

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

Water Rights Application
Number G-12526

**Final Order
Extension of Time for Permit Number G-12666
Permit Holder: City of Cascade Locks**

Permit Information

Application File G-12526/ Permit G-12666
Basin 4 – Hood River Basin / Watermaster District 3
Date of Priority: May 6, 1991

Authorized Use of Water

Source of Water:	Two Wells within the Columbia River Basin
Purpose or Use:	Municipal
Maximum Rate:	3.5 Cubic Feet per Second (CFS), being 2.3 CFS from Well 1 and 1.2 CFS from Well 2

Appeal Rights

This is a final order in other than a contested case. This order is subject to judicial review under ORS 183.484. A request for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080 you may either file for judicial review, or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.

Application History

Permit G-12666 was issued by the Department on August 21, 1996. The permit called for completion of construction by October 1, 1998, and complete application of water to beneficial use by October 1, 1999. On March 1, 2004, the City of Cascade Locks submitted an application to the Department for an extension of time for Permit G-12666. In accordance with OAR 690-315-0050(2), on August 19, 2014 the Department issued a Proposed Final Order proposing to extend the time to complete construction to October 1, 2029 and to extend the time to fully apply

water to beneficial use to October 1, 2029. The protest period closed **October 3, 2014**, in accordance with OAR 690-315-0060(1). No protest was filed.

FINDINGS OF FACT

The Department adopts and incorporates by reference the Proposed Final Order dated August 19, 2014.

At time of issuance of the Proposed Final Order the Department concluded that, based on the factors demonstrated by the applicant, the permit may be extended subject to the following conditions:

CONDITIONS

1. **Development Limitations**

Diversion of any water beyond 1.59 cfs, being 0.5 cfs from Well 1 and 1.09 cfs from Well 2, up to 3.5 cfs, being 2.3 cfs from Well 1 and 1.2 cfs from Well 2, under Permit G-12666 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 G-12666 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**

Under Permit G-12666, 2.37 cfs, being 1.23 cfs from Well 1 and 1.14 cfs from Well 2 is *not* subject to these fish persistence conditions.¹

A. **Fish Persistence Target Flows**

Fish Persistence needs in the Columbia River as recommended by ODFW are in Table 1, 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>.

¹2.37 equals the developed portion of the permit, 1.59 cfs (0.5 cfs from Well 1, 1.09 cfs from Well 2), plus the undeveloped portion not having PSI with surface water, 0.78 cfs (0.73 cfs from Well 1 and 0.05 cfs from Well 2). [1.59 + 0.78 = 2.37]

Table 1

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

Alternate Streamflow Measurement Point

The location of a streamflow 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 persistence 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

The undeveloped portion of Permit G-12666 as of October 1, 1999, having PSI with the Columbia River is 1.13 cfs, being 1.07 cfs from Well #1 and 0.06 cfs from Well #2. The maximum amount of the undeveloped portion of Permit G-12666 having PSI with the Columbia River that can be appropriated as a result of this fish persistence condition is determined in proportion to the amount by which the flows shown in Table 1 are missed based on a seven day rolling average² of mean daily flows measured on the Columbia River at McNary Dam. The percent of missed target flows is defined as:

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

where Q_A is the actual flow, measured at the designated gage at McNary Dam, based on the seven day rolling average³, and Q_T is the target flow (from Table 1).

The percent missed target flows applied to the undeveloped portion of this permit having PSI with the Columbia River provides the maximum amount of water that could be appropriated under this permit as a result of this fish persistence condition, and is defined as:

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

where E_{PSI} is undeveloped portion of the permit having PSI with the Columbia River, being 1.13 cfs.

² Alternatively, the water user may use a single daily measurement.

³ Alternatively, the water user may use a single daily measurement.

The maximum amount of water that can be appropriated as a result of this 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 having PSI with the Columbia River of the permit will not exceed 20%.

SUMMARY TABLE OF RATES SHOWING DEVELOPED AND UNDEVELOPED PORTIONS			
	Total CFS	Well #1 (CFS)	Well #2 (CFS)
Authorized under Permit G-12666	3.5	2.30	1.20
Portion Developed by 10-1-1999	1.59	0.50	1.09
Undeveloped Portion	1.91	1.80	0.11
Undeveloped Portion with No PSI	0.78	0.73	0.05
Undeveloped Portion with PSI (E_{PSI})	1.13	1.07	0.06
20% Max on Undeveloped Portion with PSI with the Columbia River	0.22	0.21	0.01

C. Consumptive Use Percentages

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 G-12666 that can be appropriated as a result of this fish persistence condition.

