

Oregon Water Resources Department
Water Right Services Division

Water Rights Application
Number S-43666

Final Order
Extension of Time for Permit Number S-47044
Permit Holder: City of Sheridan

Permit Information

Application File S-43666 / Permit S-47044

Basin 2 – Willamette Basin / Watermaster District 16

Date of Priority: May 29, 1967

Authorized Use of Water

Source of Water:	East Fork Baltimore Creek, a tributary of East Creek (a.k.a. East Fork Willamina Creek)
Purpose or Use:	Municipal Use
Maximum Rate:	1.20 Cubic Feet per Second (cfs)

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 S-47044 was issued by the Department on November 3, 1982. The permit called for completion of construction by October 1, 1984, and complete application of water to beneficial use by October 1, 1985. On June 23, 2004, City of Sheridan submitted an application to the Department for an extension of time for Permit S-47044. In accordance with OAR 690-315-0050(2), on May 31, 2011, the Department issued a Proposed Final Order proposing to extend the time to complete construction to October 1, 2035, and the time to fully apply water to beneficial use to October 1, 2035. The protest period closed July 15, 2011, in accordance with OAR 690-315-0060(1). No protest was filed.

The Department adopts and incorporates by reference the Proposed Final Order dated May 31, 2011. 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 0.11 cfs under Permit S-47044 shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan (WMCP) under OAR Chapter 690, Division 86. The required WMCP shall be submitted to the Department within 3 years of an approved extension of time application. Use of water under Permit S-47044 must be consistent with this and subsequent WMCP's approved under OAR Chapter 690, Division 86 that is on file with the Department.

The deadline established in this PFO 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 order may also meet the WMCP submittal requirements of other Department orders.

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

A. **Minimum Fish Flows Needs**

Minimum fish flow needs in East Creek and Willamina Creek as recommended by ODFW are in Table 1, below; flows are to be measured at the mouth of East Creek and at the mouth of Willamina Creek.

Table 1

ODFW'S RECOMMENDED MINIMUM FISH FLOW NEEDS		
AT THE MOUTH OF EAST CREEK AND		
AT THE MOUTH OF WILLAMINA CREEK		
Month	East Creek	Willamina Creek
	Cubic Feet per Second	Cubic Feet per Second
October	20	40
November - May	30	70
June	25	50
July	15	20
August - September	8	20

B. Determining Water Use Reductions – Generally

Since flows need to meet persistence levels at two locations, being East Creek and Willamina Creek, the calculations to determine the maximum amount of undeveloped water 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 water that can be diverted as a result of this fish persistence condition.

Thus, the maximum amount of the undeveloped portion of Permit S-47044 that can be diverted as a result of this fish persistence condition is determined by a comparison of the missed target flows in East Creek with those on Willamina Creek. The missed target flows are determined in proportion to the amount by which the flows shown in Table 1 are missed based on a seven day rolling average of mean daily flows measured at the mouth of each creek. The percent of missed target flows is defined as:

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

where Q_A is the actual flow measured at the mouth the creek being evaluated based on the seven day rolling average, E is the undeveloped portion of the permit as of this extension, and Q_T is the target flow of the creek being evaluated (from Table 1).

The percent missed target flows applied to the undeveloped portion of the permit provides the maximum amount of undeveloped water that can be diverted as a result of this fish persistence condition, and is defined as:

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

where E is the undeveloped portion of the permit as of this extension, being 1.09 cfs.

When $Q_A - E \geq Q_T$, 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 at the mouth of the creek being evaluated.

C. Examples

Example 1: Target flows met in both East Creek and Willamina Creek.

On July 15, the last seven mean daily flows in East Creek were 23, 21, 19, 18, 16, 14 and 13 cfs. The seven day rolling average (Q_A) is 17.7 cfs. Given that the undeveloped portion of this permit as of this extension (E) is 1.09 cfs, then the 7 day average of mean daily flows in East Creek minus the undeveloped portion is greater than the 15.0 cfs target flow (Q_T) for July 15. In this example, in East Creek, $Q_A - E \geq Q_T$.

$$17.7 - 1.09 \geq 15.0$$

AND, on July 15, the last seven mean daily flows on Willamina Creek were 29, 27, 25, 24, 22, 20 and 19 cfs. The seven day rolling average (Q_A) is 23.7 cfs. The 7 day average of mean daily flows on Willamina Creek minus the undeveloped portion is greater than the 20.0 cfs target flow (Q_T) for July 15. In this example, on Willamina Creek, $Q_A - E \geq Q_T$.

$$23.7 - 1.09 \geq 20.0$$

The amount of the undeveloped portion of the permit that can be diverted would not be reduced because target flows are considered met both at the mouth of East Creek and at the mouth of Willamina Creek.

Example 2: Target flows missed in both East Creek and Willamina Creek.

