

Oregon DEQ Division 33 Limited License Review Summary Sheet



Application Information

Applicant Name:	Hudson Bay District Improvement Company and Walla Walla Basin Watershed Council	Application Number:	LL-1970
Basin & Sub-basin:	Umatilla & Walla Walla	Requested Water Amount:	45 cfs
Nearest Surface Water:	Walla Walla and Little Walla Walla	Nearest Receiving Waterbody:	Walla Walla and Little Walla Walla
Proposed Use:	AR	Requested Period of Use:	November 1 through May 15

Division 33 Geographic Area

<input checked="" type="checkbox"/> Statewide	
<p>Statewide: Will the proposed use result in water quality impacts that will cause either “loss” or “net loss” of essential habitat of sensitive threatened or endangered (ST&E) fish species? (Note: the presence of ST&E fish species is determined by Oregon Department of Fish and Wildlife.)</p>	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Insufficient data

Recommended License Conditions

<p>1. Water Quality: All water use under this license shall comply with state and federal water quality laws. The licensee shall not violate any state and federal water quality standards, shall not cause pollution of any waters of the state, and shall not place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means. The use may be restricted if the quality of source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards. Licensee is responsible for obtaining any necessary state and federal licenses.</p>
<p>2. Limit Diversion: The licensee shall not divert water under this water use license unless minimum streamflow’s are met as designated as biologically necessary by ODFW. The monthly flow requirements can be found in the additional comments section of our review.</p>
<p>3. Limit Period of Use: Water use shall be limited to the period of two years, beginning at the licensing of this project.</p>
<p>4.</p>
<p>Mitigation Obligation <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes</p>
<p>Prior to issuance of a Proposed Final Order, the applicant shall submit a mitigation proposal that is of no less volume and rate than the licensed use. The proposal shall include water that is sourced upstream of the point of diversion or appropriation, or the uppermost point on the stream at which the potential for surface water interference occurs. If a surface water right is used for mitigation, it shall be transferred instream for the [month-month] time period and of similar water quality. The applicant should contact their OWRD caseworker to discuss flow mitigation options. Flow mitigation is site-specific, therefore DEQ recommends written approval of the mitigation proposal by DEQ prior to issuance of a proposed final order.</p>

Seasonal Limitations

Reason for limitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TMDL: Critical period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WAB: 20% flow threshold exceeded	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Instream Flows Likely not Met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other: ODFW Recommended Biological Flows Likely Not Met	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Additional Reviewer comments No Yes

[Use this space to describe any of the following: reasoning to substantiate license conditions; examples of additional information that may allow or disallow the use; and why any variations to the standard Division 33 review process were necessary. Designate conditions related to Division 310 with an asterisk.]

Water is likely not going to be available for the proposed use. Water may only be diverted for this project when the biologically necessary flows designated by ODFW are met:

ODFW recommends that biologically necessary flows are met between the Little Walla Walla River and Nursery Bridge Dam. To ensure these required flows are being met, ODFW recommends the site-specific condition be followed and requests that the applicant submit a Bypass Plan describing how flows will be monitored at the Nursery Bridge Dam.

Recommended ODFW flows to support the biological needs of fish species:

JAN	95 cfs	APR	150 cfs	JUL	65 cfs	OCT	65 cfs
FEB	120 cfs	MAY	150 cfs	AUG	65 cfs	NOV	65 cfs
MAR	120 cfs	JUN	150/100 cfs	SEP	65 cfs	DEC	95 cfs

ODEQ acknowledges and concurs with ODFW’s biological necessary flow recommendation. While these flows will be beneficial to the biological community they will also support ODEQ’s water quality protection measures; where the Walla Walla River, Little Walla Walla River, and Mud Creek have 303(d) listings (see Integrated Report 303(d) List Summary Table below) and enhanced flows will benefit both dissolved oxygen and temperature impairments.

Additionally, due to issues with compliance during past licensing of this project, the use shall be limited to two years immediately beginning after the approval of this license application. Streamflow data and diversion records may be requested by DEQ at any time to ensure compliance with the biologically necessary flows and licensed allocation of water.

