

**Oregon Water Resources Department  
Water Right Services Division**

**Application for Extension of Time**

In the Matter of the Application for an Extension of Time )  
for Permit S-18134, Water Right Application S-22996, ) **PROPOSED FINAL ORDER**  
in the name of the City of Cascade Locks )

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**Permit Information**

**Application File S-22996/ Permit S-18134**

Basin 4 – Hood River Basin / Watermaster District 3

Date of Priority: January 19, 1948

**Authorized Use of Water**

Source of Water: Dry Creek, a Tributary of Columbia River  
Purpose or Use: Municipal Use  
Maximum Rate: 10.0 Cubic Feet per Second (cfs)

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**This Extension of Time request is being processed in accordance with Oregon  
Administrative Rule Chapter 690, Division 315.**

***Please read this Proposed Final Order in its entirety as it contains  
additional conditions not included in the original permit.***

This Proposed Final Order applies only to Permit S-18134, water right Application S-22996.

## Summary of Proposed Final Order for Extension of Time

### The Department proposes to:

- Grant an extension of time to complete construction of the water system from October 1, 1995 to October 1, 2029.
- Grant an extension of time to apply water to full beneficial use from October 1, 1995 to October 1, 2029.
- Make the extension of time subject to certain conditions as set forth below.

### ACRONYM QUICK REFERENCE

Department – Oregon Department of Water Resources

City – City of Cascade Locks

ODFW – Oregon Department of Fish and Wildlife

PFO – Proposed Final Order

WMCP – Water Management and Conservation Plan

### Units of Measure

cfs – cubic feet per second

gpm – gallons per minute

### AUTHORITY

**Generally, see ORS 537.230 and OAR Chapter 690 Division 315.**

**ORS 537.230(2)** provides in pertinent part that the Oregon Water Resources Department (Department) may, for good cause shown, order and allow an extension to complete construction or perfect a water right. In determining the extension, the Department shall give due weight to the considerations described under ORS 539.010(5) and to whether other governmental requirements relating to the project have significantly delayed completion of construction or perfection of the right.

**ORS 539.010(5)** provides in pertinent part that the Water Resources Director, for good cause shown, may extend the time within which the full amount of the water appropriated shall be applied to a beneficial use. This statute instructs the Director to consider: the cost of the appropriation and application of the water to a beneficial purpose; the good faith of the appropriator; the market for water or power to be supplied; the present demands therefore; and the income or use that may be required to provide fair and reasonable returns upon the investment.

**OAR 690-315-0080** provides in pertinent part that the Department shall make findings to determine if an extension of time for municipal and/or quasi-municipal water use permit holders may be approved to complete construction and/or apply water to full beneficial use. Under specific circumstances, the Department may condition extensions of time for municipal water use permit holders to provide that use of the undeveloped portion of the permit maintains the persistence of listed fish species in the portions of the waterways affected by water use under the permit.

**OAR 690-315-0090(3)** authorizes the Department, under specific circumstances, to condition an extension of time for municipal and/or quasi-municipal water use permit holders to provide that diversion of water beyond the maximum rate diverted under the permit or previous extension(s) shall only be authorized upon issuance of a final order approving a WMCP Plan under OAR Chapter 690, Division 86.

## **FINDINGS OF FACT**

### **Background**

1. Permit S-18134 was granted by the Department on April 30, 1948. The permit authorizes the use of up to 10.0 cfs of water from Dry Creek, a tributary of the Columbia River for municipal use. It specified that construction of the water development project was to be completed by October 1, 1950, and that complete application of water was to be made on or before October 1, 1951.
2. Eight prior permit extensions have been granted for Permit S-18134. The most recent extension request resulted in the completion dates for construction and full application of water being extended to October 1, 1995.
3. On September 9, 1996, the City of Cascade Locks (City) submitted an "Application for Extension of Time" to the Department requesting the time to complete construction of the water system and the time to apply water to full beneficial use under the terms and conditions of Permit S-18134 be extended from October 1, 1995 to October 1, 1999.
4. Due to an ongoing permit extension rulemaking, the Department placed all pending Applications for Extension of Time for municipal and quasi-municipal permits on hold and did not require municipal and quasi-municipal water use permit holders to submit Applications for Extension of Time until the new rules were adopted.
5. Municipal and quasi-municipal water use permit extension rules OAR 690-315-0070 through 690-315-0100 became effective on November 1, 2002, were amended, filed with the Secretary of State, and became effective on November 22, 2005.
6. On March 1, 2004, the City submitted an undated "Application for Extension of Time" consistent with the Division 315 rules to the Department requesting the time to complete construction of the water system and the time to apply water to full beneficial use under the terms and conditions of Permit S-18134 be extended from October 1, 1995 to October 1, 2029.
7. Notification of the City's Application for Extension of Time for Permit S-18134 was published in the Department's Public Notice dated March 9, 2004. No public comments were received regarding the extension application.
8. On February 16, 2005, the City submitted additional information to supplement their Application for Extension of Time.

**Review Criteria for Municipal and Quasi-Municipal Water Use Permits /OAR 690-315-0080(1)/**

*The time limits to complete construction and/or apply water to full beneficial use may be extended if the Department finds that the permit holder has met the requirements set forth under OAR 690-315-0080(1). This determination shall consider the applicable requirements of ORS 537.230<sup>1</sup>, 537.630<sup>2</sup> and/or 539.010(5)<sup>3</sup>*

**Complete Extension of Time Application /OAR 690-315-0080(1)(a)/**

9. On March 1, 2004, the Department received a completed application for extension of time and the fee specified in ORS 536.050.

**Start of Construction /OAR 690-315-0080(1)(b)/**

10. Permit S-18134 was issued prior to June 29, 2005; therefore, the permit holder is not required to provide evidence of actions taken to begin actual construction of the project.<sup>4</sup>

**Duration of Extension /OAR 690-315-0080(1)(c) and (1)(d)/**

*Under OAR 690-315-0080(1)(c) and (1)(d), in order to approve an extension of time for municipal and quasi-municipal water use permits the Department must find that the time requested is reasonable and the applicant can complete the project within the time requested.*

11. The remaining work to be accomplished under Permit S-18134 consists of completing construction of the water system including the construction of a new water treatment filtration system, constructing a booster pump station, PRV stations, replacing approximately 13,600 feet of existing waterline, and constructing 0.5 MG and 0.25 MG reservoirs, and applying water to full beneficial use.
12. As of October 1, 1995, the permit holder has diverted 1.6 cfs of the 10.0 cfs of water authorized under Permit S-18134 for municipal purposes. There is an undeveloped portion of 8.4 cfs of water under Permit S-18134 as per OAR 690-315-0010(6)(g).
13. In addition to the 10.0 cfs of water authorized under Permit S-18134, the City holds the following municipal use water right certificates and permit:
  - Certificate 41302 for 0.5 cfs of water from Well 1 within the Columbia River Basin;
  - Certificate 16148 for 2.0 cfs of water from Dry Creek, a tributary of the Columbia River; and
  - Permit G-12666 for 3.5 cfs of water from Wells 1 and 2 within the Columbia River Basin.

These water right certificates and permits total 16.0 of water, being 4.0 cfs of ground

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<sup>1</sup> ORS 537.230 applies to surface water permits only.

<sup>2</sup> ORS 537.630 applies to ground water permits only.

<sup>3</sup> ORS 537.010(5) applies to surface water and ground water permits.

