CITY OF WHEELER

PO BOX 177 • WHEELER, OR 97147 • (503) 368-5756
info@ci.wheeler.or.us

Received
SEP 03 2024
OWRD

August 28, 2024

Via email and regular mail

Jeffrey D. Pierceall
725 Summer Street NE, Suite A
Salem, OR 97301
Jeffrey.D.Pierceall@water.oregon.gov

Re: City of Wheeler Permit Extension
OWRD Permit G 12196

Mr. Pierceall,

The City of Wheeler holds municipal water right Permit G-12196 for 3.6 cfs for which there is a pending extension application G-13479 under OAR 690 Division 315. We request this matter be placed on administrative hold under OAR 690-315-0080(2)(f) so that the Applicant can further review data, supplement the record and meet with representatives of OWRD and ODFW to discuss appropriate conditions for the extension.

The City of Wheeler is the permit holder and extension applicant. As OWRD knows, use of that water is shared with the City of Manzanita pursuant to an Intergovernmental Agreement dated October 4, 2000. Shared use of this water is crucial to both cities. We request that any further discussions, correspondence and notices include the City of Manzanita. The contact information for representatives from each City was previously provided to OWRD.

We appreciate OWRD's willingness to grant this administrative hold to allow discussion of extension conditions for these vital issues to each city.

Thank you,

Wesley Wootten
City Manager
City of Wheeler

Leila Aman
City Manager
City of Manzanita

cc: Dwight French
Dwight.W.French@water.oregon.gov

Oregon
Tina Kotek, Governor

Water Resources Department
North Mall Office Building
725 Summer Street NE, Suite A
Salem, OR 97301
Phone: 503-986-0900
Fax: 503-986-0904
www.Oregon.gov/OWRD

August 30, 2024

City of Wheeler
ATTN:Wes Wootten
PO Box 177
Wheeler, OR 97147

RE: Administrative Hold on Municipal Permit Extension, Permit G-12196

Mr Wootten,

The Department received your request for an Administrative Hold on processing the Application for Extension of Time for Permit G-12196 as provided by OAR 690-315-0080(2)(f).

The Department will take no action on issuance of a Proposed Final Order for a period of 180-days from the date of the request, being February 24, 2025, unless you request we continue with issuance of the Proposed Final Order sooner. If you need to request additional time, you will need to provide an update on your discussions with Oregon Department of Fish and Wildlife and Oregon Water Resources Department, which will be evaluated to determine if additional time is warranted.

If you have any questions, or need additional assistance, please do not hesitate to reach out.

Sincerely,

Jeffrey Pierceall
Extension Specialist
503-979-3213

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CITY OF WHEELER

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August 28, 2024

Via email and regular mail

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Salem, OR 97301
Jeffrey.D.Pierceall@water.oregon.gov

Re: City of Wheeler Permit Extension
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Wesley Wootten
City Manager
City of Wheeler

Leila Aman
City Manager
City of Manzanita

cc: Dwight French
Dwight.W.French@water.oregon.gov

Mailing List for Extension Withdraw Copies

Date: August 27, 2024

Copies Mailed

DATE: TM
BY: 8.28.2024

Application G-13479
Permit G-12196

Original mailed to Applicant:

City of Wheeler
Attn: Wes Wooten
PO Box 177
Wheelrer, OR 97147

Copies sent to:

1. City of Manzanita
   c/o Leila Aman, City Manager
   PO Box 129
   Manzanita, OR 97130
2. Dan Weitzel – Manzanita Public Works Director dweitzel@ci.manzanita.or.us
3. Wes Wooten – Wheeler City Manager – citymanager@ci.manzanita.or.us
4. Phil Chick – Wheeler Public Works Director – publicworks@ci.wheeler.or.us
5. Miller Nash, LLP
   c/o James Walker / Souvanny Miller
   1140 SW Washington St Ste 700
   Portland, OR 97205
6. Cable Huston
   c/o Clark Balfour
   1455 SW Broadway
   Suite 1500
   Portland, Oregon 97201WRD - App. File G- 13479/ Permit G-12196

File copy

Receiving electronic copy via e-mail (10 AM Tuesday of signature date)

7. WRD - Watermaster District 1 – Nikki Hendricks
8. WRD –Kerri Cope/Tamera Smith, Water Supply and Conservation Team (WMCP)
   *Done by*_____ *Date*_____

CASEWORKER: JDP

Oregon Water Resources Department

Water Right Services Division

ORDER WITHDRAWING APPLICATION FOR EXTENSION OF TIME FOR PERMIT G-12196, WATER RIGHT APPLICATION G-13479, IN THE NAME OF CITY OF WHEELER

Permit Information

Application:	G-13479
Permit:	G-12196
Basin:	Basin 1 – North Coast Basin Watermaster District 1
Date of Priority:	July 29, 1993
Source of Water:	Wells #4, #6, #13, and # 10 within the Nehalem River Basin in the Nehalem River Basin
Purpose or Use:	Municipal
Maximum Rate:	3.60 Cubic Feet per Second

Background

1. On May 3, 2004, the City of Wheeler (City) submitted an "Application for Extension of Time" (Application) to the Department, requesting the time to complete construction be extended from October 1, 1997, to October 1, 2047, and the time to apply water to full beneficial use under the terms and conditions of Permit G-12196 be extended from October 1, 1999, to October 1, 2047.

2. In accordance with OAR 690-315-0050(2), on July 23, 2024, the Department issued a Proposed Final Order proposing to extend the time to complete construction from October 1, 1997, to October 1, 2047, and the time to apply water to full beneficial use under the terms and conditions of Permit G-12196 from October 1, 1999, to October 1, 2047.

3. On August 20, 2024, the City met with the Department to discuss circumstances that resulted in the City not having adequate time to request an administrative hold as provided by OAT 690-315-0080(2)(f). After the discussion, the Department determined that a withdraw of the Proposed Final Order issued.

Order

The Proposed Final Order on Extension of Time issued July 23, 2024, is withdrawn.

DATED: August 27, 2024

Dwight French, Administrator of
Water Rights and Adjudications for
Ivan Gall, Director

Mailing List for Extension PFO Copies

Copies Mailed

By: TM
(SUPPORT STAFF)

on: 7-23-2024
(DATE)

PFO Date: July 23, 2024

Application G-13479
Permit G-12196

Original mailed to Applicant:

City of Wheeler
Attn: Bill pavlich, Pace Engineers
PO Box 177
Wheelrer, OR 97147

Copies sent to:

1. WRD - App. File G- 13479/ Permit G-12196

2. Agent &/or CWRE representing the applicant

Fee paid as specified under ORS 536.050 to receive copy:

3. None

Receiving electronic copy via e-mail (10 AM Tuesday of signature date)

4. WRD - Watermaster District 1 – Nikki Hendricks

5. WRD –Kerri Cope/Tamera Smith, Water Supply and Conservation Team (WMCP)
*Done by*_____ *Date*_____

CASEWORKER: JDP

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 G-12196, Water Right Application G-13479, in the name of the City of Wheeler	)))	PROPOSED FINAL ORDER

Permit Information

Application File G-13479/ Permit G-12196
Basin 1 – North Coast Basin / Watermaster District 1
Date of Priority: July 29, 1993

Authorized Use of Water

Source of Water:	Wells #4, #6, #13, and # 10 within the Nehalem River Basin in the Nehalem River Basin
Purpose or Use:	Municipal
Maximum Rate:	3.60 Cubic Feet per Second (CFS)

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 G-12196, water right Application G-13479.

Summary of Proposed Final Order for Extension of Time

The Department proposes to:

- Grant an extension of time to complete construction from October 1, 1997, to October 1, 2047.
- Grant an extension of time to apply water to full beneficial use from October 1, 1999, to October 1, 2047.
- 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 Wheeler
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 537.630 and OAR Chapter 690 Division 315.

ORS 537.630(2) provides in pertinent part that the Oregon Water Resources Department (Department) may, for good cause shown, order and allow an extension of time, for the completion of the well or other means of developing and securing the ground water or for complete application of water to beneficial use. 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 690-315-0050(5) authorizes the Department to include in an extension order, but is not limited to, any condition or provision needed to: ensure future diligence; mitigate the effects of the subsequent development on competing demands on the resource; and periodically document the continued need for 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 Water Management and Conservation Plan under OAR Chapter 690, Division 86.

FINDINGS OF FACT

1. On November 6, 1995, Permit G-12196 was issued by the Department. The permit authorizes the use of up to 3.60 cfs of water from Wells #4, #6, #13, and # 10 within the Nehalem River Basin, for municipal use. It specified that construction of the water development project was to be completed by October 1, 1997, and that complete application of water was to be made on or before October 1, 1999.