The proposed diversion takes place in the winter when temperature standards are typically met. The proposed recharge will likely contribute to cool baseflows in the summer that will help improve stream temperatures.

Interagency consultation: [Describe any substantial interagency consultation. Who was contacted and what was discussed?] Jorden Smith, ODFW

DEQ review prepared by: Cole Hendrickson and Matthew Bearden	Date complete: 3/12/2026
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Antidegradation Policy:

The purpose of DEQ’s Antidegradation Policy (OAR 340-041-0004(1)) is to guide decisions that affect water quality to prevent unnecessary further degradation from new or increased point and nonpoint sources of pollution, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses. Oregon’s Antidegradation Policy allows exemptions and conditions for new or increased water use.

1. Temporary Use or Net Benefit

Does the applicant propose a temporary use in response to an emergency, a restoration activity that the DEQ has determined provides a net ecological benefit, or a temporary (lasting less than six months) use to protect human health and welfare, for which the applicant has demonstrated that they will minimize adverse effects to threatened and endangered species? No Yes

If yes, recommend approval of the application and identify conditions necessary to protect water quality for the habitat of ST&E fish species. You may skip to Question 7.

2. Outstanding Resource Water

Does the applicant propose withdrawing directly from an **Outstanding Resource Water** with critical habitat for ST&E fish species? No Yes

If yes, then prior to license issuance, the applicant must provide suitable flow mitigation. You may skip to question 7.

3. Water Quality Limited

Is this source **Water Quality Limited** or a tributary to a water quality limited water body? Note: limit downstream review to 6th field HUC for parameters that diminished flow can affect (temperature, dissolved oxygen, pH, etc.). No Yes

Integrated Report 303(d) List Summary Table

Assessment Unit Name	Assessment Unit Description	Parameter	Status*	Beneficial Uses
Walla Walla River	Couse Creek to Birch Creek	Dissolved Oxygen (Spawning)	Category 5	Fish and Aquatic Life
		Temperature – Numeric (Year-Round and Spawning)	Category 4A	Fish and Aquatic Life
	Confluence of Dorothy Ditch and North Fork Walla Walla River to Couse Creek	Dissolved Oxygen (Spawning)	Category 5	Fish and Aquatic Life
		Temperature – Numeric (Year-Round)	Category 4A	Fish and Aquatic Life
Little Walla Walla River	Ford Branch to Confluence with Walla Walla River	Dissolved Oxygen (Spawning)	Category 5	Fish and Aquatic Life
Middle Mud Creek	Headwaters WA unit to confluence with Little Walla Walla River	Dissolved Oxygen (Spawning)	Category 5	Fish and Aquatic Life

*Integrated Report Category
Category 4 - Data indicate that at least one designated use is not supported, but a TMDL is not needed to address the pollutant
Category 4A - Clean-up plans (also called TMDLs) that will result in the waterbody meeting water quality standards and supporting its beneficial uses have been approved
Category 4B - Other pollution control requirements are expected to address pollutant of concern and will result in attainment of water quality standards
Category 4C - The impairment is caused by pollution, not a pollutant. For example, flow, or lack of flow, are not considered pollutants, but may be affecting the waterbody's beneficial uses
Category 5 - Data indicate a designated use is not supported or a water quality standard is not attained and a TMDL is needed. This category constitutes the Section 303(d) list that EPA will approve or disapprove under the Clean Water Act

Analysis: [If the answer to question 3 is yes, then describe how the use does or does not comply with existing state and federal water quality standards, and how the use may affect ST&E fish species habitat.]

