of 6.5 to 8.5 to coincide with the locally occurring range.

Present Conditions

DEQ monitoring data collected at the station located upstream of the canal outfall has generally been within the applicable criteria range for pH. This was also documented in past studies and DEQ's status and trends analysis (DEQ 1995; DEQ 2024). In the Willamette Basin, waterways with nutrient enrichment may become eutrophic, which in turn may impact the pH levels due to photosynthesis and decomposition of aquatic plant material.

The Calapooia River is characterized by an upper watershed that drains forested lands in the Cascade mountains, and a lower portion of flat, poorly drained agricultural lands used predominantly for grass seed cropping. Within the Calapooia River watershed, there is a high nitrogen input associated with grass seed crop production (Evans et al 2014). Nitrates in surface waters can encourage algal growth, which may be deleterious to native fish populations and, as noted above, can impact pH balance of a waterway. In recent studies within the Calapooia watershed or basin, nutrient levels were generally higher in lower-elevation sub-basins dominated by poorly-drained soils and agricultural production when compared to nutrient levels in higher-elevation sub-basins dominated by well-drained soils and forests (Evans et al 2014). Results of repeated sampling reported by Evans et al (2014) suggest that agricultural lands in the Calapooia watershed are most strongly contributing to in-stream nutrient concentrations, with riparian zones playing a role in reducing export of nitrate from the cropping system to the river (Griffith et al 2009). While expansion and protection of riparian buffers are a known conservation practice to mitigate nitrogen enrichment, more recent investigations that looked at water quality in the Calapooia River conclude that more work is needed to understand the impact of agricultural conservation programs aimed at reducing nitrogen inputs (Mueller-Warrant et al 2025).

Applicant's Position

The Applicant proposes to continue current operations and asserts that therefore no new or different impacts to affected waterways will occur. The Applicant asserts in their submittal that there is no need to conduct an updated evaluation of current conditions or compliance with water quality standards, as the facility has been operational since 2008 and in compliance with the 401 WQC and License requirements with no documented impacts to pH or other water quality parameters.

DEQ Evaluation

Previous evaluation of the pH impacts of the operation of the hydropower project as part of the 1995 FERC licensing determined that project operations were not expected to increase nutrient concentrations, nor introduce any other changes that would adversely affect pH levels in the power canal, sloughs or Calapooia River. Recent DEQ analysis of water quality data within the

Willamette basin reveals that the Calapooia and South Santiam river are demonstrating improved pH attainment (DEQ 2022).

DEQ Findings

The City of Albany will implement terms and conditions of the negotiated MOA, which will limit operations to times of the year when flows in the South Santiam River are at least 1100 cfs to protect flows for water quality and fish use. The waters in the South Santiam River, Albany-Santiam Canal, and Calapooia River are documented to have nutrient inputs from run-off. However, the Proposed Action would not result in new or increased nutrient concentrations through its operation.

While the Project has reported no exceedances of pH, no current data related to pH levels in the Calapooia has been made available or identified. If future monitoring data obtained by DEQ indicates that pH criteria are not being met below the Project outfall, then within 120 days of DEQ notifying the City of this exceedance, the City shall submit to DEQ a proposed pH adaptive management plan to address compliance with applicable criteria and allocations.

If DEQ determines monitoring indicates the pH criteria are not met, the City shall develop and propose measures to address the pH criteria exceedance as part of the adaptive management plan. The City shall develop and submit to DEQ an adaptive management plan to ensure that project does not cause or contribute to a violation of the pH criteria. Following DEQ approval, the City shall implement the plan in accordance with the approved plan terms and schedule, including any modifications made to the plan by DEQ as a condition of its approval. If DEQ determines the monitoring demonstrates that the pH criteria are met, then DEQ may allow Albany to cease monitoring for a period of time.

Based on the available information, DEQ finds that federal requirements of 40 CFR 131.12 have been met; that state requirements at OAR 340-041-0031 have been met and DEQ is reasonably assured that the Project will comply with the pH criteria, provided the environmental measures of the MOA and water quality certification conditions are implemented. Therefore, DEQ is reasonably assured that the Proposed Action of continued Project operation under a FERC conduit exemption will not will not likely cause or contribute to exceedance of pH standard in the South Santiam or Calapooia Rivers.