<sup>4</sup> Section 5, Chapter 410, Oregon Laws 2005 and OAR 690-315-0070(1)(d).

water, and 12.0 cfs of live flow (surface). The City is currently making beneficial use of 0.94 cfs from Well 1, (0.5 cfs under Certificate 40302 and 0.44 cfs under Permit G-12666) and 1.0 cfs from Well 2 (Permit G-12666). The City of Cascade Locks has not yet made use of 10.46 cfs of water, being 2.06 under Permit G-12666 and 8.4 cfs of water under Permit S-18134. The City's surface water rights are currently utilized as an emergency backup supply; a filtration plant must be constructed before its surface water rights can be used to meet current water quality standards.

14. According to the City, their peak water demand within its service area boundaries was 2.15 cfs in 2003.
15. According to the City, in 2005, the population within the service boundary of the City of Cascade Locks was 3210, being 1140 permanent residents + 1980 seasonal visitors. The City of Cascade Locks anticipates the population to reach an estimated population of 9280, being 2280 permanent residents + 7000 seasonal visitors by the year 2029, which calculates for an annual growth rate of 4.4 percent per year.
16. According to the City's 2003 WMCP, the City is not allowed to expand beyond the Urban Growth Boundary (UGB) without approval of the United States Congress; they do not anticipate expanding beyond their UGB. (2003 WMCP @ 6.) According to the City's Extension Application, the City has enough land within their UGB to allow for the population to increase from 1140 to their projected population of 2280.
17. According to the City, their peak day demand is projected to be approximately 4.53 cfs of water by the year 2029; however, during peak hours the demand is projected at 14.46 cfs.
18. Full development of Permit S-18134 is needed to address the present and future water demand of City of Cascade Locks, including system redundancy and emergency use.
19. The City's request for an extension of time until October 1, 2029 to complete construction of the water system and to apply water to full beneficial use under the terms of Permit S-18134 is both reasonable and necessary.

**Good Cause [OAR 690-315-0080(1)(e) and (3)(a-g)]**

*The Department's determination of good cause shall consider the requirements set forth under OAR 690-315-0080(3).*

**Reasonable Diligence and Good Faith of the Appropriator [OAR 690-315-0080(3)(a), (3)(c) and (4)]**

*Reasonable diligence and good faith of the appropriator must be demonstrated during the permit period or prior extension period as a part of evaluating good cause in determining whether or not to grant an extension. In determining the reasonable diligence and good faith of a municipal or quasi-municipal water use permit holder, the Department shall consider activities associated with the development of the right including, but not limited to, the items set forth under OAR 690-315-0080(4) and shall evaluate how well the applicant met the conditions of the permit or conditions of a prior extension period.*

20. Work was accomplished (specified in the Application for Extension of Time) during the original development time frame and prior extensions of time.
21. During the last extension period, being October 1, 1990 to October 1, 1995, the City accomplished the following:
  - the Frontage Road Intertie line was completed between the Oxbow and Dry Creek Reservoirs; and
  - approximately 1500 feet of waterlines were installed.
22. Since October 1, 1995, the City has accomplished the following:
  - a 2003 WMCP was submitted and approved by the Department;
  - modifications were made to the Dry Creek diversion dam;
  - over 2000 feet of waterlines were replaced or installed;
  - the Industrial Park waterlines were extended; and
  - a six inch water meter was installed for leak detection.
23. According to the City, as of March 1, 2004, they have invested approximately \$543,176, which is 8.3 percent of the total projected cost for complete development of this project. The City anticipates a \$6,038,000 investment is needed for the completion of this project. The Department recognizes that while some of these investment costs are unique to construction and development solely under S-18134, other costs included in this accounting are not partitioned out for S-18134 because (1) they are incurred under the development of a water supply system jointly utilized under other rights held by the City, and/or (2) they are generated from individual activities counted towards reasonable diligence and good faith as listed in ORS 690-315-0080(4) which are not associated with just this permit, but with the development and exercise of all the City's water rights.
24. The City has diverted 1.6 cfs of the 10.0 cfs allowed for beneficial municipal purposes under the terms of this permit.
25. The Department has considered the City's compliance with conditions, and did not identify any concerns.

**Financial Investment and Cost to Appropriate and Apply Water to a Beneficial Purpose**  
**[OAR 690-315-0080(3)(b)]**

26. According to the City, as of March 1, 2004, they have invested approximately \$543,176, which is 8.3 percent of the total projected cost for complete development of this project. The City anticipates a \$6,038,000 investment is needed for the completion of this project.

**The Market and Present Demands for Water [OAR 690-315-0080(3)(d)]**

27. As described in Findings 12 through 18 above, the City has indicated, and the

Department finds that the City must rely on full development of their Permit S-18134.

28. The City projects a population increase, on average, of 4.4 percent per year over a twenty-four year period, being the year's 2005 to 2029.
29. Given the current water supply situation of the City, including current and expected demands, the need for system redundancy, and emergency water supply, there is a market and present demand for the water to be supplied under S-18134.
30. OAR 690-315-0090(3) requires the Department to place a condition on this extension of time to provide that diversion of water beyond 1.6 cfs under Permit S-18134 shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan (WMCP) under OAR Chapter 690, Division 86. A "Development Limitation" condition is specified under Item 1 of the "Conditions" section of this PFO to meet this requirement.

**Fair Return Upon Investment [OAR 690-315-0080(3)(e)]**

31. Use and income from the permitted water development project would result in reasonable returns upon the investment made in the project to date.

**Other Governmental Requirements [OAR 690-315-0080(3)(f)]**

32. Delays caused by any other governmental requirements in the development of this project have not been identified.

**Events which Delayed Development under the Permit [OAR 690-315-0080(3)(g)]**

33. Delay of development under Permit S-18134 was due, in part, to relying on well water rather than surface water after the Safe Drinking Water Act was established, and to the size and scope of the municipal water system, which was designed to be phased in over a period of years.

**Maintaining the Persistence of Listed Fish Species [OAR 690-315-0080(1)(f) and (2)]**

*The Department's determination regarding maintaining the persistence of listed fish species shall be based on existing data and advice of the Oregon Department of Fish and Wildlife (ODFW). The determination shall be limited to impacts related to stream flow as a result of use of the undeveloped portion of the permit and further limited to where, as a result of use of the undeveloped portion of the permit, ODFW indicates that stream flow would be a limiting factor for the subject listed fish species.*

34. The pending municipal Application for Extension of Time for Permit S-18134 was delivered to ODFW on August 20, 2009 for ODFW's review under OAR-690-315-0080.
35. Notification that the pending municipal Application for Extension of Time for Permit S-18134 was delivered to ODFW for review was sent to the City on August 26, 2009.

36. Notification that the pending municipal Application for Extension of Time for Permit S-18134 was delivered to ODFW for review was published in the Department's Public Notice dated September 1, 2009. No public comments were received regarding this notice.
37. On January 31, 2011, the Department received ODFW's Division 315 Fish Persistence Evaluation for Permit S-18134.
38. On June 18, 2014, the Department received an Addendum to ODFW's Division 315 Fish Persistence Evaluation for Permit S-18134.
39. Summary and Excerpts of Advice and Addendum from ODFW:

Use of water under the portion of this permit that is undeveloped as of October 1, 1995, which is the completion date for application of water to full beneficial use authorized in the most recent extension of time, should be conditioned to maintain the persistence of listed fish species in the portions of waterways affected by water use under the permit. ODFW has determined that Dry Creek and the Columbia River will be affected by water use under this permit. ODFW's advice is based on the best available information and existing data.