Dissolved Oxygen

Decreased dissolved oxygen levels adversely impact sensitive, threatened, and endangered fish. Oregon's dissolved oxygen limits are based on the most sensitive species and the life history stage of those species at the location and season of concern. The Walla Walla River, Little Walla Walla, and Little Mud Creek do not meet Oregon's year-round and spawning dissolved oxygen standards. Reduced flows may increase water temperature and reduce surface area and turbulence, which can decrease dissolved oxygen. Therefore, reducing flow in waterbodies that are connected to downstream dissolved oxygen-impaired waterbodies, such as the Walla Walla, Little Walla Walla, and Middle Mud Creek, could result in lower stream dissolved oxygen levels and stressed conditions for aquatic life, particularly during the summer months when stream flow is lowest. If year-round standard triggered: The critical warm period when stream conditions are most likely to exceed the year-round dissolved oxygen standards is July 1 – September 30.

Temperature

Increases in temperature adversely impact sensitive, threatened, and endangered fish. Fish require different temperature based on species and life history stage. Oregon's temperature limits are based on the most sensitive species and the life history stage of those species at the location and season of concern. The Walla Walla, Little Walla Walla, and Middle Mud Creek do not meet Oregon's year-round and/or spawning stream temperature standards. Generally, water temperatures increase as flow decreases. Therefore, reducing flow in waterbodies that are connected to downstream temperature-impaired waterbodies, such as the Walla Walla, Little Walla Walla, and Middle Mud Creek, could result in higher stream temperatures and stressed conditions for aquatic life, particularly during the summer months when stream flow is lowest. If year-round standard triggered: The critical warm period when stream conditions are most likely to exceed the year-round temperature standards is July 1 – September 30.

Recommended Conditions: [Consider if water quality can be protected by limiting the rate and quantity of water used, period of use, or by including other license conditions.]

Water Quality

4. Total Maximum Daily Load Summary

Are there TMDLs established for parameters identified as being affected by flow modification? No Yes

Analysis: [List TMDL, identify the load allocation, and if flow modification is a contributing factor. Describe how the use does or does not comply with existing state and federal water quality standards and how the use may affect ST&E fish species habitat.]

Walla Walla Subbasin

A temperature TMDL was established for the Walla Walla Subbasin in 2005. During the summer and early fall, low stream flows and high solar input cause the water temperature to rise to levels that can be deadly to cold water species. In addition, warmer water can also harm salmonids by increasing the incidence of disease, impairing their ability to spawn, reducing growth rates, and decreasing the survival of eggs. In the Walla Walla Basin, excess solar heating is almost equally attributable to impaired (reduced) streambank vegetation and shade, reduced flows due to irrigation, and modified channel morphology via channelization. The critical period for the temperature TMDL occurs between June and September.

Recommended Conditions: [Consider if water quality can be protected by limiting the rate and quantity of water used, period of use, or by including other license conditions.]

Water Quality

5. Cumulative Withdrawals Effects

Is it likely that the proposed activity, together with existing withdrawals in the OWRD's Water Availability Basin (WAB), will lower water quality and impair aquatic life? No Yes

Water Availability and Cumulative Impacts Summary Table

Percent of natural flow = (consumptive use/natural stream flow)*100. See Appendix for additional instructions.

POD/WAB 1: W LITTLE WALLA WALLA R > WALLA WALLA R - AT MOUTH

Watershed ID	Exceedance Level	Month	Natural Stream Flow	Consumptive Use	Expected Stream Flow	Reserved Stream Flows	Instream Requirement	Net Water Available	Percent of Flow
30710209	50	JAN	10.7	17.4	-6.67	0	0	-6.67	162.6168
30710209	50	FEB	12.1	19.2	-7.06	0	0	-7.06	158.6777
30710209	50	MAR	33.8	33.6	0.25	0	0	0.25	99.40828
30710209	50	APR	81.3	79.4	1.89	0	0	1.89	97.66298
30710209	50	MAY	125	113	11.7	0	0	11.7	90.4
30710209	50	JUN	128	117	10.8	0	0	10.8	91.40625
30710209	50	JUL	81.6	76.7	4.95	0	0	4.95	93.9951
30710209	50	AUG	68.6	61.5	7.09	0	0	7.09	89.65015
30710209	50	SEP	75.2	68.5	6.74	0	0	6.74	91.09043
30710209	50	OCT	75.7	72.9	2.77	0	0	2.77	96.30119
30710209	50	NOV	67.3	63.1	4.24	0	0	4.24	93.75929
30710209	50	DEC	24.6	30.9	-6.34	0	0	-6.34	125.6098

Monthly flow in Cubic Feet per Second (CFS). Annual flow in Acre Feet (AF). Highlight months that exceed 20% of percent of flow.