5.6 Total Dissolved Gas

OAR 340-041-0031

(1) Waters will be free from dissolved gases, such as carbon dioxide hydrogen sulfide, or other gases, in sufficient quantities to cause objectionable odors or to be deleterious to fish or other aquatic life, navigation, recreation, or other reasonable uses made of such water.

(2) Except when stream flow exceeds the ten-year, seven-day average flood, the concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection may not exceed 110 percent of saturation. However, in hatchery-receiving waters and other waters of less than two feet in depth, the concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection may not exceed 105 percent of saturation.

Application of Water Quality Standard

Supersaturation of atmospheric gases typically occurs when aerated water is discharged to a deeper portion of a receiving waterbody. The hydrostatic pressure that occurs at deeper zones increases gas solubility resulting in gas concentrations that can exceed normal maximum solubility. Total dissolved gas concentrations above 100-percent saturation can cause gas bubble trauma in salmonids in which the formation of gas bubbles on the gills and fins can cause stress or death.

Present Conditions

Because of the unknown potential for TDG exposure of fish and other aquatic species at the tailrace of the generation facility, as a condition of the existing license DEQ and FERC required one year of monitoring to ensure that TDG levels did not exceed 110% saturation of the barometric pressure during normal hydroelectricity generation operations. The City conducted baseline sampling in 2008. A total of seven one-day sampling events occurred in January 2010, February 2009/10, March 2009/10 and April 2009/10 (Parametrix 2010). No TDG measurements from any individual sample in the Calapooia River exceeded 103.8% saturation compared to local barometric pressure. Lowest recorded level was 98.4%. Operation of the hydropower facility does not typically occur between roughly May – November in a given year due to flow requirements. No newer data has been identified by DEQ related to TDG levels associated with hydropower operations.

Applicant's Position

The Applicant proposes to continue current operations and asserts that therefore no new or different impacts to affected waterways will occur. The Applicant asserts in their submittal that there is no need to conduct an updated evaluation of current conditions or compliance with water quality standards, as the facility has been operational since 2008 and in compliance with the 401 WQC and License requirements with no documented impacts to water quality.

DEQ Evaluation

The existing project has not recorded any exceedances of TDG since operation began in 2008, and the Applicant has proposed to continue diversions, hydropower generation and associated discharges, subject to environmental measures set forth in the MOA. Any changes in turbine capacity or mode of operation would require FERC authorization; therefore, DEQ would have further opportunity to evaluate these potential changes for impacts on potential TDG impacts.

DEQ Findings

While the Project has reported no exceedances of TDG, no current data related to TDG levels in the Calapooia River has been made available or identified. If future monitoring data obtained by DEQ indicates that TDG criteria are not being met below the Project outfall, then within 120 days of DEQ notifying the City of this exceedance, the City shall submit to DEQ a proposed TDG adaptive management plan to address compliance with applicable criteria and allocations.

If DEQ determines monitoring indicates the total dissolved gas criteria are not met, the City shall develop and propose measures to address the total dissolved gas criteria exceedance as part of the adaptive management plan. The City shall develop and submit to DEQ an adaptive management plan to ensure that project does not cause or contribute to a violation of the total dissolved gas criteria. Following DEQ approval, the City shall implement the plan in accordance with the approved plan terms and schedule, including any modifications made to the plan by DEQ as a condition of its approval.

If DEQ determines the monitoring demonstrates that the total dissolved gas criteria are met, then DEQ may allow Albany to cease monitoring for a period of time.

Based on the available information, DEQ finds that federal requirements of 40 CFR 131.12 have been met; that state requirements at OAR 340-041-0031 have been met and DEQ is reasonably assured that the Project will comply with the TDG criteria, provided the environmental measures of the MOA and other water quality certification conditions are implemented.

5.7 Turbidity

OAR 340-041-0036 Turbidity (Nephelometric Turbidity Units, NTU): No more than a ten percent cumulative increase in natural stream turbidities may be allowed, as measured relative to a control point immediately upstream of the turbidity causing activity. However, limited duration activities necessary to address an emergency or to accommodate essential dredging, construction or other legitimate activities and which cause the standard to be exceeded may be authorized provided all practicable turbidity control techniques have been applied and one of the following has been granted:

- (1) Emergency activities: Approval coordinated by the Department with the Oregon Department of Fish and Wildlife under conditions they may prescribe to accommodate response to emergencies or to protect public health and welfare;
- (2) Dredging, Construction or other Legitimate Activities: Permit or certification authorized under terms of section 401 or 404 (Permits and Licenses, Federal Water Pollution Control Act) or OAR 14I-085-0100 et seq. (Removal and Fill Permits, Division of State Lands), with limitations and conditions governing the activity set forth in the permit or certificate.