2. The permit holder, the City of Wheeler (City), submitted an "Application for Extension of Time" (Application) to the Department on May 3, 2004, requesting the time to complete construction be extended from October 1, 1997, to October 1, 2047, and the time to apply water to full beneficial use under the terms and conditions of Permit G-12196 be extended from October 1, 1999, to October 1, 2047. This is the first extension of time request for Permit G-12196.

3. Notification of the City's Application for Extension of Time for Permit G-12196 was published in the Department's Public Notice dated May 10, 2004. No public comments were received regarding the extension application.

4. On June 22, 2005, the City submitted supplemental information and update revisions to their pending Application for Extension of Time.

5. Effective August 15, 2017, HB 2099 (Chapter 704, 2017 Oregon Laws), modifies the definition of the undeveloped portion of a municipal water right permit for the purpose of determining the amount of water that may be subject to fish persistence conditioning and diversion limitations to specify that the undeveloped portion of a municipal permit is the amount of water that has not been diverted as of the later of June 29, 2005, or the date specified in the permit or last approved extension.

Review Criteria for Municipal 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. This determination shall consider the applicable requirements of ORS 537.230[1], 537.630[2] and/or 539.010(5)[3]

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

6. On May 3, 2004, the Department received a completed Application for Extension of Time and the fee specified in ORS 536.050 from the permit holder.

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[1] ORS 537.230 applies to surface water permits only.

[2] ORS 537.630 applies to ground water permits only.

[3] ORS 539.010(5) applies to surface water and ground water permits.

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

7. Actual construction began prior to November 6, 1996, as specified in Permit G-12196.

8. According to the well log submitted to the Department on August 20, 1996, construction of TILL 50076 (Well #6) began June 21, 1996.

Duration of Extension *[OAR 690-315-0080(1)(c) and (1)(d)]*
Under OAR 690-315-0080(1)(c),(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.

9. The remaining work to be accomplished under Permit G-12196 consists of completing construction and applying water to full beneficial use.

10. As of June 29, 2005, the City had appropriated 1.17 cfs of the 3.60 cfs of water authorized under Permit G-12196 for municipal purposes. There is an undeveloped portion of 2.43 cfs of water under Permit G-12196 as per ORS 537.630(1).

11. In addition to the 3.60 cfs of water authorized under Permit G-12196, the City holds the following rights for municipal use:

    - Certificate 2440 for 3.0 cfs of water from West Branch Gervais (Jarvis) Creek tributary to Nehalem River;
    - Certificate 9250 for 0.28 cfs of water from Jarvis Creek tributary to Nehalem River; and
    - Permit S-39355 for 4.0 cfs of water from Vosburg Creek Tributary to Nehalem River;

    These water rights and permits total 10.88 cfs of water, being 7.28 cfs of surface water, 3.6 cfs of live ground water. The City of Wheeler has not yet made use of 1.9 cfs of water, under Permit G-12196.

12. The City of Wheeler and the City of Mazanita have an intergovernmental cooperative agreement for operation of the joint water system.

13. According to the City, their peak water demand within its service area boundaries was 1.08 cfs in 2000.

14. As of 2004, the population within the service boundary of the City of Wheeler was 410, and the City of Mazanita was 630. The City of Wheeler estimates the population will increase at growth rate of 0.9 percent per year, reaching an estimated population of 670 for City of Wheeler, and the City of Mazanita estimates the population will increase at a growth rate of 3.3 percent per year, reaching an estimated population of 5,407, by the year 2047.

15. Both the City of Wheeler and the City of Manzanita also consists of a significant transient population. Though no studies have been conducted to determine the extent of the transient population, both Cities estimate it is at least equivalent to the base

population. The City also serves water to Nehalem Bay State Park, and Zadduck Creek Water Coop.

16. According to the City, their peak day demand is projected to be approximately 5.58 cfs of water by the year 2047. This does not account for redundancies and emergency use.

17. Full development of Permit G-12196 is needed to address the present and future water needs, including system redundancy and emergency uses.

18. The Department has determined that the City's request for an extension of time until October 1, 2047, to complete construction and to apply water to full beneficial use under the terms and conditions of Permit G-12196 is both reasonable and necessary.

Good Cause *[OAR 690-315-0080(1)(e) and (3)(a-g)and (4)]*
The Department's determination of good cause shall consider the requirements set forth under OAR 690-315-0080(3) and OAR 690-315-0080(4).

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.

19. Prior to the issuance of Permit G-12196 on November 6, 1995, the City constructed Wells 7 and 8.

20. Work was accomplished (specified in the Application for Extension of Time) during the original development time frame under Permit G-12196.

The Department has determined that work has been accomplished since the beginning of the last authorized extension time period, which provides evidence of good cause and reasonable diligence in developing the permit.

21. As of May 3, 2004, they have invested approximately $7,787,672, which is approximately 59 percent of the total projected cost for complete development of this project. The City estimates an additional $5,350,000 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 G-12196, other costs included in this accounting are not partitioned out for G-12196 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 OAR 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.

22. As of June 29, 2005, 1.17 cfs of the 3.60 cfs allowed has been appropriated for beneficial municipal purposes under the terms of this permit.

23. The Department has considered the City's compliance with conditions and did not identify any concerns.

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

24. As of May 22, 2005, the City has invested approximately $7,787,672, which is 59 percent of the total projected cost for complete development of this project. The City estimates an additional $5,350,000 investment is needed for the completion of this project.

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

25. As described in Findings 11 through 17 above, the City has indicated, and the Department finds that the City must rely on full development of their Permit G-12196.

26. The City projects a population increase, on average, of 0.9 percent per year for the City of Wheeler, and 3.3 percent per year for the City of Manzanita, over a 43 year period, being the years 2004 to 2047.

27. 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 G-12196.

28. OAR 690-315-0090(3) requires the Department to place a condition on this extension of time to provide that appropriation of water beyond 1.17 cfs (not to exceed the maximum amount authorized under this permit, being 3.60 cfs) under Permit G-12196 shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan(s) (WMCP) under OAR Chapter 690, Division 86 which grants access to a greater appropriation of water under the permit consistent with OAR 690-086-0130(7). 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)]*

29. The City expects to obtain a fair and reasonable return on investment by continuing development of Permit G-12196.

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

30. 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)]*

31. Delay of development under Permit G-12196 was due, in part, to the size and scope of the municipal water system, which was designed to be phased in over a period of years, as well as attempts to form a Regional Water Supply Authority.

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.

32. On December 8, 2014, the Water Resources Department determined under OAR Chapter 690 Division 9, that use of water under this ground water Permit G-12196 has the potential for substantial interference (PSI) with surface water in accordance with OAR 690-315-0010(6)(f). The Department estimated that use of the undeveloped portion being 2.43 cfs, will result in impact of 2.19 cfs to Nehalem River and 0.24 cfs to Peterson Creek. This is based on a long-term capture rate of 100%

33. The pending municipal Application for Extension of Time for Permit G-12196 was initially delivered to ODFW on March 13, 2006, for ODFW's review under OAR-690-315-0080.

34. Notification that the pending municipal Application for Extension of Time for Permit G-12196 was delivered to ODFW for review was sent to the City on March 15, 2006.

35. Notification that the pending municipal Application for Extension of Time for Permit G-12196 was delivered to ODFW for review was published in the Department's Public Notice dated March 21, 2006. WaterWatch of Oregon and Columbia River Keepers requested copies of the advice received from ODFW.

36. On May 20, 2024, the Department received ODFW's Division 315 Fish Persistence Evaluation for Permit G-12196.

37. Summary and Excerpts of Advice from ODFW:

    As directed by ORS 537.230 (3)(d) and ORS 537.630 (3)(d), ODFW provides the following advice to WRD to maintain, in the portions of waterways affected by water use under the permit, the persistence of fish species listed as sensitive, threatened, or endangered under state or federal law. ODFW's advice is based on existing data. ODFW recommends the flows set forth in Tables 1 and 2 and advises WRD to develop conditions that allow the City to meet its water needs while maintaining the persistence of listed fish species.

    The long-term objective for a listed species is to have the population increase to a sustainable level over time and maintain itself through natural fluctuations. Current

scientific projections indicate that regional climate change impacts to freshwater systems in Oregon are likely to cause a long-term reduction in the frequency of favorable water years for many native species. Such changes include decreasing trends for snowpack volume, increased flows during the winter, decreased flows in

late summer and fall, and an increasing trend in water temperatures. Conditions outlined in this letter reflect ODFW's obligation to conserve habitat conditions that support naturally-occurring native species.

ODFW recognizes that municipalities can return a certain portion of flow to a waterbody through effluent discharge. If the municipality can demonstrate that the withdrawal point(s) and effluent discharge(s) are within reasonable proximity to each other - such that fish habitat between the two points is not impacted significantly - curtailment of the water right extension can be adjusted to be based on monthly consumptive use (diverted-effluent) rather than just the quantity diverted.