Eastside POD/WAB 2: WALLA WALLA R > COLUMBIA R - AB BIRCH CR

Watershed ID	Exceedance Level	Month	Natural Stream Flow	Consumptive Use	Expected Stream Flow	Reserved Stream Flows	Instream Requirement	Net Water Available	Percent of Flow
30710208	50	JAN	207	118	88.8	0	0	88.8	57.00483
30710208	50	FEB	258	118	140	0	0	140	45.73643
30710208	50	MAR	304	137	167	0	0	167	45.06579
30710208	50	APR	348	195	153	0	0	153	56.03448
30710208	50	MAY	327	243	83.6	0	0	83.6	74.31193
30710208	50	JUN	165	248	-82.7	0	0	-82.7	150.303
30710208	50	JUL	98	201	-103	0	0	-103	205.102
30710208	50	AUG	78.6	181	-102	0	0	-102	230.2799
30710208	50	SEP	92.9	181	-87.9	0	0	-87.9	194.8332
30710208	50	OCT	97.6	177	-79.2	0	0	-79.2	181.3525
30710208	50	NOV	138	165	-27.2	0	0	-27.2	119.5652
30710208	50	DEC	186	132	54.3	0	0	54.3	70.96774

Monthly flow in Cubic Feet per Second (CFS). Annual flow in Acre Feet (AF). Highlight months that exceed 20% of percent of flow.

Eastside POD/WAB 2: WALLA WALLA R > COLUMBIA R - AB LITTLE WALLA WALLA R

Watershed ID	Exceedance Level	Month	Natural Stream Flow	Consumptive Use	Expected Stream Flow	Reserved Stream Flows	Instream Requirement	Net Water Available	Percent of Flow
223	50	JAN	221	98.7	122	0	70	52.3	44.66063
223	50	FEB	296	98.7	197	0	95	102	33.34459
223	50	MAR	328	98.8	229	0	95	134	30.12195
223	50	APR	397	101	296	0	95	201	25.44081
223	50	MAY	392	104	288	0	95	193	26.53061
223	50	JUN	207	106	101	0	70	31	51.20773
223	50	JUL	124	112	12.2	0	50	-37.8	90.32258
223	50	AUG	107	109	-2.14	0	50	-52.1	101.8692
223	50	SEP	111	104	6.9	0	50	-43.1	93.69369
223	50	OCT	115	99.9	15.1	0	30	-14.9	86.86957
223	50	NOV	155	98.7	56.3	0	30	26.3	63.67742
223	50	DEC	207	98.7	108	0	70	38.3	47.68116

Percent of natural flow = (consumptive use/natural stream flow)*100. See Appendix for additional instructions.

6. Flow Modification Compliance with State and Federal Water Quality Standards

Based on responses to questions 3, 4, and 5, is the use in compliance with state and federal water quality standards or can compliance with state and federal water quality standards be assured, and ST&E habitat loss prevented through flow mitigation and/or by imposing license condition(s)?

- No Yes

Recommended Conditions: [If water quality can be protected by modifying or limiting the amount diverted, period of use, or other license conditions, then select appropriate condition from the conditions list.]

Limit Diversion, Limit Period of Use

7. Compliance with other State and Federal Water Quality Standards

ORS 468B.025 prohibits pollution of waters of the state. Are there additional water quality impairments that would result from this proposed used by degrading surface water or groundwater quality?

- No Yes

If water quality can be protected by applying license conditions, then select all appropriate conditions from the standardized menu of conditions.