Application of Water Quality Standard

Turbidity is an optical property that results from inorganic and organic particulate matter held in suspension. The standard is designed to minimize the addition of soil particles or any other suspended substances that would cause significant increases in the river's normal, seasonal turbidity pattern.

Turbidity may occur naturally through channel erosion, organic loading, dust deposition, and nutrient influences. Turbidity loading can also come from a variety of anthropogenic point and non-point discharge sources. Oregon applies the numeric turbidity criterion to protect broad classes of beneficial uses including drinking water, safety, aesthetics, recreation, and agricultural and industrial uses from unwanted or potentially harmful degradation.

Existing Conditions

Turbidity data is collected on an ongoing basis at the Albany water treatment plant. The City's most recent water quality report (2024) does not indicate any concerns with high turbidity levels and all samples are within the requirements for drinking water criteria. Previous evaluations determined that variations in turbidity are likely related to canal inflows and local precipitation events rather than a function of flows within the Albany-Santiam canal. The proposed action does not include any dredging within the canal or at the diversion.

Applicant's Position

The Applicant proposes to continue current operations and asserts that therefore no new or different impacts to affected waterways will occur. The Applicant asserts in their submittal that there is no need to conduct an updated evaluation of current conditions or compliance with water quality standards, as the facility has been operational since 2008 and in compliance with the 401 WQC and License requirements with no documented impacts to water quality.

DEQ Evaluation

The City collected turbidity data in support of the original 1995 hydropower license application, and raw water (canal water before treatment) data is collected by the City on an ongoing basis and evaluated for pH, turbidity and temperature. As discussed above, no newer data was provided by the City, but available water quality data from the City's water treatment facility provides no indication that turbidity exceedances are known to occur at the point of discharge of Albany-Santiam canal water to the Calapooia River.

The Proposed Action would divert water from the South Santiam for hydropower generation only when there are appropriate periods of high flows in the South Santiam and Calapooia rivers. At present, hydropower generation has paused, therefore an inspection of discharge via the draft tubes was not possible at the time of this report.

DEQ Findings

Operational effects of the continued operation of the hydropower project on turbidity is unlikely to be significant or result in exceedances of the standard due to the characteristics of the South Santiam and Calapooia rivers during times that hydroelectric generation is most likely to occur (that is, at times when the South Santiam flows would not be reduced to less than 1,100 cfs).

Some amount of sediment may have accumulated under the point of discharge during the pause in hydropower generation. Due to the amount of time that has passed since the Project paused hydropower generation operations, DEQ anticipates that maintenance on the turbine will be completed before it returns to operation. The City shall implement visual monitoring of the discharge point to the Calapooia River at the draft tubes upon restart. DEQ's water quality certification will require a visual turbidity monitoring condition, expected to be implemented upon resumption in hydropower generation at any time hydropower generation has been paused for more than 365 days. Visual monitoring shall include the following:

- Documentation of maintenance of the turbine appropriate to the amount of time it has been out of operation will be completed before the turbine returns to operation.

- Upon planned restart of turbine operation, the City shall begin visual monitoring no more than two (2) hours prior to restart to capture baseline/background conditions; immediately at turbine restart (at the zero hour); and every 2 hours thereafter for the first 8-hours of start-up according to the monitoring details in Table 1.
- Visual monitoring shall be conducted by an official staff or designated representative with demonstrable experience in water quality monitoring.
- Photographic documentation shall be obtained at a suitable vantage point for the discharge area in the Calapooia River, such as the SW Bryant Way bridge.