ODFW recognizes that climatic variations will affect the amount of water in the system. In favorable water years, fish populations tend to increase and in unfavorable water years, fish populations contract. Climate change is likely to cause a long-term reduction in the frequency of favorable water years. The long term objective for a listed species is to have the population increase to a sustainable level over time and to be able to maintain itself through natural fluctuations in the environment.

ODFW advises the Water Resources Department to develop conditions that allow municipalities to meet their water needs while maintaining the persistence of listed fish species.

Flows for fish persistence in Dry Creek are considered to be the natural median flows from April – November, and the adjusted natural medians from December through March. Flows for fish persistence in the Columbia River are considered to be the BiOP flows at McNary Dam. ODFW's advice uses these two sets of flows as target flows for fish persistence. ODFW's recommended target flows for maintaining the persistence of listed fish species in Dry Creek are shown in Table 1, below, and the recommended target flows for maintaining the persistence of listed fish species in the Columbia River are shown in Table 2, below.

**Table 1**

<b>ODFW'S RECOMMENDED FISH PERSISTENCE TARGET FLOWS NEAR THE MOUTH OF DRY CREEK</b>	
<b>Month</b>	<b>Cubic Feet per Second</b>
October	2.75



<b>ODFW'S RECOMMENDED FISH PERSISTENCE TARGET FLOWS NEAR THE MOUTH OF DRY CREEK</b>	
November - December	11.8
January - February	9.4
March	9.1
April	17.9
May	13.8
June	5.64
July	1.96
August	1.09
September	1.33

**Table 2**

<b>ODFW'S RECOMMENDED FISH PERSISTENCE TARGET FLOWS IN THE COLUMBIA RIVER AT McNARY DAM NEAR UMATILLA, OREGON</b>	
Month	1000 Cubic Feet per Second
April 10 – April 30	220-260
May – June	220-260
July – August	200

**Streamflow Measurement Point**

After analysis of flow records, ODFW has determined that persistence flows need to be measured year around near the mouth of Dry Creek, and persistence flows need to be measured on the Columbia River at McNary Dam from April 10 through August 31. Therefore, ODFW advises the Department to establish the mouth of Dry Creek and the Columbia River at McNary Dam as the points for determining whether fish flows are being met for this municipal permit extension.

**40. Department's Findings Based on Review of ODFW's Advice and Addendum:**

There is an undeveloped portion of 8.4 cfs of water under Permit S-18134 as per OAR 690-315-0010(6)(g). Authorization to incrementally expand use of water under this permit beyond 1.6 cfs up to the permitted quantity of 10.0 cfs can only be granted through the Department's review and approval of the municipal permit holder's future WMCPs (OAR 690-086). When ODFW's recommended target flows are not met, the Department's proposed conditions may result in a reduction in the amount of the undeveloped portion of water under Permit S-18134 that can be diverted. The

proposed conditions in this extension of time are based on the following findings:

a. The target flows needed to maintain the persistence of fish must be measured at two locations, being near the mouth of Dry Creek and in the Columbia River at McNary Dam, Oregon.

b. In Dry Creek from November 1 through May 31

During this time period, the undeveloped portion of the extension (E) is *less than* the target flow ( $Q_T$ ).

When target flows are not met in Dry Creek during this time period, use of the undeveloped portion of the permit must be reduced in proportion to the degree to which the recommended target flows are being missed. ODFW's formula for determining the percent shortfall, or missed target flows is defined as:

$$1 - [(Q - E) / Q_T],$$

where Q is the flow near the mouth of Dry Creek, E is the undeveloped portion of the permit, and  $Q_T$  is the target flow (from Table 1). Q may be adjusted to account for any undeveloped portion of the permit being diverted upstream at the POD.

c. In Dry Creek from June 1 through October 31

During this time period, the undeveloped portion of the extension (E) is *greater than* the target flow ( $Q_T$ ), therefore,

i. When  $Q \leq Q_T$ :

No undeveloped portion of the permit may be diverted from Dry Creek under this permit.

ii. When  $Q > Q_T$ :

The maximum amount of the undeveloped portion of Permit S-18134 that could be diverted based on Dry Creek target flows would equal the difference of  $(Q - Q_T)$ , not to exceed the amount of the undeveloped portion (E), being 8.4 cfs, and is defined as:

$$(Q - Q_T), \text{ not to exceed } E,$$

where Q is the flow near the mouth of Dry Creek,  $Q_T$  is the target flow (from Table 1), and E is the undeveloped portion of the permit. Q may be adjusted to account for any undeveloped portion of the permit being diverted upstream at the POD.

d. In the Columbia River from April 10 though August 31

i. When target flows are not met in the Columbia River during this time period, use of the undeveloped portion of the permit may need to be reduced in proportion to the degree to which the recommended target flows are being missed. ODFW's formula for determining the percent shortfall, or missed target flows in the Columbia River is defined as:

$$1 - (Q / Q_T),$$

where Q is the flow at the point of interest on the Columbia River (at McNary Dam), and  $Q_T$  is the target flow (from Table 2).

- ii. ODFW's advice recognizes that municipalities may return a certain amount of flow to a river or stream through their effluent discharge. If the withdrawal points and effluent discharges are within reasonable proximity to each other, such that fish habitat between the two points is not impacted significantly, then ODFW recommends that any reduction (based on Columbia River flows) to use of the undeveloped portion of Permit S-18134 should be adjusted by the monthly estimated percentage of the difference between the total water withdrawals and their return flows. Therefore, consistent with ODFW's advice, when appropriate, the Department proposes to adjust any reduction based on Columbia River flows by a "Consumptive Use Percentage," as generally determined by  $(1 - [\text{total municipal wide returned flows} / \text{total municipal wide diverted flows}])$ .
  - iii. Because the main influence of Columbia River flow levels is the federal management of the dams and that the severity of the measures to be taken by the permit holder should reflect the percentage of water that is withdrawn by the municipality as compared to the overall streamflow level, the Department proposes to limit any overall reduction based on Columbia River flows to no more than 20 percent of the undeveloped portion.
  - iv. From April 10 through June 30, the target flow is expressed as a range (220K-260K cfs). This range is based on the Corps river level forecasting, which reflects the type of water year expected and the physical possibility of providing various flow levels. However, flows below 260K cfs are considered to be less beneficial to the persistence of listed fish species compared to flows of 260K cfs and above. Thus, the larger number in the range (260K cfs) is considered to be the target flow for fish persistence.
  - e. Since flows are measured two locations, being near the mouth of Dry Creek and on the Columbia River at McNary Dam, the calculations to determine the maximum amount of undeveloped portion of the permit that can be diverted as a result of this fish persistence condition must be done for each of the two locations. The lower of the two calculations will establish the maximum amount of undeveloped portion of the permit that can be diverted as a result of this fish persistence condition.
41. The Department finds, based on ODFW's advice, that in the absence of conditions, the use of the undeveloped portion of Permit S-18134 will not maintain the persistence of listed fish species in the portions of the waterways affected by water use under the permit, and as a result of the use of the undeveloped portion of the permit, streamflows would be a limiting factor for the listed fish species.