A 303(d) water quality impairment (fecal coliform) has been identified on the Nehalem River reach downstream of the point of diversion. Water withdrawals during low-flow periods may exacerbate already-identified water quality issues.

Use of the full undeveloped portion of the City's water right from the Nehalem River and Peterson Creek will further reduce the likelihood of meeting instream flow targets for fish persistence.

ODFW recommends **full curtailment** of the undeveloped portion of G-12196 from July 1-September 30 when target flow achievement (Ta) is missed (Ta<1) in Peterson Creek or the Nehalem River. For the remainder of the year (October 1-June 30), ODFW recommends **partial curtailment** of the undeveloped portion when target flow achievement (Ta) is missed (Ta<1) on Peterson Creek or the Nehalem River.

Table 1. Monthly target flows for Peterson Creek.

Month	ODFW Target Flows [cfs]
Jan	22.7
Feb	18.0
Mar	16.1
Apr	13.4
May	8.2
Jun	5.4
Jul	2.1
Aug	1.3
Sept	1.4
Oct	4.9
Nov	17.1
Dec	23.2

Table 2. Monthly target flows for the Nehalem River.

Month	ODFW Target Flows [cfs]
Jan	400
Feb	400
Mar	400
Apr	400
May	265
Jun	178
Jul	178
Aug	178
Sept 1-15	178
Sept 16-30	265
Oct	400
Nov	400
Dec	400

Curtailment amounts should be calculated daily and independently for each stream; curtailment may be required due to conditions on both streams, only one stream, or may not be required if both exceed Ta.

ODFW evaluates water right permit curtailment need based on the fraction of target flow achievement (*EQ 1*).

$$T_a = (Q_g - P)/Q_t \qquad \textit{(EQ 1)}$$

T_a = target flow achievement
Q_g = gaged daily flow
P = amount of water conditioned for fish persistence (0.24 cfs for Peterson Creek; 2.19 cfs for Nehalem River)
Q_t = target flow

When target flow achievement (T_a) is greater than 1, no curtailment is recommended. When target flow achievement is less than 1, curtailment of the undeveloped portion of the permit is recommended. For partial curtailment, the curtailed permit rate is determined by scaling the undeveloped portion of the permit by the fraction the flow target is not being met (*EQ 2*).

If $T_a \geq 1$, no curtailment necessary. Otherwise:

$$D_m = T_a * P \textit{ (EQ 2)}$$

D_m = maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition

In relation to Nehalem River flows

Mean daily flow data measured at USGS gaging station #14301000 (Nehalem River near Foss, OR) are suitable for determining target flow achievement in the Nehalem River. When Nehalem River flows are less than those associated with MF-36, the City's water right is subject to regulation by OWRD. This regulation would apply to the developed as well as the undeveloped portion because MF-36 is senior to Permit G-12196. When Nehalem River target flow achievement (T_a) <1, full curtailment (no additional withdrawal) or partial curtailment (conforming to Equation 2 described above) should occur.

For descriptive purposes only, expected levels of flow target achievement are provided in Table 3, which tabulates the analysis described above using daily data from USGS streamgage #14301000 for the period of record from 1989-2018, the undeveloped water right apportioned to the Nehalem River (2.19 cfs, or 90% of the full undeveloped amount), and monthly target flows for fish persistence. For the years analyzed, the fraction of target non-achievement by month (Table 3, column 2) ranged from 0.00 to 0.91. The most frequent incidences of target non-achievement (when T_a<1) occur in late summer.

Table 3. Persistence flow target non-achievement based on historical streamflow data for Nehalem River.

Month	Fraction of Days Target Not Met	Median of Target Flow Achievement (Ta) When Ta<1
JAN	0	n/a
FEB	0	n/a
MAR	0	n/a
APR	0	n/a
MAY	0	n/a
JUN	0.01	0.91
JUL	0.29	0.81
AUG	0.83	0.67
SEP 1-15	0.91	0.59
SEP 16-30	0.86	0.37
OCT	0.63	0.34
NOV	0.12	0.72
DEC	0.01	0.64

In relation to Peterson Creek flows

When Peterson Creek flows are less than those associated with IS-70958, the City's water right is subject to regulation by OWRD. This regulation would apply to the developed as well as the undeveloped portion, because IS-70958 is the senior right. When Peterson

Creek target flow achievement (T_a) <1, full curtailment (no additional withdrawal) or partial curtailment (conforming to Equation 2 described above) should occur.

Sample Curtailment Calculations

To exemplify ODFW's recommended curtailment procedure, Tables 4a and 4b demonstrate how full curtailment applies to the extension for the month of August. Tables 5a and 5b demonstrate how curtailment equations 1 and 2 (partial curtailment) apply to the extension for the month of October.

Table 4. Example full curtailment for August: a. Nehalem River (using 90% of the total undeveloped portion, or 2.19 cfs) and b. Peterson Creek (using 10% of the total undeveloped portion, or 0.24 cfs).
4a. Nehalem River

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
200	178	1.11	0	2.19
150	178	0.83	2.19	**0**
100	178	0.55	2.19	**0**
50	178	0.27	2.19	**0**

4b. Peterson Creek

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
2.0	1.3	1.35	0	0.24
1.0	1.3	0.58	0.24	**0**
0.8	1.3	0.39	0.24	**0**
0.5	1.3	0.20	0.24	**0**

Table 5. Example partial curtailment equations for October: a. Nehalem River (using 90% of the total undeveloped portion, or 2.19 cfs) and b. Peterson Creek (using 10% of the total undeveloped portion, or 0.24 cfs).

5a. Nehalem River

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
550	400	1.37	0	2.19
450	400	1.12	0	2.19
350	400	0.87	0.29	1.9
250	400	0.62	0.83	1.36

5b. Peterson Creek

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
6.0	4.9	1.18	0.00	0.24
4.5	4.9	0.87	0.03	0.21
3.0	4.9	0.56	0.10	0.14
1.5	4.9	0.26	0.18	0.06

Total daily curtailment should be based on the cumulative curtailment for Peterson Creek and the Nehalem River. For example, if flows on 10/1 are 350 cfs in the Nehalem River (Ta=0.87, resulting in 0.29 cfs curtailment), and 4.5 cfs in Peterson Creek (Ta=0.87, resulting in 0.03 cfs curtailment), total curtailment should be the cumulative 0.29 + 0.03 = 0.32 cfs. Alternatively, if flows on 10/1 are 350 cfs in the Nehalem River (Ta=0.87, resulting in curtailment of 0.29 cfs) and flows in Peterson Creek are 6.0 cfs (Ta>1, so no curtailment), then total curtailment should be the cumulative 0.29 + 0.0 = 0.29 cfs.

Streamflow Measurement Point

USGS gaging station #14301000 (Nehalem River near Foss, OR) is located approximately three river miles upstream from the City's wells and provides appropriate data for target flow achievement monitoring for the Nehalem River. It is the City's responsibility to install an additional streamflow gage or develop an approved daily monitoring approach for Peterson Creek. Peterson Creek near its mouth (though outside a backwater influence zone from the Nehalem River) is recommended as a suitable gage location to determine if target flows in Peterson Creek are being met.

38. Department's Findings Based on Review of ODFW's Advice:

There is an undeveloped portion of 2.43 cfs of water under Permit G-12196 as per ORS 537.630(1). For the purpose of conditioning this permit to maintain the persistence of fish, the Department finds that the amount of the undeveloped portion of water under Permit G-12196 is 2.43 cfs. Therefore, 2.43 cfs is the amount of water under Permit G-12196 that must be conditioned for the persistence of listed fish species.

Use of the undeveloped portion of the groundwater source under Permit G-12196 has the Potential for Substantial Interference (PSI) with both Peterson Creek and the Nehalem River. The Department estimated that the stream depletion rate after 360 days of pumping is 96% of the withdrawal rate. The undeveloped portion of the permit with PSI was determined by OWRD to be 0.24 cfs for Peterson Creek (10%) and 2.19 cfs for the Nehalem River (90%).

Authorization to incrementally expand use of water under this permit beyond 1.17 cfs up to the permitted quantity of 3.6 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 missed, the proposed conditions may result in a reduction in the amount of water conditioned for fish persistence under Permit G-12196 that can be diverted.

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

a. The flows needed to maintain the persistence of fish must be determined or measured on the Nehalem River and Peterson Creek, by the water user at USGS streamgage #14301000 on Nehalem River near Foss, OR; and measured at an approved location and using an approved method developed by the water user on Peterson Creek.

b. From October 1-June 30, ODFW recommends **partial curtailment** of the undeveloped portion of water right Permit G-12196 when target flows are missed (T_a<1) in Peterson Creek and/or the Nehalem River. Partial curtailment may apply to one or both streams, depending on the independently calculated T_a values.
c. From July 1-September 30, ODFW recommends **full curtailment** of the quantity of the undeveloped portion of water right apportioned to each individual stream, being 2.19 for the Nehalem River, and 0.24 for Peterson Creek, when a target flow is missed (T_a<1). Full curtailment may apply to one or both streams, depending on their independently calculated T_a values. Seasonal low flows and high temperatures during this time coincide with important life stages of STE species identified above, and additional water withdrawals will negatively affect fish persistence.