VISUAL TURBIDITY MONITORING		
Establish monitoring point and collect initial baseline visual data no more than 2 hours prior to turbine restart		
Monitoring Result	Action	Next Steps
No plume observed	Continue to monitor every 2 hours	Continue to monitor every 2 hours for a total of 4 observations over 8 hours.
Plume observed	Implement BMPs and continue to monitor every 2 hours	Consult with DEQ staff for action required to address any visible turbidity plume more than 4 continuous hours in duration

- Record all turbidity monitoring data collected, which must include: the location, date, time, and photograph for each observation.
- Prepare a narrative report discussing monitoring, actions taken, and the effectiveness of the actions. The narrative must also include documentation of any maintenance of the turbine that has been conducted consistent with the amount of time the turbine has been out of operation; maintenance shall be completed before the turbine returns to operation after any period of 365 days or more.
- If turbidity monitoring at the discharge point cannot be conducted due to dry conditions in the Calapooia River, the Applicant must provide photo documentation with a date and time stamp.
- Submit all notifications and turbidity monitoring records at the end of monitoring event to 401certifications@deq.oregon.gov. Include the FERC project number in the email subject line.

DEQ finds that federal requirements of 40 CFR 131.12 have been met; that state requirements at OAR 340-041-0036 have been met. Based on available information, DEQ is reasonably assured that the Project operating under a FERC conduit exemption will comply with the turbidity criteria, provided the conditions of the 401 certification including turbidity monitoring and the Environmental Measures of the MOA are implemented.

6.0 Evaluation of Compliance with Sections 301, 302, 303, 306 and 307 of the Federal Clean Water Act

In order to certify a project pursuant to §401 of the federal Clean Water Act, DEQ must find that the project complies with applicable provisions of Sections 301, 302, 303, 306 and 307 of that Act and state regulations adopted to implement these sections.

Sections 301, 302, 306 and 307 of the federal Clean Water Act address effluent limitations, water quality related effluent limitations, national standards of performance for new sources and toxic and pretreatment standards. All of these requirements relate to point source discharges and are the foundation for conditions incorporated in National Pollution Discharge Elimination System (NPDES) permits issued to the point sources. Point source discharges at hydroelectric projects may include cooling water discharges, stormwater, and sewage discharges.

Section 303 of the Act relates to Water Quality Standards and Implementation Plans. The federal Environmental Protection Agency (EPA) has adopted regulations to implement Section 303 of the Act. The EQC has adopted water quality standards consistent with the requirements of Section 303 and the applicable EPA rules. The EQC standards are codified in OAR Chapter 340, Division 41. EPA has approved the Oregon standards pursuant to the requirements of Section 303 of the Act. Therefore, the Project must comply with Oregon Water Quality Standards to qualify for certification.

As discussed above in this report, the proposed Project will comply with Oregon Water Quality Standards and therefore Section 303 of the Clean Water Act, provided the conditions in the Section 401 Certification are satisfied.

Required NPDES Permits

Facilities engaged in upland construction activities which will disturb more than one acre of land, and which may reasonably result in surface water discharge to waters of the state must obtain a construction stormwater permit from DEQ. DEQ will condition this §401 water quality certification to require Albany to obtain all applicable permits prior to engaging in activities which may result in discharge to waters of the state or disturb more than one acre of land.

7.0 Evaluation of other appropriate requirements of state law

As part of the evaluation of an application for §401 certification, DEQ must evaluate whether the activity for which certification is sought will comply with other appropriate requirements of state law (OAR 340-048-0042(2)). Such requirements are “appropriate” if they have any relation to water quality, see *Arnold Irrigation Dist. v. DEQ*, 79 Or App 136 (1986); *PUD No.1 of Jefferson Co. v. Washington Dept. of Ecology*, 511 U.S. 700 (1994); *S.D. Warren v. Maine Board of Env'tl. Prot., et. al*, 547 U.S. 370 (2006).

7.1 Department of State Lands

ORS 196.810 requires that permits be obtained from the Oregon Department of State Lands (DSL) prior to any fill and removal of material from the bed or banks of any stream. Such permits, if issued, may contain conditions to assure protection of water quality to protect fish and aquatic habitat. If any changes to a hydropower license (through relicensing, decommissioning, or license surrender, or change in license type such as issuance of a conduit exemption) authorizes construction activities that include fill or removal of material from the bed or banks of waterways, the Applicant must first apply for and receive a removal-fill permit from DSL. Such actions may also require a dredge and fill permit from the Corps pursuant to § 404 of the Clean Water Act, and a §401 water quality certification from DEQ. The Applicant must first obtain all applicable permits, certificates, and authorizations prior to engaging in any activities required under the terms of a new FERC License or other FERC authorization such as a conduit exemption.