Recommended conditions: [List conditions]

PRE-PROPOSED FINAL ORDER ACTIONS

DEQ recommends that the applicant provide suitable replacement water as mitigation for anticipated impacts to water quality and more specifically the habitat of sensitive, threatened, and endangered fish species. Additional mitigation may be required from other Interagency Review Team members (for example: OWRD may require mitigation for periods when water is not available). Surface water flow mitigation is unlikely to provide the same benefit that groundwater can provide to gaining stream reaches. However, if groundwater mitigation is unavailable within the same aquifer, surface water mitigation may provide suitable mitigation.

Flow Mitigation Obligation:

Prior to issuance of a Proposed Final Order, the applicant shall submit a mitigation proposal that is of no less volume and rate than the licensed use. The proposal shall include water that is sourced upstream of the point of diversion or appropriation, or the uppermost point on the stream at which the potential for surface water interference occurs. If a surface water right is used for mitigation, it shall be instream for the *month - month time period* and of similar water quality. The applicant should contact their OWRD caseworker to discuss flow mitigation options.

Riparian: If the riparian area is disturbed in the process of developing, modifying or repairing a point of diversion under this water use license, the licensee shall be responsible for restoration and enhancement of such riparian area in accordance with the Oregon Department of Fish and Wildlife's Habitat Mitigation Policy described in Oregon Administrative Rule OAR Chapter 635-415. Prior to development, modification or repairs at the point of diversion, the licensee shall submit, to the Oregon Water Resources Department, either a Riparian Mitigation Plan approved in writing by Oregon Department of Fish and Wildlife (ODFW) or a written declaration from ODFW that riparian mitigation is not necessary. The licensee shall maintain the riparian area for the life of the license and subsequent certificate per the approved Riparian Mitigation Plan. The licensee is hereby directed to contact the local Oregon Department of Fish and Wildlife Fish Biologist prior to development of the point of diversion.

Water Storage Construction: The applicant shall locate the reservoir outside of the stream's natural channel. *Identify waterbody and set back to prevent stream capture and justification for distance selected.*

(Note to reviewer: The 1200C license requires a 50-foot setback, which is cited from the National General Construction License OAR-660-023-0090(5). Requiring the storage reservoir to be outside of the mapped 100 year floodway may also be a protective buffer.)

Construction Activities: 1200-C NPDES Stormwater Construction license coverage is required from DEQ or Agent for construction activities (clearing, grading, excavation, grubbing, stumping, demolition, staging, stockpiling and other land disturbing activities) that will disturb one or more acres, or that will disturb less than one acre of land but is part of a common plan of development or sale that will ultimately disturb one or more acres of land and have the potential to discharge to surface waters or to a conveyance system that leads to surface waters of the state.

In-Water or Riparian Construction: For in-water or riparian construction, licensee may be required to obtain additional licenses from the Oregon Department of State Lands, the U.S. Army Corps of Engineers, and the DEQ Section 401 certification program prior to construction. The applicant must contact these agencies to confirm requirements.

Herbicide Applications: When herbicide application is within three feet of water, the licensee is responsible for ensuring that herbicide application laws are met, and that they obtain from DEQ any necessary pesticide application licenses, including the 2300-A Pesticide General License or the 2000-J NPDES General License. Polluted return flows are not allowed to enter waters of the state per ORS 468B.025(1).

STANDARIZED MENU OF CONDITIONS

Water Quality: All water use under this license shall comply with state and federal water quality laws. The licensee shall not violate any state and federal water quality standards, shall not cause pollution of any waters of the state, and shall not place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means. The use may be restricted if the quality of source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards. Licensee is responsible for obtaining any necessary state and federal licenses.

Agricultural Water Quality Management Area Rules: The licensee shall comply with basin-specific Agricultural Water Quality Management Area Rules described in Oregon Administrative Rule Chapter 603-095. The licensee shall protect riparian areas, including through irrigation practices and the management of any livestock, allowing site capable vegetation to establish and grow along streams, while providing the following functions: shade (on perennial and some intermittent streams), bank stability, and infiltration or filtration of overland runoff.