ODFW evaluates water right permit curtailment need based on the fraction of target flow achievement (herein referred to as "target flow achievement value") as determined independently for the Nehalem River and Peterson Creek). *(EQ 1)*.

$$T_a = (Q_g - P)/Q_t \qquad \textit{(EQ 1)}$$

T_a = target flow achievement value Q_g = gaged daily flow
P = amount of water conditioned for fish persistence (0.24 cfs for Peterson Creek; 2.19 cfs for Nehalem River)
Q_t = target flow

When target flow achievement values (TT_{aa}) for the Nehalem River and Peterson Creek are greater than 1, no curtailment is recommended.

If $T_a \geq 1$, no curtailment necessary.

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 537.630(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. Pursuant to ORS 540.510(3)(a) and (b), water under Permit G-12196 may be applied to beneficial use on land to which the right is not appurtenant.

5. The time requested to complete construction and apply water to full beneficial use is reasonable, as required by OAR 690-315-0080(1)(c).

6. Completion of construction and full application of water to beneficial use can be completed by October 1, 2047[4] pursuant to OAR 690-315-0080(1)(d).

7. 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 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 and to apply the water to full beneficial use pursuant to OAR 690-315-0080(1)(e).

8. As required by OAR 690-315-0090(3) and as described in Finding 28, above, and specified under Item 1 of the "Conditions" section of this PFO, the appropriation of water beyond 1.17 cfs (not to exceed the maximum amount authorized under this permit, being 3.60 cfs) under Permit G-12196 shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan(s) under OAR Chapter 690, Division 86 that authorizes access to a greater rate of appropriation of water under the permit consistent with OAR 690-086-0130(7).

9. In accordance with OAR 690-315-0080(1)(f), and as described in Findings 32 through 38, above, the persistence of listed fish species will not be maintained in the portions of the waterways affected by water use under this municipal use permit of the undeveloped portion with surface water impacts, in the absence of special conditions. Therefore, the appropriation of water beyond 1.17 cfs under Permit G-12196 will be subject to the conditions specified under Item 2 of the "Conditions" section of this PFO.

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[4] 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.

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 under Permit G-12196 from October 1, 1997, to October 1, 2047.

Extend the time to apply the water to beneficial use under Permit G-12196 from October 1, 1999, to October 1, 2047.

Subject to the following conditions:

CONDITIONS

1. **Municipal Use Extension Condition**

The use of any water beyond 1.17 cfs under Permit G-12196 is subject to this Municipal Use Extension Condition.

The water user shall develop a plan to monitor and report the impact of water use under Permit G-12196 on water levels within the aquifer that provides water to the permitted wells. The plan shall be submitted to the Department within one year of the date the Extension Order is issued and shall be subject to the approval of the Department. At a minimum, the plan shall include a program to periodically measure static water levels within the permitted wells or and adequate substitute such as water levels in nearby wells.

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

The first 1.17 cfs of water under Permit G-12196 or any subsequent water right(s) originating from Permit G-12196 is not and will not be conditioned for maintaining fish persistence.

The portion of Permit G-12196 subject to these fish persistence conditions is established as 2.43 cfs in accordance with ORS 537.630(3)(d). The use of 2.43 cfs as authorized under this permit must be hereafter conditioned with these fish persistence conditions. Therefore, all subsequent water right(s) originating from this portion of Permit G-12196 implemented will include these Conditions to Maintain the Persistence of Listed Fish. If more than one resulting water right is subject to these Conditions to Maintain the Persistence of Listed Fish, then legal use of the 2.43 cfs conditioned to maintain the persistence of listed fish species shall be determined among all the permit/water right holders of record; all the permit/water right holders of record subject to these Conditions to Maintain the Persistence of Listed Fish must ensure that these fish persistence conditions are met.

A. Minimum Fish Flow Needs

Fish persistence target flows in the Nehalem River and Peterson Creek and as recommended by ODFW are in Table 6, below; Nehalem River flows are to be measured at USGS streamgage #14301000 near Foss, OR and, Peterson Creek flows are to be measured at an approved location and using an approved method developed by the water user.

Table 6

Month	ODFW Target Flows at Gage 14301000 (cfs) on the Nehalem River	ODFW Target Flows on Peterson Creek in cfs
JAN	400	22.7
FEB	400	18.0
MAR	400	16.1
APR	400	13.4
MAY	265	8.2
JUN	178	5.4
JUL	178	2.1
AUG	178	1.3
SEPT 1-15	178	1.4
SEPT 16-30	265	1.4
OCT	400	4.9
NOV	400	17.1
DEC	400	23.2

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 permit or water right holder provides evidence in writing that ODFW has determined that flows may be measured at an alternate streamflow measurement point and the permit or water right holder 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 maximum amount of the 2.43 cfs conditioned for fish persistence that can be appropriated is determined independently for each stream (up to 2.19 cfs on the Nehalem River, and up to 0.24 cfs on Peterson Creek) in proportion to the amount by which the target flows shown in Table 6 are missed. The amount by which the target flows are missed will be based on measured Nehalem River daily flows at USGS streamgage #14301000, Nehalem River near Foss, OR; *and* on Peterson Creek at an approved location and using an approved method developed by the water user. The proportion by which target flows are missed is expressed as a decimal, and termed "flow achievement value."

The target flow achievement value for the Nehalem River (NR) is defined as:

$$T_{aNR} = (Q_{gNR} - P_{NR}) / Q_{tNR} \qquad \textit{(EQ 1a)}$$

Q_{gNR} = gaged daily flow on the Nehalem River
P_{NR} = amount of water conditioned for fish persistence for the Nehalem River, being 2.19 cfs
Q_{tNR} = target flow for the Nehalem River
T_{aNR} = target flow achievement value for the Nehalem River

The target flow achievement value for Peterson Creek (PC) is defined as:

$$T_{aPC} = (Q_{gPC} - P_{NPC}) / Q_{tPC} \qquad \textit{(EQ 1b)}$$

Q_{gPC} = gaged daily flow on the Peterson Creek
P_{PC} = amount of water conditioned for fish persistence for Peterson Creek, being 0.24 cfs
Q_{tPC} = target flow for Peterson Creek
T_{aPC} = target flow achievement value for Peterson Creek

During any time of the year, when the target flow achievement values are greater than 1 in both the Nehalem River ($T_{aNR} > 1$) and Peterson Creek ($T_{aPC} > 1$), no curtailment is recommended. The full undeveloped portion of 2.43 cfs may be utilized.

July 1-Sept 30

When the target flow achievement values are less than 1 in both the Nehalem River ($T_{aNR} < 1$) and Peterson Creek ($T_{aPC} < 1$), the undeveloped portion of 2.43 cfs shall be curtailed in full.

When the target flow achievement value is less than 1 in the Nehalem River ($T_{aNR} < 1$) but greater than 1 in Peterson Creek ($T_{aPC} > 1$), the 2.19 cfs for the Nehalem River shall be curtailed in full, but the 0.24 cfs for Peterson Creek may be fully utilized.

When the target flow achievement value is greater than 1 in the Nehalem River ($T_{aNR} > 1$) but less than 1 in Peterson Creek ($T_{aPC} < 1$) the 2.19 cfs for the Nehalem River may be fully utilized, but the 0.24 cfs for Peterson Creek shall be curtailed in full.

Oct 1 – June 30

When a target flow achievement value is less than 1 for a given stream, partial curtailment of the amount of water conditioned for fish persistence for that stream (up to 2.19 cfs on the Nehalem River, and up to 0.24 cfs on Peterson Creek) is recommended. The maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition is determined independently for each stream by scaling the amount of water conditioned for fish

persistence by the fraction each flow target is not being met ("flow achievement value") for that stream. *(EQ 2a & 2b)*.

Nehalem River: $D_{mNR} = T_{aNR} * P_{NR}$ *(EQ 2a)*

D_{mNR} = maximum amount of water conditioned for fish persistence that may be appropriated as a result of this fish persistence condition
T_{aNR} = target flow achievement value for the Nehalem River
P_{NR} = amount of water conditioned for fish persistence (2.19 cfs for the Nehalem River)

Peterson Creek: $D_{mPC} = T_{aPC} * P_{PC}$ *(EQ 2b)*

D_{mPC} = maximum amount of water conditioned for fish persistence that may be appropriated as a result of this fish persistence condition
T_{aPC} = target flow achievement value for Peterson Creek
P_{PC} = amount of water conditioned for fish persistence (0.24 cfs for Peterson Creek)

When the target flow achievement value is less than 1 in both the Nehalem River ($T_{aNR} < 1$) and Peterson Creek ($T_{aPC} < 1$), the undeveloped portions of 2.19 cfs and 0.24 cfs shall be curtailed by the fraction each flow target is not being met (i.e, flow achievement value) The maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition would be the sum of $D_{mNR} + D_{mPC}$.