DEQ Findings

The Proposed Action does not include construction activities. The Proposed Certification includes conditions that require Albany to first obtain all applicable permits, certificates, and authorizations prior to engaging in any project maintenance or construction activities required under the terms of the conduit exemption or required as part of maintaining the Project for long-term operations.

7.2 Department of Fish and Wildlife

The Oregon Department of Fish and Wildlife implements the following statutes and administers the following rules that pertain to providing and maintaining passage around artificial obstructions, protecting aquatic habitat, and protecting and restoring native fish stocks.

- ORS 541.405 Oregon Plan for Salmon and Watersheds
Restore native fish populations and the aquatic systems that support them, to productive and sustainable levels that will provide environmental, cultural and economic benefits.
- ORS 496.012 Wildlife Policy
This statute establishes ODF&W's primary directive to prevent serious depletion of any indigenous species and to maintain all species of fish and wildlife at optimum levels.
- ORS 496.435 Policy to Restore Native Stocks
Restore native stocks of salmon and trout to historic levels of abundance.
- ORS 498.306 Screening or By-pass Devices for Water Diversions
Any person who diverts water from any body of water in this state in which any fish, subject to the State Fish and Wildlife Commission's regulatory jurisdiction, exist may be required to install, operate and maintain screening or by-pass devices to provide adequate protection for fish populations present at the water diversion.
- ORS 509.580 - 509.910; OAR 635, Division 412 ODF&W's Fish Passage Laws
Provision of upstream and downstream passage at all artificial obstructions in Oregon waters where migratory native fish are currently or have historically been present.
- OAR 635-007-0502 through 0509 Native Fish Conservation Policy
- OAR 635-500-0100-0120 Trout Management
Maintain the genetic diversity and integrity of wild trout stocks; and protect, restore and enhance trout habitat.
- OAR 635-415-0000-0030 Fish and Wildlife Habitat Mitigation Policy

DEQ Findings

As described in the MOA (Attachment A) and included as a proposed activity in the 401 application, the City of Albany will implement the specific fish screening and fish passage measures necessary to comply with the above statutes and rules governing same. The continued implementation of those conditions ensures adequate protection and restoration of Oregon's native fish populations by supporting sufficient genetic diversity and providing access to available habitat.

The Proposed Action does not include construction activities. The Proposed Certification includes conditions that require Albany to first obtain all applicable permits, certificates, and authorizations prior to engaging in any project maintenance or construction activities required under the terms of the conduit exemption or required as part of maintaining the Project for long-term operations.

7.3 Department of Environmental Quality

DEQ implements the following programs that regulate activities that may contribute to discharge to waters of the state.

Onsite Septic Systems

On-site disposal of sewage is governed by ORS 454.705 et. seq. and OAR Chapter 340, Divisions 71 and 73. The purpose of these rules is to prevent health hazards and protect the quality of surface water and groundwater.

The Proposed Action does not propose the addition of on-site systems covered by this rule.

Hazardous Materials

ORS 466.605 et. seq. and ORS 468.780 through ORS 468.815 establish requirements for reporting and clean-up of spills of petroleum products and hazardous materials. ORS 468.742 requires submittal of plans and specifications for water pollution control facilities to DEQ for review and approval prior to construction. One of the purposes of these statutes and rules is to prevent contamination of surface or groundwater. The 2024 FERC environmental inspection of the powerhouse noted that proper primary and secondary containment for waste oil and spill supplies was present (FERC 2024).

As a condition of certification, in the event of a spill or release or threatened spill or release to waters of the state of petroleum or other hazardous substances at or above reportable quantities as specified in state and federal regulations, City of Albany must implement spill response procedures, notify Oregon Emergency Response System within 24-hours, and comply with ORS Chapters 466 and 468, as applicable. City of Albany must address these requirements in a spill prevention control and countermeasure (SPCC) plan for the operation of the Project. A registered professional engineer must certify the SPCC plan.

Construction Stormwater

DEQ requires that facilities apply for and receive coverage under National Pollution Discharge Elimination System construction stormwater system permit 1200-C prior to engaging in upland construction activities that may disturb one or more acres of land, and which may reasonably result in discharge to surface waters of the state. DEQ proposes to condition the Section 401 water quality certification to require the Applicant to obtain all applicable permits prior to engaging in activities that may result in discharge to waters of the state.