Flow Restrictor: The licensee shall install a flow control valve on the diversion system to limit use to the licensed rate. The valve shall be in place, functional, and verified by the Certified Water Rights Examiner before a certificate is issued. The valve or a suitable replacement shall remain in place for the life of the water right.

Limit Rate: Water withdrawal shall be limited to *Enter CFS or AF for the defined period, or a month by month rate or volume.*

Limit Period of Use: Water use shall be limited to the period: *start date through end date.*

(Note to reviewer: Do not split the irrigation season. Require mitigation if water is not available during the requested time period.)

Limit Diversion: The licensee shall not divert water under this water use license unless streamflow in the *waterbody name* is at or above *CFS* cubic foot per second, as determined at Gaging Station ID _____.

Off-Channel Stored Water Releases: The licensee shall not release polluted water from this off-channel reservoir into waters of the state except when the release is directed by the State Engineer to prevent dam failure.

On-Channel Reservoir: The licensee shall design and operate the water storage facility such that all waters within and below the reservoir meet water quality criteria. The licensee shall develop a reservoir operations plan that details how water quality criteria and standards will be met. A Certified Water Rights Examiner shall verify that the reservoir operations are consistent with the plan before a certificate is issued. The reservoir operator shall maintain a copy of the plan and make it available for review upon request.

Restrict Reservoir Release: To prevent pollution downstream, the licensee shall not release water from the reservoir when the flow at Gaging Station ID _____ (*gage name*) is below the Mean Daily Discharge of *CFS* (discharge which was equaled or exceeded for 90% percent of the time) except when the release is directed by the State Engineer to prevent dam failure.

Live Flow: Once the allocated volume has been stored, licensee shall pass all live flow downstream at a rate equal to inflow, using methods that protect instream water quality.

Lining: The licensee shall line the reservoir with *include material or allowable infiltration rate* to minimize seepage and protect groundwater quality per Oregon Administrative Rule 340-040. The liner is to be in place, inspected,

and approved by the Certified Water Rights examiner prior to storage of water.* If the liner fails, the water user shall replace it within one calendar year.

Site-Specific Condition: The licensee shall

* OAR 690-410-0010(2)(a), OAR 690-310-0120, OAR 690-310-0140

Appendix: General Overview, Instructions for Water Availability Analysis, and Process Flow Chart

General Overview

The purpose of OAR Chapter 690, Division 33 is to aid the Oregon Water Resources Department (OWRD) in determining whether a proposed use will impair or be detrimental to the public interest with regard to listed sensitive, threatened, or endangered (ST&E) fish species. Oregon's stream temperature, dissolved oxygen (DO), pH and several other water quality standards are based on the life cycle needs of salmonids and other resident fish and aquatic life. Exceeding the standards can disrupt the life cycle of a ST&E fish species and may cause death. In addition, OWRD must consider water quality impacts as part of a public interest review, OAR 690-310-0120. Water quality impacts and conditions unrelated to ST&E species should be noted as "Division 310" in the recommendations to OWRD. The DEQ's Water Right Application Review Procedures document contains a full description of the review process.

The two main categories of Division 33 reviews are based on the geographic distribution of ST&E fish species:

- **For Proposed Uses in the Columbia River Basin**, reviews must determine whether a proposed use complies with existing state and federal water quality standards. Upper Columbia applications specifically require applicants to provide evidence that the proposed use complies with existing state and federal water quality standards. Geographic scope: Columbia River Basin (includes all waters that ultimately drain into the Columbia River).
- **For Proposed Uses Statewide**, review is conducted under the "Statewide review" procedure. Statewide reviews must determine whether a proposed use may affect ST&E fish species habitat. The statewide review procedure is intended to identify license conditions that can prevent the "loss" or "net loss" of essential habitat of ST&E fish species. When license conditions cannot be identified that meet this standard, then the DEQ recommends denial of the license. Geographic scope: all areas outside the Columbia River Basin where OWRD determines ST&E fish species are present.