42. Based on ODFW's advice, the Department proposes to require conditions to maintain, in the portions of the waterways affected by water use under Permit S-18134, the persistence of fish species listed as sensitive, threatened or endangered under state or federal law. (See Item 2 of the "Conditions" section of this PFO.)<sup>5</sup>
43. On July 14, 2014, ODFW notified the Department that the proposed "Conditions to Maintain the Persistence of Listed Fish" and Addendum for Permit S-18134 are consistent with their advice.
44. On July 22, 2014, the Department notified the City as per OAR 690-315-0080(2)(f) of ODFW's written advice and the "Conditions to Maintain the Persistence of Listed Fish" proposed in this PFO for the pending municipal Application for Extension of Time for Permit S-18134.

### **CONCLUSIONS OF LAW**

1. The City is entitled to apply for an extension of time to complete construction and/or completely apply water to the full beneficial use pursuant to ORS 537.230(2).
2. The City has submitted a complete extension application form and the fee specified under ORS 536.050(1)(k), as required by OAR 690-315-0080(1)(a).
3. Pursuant to Section 5, Chapter 410, Oregon Laws 2005, the permit holder is not required to demonstrate that actual construction of the project began within one year of the date of issuance of the permit, as otherwise required by OAR 690-315-0080(1)(b).
4. The time requested to complete construction and apply water to full beneficial use is reasonable, as required by OAR 690-315-0080(1)(c).
5. Completion of construction and full application of water to beneficial use can be completed by October 1, 2029<sup>6</sup>, as required by OAR 690-315-0080(1)(d).
6. The Department has considered the reasonable diligence and good faith of the appropriator, the cost to appropriate and apply water to a beneficial purpose, the market and present demands for water to be supplied, the financial investment made and the fair return upon the investment, the requirements of other governmental agencies, and

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<sup>5</sup> The Department, based on advice from the ODFW, has determined that the conditions contained in this PFO are appropriate for this extension. In other municipal extensions that require conditions to maintain the persistence of listed species, different conditions may be warranted depending on the advice received from ODFW and communications with the particular extension applicant.

<sup>6</sup> For permits applied for or received on or before July 9, 1987, upon complete development of the permit, you must notify the Department that the work has been completed and either: (1) hire a water right examiner certified under ORS 537.798 to conduct a survey, the original to be submitted as required by the Department, for issuance of a water right certificate; or (2) continue to appropriate water under the water right permit until the Department conducts a survey and issues a water right certificate under ORS 537.625.

unforeseen events over which the water right permit holder had no control, and the Department has determined that the City has shown good cause for an extension of time to complete construction of the water system and to apply the water to full beneficial use pursuant to OAR 690-315-0080(1)(e).

7. As required by OAR 690-315-0090(3) and as described in Finding 30 above and specified under Item 1 of the “Conditions” section of this PFO, the diversion of water beyond 1.6 cfs under Permit S-18134 shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan (WMCP) under OAR Chapter 690, Division 86.
8. In accordance with OAR 690-315-0080(1)(f), and as described in Findings 34 through 44 above, the persistence of listed fish species will not be maintained in the portions of the waterways affected by water use of the undeveloped portion under this municipal use permit, in the absence of special conditions. Therefore, the diversion of water beyond 1.6 cfs under Permit S-18134 will be subject to the conditions specified under Item 2 of the “Conditions” section of this PFO.

### **Proposed Order**

Based upon the foregoing Findings of Fact and Conclusions of Law, the Department proposes to issue an order to:

Extend the time to complete construction of the water system under Permit S-18134 from October 1, 1995 to October 1, 2029.

Extend the time to apply the water to beneficial use under Permit S-18134 from October 1, 1995 to October 1, 2029.

Subject to the following conditions:

### **CONDITIONS**

#### **1. Development Limitations**

Diversion of any water beyond 1.6 cfs up to 10.0 cfs under Permit S-18134 shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan (WMCP) under OAR Chapter 690, Division 86 that authorizes access to a greater rate of diversion of water under the permit consistent with OAR 690-086-0130(7). The required WMCP shall be submitted to the Department within 3 years of this Final Order. The amount of water used under Permit S-18134 must be consistent with this and subsequent WMCP’s approved under OAR Chapter 690, on file with the Department.

The deadline established in this Extension Final Order for submittal of a WMCP shall not relieve a permit holder of any existing or future requirement for submittal of a WMCP at an earlier date as established through other orders of the Department. A WMCP

submitted to meet the requirements of this final order may also meet the WMCP submittal requirements of other Department orders.

2. **Conditions to Maintain the Persistence of Listed Fish**

The developed portion of the permit, being 1.6 cfs is *not* subject to these fish persistence conditions.

A. **Fish Persistence Target Flows**

- a. Fish persistence target flows in Dry Creek as recommended by ODFW are in Table 3, below; flows are to be measured near the mouth of Dry Creek.

**Table 3**

<b>FISH PERSISTENCE TARGET FLOWS NEAR THE MOUTH OF DRY CREEK</b>	
Month	Cubic Feet per Second
October	2.75
November - December	11.8
January - February	9.4
March	9.1
April	17.9
May	13.8
June	5.64
July	1.96
August	1.09
September	1.33

- b. Fish persistence target flows in the Columbia River as recommended by ODFW are in Table 4, below; flows are to be measured in the Columbia River at McNary Dam. Daily flow reports for McNary Dam are available from the Fish Passage Center (FPC) established by the Northwest Power Planning Council (NPPC) at <http://www.fpc.org/currentdaily/flowspil.txt>.

**Table 4**

<b>FISH PERSISTENCE TARGET FLOWS IN THE COLUMBIA RIVER, MEASURED AT McNARY DAM NEAR UMATILLA, OR</b>	
Month	1000 Cubic Feet per Second
April 10 – April 30	260
May – June	260
July – August	200

c. Alternate Streamflow Measurement Point

The location of a target flow measurement point as established in these Conditions to Maintain the Persistence of Listed Fish may be revised if the City provides evidence in writing that ODFW has determined that target flows may be measured at an alternate streamflow measurement point and provides an adequate description of the location of the alternate streamflow measurement point, and the Water Resources Director concurs in writing.

B. Determining Water Use Reductions – Generally

Since flows need to be measured at two locations, being Dry Creek and the Columbia River, the calculations to determine the maximum amount of undeveloped portion of the permit that can be diverted as a result of this fish persistence condition must be done for each of the two locations. The lower of the two calculations will establish the maximum amount of undeveloped portion of the permit that can be diverted under Permit S-18134 as a result of this fish persistence condition.

a. In Dry Creek from November 1 through May 31 ( $E < Q_T$ )

- i. The missed target flows are determined in proportion to the amount by which the flows shown in Table 3 are missed based on a seven-day rolling average<sup>7</sup> of mean daily flows measured near the mouth of Dry Creek, adjusted for the undeveloped portion diverted under Permit S-18134 at the POD. The percent of missed target flows is defined as:

$$(1 - [(Q_{ADJ} - E) / Q_T]) \times 100\%$$

$Q_{ADJ}$  is the actual flow measured near the mouth of Dry Creek the POD, adjusted for the quantity of the undeveloped portion being diverted under Permit S-18134 at the POD.  $Q_{ADJ}$  is further defined as:

$$Q_{ADJ} = Q_A + (Q_{POD} - 1.6), \text{ where } (Q_{POD} - 1.6) \text{ is } \geq 0$$

$Q_A$  is the actual flow measured near the mouth of Dry Creek based on a seven-day rolling average,

$Q_{POD}$  is total amount of water actually diverted (up to 10 cfs) under Permit S-18134 at the POD, and

1.6 is the developed portion of the permit.