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 G-12666 that can be appropriated as a result of this fish persistence condition 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 G-12666 that can be appropriated as a result of this fish persistence condition 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 wastewater 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 G-12666 that can be appropriated as a result of this fish persistence condition. 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 wastewater 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 G-12666 that can be appropriated as a result of this fish persistence condition.

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 G-12666 that can be appropriated as a result of this fish persistence condition 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. Columbia River Flow Restoration Credits for Utilization in Columbia River Calculations

- a. This Flow Restoration Credit (credit) is based, in part, on the amount of water restored to the Columbia River at or above the Point of Appropriation (POA) @ River Mile (RM) 151 through qualified and Department-approved instream transfers, instream leases and/or instream water exchanges. The credit is in cubic feet per second (cfs). When target flows are not met, the credit may be used to increase allowed appropriations to the extent discussed below, when appropriating the undeveloped portion of Permit G-12666 having PSI with the Columbia River.
- b. Since the overall reduction of amount of the undeveloped portion of the permit having PSI with the Columbia River may not exceed 20%, the maximum allowable credit is 0.22 cfs (20% of 1.13).
- c. The maximum allowable credit, 0.22 cfs, is based on flows restored to the Columbia River, being the total combined maximum rate (in cfs) of the instream transfers, instream leases and/or instream water exchanges that protect water in the Columbia River; and is also a function of the river mileage (RM) affected by the use of undeveloped portion of Permit G-12666 having PSI with the Columbia River. The affected river mileage is 151 miles, the distance from the POA near the City of Cascade Locks to the mouth of the Columbia River.

- d. The City has the option to protect flows beginning at or above the POA. If protection begins above the POA, the resource may be protected to maintain the equivalent proportion of total river miles of cfs credits as determined by river mile (RM) and Department approved instream transfers, instream leases and/or instream water exchanges. Protection that begins above the POA would require a proportionately smaller amount of flows restored to the Columbia River compared to flows restored at the POA. Flows restored below RM 151 (downstream of the POA) do not qualify for restoration credit.
- e. Utilization of the Flow Restoration Credit:

For the maximum allowable credit of 0.22 cfs, the amount and location of water added instream to the Columbia River must be such that $RM \times cfs = (151 \times 0.22) = 33.2$. For a credit of 0.22 cfs, the constant (33.2) divided by the RM equals the amount of flows that need to be restored to the Columbia River by the City to receive a credit of 0.22 cfs.

1. If water is added instream at McNary Dam (RM 292), then the amount of flows restored to the Columbia River by the City would only require 0.11 cfs in order to receive the 0.22 credit. ($33.2 / 292 = 0.11$)
2. If water is added instream at RM 200, then the amount of flows restored to the Columbia River by the City would only require 0.17 cfs in order to receive the 0.22 credit. ($33.2 / 200 = 0.17$)
3. If water is added at the POA near Cascade Locks (RM 151), then the amount of flows restored to the Columbia River by the City would require 0.22 cfs. ($33.2 / 151 = 0.22$)

For a credit less than the maximum allowable credit of 0.22, for example a credit of 0.15 cfs, the amount and location of water added instream to the Columbia River must be such that $RM \times cfs = (151 \times 0.15) = 22.7$. For a credit of 0.15 cfs, the constant (22.7) divided by the RM equals the amount of flows that need to be restored to the Columbia River by the City to receive the credit of 0.15 cfs.

1. If water is added instream at McNary Dam (RM 292), then the amount of flows restored to the Columbia River by the City would only require 0.08 cfs in order to receive the 0.15 credit. ($22.7 / 292 = 0.08$)
2. If water is added instream at RM 200, then the amount of flows restored to the Columbia River by the City would only require 0.11 cfs in order to receive the 0.15 credit. ($22.7 / 200 = 0.11$)