Make Calculations Based in East Creek Flows

Step 1: Given that the undeveloped portion of this permit (E) is 1.09 cfs, if on July 15, the average of the last seven mean daily flows (Q_A) was 6.0 cfs, and the target flow (Q_T) is 15.0, then the target flow would be missed by 67.0%.

$$(1 - [(6.0 - 1.09) / 15]) \times 100\% = 67\%$$

Step 2: The undeveloped portion of this permit as of this extension (E) is 1.09 cfs. Therefore, in this example, the maximum amount of the undeveloped portion of Permit S-47044 that could be diverted based on East Creek streamflows would be 0.36 cfs.

$$1.09 - ((1.09 \times 67\%) / 100) = 0.36$$

Make Calculations Based on Willamina Creek Flows

Step 3: Given that the undeveloped portion of this permit is (E) 1.09 cfs, if on July 15, the average of the last seven mean daily flows (Q_A) was 13.0 cfs, and the target flow (Q_T) is 20.0, then the target flow would be missed by 40.0%.

$$(1 - [(13.0 - 1.09) / 20]) \times 100\% = 40.0\%$$

Step 4: The undeveloped portion of this permit as of this extension is (E) is 1.09 cfs. Therefore, in this example, the maximum amount of the undeveloped portion of Permit S-47044 that could be diverted based on Willamina Creek streamflows would be 0.65 cfs.

$$1.09 - ((1.09 \times 40\%) / 100) = 0.65$$

Compare Calculations from East Creek and Willamina Creek

Step 5: Compare calculations based on East Creek flows (0.36 cfs) with those based on Willamina Creek flows (0.65 cfs), and choose the smaller number.

$$0.36 < 0.65$$

The maximum undeveloped portion that can be diverted as a result of this fish persistence condition is 0.36 cfs.

Determine the Amount of Reduction to Diversion of Undeveloped Water

Step 6: Given that permitted quantity under this right is 1.20 cfs, and the undeveloped portion is 1.09 cfs, if the amount of water legally authorized for a diversion at a given point in time (for example, authorization provided through a WMCP) is 0.40 cfs, then only 0.29 cfs of undeveloped water would be used to satisfy the 0.40 cfs.

$$0.40 - (1.20 - 1.09) = 0.29$$

[Note: $(1.20 - 1.09)$ equals the developed portion of the permit]

In this example, the 0.29 cfs of undeveloped water is less than the 0.36 cfs maximum undeveloped portion (from Step 5) that can be diverted as a result of this fish persistence condition. Therefore, there would be no required reduction in water use of the undeveloped portion under the permit.

Step 7: If the amount of water legally authorized for a diversion at a given point in time is 1.00 cfs, then 0.89 cfs of undeveloped water would be used to satisfy the 1.00 cfs.

$$1.00 - (1.20 - 1.09) = 0.89$$

In this example, the 0.89 cfs of undeveloped water is greater than the 0.36 cfs maximum undeveloped portion (from Step 5) that can be diverted as a result of this fish persistence condition. Therefore, the amount of undeveloped water diverted by the permit holder would need to be reduced by 0.53 cfs.

$$0.89 - 0.36 = 0.53$$

In this example, the maximum amount of water that could be appropriated is 0.47 cfs.

$$1.0 - 0.53 = 0.47$$

Example 3: Target flows met in Willamina Creek, but missed in East Creek.

Given that the undeveloped portion of this permit (E) is 1.09 cfs, if on July 15 the seven day rolling average (Q_A) in East Creek is 15.3 cfs, then the 7 day average of mean daily flows at the mouth minus the undeveloped portion is less than the 15.0 cfs target flow (Q_T) for July 15. In this example, in East Creek, $Q_A - E < Q_T$.

$$15.3 - 1.09 < 15.0$$

AND, if on July 15, the seven day rolling average (Q_A) on Willamina Creek is 23.7 cfs, then the 7 day average of mean daily flows at the mouth minus the undeveloped portion is greater than the 20.0 cfs target flow (Q_T) for July 15. In this example, on Willamina Creek, $Q_A - E \geq Q_T$.

$$23.7 - 1.09 \geq 20.0$$

In this example, although the target flow is considered met on Willamina Creek, the target flow was missed in East Creek. Therefore, the maximum amount of undeveloped water that can be diverted as a result of this fish persistence condition would be calculated based on actual and target flows in East Creek only.

The applicant has demonstrated good cause for the permit extension pursuant to ORS 537.230, 539.010(5) and OAR 690-315-0080(3).

Order

The extension of time for Application S-43666, Permit S-47044, therefore, is approved subject to conditions contained herein. The deadline for completing construction is extended from October 1, 1984 to October 1, 2035. The deadline for applying water to full beneficial use under the terms and conditions of the permit is extended from October 1, 1985 to October 1, 2035.

DATED: August 4, 2011


Dwight French, Water Right Services Division Administrator for
PHILIP C. WARD, DIRECTOR

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