Instructions for Populating the Water Availability Summary Table using data from OWRD's WAB (Section 5)

- Open OWRD's Water Availability Reporting System.
- Search for the water availability basin of interest. Select 50% exceedance. The 50% exceedance stream flow is the stream flow that occurs at least half of the time.
- The water availability analysis will display a nested list of watersheds that contain the POD. Select the highest nesting order WAB that contains the POD.
- Download to an Excel spreadsheet. Percent of flow is calculated using this equation:

$$\text{Percent of Flow} = \frac{\text{Consumptive Use}}{\text{Natural Stream Flow}} * 100$$

You may choose to add the proposed rate (or storage amount) to the consumptive use.

Instructions for Water Availability Analysis

To complete Section 6, review and consider the cumulative impact of consumptive withdrawals using the [OWRD WAB](#). All water withdrawals and the following factors should be considered when conducting a water availability analysis.

- **Instream Flow:** Consider the percent of natural flow removed from the stream in each month (see right-most column in Water Availability and Cumulative Impacts Summary Table). Based on best professional judgment, evaluate if the cumulative withdrawal is likely to cause impairment to aquatic life or water quality. Water quality standards are established to protect aquatic life. In scientific literature, researchers have identified ecological harm occurring when flows are reduced by **>6-35% of daily flow**¹. Consider the seasonality of any listings and season of withdrawal to determine impact for each month of the year.
- **Antidegradation:** Rule 340-041-0004 applies: withdrawals cannot cumulatively increase a waterbody's temperature by more than 0.5 degrees Fahrenheit or cause a 0.1 mg/l decrease in dissolved oxygen from the upstream end of a stream reach to the downstream end of the reach so long as it has no adverse effects on threatened and endangered species. See OAR [340-041-0004\(3\)-\(5\)](#) for a description in rule of activities that do not result in lowering of water quality.
- **Flow modification:** Consider if cumulative withdrawals are contributing to flow modification and a likely limiting factor in the waterbody at certain times of the year. Temperature and dissolved oxygen are flow-related parameters. When streamflow is reduced, assimilative capacity is reduced. As a waterbody heats up, dissolved oxygen concentrations decline. Reduced stream flows (including groundwater inputs to streamflow), exacerbate temperature and/or dissolved oxygen impairments.
- **Temperature:** Increases in temperature or a reduction in dissolved oxygen adversely impacts ST&E fish. Fish require different temperature and concentrations of dissolved oxygen based on species and life history stage. Oregon's temperature and dissolved oxygen limits are based on the most sensitive species and the life history stage of those species at the location and season of concern. Additional heat or reduction in dissolved oxygen concentrations will further impact these species habitat. Reduced flows can also increase the concentrations of phosphorous, bacteria, pesticides and metals.

Instructions for Calculating "Limit Diversion" Rate

This condition is selected to limit withdrawals once the cumulative withdrawals in the watershed have exceeded the protective threshold of 20 percent and/or the ISWR is not fully protective of aquatic life. A different value can be selected, but the reviewer should state why a particular percent was selected.

"Natural stream flow" is obtained from OWRD's Water Availability Reporting System. The condition is applied on a monthly timeframe based on OWRD's data.

"Natural stream flow" – (percent of flow * "natural stream flow") = Expected Stream Flow

The applicant would have to stop using when instream flows drop below the Expected Stream Flow.