When the target flow achievement value is less than 1 in the Nehalem River ($T_{aNR} < 1$) but greater than 1 in Peterson Creek ($T_{aPC} > 1$) the 2.19 cfs for the Nehalem River shall be proportionately curtailed, but the 0.24 cfs for Peterson Creek may be utilized in full. The maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition would be the sum of $D_{mNR} + 0.24$.

When the target flow achievement value is greater than 1 in the Nehalem River ($T_{aNR} > 1$) but less than 1 in Peterson Creek ($T_{aPC} < 1$) the 2.19 cfs for the Nehalem River may be utilized in full, but the 0.24 cfs for Peterson Creek shall be proportionately curtailed. The maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition would be the sum of $2.19 + D_{mPC}$.

C. Consumptive Use Percentages for Utilization in Peterson Creek and Nehalem River Calculations

a. Initial Consumptive Use Percentages

The City of Wheeler (CITY) has not identified any Consumptive Use Percentages based on the return of flows to the Nehalem 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-12196 that can be diverted 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-12196 that can be diverted 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-12196 that can be diverted 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 wastewater treatment facility resulting in 25% or more reductions in average monthly return flows to the Peterson Creek and Nehalem 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-12196 that can be diverted 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 Peterson Creek and Nehalem 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 CITY 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-12196 that can be diverted 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-12196 that can be diverted 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. Examples

In each example below, the undeveloped portion (2.43 cfs) is partitioned to estimate the use of groundwater impact on each stream, being 90% of the impact being on the Nehalem River (2.19 cfs), and 10% of the impact on Peterson Creek (0.24 cfs).

Example 1: Jan 1 – Dec 31 ($T_{aNR} > 1$ & $T_{aPC} > 1$)
Target flows are met in both the Nehalem River and Peterson Creek.

On August 15, the gaged daily flow of the Nehalem River (Q_{gNA}) is 190.0 cfs. Given that the amount of water for the Nehalem River conditioned for fish persistence (P_{NR}) is 2.19 cfs, then the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is greater than the 178.0 cfs target flow (Q_{tNR}) for August 15. In this example, $(Q_{gNR} - P_{NR})/Q_{tNR} \geq 1$.

$$(190.0 - 2.19)/178 \geq 1$$

On August 15, the measured daily flow of the Peterson Creek (Q_{gPC}) is 3.0 cfs. Given that the amount of water for Peterson Creek conditioned for fish persistence (P_{PC}) is 0.24 cfs, then the gaged daily flow (Q_{gPC}) minus 0.24 (P_{PC}) is greater than the 1.3 cfs target flow (Q_{tPC}) for August 15. In this example, $(Q_{gPC} - P_{PC})/Q_{tPC} \geq 1$.

$$(3.0 - 0.24)/1.3 \geq 1$$

The amount of water conditioned for fish persistence, being 2.43 cfs, may be utilized in full because the target flows are considered met in both the Nehalem River and Peterson Creek.

Example 2: July 1 – Sept 30 ($T_{aNR} < 1$ & $T_{aPC} < 1$)
Target flows are missed in both the Nehalem River and Peterson Creek

On July 15, the gaged daily flow of the Nehalem River (Q_{gNR}) is 160.0 cfs. Given that the amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, then the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is less than the 178.0 cfs target flow (Q_{tNR}) for July 15. The flow target is missed in the Nehalem River.

On July 15, the gaged daily flow of the Peterson Creek (Q_{gPC}) is 1.9 cfs. Given that the amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, the gaged daily flow (Q_{gPC}) minus 0.24 cfs (P_{PC}) is less than the 2.1 cfs target flow (Q_{tPC}) for July 1. The flow target is missed in Peterson Creek.

Step 1: Given that the amount of water conditioned for fish persistence is 2.43 cfs ($P_{NR} + P_{PC}$), if on July 15, the average of the gaged daily flow is 160.0 cfs on the Nehalem River (Q_{gNR}), and 1.9 cfs on Peterson Creek(Q_{gPC}), and the target flow is 178.0 cfs on the Nehalem River (Q_{tNR}) and 2.1 cfs for Peterson Creek (Q_{tPC}), then each target flow achievement value (T_{aNR} & T_{aPC}) is less than 1.

Nehalem River
$(160.0 - 2.19) / 178.0 = 0.89$

$0.89 < 1$

Peterson Creek
$(1.9 - 0.24) / 2.1 = 0.79$

$0.79 < 1$

None of the water conditioned for fish persistence (2.43 cfs) could be diverted because the target flows are considered missed in both the Nehalem River and Peterson Creek.

Example 3: July 1 – September 30 ($T_{aNR} < 1$ & $T_{aPC} > 1$)
Target flows are missed in the Nehalem River, but met in Peterson Creek

On July 10, the gaged daily flow of the Nehalem River (Q_{gNR}) is 170.0 cfs. Given that the amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is less than the 178.0 cfs target flow (Q_{tNR}) for July 10. The target flow is missed in the Nehalem River.

On July 10, the gaged daily flow of the Peterson Creek (Q_{gPC}) is 3.3 cfs. Given that the amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, then the gaged daily flow (Q_{gPC}) minus 0.24 cfs (P_{PC}) is greater than the 2.1 cfs target flow (Q_{tPC}) for July 10. The flow target is met in Peterson Creek.

Step 1: Given that the amount of water conditioned for fish persistence is 2.43 cfs ($P_{NR} + P_{PC}$), if on July 10, the average of the gaged daily flow is 170.0 cfs on the Nehalem River (Q_{gNR}), and 3.3 cfs on Peterson Creek (Q_{gPC}), and the target flow is 178.0 cfs for Nehalem River (Q_{tNR}) and 2.7 cfs for Peterson Creek (Q_{tPC}), then the target flow achievement value for the Nehalem River (T_{aNR}) is less than 1, but the target flow achievement value for the Peterson Creek (T_{aPC}) is greater than 1.

Nehalem River
$(170.0 - 2.19) / 178.0 = 0.94$

$0.94 < 1$

Peterson Creek
$(3.3 - 0.24) / 2.1 = 1.46$

$1.46 > 1$

Only the amount of water the water conditioned for fish persistence for Peterson Creek, being 0.24 cfs, could be diverted because the target flows are considered missed in the Nehalem River.

Example 4: Oct 1 – June 30 ($T_{aNR} < 1$ & $T_{aPC} < 1$)
Target flows are missed in both the Nehalem River and Peterson Creek

On June 1, the gaged daily flow of the Nehalem River (Q_{gNR}) is 160.0 cfs. Given that the amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is less than the 178.0 cfs target flow (Q_{tNR}) for June 1. The flow target is missed for the Nehalem River.

On June 1, the gaged daily flow of the Peterson Creek (Q_{gPC}) is 4.0 cfs. Given that the amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, the gaged daily flow (Q_{gPC}) minus 0.24 cfs (P_{PC}) is less than the 5.4 cfs target flow (Q_{tPC}) for June 1. The flow target is missed for Peterson Creek.

Step 1: Given that the amount of water conditioned for fish persistence is 2.43 cfs ($P_{NR} + P_{PC}$), if on June 1, the average of the gaged daily flow is 160.0 cfs on the Nehalem River (Q_{gNR}), and 4.0 cfs on Peterson Creek(Q_{gPC}), and the target flow is 178.0 cfs for Nehalem River (Q_{tNR}) and 5.7 cfs for Peterson Creek (Q_{tPC}), the target flow achievement values (T_{aNR} & T_{aPC}) are less than 1.

Nehalem River
$(160.0 - 2.19) / 178.0 = 0.89$

$0.89 < 1$

Peterson Creek
$(4.0 - 0.24) / 5.4 = 0.70$

$0.70 < 1$

Step 2: Given the target flow achievement value for Nehalem River (T_{aNR}) is less than 1 (from Step 1), and amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, the maximum amount of water conditioned for fish persistence for the Nehalem River that can be appropriated as a result of this fish persistence condition is 1.95 cfs. ($D_{mNR} = = T_{aNR} * P_{NR}$)

Nehalem River
$0.89 * 2.19$ cfs $= 1.95$ cfs

Step 3: Given the target flow achievement value for Peterson Creek (T_{aPC}) is less than 1 (from Step 1), and amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, the maximum amount

of water conditioned for fish persistence for Peterson Creek that can be appropriated as a result of this fish persistence condition is 0.17 cfs. ($D_{mPC} = = T_{aPC} * P_{PC}$)

Peterson Creek

0.70 * 0.24 cfs = 0.17 cfs

Step 4: The maximum amount of water out of the 2.43 cfs conditioned for fish persistence that may be diverted based on Nahalem River and Peterson Creek stream flows is 2.10 cfs. ($D_{mNC} + D_{mPC}$).