DEQ Findings

The Proposed Action does not include any on-site septic. As a condition of certification, Albany must maintain a current SPCC plan certified by a professional engineer that addressing requirements for spill prevention, reporting and cleanup of petroleum products and hazardous materials. Prior to engaging in future construction activities which may disturb more than one acre, and which will result in stormwater discharge to surface waters, City of Albany must first obtain an NPDES 1200-C construction stormwater permit from DEQ.

7.4 Department of Water Resources

Under ORS 468.045(2) DEQ is required to make findings that its approval or denial is consistent with the standards established in ORS 543A.025(2) to (4). The following list summarizes these standards:

1. Standards that mitigate, restore and rehabilitate fish and wildlife resources that are adversely affected by the Project.
2. Any plan adopted by the Pacific Northwest Power and Conservation Planning Council; the Environmental Quality Commission's water quality standards.
3. Operational standards that ensure the Project does not endanger public health or safety, including "practical protection from vulnerability to seismic and geologic hazards,"
4. Standards that protect, maintain, or enhance wetland resources such that the Project may not result in a net loss to existing wetland resources; and
5. Standards that protect, maintain, or "enhance other resources in the Project vicinity including recreational opportunities, scenic and aesthetic values, historic, cultural and archaeological sites, and botanical resources" such that reauthorization may not result in net loss to these existing resources.

DEQ Findings

City of Albany holds an Oregon Certificate of Water Right (Certificate No. 49387) in perpetuity for the purposes of power generation at the Project; the date of priority is 1874. Hydroelectric water rights issued before 1931 do not expire. This right was confirmed by decree of the Circuit Court of the State of Oregon for Linn County. The decree is of record at Salem, in the Order Record of the Water Resources Director in Volume 18, at Page 15. The amount of water to which this right is entitled is limited to an amount actually used beneficially, and shall not exceed 190.0 cubic feet per second diversion from the South Santiam River.

According to the OWRD, there are not any known existing or proposed uses of Project waters that would impose downstream constraints on Project operations. Other than the Project itself, there are no known in-stream flow uses, existing water rights or pending water rights upstream of the confluence of the South Santiam River affected by the Proposed Action.

7.5 Department of Land Conservation and Development

ORS Chapter 197 contains provisions of state law requiring the development and acknowledgement of comprehensive land use plans. This chapter also requires state agency actions to be consistent with acknowledged local land use plans and implementing ordinances.

OAR 340-048-0020 (2)(i)(A) requires the application for section 401 certification to include land use compatibility findings prepared by the local planning jurisdiction. In the event a LUCS has not or cannot be issued, compatibility with local land use may alternatively be demonstrated pursuant to OAR 340-048-0020(2)(B, C).

DEQ Findings

City of Albany provided a Land Use Compatibility Statement signed on April 1, 2025 as required for the Application for Section 401 Water Quality Certification. In the Land Use Compatibility Statement, the City of Albany affirmed that the hydroelectric facility is allowed within the zoning district.

8.0 Public comment

DEQ will hold a public comment period for this **draft** document. The final version of this report will include summary of the public comment process.

On March 2, 2026 DEQ issued a notice inviting public review and comment on the **proposed** certification decision. The public comment period concludes at 5:00pm Pacific time on April 6, 2026.

9.0 Conclusions and Recommendation for Certification

DEQ has evaluated Albany's application for §401 water quality certification and other publicly available environmental information. Per the terms of the MOA, the City of Albany has submitted applications to FERC and to DEQ that include its obligations to carry out environmental measures intended to support aquatic species and protect beneficial uses in the South Santiam and Calapooia Rivers. DEQ supports both of the City of Albany's applications to FERC, subject to Albany's commitment to implement the environmental measures pursuant to the MOA.

DEQ has determined that the Proposed Action will comply with the applicable provisions of Sections 301, 302, 303, 306 and 307 of the Clean Water Act, OAR Chapter 340, Division 41 and other appropriate requirements of state law provided Albany implements the MOA and the conditions proposed in this **draft** report, which are presented in DEQ's **proposed** water quality certification.

Based on the preceding analysis and findings presented in this **draft** report, it is recommended that pursuant to §401 of the Federal Clean Water Act and ORS 468B.040, the Director, or assigned signatory, conditionally approve the application for 401 certification associated with the City of Albany's Small Conduit Hydroelectric Exemption as subject to the conditions set forth in the **proposed** certification.

10 References

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Attachment A – Memorandum of Agreement

Attachment B – Adjacent Property Owner Information