$E$  is the undeveloped portion of the permit, being 8.4 cfs.

$Q_T$  is the target flow (from Table 3).

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<sup>7</sup> Alternatively, the City may use a single daily measurement.

- ii. The percent by which the target flow is missed applied to the undeveloped portion of the permit provides the maximum amount of the undeveloped portion of the permit that could be diverted based on target flows in Dry Creek, and is defined as:

$$E - (E \times \% \text{ missed target flows}),$$

where E is the undeveloped portion of the permit, being 8.4 cfs.

- iii. When  $Q_{ADJ} - E \geq Q_T$ , the target flow is considered met and therefore the amount of the undeveloped portion of the permit that can be diverted would not need to be reduced based on flows in Dry Creek.

b. In Dry Creek from June 1 through October 31 ( $E > Q_T$ )

- i. When  $Q_{ADJ} \leq Q_T$  in Dry Creek:

No undeveloped portion of the permit may be diverted from Dry Creek under this permit, where  $Q_{ADJ}$  is the actual flow measured near the mouth of Dry Creek as adjusted for the undeveloped portion diverted under Permit S-18134 at the POD, and  $Q_T$  is the target flow (from Table 3).  $Q_{ADJ}$  is based on a seven-day rolling average<sup>8</sup> of mean daily flows.

- ii. When  $Q_{ADJ} > Q_T$  in Dry Creek:

The maximum amount of undeveloped portion of the permit that can be diverted based on target flows near the mouth of Dry Creek is defined as:

$$(Q_{ADJ} - Q_T), \text{ not to exceed } E,$$

where  $Q_{ADJ}$  is the actual flow measured near the mouth of Dry Creek as adjusted for the undeveloped portion diverted under Permit S-18134 at the POD, based on the seven-day rolling average; and  $Q_T$  is the target flow (from Table 3); and E is the undeveloped portion of the permit.

- iii. When  $Q_{ADJ} - Q_T \geq E$ , the amount of the undeveloped portion of the permit that can be diverted would not need to be reduced based on target flows in Dry Creek.

c. In the Columbia River from April 10 though August 31

- i. The missed target flows are determined in proportion to the amount by which the flows shown in Table 4 are missed based on a seven-day rolling average<sup>9</sup> of mean daily flows measured on the Columbia River at McNary Dam. The percent of missed target flows is defined as:

$$(1 - [Q_A / Q_T]) \times 100\%,$$

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<sup>8</sup> Alternatively, the City may use a single daily measurement.

<sup>9</sup> Alternatively, the City may use a single daily measurement.



where  $Q_A$  is the actual flow, measured at the designated gage at McNary Dam, based on the seven-day rolling average, and  $Q_T$  is the target flow (from Table 4).

- ii. The percent by which the target flow is missed applied to the undeveloped portion of the permit provides the maximum amount of undeveloped portion of the permit that could be diverted based on target flows in the Columbia River at McNary Dam, and is defined as:

$$E - (E \times \% \text{ missed target flows}),$$

where E is the undeveloped portion of the permit, being 8.4 cfs.

- iii. The maximum amount of undeveloped portion of the permit that can be diverted based on target flows in the Columbia River as a result of this fish persistence condition may be adjusted by a Consumptive Use Percentage, when applicable, as per Item 2.C., below. The overall reduction to the amount of the undeveloped portion of the permit will not exceed 20%.

C. Consumptive Use Percentages for Utilization in Columbia River Calculations

a. Initial Consumptive Use Percentages

The City of Cascade Locks has not identified any Consumptive Use Percentages based on the return of flows to the Columbia River through effluent discharge. Thus, at this time the City may not utilize Consumptive Use Percentages for the purpose of calculating the maximum amount of the undeveloped portion of Permit S-18134 that can be diverted based on flows in the Columbia River.

b. First Time Utilization of Consumptive Use Percentages

Utilization of Consumptive Use Percentages for the purpose of calculating the maximum amount of the undeveloped portion of Permit S-18134 that can be diverted based on flows in the Columbia River may begin after the issuance of the Final Order for this extension of time.

First time utilization of Consumptive Use Percentages is contingent upon the City (1) providing evidence in writing that ODFW has determined that withdrawal points and effluent discharges are within reasonable proximity to each other, such that fish habitat between the two points is not impacted significantly, and (2) submitting monthly Consumptive Use Percentages and receiving the Water Resources Director's concurrence with the proposed Consumptive Use Percentages. Utilization of Consumptive Use Percentages is subject to an approval period described in 2.C.f., below.

Consumptive Use Percentages submitted to the Department for review must (1) be specified as a percentage (may be to the nearest 1/10 percent) for each month of the year and (2) include a description and justification of the methods utilized to determine the percentages. The proposed Consumptive Use Percentages should be submitted on the *Consumptive Use Percentages*

*Update Form* provided with the Final Order for this extension of time.

c. Consumptive Use Percentages Updates

Continuing the utilization of Consumptive Use Percentages for the purpose of calculating the maximum amount of the undeveloped portion of Permit S-18134 that can be diverted based on flows in the Columbia River beyond an approval period (as described in 2.C.f., below) is contingent upon the City submitting updated Consumptive Use Percentages and receiving the Water Resources Director's concurrence with the proposed Consumptive Use Percentages Updates. Utilization of Consumptive Use Percentages Updates is subject to an approval period described in 2.C.f., below.

The updates to the Consumptive Use Percentages must (1) be specified as a percentage (may be to the nearest 1/10 percent) for each month of the year and (2) include a description and justification of the methods utilized to determine the percentages. The updates should be submitted on the *Consumptive Use Percentages Update Form* provided with the Final Order for this extension of time.

d. Changes to Wastewater Technology and/or Wastewater Treatment Plant Practices

If there are changes to either wastewater technology or the practices at the City's waste water treatment facility resulting in 25% or more reductions in average monthly return flows to the Columbia River, then the Consumptive Use Percentages in effect at that time may no longer be utilized for the purposes of calculating the maximum amount of the undeveloped portion of Permit S-18134 that can be diverted based on flows in the Columbia River. The 25% reduction is based on a 10-year rolling average of monthly wastewater return flows to the Columbia River as compared to the average monthly wastewater return flows from the 10 year period just prior to date of the first approval period described in 2.C.f., below.

If such changes to either wastewater technology or the practices at the City's waste water treatment facility occur resulting in 25% reductions, further utilization of Consumptive Use Percentages is contingent upon the City submitting Consumptive Use Percentages Updates as per 2.C.c., above, and receiving the Water Resources Director's concurrence with the proposed Consumptive Use Percentages.

e. Relocation of the Point(s) of Diversion(s) and/or Return Flows

If the point(s) of diversion(s) and/or return flows are relocated, Consumptive Use Percentages in effect at that time may no longer be utilized for the purposes of calculating the maximum amount of the undeveloped portion of Permit S-18134 that can be diverted based on flows in the Columbia River.