3. If water is added at the POA near Cascade Locks (RM 151), then the amount of flows restored to the Columbia River by the City would require 0.15 cfs in order to receive the 0.15 credit. ($22.7 / 151 = 0.15$)
- f. The Flow Restoration Credit may be applied to the calculated allowed appropriation of the undeveloped portion of Permit G-12666 having PSI with the Columbia River so long as:
 - (1) the maximum amount of the undeveloped portion of Permit G-12666 having PSI with the Columbia River that could be appropriated under the undeveloped portion of the permit as a result of this fish persistence condition *PLUS* the allowed credit does not exceed 1.13 cfs.
 - (2) the allowed appropriation of the undeveloped portion of the permit having PSI with the Columbia River is determined in accordance with 1.A., 1.B., and 1. C., above,
 - (3) the total credit as determined above is not exceeded, and
 - (4) the legal amount of water that can be diverted under the permit as granted through the Department's review and approval of the municipal water user's WMCP under OAR 690-086 is not exceeded.

g. Establishing the Flow Restoration Credit

The City of Cascade Locks has not identified any instream transfers, instream leases and/or instream water exchanges for restoring water to the Columbia River that meet the criteria in Section 1.D.a-f., above, for the purpose of a Flow Restoration Credit. Thus, at this time the City may not utilize a Flow Restoration Credit for the purpose of offsetting any required reduction to use of the undeveloped portion of Permit G-12666 having PSI with Columbia River due to fish persistence conditions.

In order to establish the Flow Restoration Credit, the City must receive the Water Resources Director's concurrence with any proposed Flow Restoration Credit based on instream transfers, instream leases and/or instream water exchanges for restoring water to the Columbia River that meet the criteria in Section 1.D.a-f.

E. Examples

(NOTE: although not shown in these examples, it is assumed the development limitations for each individual well are not exceeded.)

Example 1: Target flow met.

On July 15, the last seven mean daily flows in the Columbia River at McNary Dam⁴ were 310K, 290K, 280K, 260K, 260K, 240K and 250K cfs. The seven day rolling average (Q_A) is 270K cfs. The amount of the undeveloped portion of the permit having PSI with the Columbia River that can be appropriated would not be reduced because the 7 day average of mean daily flows is greater than the 200K cfs target flows (Q_T) for July 15.

Example 2: Target flows missed.

Step 1: If on July 15, the average of the last seven mean daily flows was 170K cfs, and the target flow is 200K, then the target flow would be missed by 15.0%.

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

Step 2: Assuming the Consumptive Use Percentage is 78.7%⁵ during the month of July and the utilization of this percentage is authorized, and the target flow is missed by 15.0% (from Step 1), then the amount of the undeveloped portion of the permit having PSI with the Columbia River that could be appropriated 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 having PSI with the Columbia River would only be reduced by the % by which the target flow is missed – 15.0% in this example).

Step 3: The overall reduction of 11.8% of the amount of the undeveloped portion of the permit having PSI with the Columbia River does not exceed 20%.

⁴ Daily flow data for McNary Dam is available at <http://www.fpc.org/currentdaily/flowspil.txt>.

⁵ 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 G-12666 that can be appropriated as a result of this fish persistence condition. The utilization of the Consumptive Use Percentage of 78.7%¹⁵ only for illustrative purposes in this example.

Step 4: Given that the undeveloped portion of this permit having PSI with the Columbia River (E_{PSI}) is 1.13 cfs, which needs to be reduced by 11.8% (from Step 2), or 0.13 cfs, then the maximum amount of the undeveloped portion of Permit G-12666 having PSI with the Columbia River that can be appropriated as a result of this fish persistence condition is 1.00 cfs.

$$(1.13 \times 11.8 \%) / 100 = 0.13$$

$$1.13 - 0.13 = 1.00$$

Step 5: Assuming the Flow Restoration Credit is 0.20 cfs⁶, and the utilization of this whole credit is authorized, then the maximum amount of the undeveloped portion of Permit G-12666 having PSI with the Columbia River that could be appropriated under the undeveloped portion of the permit as a result of this fish persistence condition is 1.13 cfs. (This maximum amount may be limited as illustrated in Step 6, below.)

$$0.20 + 1.00 = 1.20, \text{ not to exceed } 1.13 \text{ cfs}$$

Step 6: The calculated maximum amount of water that could be appropriated 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 2.5 cfs (for example, authorization provided through a WMCP), then 2.5 cfs would be the maximum amount of diversion allowed under this permit including the developed portion of the permit, being 1.59 cfs, plus the undeveloped portion of the permit not having PSI, being 0.78 cfs.