1.95 + 0.17 = 2.12 cfs

Example 5: October 1 – June 30 ($T_{aNR} > 1$ & $T_{aPC} < 1$)

Target flows are met in the Nehalem River, but missed in Peterson Creek

On November 1, the gaged daily flow of the Nehalem River (Q_{gNR}) is 420.0 cfs. Given that the amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, then the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is more than the 400.0 cfs target flow (Q_{tNR}) for November 1. The target flow is met for the Nehalem River.

On November 1, the gaged daily flow of the Peterson Creek (Q_{gPC}) is 16.0 cfs. Given that the amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, then the gaged daily flow (Q_{gPC}) minus 0.24 cfs (P_{PC}) is less than the 17.1 cfs target flow (Q_{tPC}) for November 1. The target flow is missed for Peterson Creek.

Step 1: Given that the amount of water conditioned for fish persistence is 2.43 cfs ($P_{NR} + P_{PC}$), if on November 1, the average of the gaged daily flow is 420 cfs on the Nehalem River (Q_{gNR}), and 16.0 cfs on Peterson Creek (Q_{gPC}), and the target flow is 400.0 cfs for Nehalem River (Q_{tNR}) and 17.1 cfs for Peterson Creek (Q_{tPC}), then the target flow achievement value for the Nehalem River (T_{aNR}) is greater than 1, but target flow achievement value Peterson Creek (T_{aPC}) is less than 1.

Nehalem River

(420 – 2.19) / 400 = 1.04

1.04 > 1

Peterson Creek

(16 – 0.24) / 17.1 = 0.92

0.92 < 1

Step 2: The full amount of water the water conditioned for fish persistence for the Nehalem River, being 2.19 cfs, could be diverted because the target flows are not considered missed in the Nehalem River.

Step 3: Given the target flow achievement value for Peterson Creek (T_{aPC}) is less than 1 (from Step 1), and amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, the maximum amount of water conditioned for fish persistence for Peterson Creek that can be appropriated as a result of this fish persistence condition is 0.19 cfs.
($D_{=PC} = = T_{aPC} * P_{PC}$)

Peterson Creek
0.24 *0.92 = 0.22

Step 4: The maximum amount of water out of the 2.43 cfs conditioned for fish persistence that may be diverted is 2.41 cfs.

2.19 + 0.22 = 2.41

DATED: July 23, 2024

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 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 6, 2024,** 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.

NOTICE TO ACTIVE DUTY SERVICEMEMBERS: Active duty Servicemembers have a right to stay these proceedings under the federal Servicemembers Civil Relief Act. For more information contact the Oregon State Bar at 800-452-8260, the Oregon Military Department at 503-584-3571 or the nearest United States Armed Forces Legal Assistance Office through http://legalassistance.law.af.mil. The Oregon Military Department does not have a toll free telephone number.

- If you have any questions about statements contained in this document, please contact Jeffrey Pierceall at 503-979-3213.
- 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 Will Davidson at 503-507-2749.
- 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

May 31, 2024

Columbia Riverkeepers
ATTN: Miles Johnson
111 Third St
Hood River, OR 97031

REFERENCE: Application G-13479; Permit G-12196

Dear Lisa,

You have requested notification of fishery resource protection conditions proposed for the above referenced permit(s) in accordance with OAR 690-315-0080(2)(f). Enclosed, please find a copy of the Oregon Department of Fish and Wildlife advice received on May 20, 2024, and the proposed fishery resource protection conditions which may be included in the Proposed Final Order under OAR 690-315-0050.

Sincerely,

Jeffrey Pierceall
Extension Specialist
Oregon Water Resources Department
Water Rights Division

May 31, 2024

WaterWatch of Oregon
ATTN: Lisa Brown
213 SW Ash St., Suite 208
Portland, OR 97204

REFERENCE: Application G-13479; Permit G-12196

Dear Lisa,

You have requested notification of fishery resource protection conditions proposed for the above referenced permit(s) in accordance with OAR 690-315-0080(2)(f). Enclosed, please find a copy of the Oregon Department of Fish and Wildlife advice received on May 20, 2024, and the proposed fishery resource protection conditions which may be included in the Proposed Final Order under OAR 690-315-0050.

Sincerely,

Jeffrey Pierceall
Extension Specialist
Oregon Water Resources Department
Water Rights Division

May 31, 2024

City of Wheeler
ATTN: Phil Chick or Pax Broder
P.O. Box 177
Wheeler, OR 97147

REFERENCE: Pending Application for Extension of Time for:
Water Right Application G-13479 (Permit G-12196)

Dear Municipal Water Right Holder:

The purpose of this letter is to provide you with notification as per OAR 690-315-0080(2)(f) of fishery resource protection conditions that may be proposed in the proposed final order under OAR 690-315-0050.

On May 20, 2024, the Department received ODFW's Fish Persistence advice for the above referenced permit; it is enclosed for your review.

This letter will also act to provide you notice of your opportunity to request the Department place the above referenced municipal permit extension application on administrative hold.

If you should have any questions concerning your extension request you may contact me at (503) 979-3213.

Sincerely,

Jeffrey D. Pierceall
Extension Specialist

Enclosures

cc: Application File G-13479
Nikki Hendricks, Watermaster District 1

Oregon
Tina Kotek, Governor

Department of Fish and Wildlife
Habitat Division
4034 Fairview Industrial Dr SE
Salem, OR 97302-1142
Voice: 503-947-6000
Fax: 503-947-6330
Internet: www.dfw.state.or.us

May 20, 2024

Doug Woodcock, Acting Director
Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301

Re: ODFW's recommendation on maintaining the persistence of listed fish species
City of Wheeler Application G-13479 (Permit G-12196)

Director Woodcock:

The City of Wheeler (City) has requested an extension of time to develop the municipal water right Permit G-12196; the undeveloped portion of this permit is 2.43 cfs from wells adjacent to Peterson Creek and the Nehalem River. ORS 537.230(3)(d) and 537.630(3)(d) direct the Oregon Water Resources Department (OWRD) to find that the undeveloped portion of the permit is conditioned to maintain, in the portions of waterways affected by water use under the permit, the persistence of fish species listed as sensitive, threatened, or endangered (STE) under state or federal law. OWRD is to base their findings on existing data and advice from the Oregon Department of Fish and Wildlife (ODFW). This letter is the advice provided to OWRD by ODFW.

<u>Summary</u>

- The City of Wheeler has a groundwater right (Permit G-12196) for 3.6 cfs with a priority date of July 29, 1993. The undeveloped portion of the permit is 2.43 cfs from wells adjacent to both Peterson Creek and the Nehalem River. The period of allowable use is year-round.
- OWRD has determined that use of the undeveloped portion has the Potential for Substantial Interference (PSI) with both Peterson Creek and the Nehalem River. OWRD estimated that the stream depletion rate after 360 days of pumping is 96% of the withdrawal rate. For this analysis, the long-term capture rate of 100% was used. The undeveloped portion of the permit with PSI was determined by OWRD to be 0.24 cfs for Peterson Creek (10%) and 2.19 cfs for the Nehalem River (90%).
- Potentially affected listed STE fish species include Coho Salmon, Chum Salmon, Pacific Lamprey, and Western Brook Lamprey. Other affected salmonids include Winter Steelhead, Coastal Cutthroat Trout, and Chinook Salmon, including an early summer run that is of special management concern.
- ODFW develops target flows for fish persistence based on available data including (but not limited to) instream water rights on the impacted reaches, flows recommended in Basin Investigation

Reports, instream flow studies, and modeled or measured streamflow data. Target flows for Peterson Creek and Nehalem River are presented in Tables 1 and 2, respectively.