After relocation of the point(s) of diversion(s) and/or return flows, further utilization of Consumptive Use Percentages is contingent upon the City (1) providing evidence in writing that ODFW has determined that any relocated withdrawal points and effluent discharge points are within

reasonable proximity to each other, such that fish habitat between the two points is not impacted significantly, and (2) submitting Consumptive Use Percentages Updates as per 2.C.c., above, and receiving the Water Resources Director's concurrence with the proposed Consumptive Use Percentages.

f. Approval Periods for Utilization of Consumptive Use Percentages

The utilization of Consumptive Use Percentages for the purpose of calculating the maximum amount of the undeveloped portion of Permit S-18134 that can be diverted based on flows in the Columbia River may continue for a 10 year approval period that ends 10 years from the Water Resources Director's most recent date of concurrence with Consumptive Use Percentages Updates as evidenced by the record, unless sections 2.C.d., or 2.C.e. (above) are applicable.

Consumptive Use Percentages (first time utilization or updates) which are submitted and receive the Director's concurrence will begin a new 10 year approval period. The approval period begins on the date of the Water Resources Director's concurrence with Consumptive Use Percentages Updates, as evidenced by the record. The City at its discretion may submit updates prior to the end of an approval period.

D. Summary of Formulas Used for Fish Persistence Condition Calculations

Date Range [Undeveloped portion (E) compared to Target Flow (QT)]	Formula for Dry Creek <sup>a</sup>	Formula for the Columbia River <sup>b</sup>	Need to Compare Dry Creek to Columbia River?
Nov 1 – Apr 9 [E < QT]	$1 - [(Q_{ADJ} - E) / QT]$	N/A	no
Apr 10 – May 31 [E < QT]	$1 - [(Q_{ADJ} - E) / QT]$	$1 - [Q_A / QT]$	yes
Jun 1 – Aug 31 [E > QT]	When $Q_{ADJ} \leq QT$ : No Diversion of the Undeveloped Portion of the Permit Allowed	N/A	yes
	When $Q_{ADJ} > QT$ : $Q_{ADJ} - QT$ , not to exceed E	$1 - [Q_A / QT]$	
Sep 1 – Oct 31 [E > QT]	When $Q_{ADJ} \leq QT$ : No Diversion of the Undeveloped Portion of the Permit Allowed	N/A	no
	When $Q_{ADJ} > QT$ : $Q_{ADJ} - QT$ , not to exceed E		

<sup>a</sup>For Dry Creek,  $Q_{ADJ}$  is based on Dry Creek flows measured at its mouth adjusted for the undeveloped portion diverted under Permit S-18134 at the POD.

<sup>b</sup>For the Columbia River,  $Q_A$  and  $Q_T$  are measured in the Columbia River at McNary Dam, near Umatilla, OR

E. Examples

**For date range April 10 – May 31 (E < QT in Dry Creek)**

**Example 1: Target flows met in both Dry Creek and the Columbia River.**

On April 15, the last seven mean daily flows in Dry Creek were 26, 28, 28, 27, 26, 27 and 28 cfs. The seven-day rolling average (QA) is 27.1 cfs and if 1.6 cfs is being diverted at the POD, then QADJ would be 27.1 cfs.

$$27.1 + (1.6 - 1.6) = 27.1$$

Given that the undeveloped portion of this permit (E) is 8.4 cfs, then the seven-day average of mean daily flows in Dry Creek adjusted for the undeveloped portion diverted at the POD (QADJ), minus the undeveloped portion is greater than the 17.9 cfs target flow (QT) for April 15. In this example, in Dry Creek,

$$27.1 - 8.4 \geq 17.9$$

AND, on April 15, the last seven mean daily flows in the Columbia River at McNary Dam<sup>10</sup> were 310K, 290K, 280K, 260K, 260K, 240K and 250K cfs. The seven-day rolling average (QA) is 270K cfs. The seven-day average of mean daily flows in the Columbia River is greater than the 260K cfs target flow (QT) for April 15.

The amount of the undeveloped portion of the permit that can be diverted would not be reduced because target flows are considered met both near the mouth of Dry Creek and on the Columbia River at McNary Dam.

**Example 2: Target flows missed in both Dry Creek and in the Columbia River**

**Make Calculations Based on Dry Creek Flows**

Step 1: If on April 15, the average of the last seven mean daily flows (QA) is 16.0 cfs and 3.6 cfs is being diverted at the POD, then QADJ would be 18.0 cfs.

$$16.0 + (3.6 - 1.6) = 18.0$$

Given that the undeveloped portion of this permit (E) is 8.4 cfs, the target flow (QT) of 17.9 would be missed by 46.4%.

$$(1 - [(18.0 - 8.4) / 17.9]) \times 100\% = 46.4\%$$

Step 2: Given that the undeveloped portion of this permit (E) is 8.4 cfs, and the undeveloped portion of the permit needs to be reduced by 46.4% (from Step 1), or 3.9 cfs, then the maximum amount of the undeveloped portion of Permit S-18134 that could be diverted based on Dry Creek

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<sup>10</sup> Daily flow data for McNary Dam is available at <http://www.fpc.org/currentdaily/flowspil.txt>.

target flows would be 4.5 cfs. (This maximum amount may be limited as illustrated in Step 8, below.)

$$(8.4 \times 46.4\%) / 100 = 3.9$$

$$8.4 - 3.9 = 4.5$$

Make Calculations Based on Columbia River Flows

Step 3: If on April 15, the average of the last seven mean daily flows is 120K cfs, and the target flow is 260K, then the target flow would be missed by 53.8%.

$$(1 - (120 / 260)) \times 100\% = 53.8\%$$

Step 4: Assuming the Consumptive Use Percentage is 52.5%<sup>11</sup> during the month of April and the utilization of this percentage is authorized, and the target flow is missed by 53.8% (from Step 3), then the amount of the undeveloped portion of the permit that could be diverted would be reduced by 28.2%.

$$((52.5\% \times 53.8\%) / 100) = 28.2 \%$$

(If adjustments are not to be made by a Consumptive Use Percentage, then the undeveloped portion of the permit would only be reduced by the % by which the target flow is missed, which is 53.8 % in this example. However, because 53.8% exceeds an overall 20% reduction, without an adjustment for a Consumptive Use Percentage the reduction would be calculated at 20%).

Step 5: The overall reduction of 28.2 % of the amount of the undeveloped portion of the permit exceeds an overall 20% reduction. Therefore, the reduction would be calculated at 20%.

Step 6: Given that the undeveloped portion of this permit (E) is 8.4 cfs, and the undeveloped portion of the permit needs to be reduced by 20% (from Steps 4 and 5), or 1.68 cfs, then the maximum amount of the undeveloped portion of Permit S-18134 that could be diverted based on Columbia River flows would be 6.72 cfs. (This maximum amount may be limited as illustrated in Step 8, below.)

$$(8.4 \times 20\%) / 100 = 1.68$$

$$8.4 - 1.68 = 6.72$$

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<sup>11</sup> Currently, the City of Cascade Locks may not utilize Consumptive Use Percentages for the purpose of calculating the amount of the undeveloped portion of Permit S-18134 that can be diverted based on flows in the Columbia River. The utilization of the Consumptive Use Percentage 52.5%<sup>is</sup> only for illustrative purposes in this example.

Compare Calculations from Dry Creek and the Columbia River

Step 7: Compare calculations based on Dry Creek flows (3.75 cfs) with those based on Columbia River flows (6.72 cfs), and choose the smaller number.

$$4.5 < 6.72$$

The maximum undeveloped portion that can be diverted as a result of this fish persistence condition is 4.5 cfs.