(Conversely, if the amount of water legally authorized for diversion under this permit is 3.5 cfs, then 3.5 cfs would be the maximum amount of diversion allowed under this permit. (1.13 from Step 5 + the 1.59 developed portion + the 0.78 cfs not having PSI = 3.5).

(Note: if the maximum curtailment was 20%, or 0.22 cfs (20% of 1.13), then 0.91 cfs would be the amount of the undeveloped portion of Permit G-12666 having PSI with the Columbia River that could be appropriated as a result of this fish persistence condition. If the Flow Restoration Credit was the allowable maximum of 0.22, and if the amount of water legally authorized for diversion under this permit is 3.5 cfs, then 3.5 cfs (0.91 cfs max. undeveloped portion with PSI + 0.22 credit + the 1.59 developed portion + the 0.78 cfs not having PSI) would be the maximum amount of diversion allowed under this permit.)

⁶ Currently, the City of Cascade Locks may not utilize a Flow Restoration Credit for the purpose of calculating the amount of the undeveloped portion of Permit G-12666 that can be appropriated as a result of this fish persistence condition. The utilization of the Flow Restoration Credit of 0.2 cfs is only for illustrative purposes in this example.

F. Relocation of the Point(s) of Appropriation (s) and New Quantification of PSI.

Any relocation of the point(s) of appropriation(s) through a permit amendment or transfer process will require a new OWRD ground water review pursuant to OAR Chapter 690 Division 9 to determine if use of water at the relocated point(s) of appropriation(s) has the potential for substantial interference (PSI) with surface water. This review will be used to quantify a new value for E_{PSI} , being the undeveloped portion of the permit as of October 1, 1999, having PSI with the surface water based on the new locations of the point(s) of appropriation(s). The new value for E_{PSI} will be then utilized in the calculations for determining the maximum amount of water that could be appropriated under this permit as a result of this fish persistence condition.

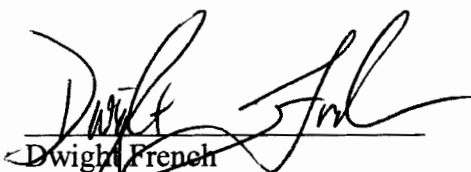
CONCLUSION OF LAW

The applicant has demonstrated good cause for the permit extension pursuant to ORS 537.630, 539.010(5) and OAR 690-315-0080(3).

ORDER

The extension of time for Application G-12526, Permit G-12666, therefore, is approved subject to conditions contained herein. The deadline for completing construction is extended from October 1, 1998 to October 1, 2029. The deadline for applying water to full beneficial use within the terms and conditions of the permit is extended from October 1, 1999 to October 1, 2029.

DATED: October 15, 2014



Dwight French
Water Right Services Division Administrator, for
Director
Oregon Water Resources Department

If you have any questions about statements contained in this document, please contact Ann Reece at (503) 986-0827.

If you have other questions about the Department or any of its programs, please contact our Water Resources Customer Service Group at (503) 986-0900.



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“Consumptive Use Percentages” Update Form

TO THE WATER RIGHTS ADMINISTRATOR OF THE OREGON WATER RESOURCES DEPARTMENT

Re: Fish Persistence Condition Applicable to:
G-12526 / Permit G-12666
Permit Holder: City of Cascade Locks

“Consumptive Use Percentages” Updates

- For each month listed below, provide the consumptive use percentage for the purpose of calculating the maximum total amount of the undeveloped portion of Permit G-12666 that can be diverted as a result of the fish persistence condition on the extension Final Order Dated October 15, 2014.

Month	Consumptive Use Percentage	Month	Consumptive Use Percentage
January	%	July	%
February	%	August	%
March	%	September	%
April	%	October	%
May	%	November	%
June	%	December	%

- Provide a description and justification of the methods utilized to determine the percentages. Please attach additional pages as necessary.
- The use of these “Consumptive Use Percentages” for the purposes stated above may continue for a 10 year approval period unless further utilization of Consumptive Use Percentages is contingent upon the City submitting Consumptive Use Percentages Updates due to changes in wastewater technology and/or the wastewater treatment plant or due to relocation of the point(s) of diversion(s) and/or return flows.

Signature _____ Date _____

For OWRD use only

WRD Concurs with these “Consumptive Use Percentages” Updates Yes No

Approved by: _____
 for the Water Resources Director

Date: _____