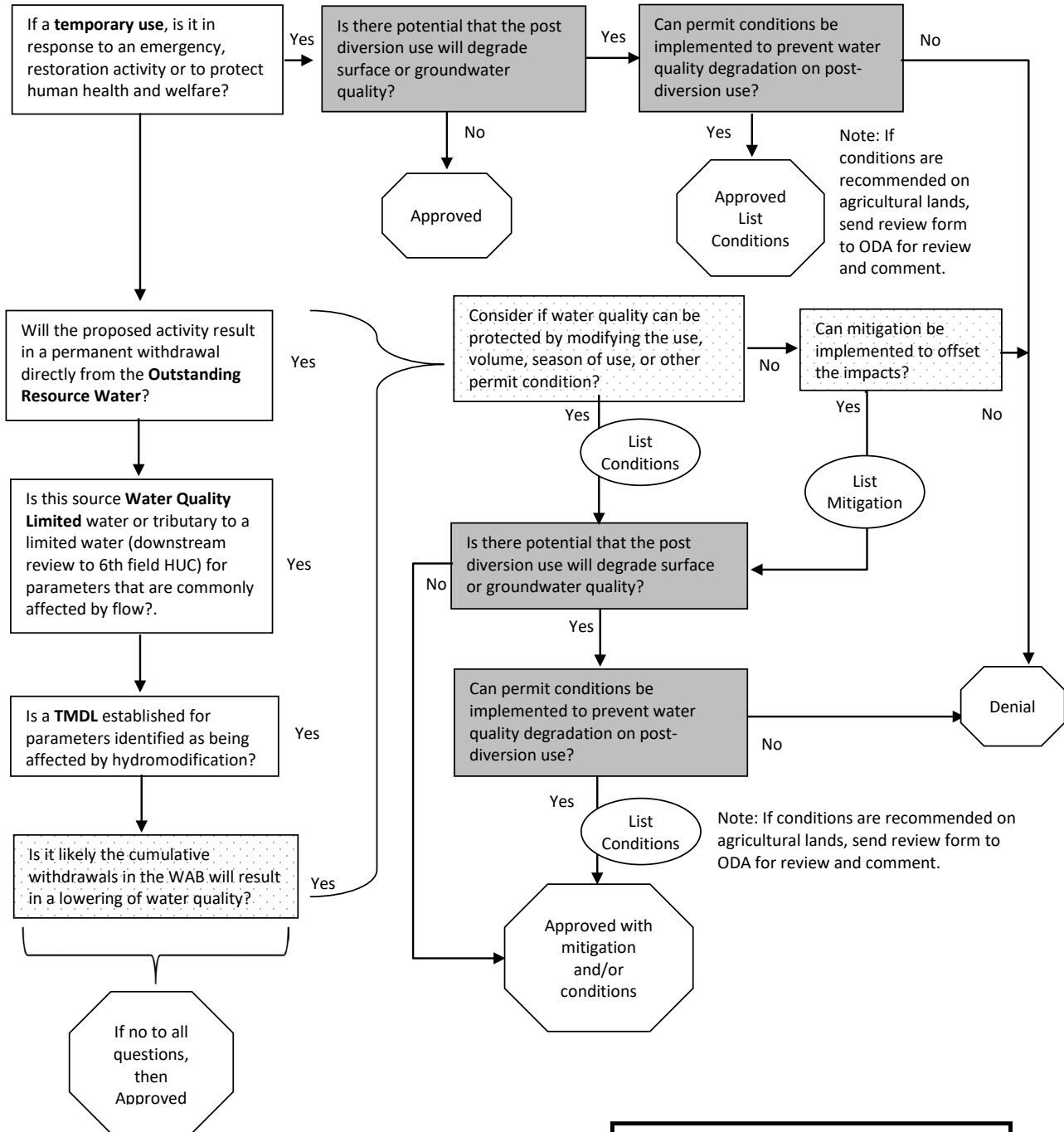
Example:

Natural stream flow for a particular month = 1200 CFS

1200 CFS – (.2 * 1200 CFS) = 960 CFS

¹ Richter BD, Davis MM, Apse C, Konrad C. 2011. *Short Communication, A Presumptive Standard For Environmental Flow Protection*. River Research and Applications. Published online in Wiley Online Library (wileyonlinelibrary.com), DOI: 10.002/rra.1551

DEQ Water Right Review Flow Chart



Each yes will need to be explained by how the use does not comply with existing state and federal water quality standards and how the use may affect sensitive, threatened or endangered fish species habitat.

Note: Review based on DEQ's anti-degradation rule (340-041-0004).

	Best Professional Judgment and Data
	Data
	Best Professional Judgment