Determine the Maximum Amount of Diversion

Step 8: The calculated maximum amount of water that could be diverted due to the fish persistence condition may not exceed the amount of water to which the City is legally entitled to divert. In this example, if the amount of water legally authorized for diversion under this permit is 4.0 cfs (for example, authorization provided through a WMCP), then 4.0 cfs would be the maximum amount of diversion allowed under this permit including the developed portion of the permit, being 1.6 cfs.

(Conversely, if the amount of water legally authorized for diversion under this permit is 8.0 cfs, then 6.1 cfs (4.5 from Step 7 + the 1.6 developed portion) would be the maximum amount of diversion allowed under this permit.)

Example 3: Target flows met in the Columbia River, but missed in Dry Creek.

If on April 15, the average of the last seven mean daily flows ( $Q_A$ ) in Dry Creek is 25.0 cfs, and 2.5 cfs is being diverted at the POD, then  $Q_{ADJ}$  would be 25.9 cfs.

$$25.0 + (2.5 - 1.6) = 25.9$$

The seven-day average of mean daily flows in Dry Creek adjusted for the undeveloped portion diverted at the POD ( $Q_{ADJ}$ ), minus the undeveloped portion is less than the 17.9 cfs target flow ( $Q_T$ ) for April 15. In this example, in Dry Creek,  $Q_{ADJ} - E < Q_T$ .

$$25.9 - 8.4 < 17.9$$

AND, if on April 15, the last seven-day rolling average ( $Q_A$ ) in the Columbia River is 268K cfs, then the seven-day average of mean daily flows in the Columbia River is greater than the 260K cfs target flow ( $Q_T$ ) for April 15.

In this example, although the target flow is considered met in the Columbia River, the target flow was missed in Dry Creek. Therefore, the maximum amount of undeveloped portion of the permit that can be diverted as a result of this fish persistence condition would be calculated based on flows in Dry Creek only.

**For date range June 1 – August 31 (E > QT in Dry Creek)**

**Example 4: Target flows met in both Dry Creek and the Columbia River.**

On July 15, the last seven mean daily flows in Dry Creek were 9, 10, 11, 9, 9, 8 and 8 cfs. The seven-day rolling average (QA) is 9.1 cfs, and if 3.5 cfs is being diverted at the POD, then QADJ would be 11.0.

$$9.1 + (3.5 - 1.6) = 11.0.$$

Given that the undeveloped portion of this permit (E) is 8.4 cfs, then the seven-day average of mean daily flows in Dry Creek adjusted for the undeveloped portion diverted at the POD (QADJ), minus the 1.96 cfs target flow (QT) for July 15 is greater than undeveloped portion of the permit (E). In this example, in Dry Creek,  $Q_{ADJ} - Q_T \geq E$ .

$$11.0 - 1.96 \geq 8.4$$

AND, on July 15, the last seven mean daily flows in the Columbia River were 290K, 270K, 250K, 240K, 220K, 200K and 190K cfs. The seven-day rolling average (QA) is 237K cfs. The seven-day average of mean daily flows in the Columbia River is greater than the 200K cfs target flow (QT) for July 15.

The amount of the undeveloped portion of the permit that can be diverted would not be reduced because target flows are considered met both near the mouth of Dry Creek and in the Columbia River at McNary Dam.

**Example 5: Target flows missed in Dry Creek (when QADJ > QT) and in the Columbia River**

**Make Calculations Based on Dry Creek Flows**

Step 1: If on July 15, the average of the last seven mean daily flows (QA) in Dry Creek is 5.0 cfs, and 2.0 cfs is being diverted at the POD, then QADJ would be 5.4 cfs.

$$5.0 + (2.0 - 1.6) = 5.4$$

The target flow (QT) is 1.96, therefore  $Q_{ADJ} > Q_T$ . Therefore, the maximum amount of the undeveloped portion of Permit S-13862 that could be diverted based on target flows in Dry Creek would be 3.44 cfs.

$$(5.4 - 1.96) = 3.44, \text{ not to exceed } 8.4$$

Make Calculations Based on Columbia River Flows

Step 2: If on July 15, the average of the last seven mean daily flows ( $Q_A$ ) is 170K cfs, and the target flow ( $Q_T$ ) is 200K, then the target flow would be missed by 15.0%.

$$(1 - (170 / 200)) \times 100\% = 15.0\%$$

Step 3: Assuming the Consumptive Use Percentage is 78.7%<sup>12</sup> during the month of July and the utilization of this percentage is authorized, and the target flow is missed by 15.0% (from Step 2), then the amount of the undeveloped portion of the permit that could be diverted would be reduced by 11.8%.

$$((78.7\% \times 15.0\%) / 100) = 11.8\%$$

(If adjustments are not to be made by a Consumptive Use Percentage, then the undeveloped portion of the permit would only be reduced by the % by which the target flow is missed – 15.0% in this example).

Step 4: The overall reduction of 11.8 % of the amount of the undeveloped portion of the permit does not exceed 20%.

Step 5: Given that the undeveloped portion of this permit (E) is 8.4 cfs, and the undeveloped portion of the permit needs to be reduced by 11.8% (from Steps 3 and 4), or 0.99 cfs, then the maximum amount of the undeveloped portion of Permit S-18134 that could be diverted based on Columbia River flows would be 7.41 cfs. (This maximum amount may be limited as illustrated in Step 7, below.)

$$(8.4 \times 11.8\%) / 100 = 0.99$$

$$8.4 - 0.99 = 7.41$$

Compare Calculations from Dry Creek and the Columbia River

Step 6: Compare calculations based on Dry Creek flows (3.04 cfs) with those based on Columbia River flows (7.41 cfs), and choose the smaller number.

$$3.44 < 7.41$$

The maximum undeveloped portion that can be diverted as a result of this fish persistence condition is 3.44 cfs.

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<sup>12</sup> Currently, the City of Cascade Locks may not utilize Consumptive Use Percentages for the purpose of calculating the amount of the undeveloped portion of Permit S-18134 that can be diverted based on flows in the Columbia River. The utilization of the Consumptive Use Percentage 78.7%<sup>15</sup> only for illustrative purposes in this example.



### Determine the Maximum Amount of Diversion

Step 7: The calculated maximum amount of water that could be diverted due to the fish persistence condition may not exceed the amount of water to which the City is legally entitled to divert. In this example, if the amount of water legally authorized for diversion under this permit is 4.0 cfs (for example, authorization provided through a WMCP), then 4.0 cfs would be the maximum amount of diversion allowed under this permit including the developed portion of the permit, being 1.6 cfs.

(Conversely, if the amount of water legally authorized for diversion under this permit is 8.0 cfs, then 5.04 cfs (3.44 from Step 6 + the 1.6 developed portion) would be the maximum amount of diversion allowed under this permit.)

#### Example 6: Target flows met in Dry Creek, but missed in the Columbia River.

If on July 15, the average of the last seven mean daily flows ( $Q_A$ ) in Dry Creek is 10.5 cfs, and 2.0 cfs is being diverted at the POD, then  $Q_{ADJ}$  would be 10.9 cfs.

$$10.5 + (2.0 - 1.6) = 10.9$$

Given that the undeveloped portion of this permit ( $E$ ) is 8.4 cfs, then the seven-day average of mean daily flows in Dry Creek adjusted for the undeveloped portion diverted at the POD ( $Q_{ADJ}$ ), minus the 1.96 cfs target flow ( $Q_T$ ) for July 15 is greater than undeveloped portion of the permit ( $E$ ). In this example for Dry Creek,  $Q_{ADJ} - Q_T \geq E$ .

$$10.9 - 1.96 \geq 8.4$$

AND, if on July 15, the last seven-day rolling average ( $Q_A$ ) in the Columbia River is 195K cfs, then the seven-day average of mean daily flows in the Columbia River is less than the 200K cfs target flow ( $Q_T$ ) for July 15.