- Conditions outlined in this letter are based on **target flow achievement (T_a)**, which is calculated using monthly target flows, measured daily flows, and the portion of the undeveloped amount that applies to each stream (see Equation 1).
- There are existing instream water rights for Peterson Creek and the Nehalem River adjacent to the City's wells, and both instream water rights are senior to the City's 1993 water right (G-12196). When flows are below instream water right target flows, ODFW understands that the entire City water right is subject to regulation by OWRD.
- USGS streamgage #14301000 (Nehalem River near Foss, OR), located approximately three river miles upstream from the City's wells, was used to assess fish persistence flows on the Nehalem River. The gage is operational and should provide satisfactory data for the City of Wheeler to evaluate ODFW target flow achievement on a daily basis. There is no gage on Peterson Creek.
- Fish persistence target flows were established for the assumed monitoring location, USGS gaging station #14301000. If the City elects to install an appropriate streamflow measurement device near the POD for compliance purposes in place of the USGS gage, ODFW will provide revised target flows to reflect the POD monitoring location. It is the City's responsibility to install an additional streamflow gage or develop an approved daily monitoring approach for Peterson Creek.
- ODFW recommends **partial curtailment** of the undeveloped portion of water right Permit G-12196 from October 1-June 30 when T_a is missed (T_a<1) in Peterson Creek or the Nehalem River. Partial curtailment may apply to one or both streams, depending on the independently calculated T_a values.
- ODFW recommends **full curtailment** of the undeveloped portion of water right Permit G-12196 from July 1-September 30 when T_a is missed (T_a<1) in Peterson Creek or the Nehalem River. Full curtailment may apply to one or both streams, depending on the independently calculated T_a values. Seasonal low flows and high temperatures during this time coincide with important life stages of STE species identified above, and additional water withdrawals will negatively affect fish persistence.

Analysis of Flows for Fish Persistence

Water Availability

According to OWRD's Water Availability Reporting System (WARS) for the Nehalem River at the mouth, water is available for consumptive use year-round except for October based on 80% exceedance flows. Water is unavailable year-round for Peterson Creek based on 80% exceedance flows.

Listed STE Fish Species with Designation

Coho Salmon (*Oncorhynchus kisutch)* – Federal Threatened, State Sensitive
Chum Salmon *(Oncorhynchus keta)* – State Sensitive-Critical
Pacific Lamprey (*Entosphenus tridentata*) – State Sensitive

Western Brook Lamprey (*Lampetra richardsoni*) – State Sensitive

Other Affected Native Salmonids (not listed)

Winter Steelhead (*Oncorhynchus mykiss*)
Coastal Cutthroat Trout (*Oncorhynchus clarkii clarkii)*
Chinook Salmon (*Oncorhynchus tshawytscha)*

Analysis of Risk to Fish Persistence

Coho Salmon – Based on ODFW's 2007 Conservation Plan,[1] Coastal Coho Salmon are viable but effective management protections are needed to ensure that the productive capacity improves. Identified limiting factors include habitat quality, water quality, and water quantity.

Chum Salmon – Based on ODFW's 2014 Conservation and Management Plan,[2] Chum Salmon are a viable population in the Nehalem River watershed. However, they are state listed (critically sensitive) throughout their range, and one of the highest priority conservation goals identified in the plan includes ensuring that chum salmon status improves to a greater level of viability. Current abundance is presumed to be severely reduced compared to historical abundance, and identified limiting factors include habitat quality, water quality, and water quantity.

Pacific Lamprey – Based on ODFW's 2020 assessment,[3] Pacific Lamprey are considered an at-risk species. The current status of the coastal Pacific Lamprey population stratum is prevalent; however, effective management protections are needed to address habitat limiting factors and ensure population persistence. Identified limiting factors include water quantity (reduced flows and flow management), water quality (high water temperature, sedimentation), physical habitat loss/degradation, and impeded passage.

Western Brook Lamprey – Based on ODFW's 2020 assessment,[3] Western Brook Lamprey are considered at risk. Identified limiting factors include water quantity (reduced flows and flow management), water quality (high water temperature, sedimentation), physical habitat loss/degradation, and impeded passage.

Flow Restoration Priorities

Based on the 1998 Oregon Plan Flow Restoration Priorities developed by ODFW and OWRD, summer flow (July-September) restoration need is ranked highest in Peterson Creek, and it is a state flow restoration priority. The lower Nehalem River is ranked as having moderate restoration need. ODFW is in the process of updating flow restoration priorities.

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[1] Oregon Department of Fish and Wildlife. *Oregon Coast Coho Conservation Plan for the State of Oregon.* (2007).
[2] Oregon Department of Fish and Wildlife. *Coastal Multi-Species Conservation and Management Plan*. 221 (2014).
[3] Clemens, B., Anlauf-Dunn, K., Weeber, M. & Stahl, T. Coastal, Columbia, and Snake Conservation Plan for Lampreys in Oregon. (2020).

Existing Fish Protection Agreement

No existing fish protection agreement noted.

Determination of Target Flows

To determine target flows, ODFW considered the following data sources:

- Existing instream water rights on the impacted reaches.
  - IS 70958 on Peterson Creek (priority date November 30, 1990)
  - MF 36 on the Nehalem River (priority date May 9, 1973)
- Basin Investigation Report (BIR) flow recommendations for both Peterson Creek and the Nehalem River.[4]
- Measured streamflow from Gage #14301000, located three miles upstream of the POD.
- Modeled natural flows using multiple datasets for the State of Oregon.[5]

The City's wells have PSI with both Peterson Creek and the Nehalem River. See Table 1 for Peterson Creek and Table 2 for the Nehalem River flow targets.

Table 1. Monthly target flows for Peterson Creek.

Month	ODFW Target Flows [cfs]
Jan	22.7
Feb	18.0
Mar	16.1
Apr	13.4
May	8.2
Jun	5.4
Jul	2.1
Aug	1.3
Sept	1.4
Oct	4.9
Nov	17.1
Dec	23.2

[4] Lauman, J., Smith, A., & Thompson, K. (1972). *Supplement to the fish and wildlife resources of the North Coast Basin, Oregon, and their water requirements* (Environmental Investigations). Oregon State Game Commission.
[5] Data acquired from USGS StreamStats, USGS/EPA NHD, Oregon WRD's Water Availability Reporting System, and University of Washington's Variable Infiltration Capacity model

Table 2. Monthly target flows for the Nehalem River.

Month	ODFW Target Flows [cfs]
Jan	400
Feb	400
Mar	400
Apr	400
May	265
Jun	178
Jul	178
Aug	178
Sept 1-15	178
Sept 16-30	265
Oct	400
Nov	400
Dec	400

ODFW's Advice to OWRD on Maintaining the Persistence of Listed Fish Species

General Considerations

As directed by ORS 537.230 (3)(d) and ORS 537.630 (3)(d), ODFW provides the following advice to WRD to maintain, in the portions of waterways affected by water use under the permit, the persistence of fish species listed as sensitive, threatened, or endangered under state or federal law. ODFW's advice is based on existing data. ODFW recommends the flows set forth in Tables 1 and 2 and advises WRD to develop conditions that allow the City to meet its water needs while maintaining the persistence of listed fish species.

- The long-term objective for a listed species is to have the population increase to a sustainable level over time and maintain itself through natural fluctuations. Current scientific projections indicate that regional climate change impacts to freshwater systems in Oregon are likely to cause a long-term reduction in the frequency of favorable water years for many native species. Such changes include decreasing trends for snowpack volume, increased flows during the winter, decreased flows in late summer and fall, and an increasing trend in water temperatures. Conditions outlined in this letter reflect ODFW's obligation to conserve habitat conditions that support naturally-occurring native species.

- ODFW recognizes that municipalities can return a certain portion of flow to a waterbody through effluent discharge. If the municipality can demonstrate that the withdrawal point(s) and effluent discharge(s) are within reasonable proximity to each other - such that fish habitat between the two points is not impacted significantly - curtailment of the water right extension can be adjusted to be based on monthly consumptive use (diverted-effluent) rather than just the quantity diverted.

- A 303(d) water quality impairment (fecal coliform) has been identified on the Nehalem River reach downstream of the point of diversion. Water withdrawals during low-flow periods may exacerbate already-identified water quality issues.

- Use of the full undeveloped portion of the City's water right from the Nehalem River and Peterson Creek will further reduce the likelihood of meeting instream flow targets for fish persistence.

Specific Advice

ODFW recommends **full curtailment** of the undeveloped portion of G-12196 from July 1-September 30 when T_a is missed (<1) on the Nehalem River or Peterson Creek. For the remainder of the year, ODFW recommends **partial curtailment** of the undeveloped portion following the formula described below (Equation 2) when T_a is missed (<1) on the Nehalem River or Peterson Creek. Curtailment amounts should be calculated daily and independently for each stream; curtailment may be required due to conditions on both streams, only one stream, or may not be required if both exceed T_a.

ODFW evaluates water right permit curtailment need based on the fraction of target flow achievement (*EQ 1*).

$$T_a = (Q_g - P)/Q_t \qquad \textit{(EQ 1)}$$

T_a = target flow achievement
Q_g = gaged daily flow
P = amount of water conditioned for fish persistence (0.24 cfs for Peterson Creek; 2.19 cfs for Nehalem River)
Q_t = target flow

When target flow achievement (T_a) is greater than 1, no curtailment is recommended. When target flow achievement is less than 1, curtailment of the undeveloped portion of the permit is recommended. For partial curtailment, the curtailed permit rate is determined by scaling the undeveloped portion of the permit by the fraction the flow target is not being met (*EQ 2*).