In this example, although the target flow is considered met in Dry Creek, the target flow was missed in the Columbia River. Therefore, the maximum amount of undeveloped portion that can be diverted as a result of this fish persistence condition would be calculated based on actual and target flows Columbia River at McNary Dam only.

#### Example 7: Adjusted flows are less than the target flows ( $Q_{ADJ} < Q_T$ ) in Dry Creek.

If on August 15, the average of the last seven mean daily flows ( $Q_A$ ) in Dry Creek is .53 cfs, and 2.0 cfs is being diverted at the POD, then  $Q_{ADJ}$  would be 0.93 cfs.

$$0.53 + (2.0 - 1.6) = 0.93$$

Given that the target flow ( $Q_T$ ) is 1.09, then  $Q_{ADJ} \leq Q_T$ . In this example, no undeveloped portion of the permit may be diverted from Dry Creek under this

permit as a result of this fish persistence condition -- regardless of the flows in the Columbia River at McNary Dam.

**For date range September 1 – October 31 (E > QT in Dry Creek)**

NOTE: Calculations Are Based on Dry Creek Flows Only

**Example 8: Adjusted flows are greater than the target flows (Q<sub>ADJ</sub> > Q<sub>T</sub>)**

Step 1: If on September 15, the average of the last seven mean daily flows (Q<sub>A</sub>) is 4.0 cfs, and 2.0 cfs is being diverted at the POD, then Q<sub>ADJ</sub> would be 4.4 cfs.

$$4.0 + (2.0 - 1.6) = 4.4$$

The target flow (Q<sub>T</sub>) is 1.33, therefore Q<sub>ADJ</sub> > Q<sub>T</sub>. Therefore, the maximum amount of the undeveloped portion of Permit S-13862 that could be diverted would be 3.07 cfs.

$$(4.4 - 1.33) = 3.07, \text{ not to exceed } 8.4$$

Step 2: The calculated maximum amount of water that could be diverted due to the fish persistence condition may not exceed the amount of water to which the City is legally entitled to divert. In this example, if the amount of water legally authorized for diversion under this permit is 4.0 cfs (for example, authorization provided through a WMCP), then 4.0 cfs would be the maximum amount of diversion allowed under this permit including the developed portion of the permit, being 1.6 cfs.

(Conversely, if the amount of water legally authorized for diversion under this permit is 10.0 cfs, then 4.67 cfs (3.07 from Step 1 + the 1.6 developed portion) would be the maximum amount of diversion allowed under this permit.)

**Example 9: Adjusted flows are less than the target flows (Q<sub>ADJ</sub> < Q<sub>T</sub>) in Dry Creek.**

If on September 15, the average of the last seven mean daily flows (Q<sub>A</sub>) in Dry Creek is 0.7 cfs, and 2.0 cfs is being diverted at the POD, then Q<sub>ADJ</sub> would be 1.1 cfs.

$$0.7 + (2.0 - 1.6) = 1.1$$

Given that the target flow (Q<sub>T</sub>) is 1.33, then Q<sub>ADJ</sub> ≤ Q<sub>T</sub>. In this example no undeveloped portion of the permit may be diverted from Dry Creek under this permit as a result of this fish persistence condition.

**For date range November 1 – April 9 (E < QT in Dry Creek)**

NOTE: Calculations Are Based on Dry Creek Flows Only

**Example 10: Target flow missed.**

Step 1: If on December 15, the average of the last seven mean daily flows (QA) is 12.0 cfs and 3.6 cfs is being diverted at the POD, then Q<sub>ADJ</sub> would be 14.0 cfs.

$$12.0 + (3.6 - 1.6) = 14.0$$

Given that the undeveloped portion of this permit (E) is 8.4 cfs, the target flow (QT) of 11.8 would be missed by 52.5%.

$$(1 - [(14.0 - 8.4) / 11.8]) \times 100\% = 52.5\%$$

Step 2: Given that the undeveloped portion of this permit (E) is 8.4 cfs, and the undeveloped portion of the permit needs to be reduced by 52.5% (from Step 1), or 4.41 cfs, then the maximum amount of the undeveloped portion of Permit S-18134 that could be diverted would be 3.99 cfs. (This maximum amount may be limited as illustrated in Step 3, below.)

$$(8.4 \times 52.5\%) / 100 = 4.41$$

$$8.4 - 4.41 = 3.99$$

Step 3: The calculated maximum amount of water that could be diverted due to the fish persistence condition may not exceed the amount of water to which the City is legally entitled to divert. In this example, if the amount of water legally authorized for diversion under this permit is 5.0 cfs (for example, authorization provided through a WMCP), then 5.0 cfs would be the maximum amount of diversion allowed under this permit including the developed portion of the permit, being 1.6 cfs.

(Conversely, if the amount of water legally authorized for diversion under this permit is 6.0 cfs, then 5.59 cfs (3.99 from Step 2 + the 1.6 developed portion) would be the maximum amount of diversion allowed under this permit.)

DATED: July 29, 2014

  
Dwight French  
Water Right Services Division Administrator

*If you have any questions,  
please check the information  
box on the last page for the  
appropriate names and phone  
numbers.*

### **Proposed Final Order Hearing Rights**

1. Under the provisions of OAR 690-315-0100(1) and 690-315-0060, the applicant or any other person adversely affected or aggrieved by the proposed final order may submit a written protest to the proposed final order. The written protest must be received by the Water Resources Department no later than **September 12, 2014**, being 45 days from the date of publication of the proposed final order in the Department's weekly notice.
2. A written protest shall include:
  - a. The name, address and telephone number of the petitioner;
  - b. A description of the petitioner's interest in the proposed final order and if the protestant claims to represent the public interest, a precise statement of the public interest represented;
  - c. A detailed description of how the action proposed in the proposed final order would adversely affect or aggrieve the petitioner's interest;
  - d. A detailed description of how the proposed final order is in error or deficient and how to correct the alleged error or deficiency;
  - e. Any citation of legal authority supporting the petitioner, if known;
  - f. Proof of service of the protest upon the water right permit holder, if petitioner is other than the water right permit holder; and
  - g. The applicant or non-applicant protest fee required under ORS 536.050.
3. Within 60 days after the close of the period for requesting a contested case hearing, the Director shall:
  - a. Issue a final order on the extension request; or
  - b. Schedule a contested case hearing if a protest has been submitted, and:
    - 1) Upon review of the issues, the Director finds there are significant disputes related to the proposed agency action; or
    - 2) The applicant submits a written request for a contested case hearing within 30 days after the close of the period for submitting protests.

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If you have any questions about statements contained in this document, please contact Ann L. Reece at 503-986-0834.

If you have questions about how to file a protest or if you have previously filed a protest and you want to know the status, please contact Patricia McCarty at 503-986-0820.

If you have any questions about the Department or any of its programs, please contact our Water Resources Customer Service Group at 503-986-0801.

Address any correspondence to:      Water Right Services Division  
725 Summer St NE, Suite A  
Fax: 503-986-0901                      Salem, OR 97301-1266

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