If $T_a \geq 1$, no curtailment necessary. Otherwise:

$$D_m = T_a * P \qquad \textit{(EQ 2)}$$

D_m= maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition

<u>In relation to Nehalem River flows</u>

Mean daily flow data measured at USGS gaging station #14301000 (Nehalem River near Foss, OR) are suitable for determining target flow achievement in the Nehalem River. When Nehalem River flows are less than those associated with MF-36, the City's water right is subject to regulation by OWRD. This regulation would apply to the developed as well as the undeveloped portion because MF-36 is senior to

Permit G-12196. When target flow achievement (T_a) <1, full curtailment (no additional withdrawal) or partial curtailment (conforming to Equation 2 described above) should occur.

For descriptive purposes only, expected levels of flow target achievement are provided in Table 3, which tabulates the analysis described above using daily data from USGS streamgage #14301000 for the period of record from 1989-2018, the undeveloped water right apportioned to the Nehalem River (2.19 cfs, or 90% of the full undeveloped amount), and monthly target flows for fish persistence. For the years analyzed, the fraction of target non-achievement by month (Table 3, column 2) ranged from 0.00 to 0.91. The most frequent incidences of target non-achievement (when T_a<1) occur in late summer.

Table 3. Persistence flow target non-achievement based on historical streamflow data for Nehalem River.

Month	Fraction of Days Target Not Met	Median of Target Flow Achievement (T_a) When T_a<1
JAN	0.00	na
FEB	0.00	na
MAR	0.00	na
APR	0.00	na
MAY	0.00	na
JUN	0.01	0.91
JUL	0.29	0.81
AUG	0.83	0.67
SEP 1-15	0.91	0.59
SEP 16-30	0.86	0.37
OCT	0.63	0.34
NOV	0.12	0.72
DEC	0.01	0.64

In relation to Peterson Creek flows

When Peterson Creek flows are less than those associated with IS-70958, the City's water right is subject to regulation by OWRD. This regulation would apply to the developed as well as the undeveloped portion, because IS-70958 is the senior right. When target flow achievement (T_a) <1, full curtailment (no additional withdrawal) or partial curtailment (conforming to Equation 2 described above) should occur.

Sample Curtailment Calculations

To exemplify ODFW's recommended curtailment procedure, Tables 4a and 4b demonstrate how full curtailment applies to the extension for the month of August. Tables 5a and 5b demonstrate how curtailment equations 1 and 2 (partial curtailment) apply to the extension for the month of October.

Table 4. Example full curtailment for August: a. Nehalem River (using 90% of the total undeveloped portion, or 2.19 cfs) and b. Peterson Creek (using 10% of the total undeveloped portion, or 0.24 cfs).

4a. Nehalem River

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
200	178	1.11	0.00	2.19
150	178	0.83	2.19	**0.00**
100	178	0.55	2.19	**0.00**
50	178	0.27	2.19	**0.00**

4b. Peterson Creek

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
2.0	1.3	1.35	0.00	0.24
1.0	1.3	0.58	0.24	**0.00**
0.8	1.3	0.43	0.24	**0.00**
0.5	1.3	0.20	0.24	**0.00**

Table 5. Example partial curtailment equations for October: a. Nehalem River (using 90% of the total undeveloped portion, or 2.19 cfs) and b. Peterson Creek (using 10% of the total undeveloped portion, or 0.24 cfs).

5a. Nehalem River

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
550	400	1.37	0.00	2.19
450	400	1.12	0.00	2.19
350	400	0.87	0.29	1.90
250	400	0.62	0.83	1.36

5b. Peterson Creek

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
6.0	4.9	1.18	0.00	0.24
4.5	4.9	0.87	0.03	0.21
3.0	4.9	0.56	0.10	0.14
1.5	4.9	0.26	0.18	0.06

Total daily curtailment should be based on the cumulative curtailment for Peterson Creek and the Nehalem River. For example, if flows on 10/1 are 350 cfs in the Nehalem River (T_a=0.87, resulting in 0.29 cfs curtailment), and 4.5 cfs in Peterson Creek (Ta=0.87, resulting in 0.03 cfs curtailment), total curtailment should be the cumulative 0.29 + 0.03 = 0.32 cfs. Alternatively, if flows on 10/1 are 350 cfs in the Nehalem River (Ta=0.87, resulting in curtailment of 0.29 cfs) and flows in Peterson Creek are 6.0 cfs (Ta>1, so no curtailment), then total curtailment should be the cumulative 0.29 + 0.0 = 0.29 cfs.

Streamflow Measurement Point

The City's wells are located approximately three miles downstream of the USGS gaging station #14301000 (Nehalem River near Foss, OR). This gage is a suitable measurement point to determine if target flows for fish persistence are met in the Nehalem River. Peterson Creek near its mouth (though outside a backwater influence zone from the Nehalem River) is recommended as a suitable gage location to determine if target flows in Peterson Creek are being met.

Conclusion

Use of the undeveloped portion of the City of Wheeler's permit should be conditioned with full or partial curtailment to maintain persistence of listed fish species when T_a<1 at either the Nehalem River or Peterson Creek. Measured streamflow data for the Nehalem River indicate that flows are most likely to be curtailed in August-October (Table 3); however, curtailment may occur at any time during the year and is based on daily flow measurements.

This concludes ODFW's advice to OWRD on the City of Wheeler's Municipal Extension Permit # G-12196. If you have questions about our advice or need further clarification, please contact me (971-375-7440).

Sincerely,

Spencer Sawaske
ODFW Acting Habitat Division Deputy Administrator
Enclosure: Proposed Fish Persistence Conditions for Extension of Time Proposed Final Order (PFO) for Application #G-13479/Permit #G-12196
Cc: Jeffrey Pierceall, WRD

Peterson Creek and Nehalem River – DRAFT Proposed Fish Persistence Conditions for Extension of Time Proposed Final Order (PFO) for Application G-13479 (Permit G-12196) City of Wheeler

Note: The developed portion (1.17 cfs) used in these conditions was diverted AFTER the C-date but prior to June 29, 2005

FINDINGS

1. Summary and Excerpts of Advice from ODFW:

As directed by ORS 537.230 (3)(d) and ORS 537.630 (3)(d), ODFW provides the following advice to WRD to maintain, in the portions of waterways affected by water use under the permit, the persistence of fish species listed as sensitive, threatened, or endangered under state or federal law. ODFW's advice is based on existing data. ODFW recommends the flows set forth in Tables 1 and 2 and advises WRD to develop conditions that allow the City to meet its water needs while maintaining the persistence of listed fish species.

The long-term objective for a listed species is to have the population increase to a sustainable level over time and maintain itself through natural fluctuations. Current scientific projections indicate that regional climate change impacts to freshwater systems in Oregon are likely to cause a long-term reduction in the frequency of favorable water years for many native species. Such changes include decreasing trends for snowpack volume, increased flows during the winter, decreased flows in late summer and fall, and an increasing trend in water temperatures. Conditions outlined in this letter reflect ODFW's obligation to conserve habitat conditions that support naturally-occurring native species.

ODFW recognizes that municipalities can return a certain portion of flow to a waterbody through effluent discharge. If the municipality can demonstrate that the withdrawal point(s) and effluent discharge(s) are within reasonable proximity to each other - such that fish habitat between the two points is not impacted significantly - curtailment of the water right extension can be adjusted to be based on monthly consumptive use (diverted-effluent) rather than just the quantity diverted.

A 303(d) water quality impairment (fecal coliform) has been identified on the Nehalem River reach downstream of the point of diversion. Water withdrawals during low-flow periods may exacerbate already-identified water quality issues.

Use of the full undeveloped portion of the City's water right from the Nehalem River and Peterson Creek will further reduce the likelihood of meeting instream flow targets for fish persistence.

ODFW recommends **full curtailment** of the undeveloped portion of G-12196 from July 1-September 30 when target flow achievement (T_a) is missed ($T_a<1$) in Peterson Creek or the Nehalem River. For the remainder of the year (October 1-June 30),

ODFW recommends **partial curtailment** of the undeveloped portion when target flow achievement (T_a) is missed (T_a<1) on Peterson Creek or the Nehalem River.

Table 1. Monthly target flows for Peterson Creek.

Month	ODFW Target Flows [cfs]
Jan	22.7
Feb	18.0
Mar	16.1
Apr	13.4
May	8.2
Jun	5.4
Jul	2.1
Aug	1.3
Sept	1.4
Oct	4.9
Nov	17.1
Dec	23.2

Table 2. Monthly target flows for the Nehalem River.

Month	ODFW Target Flows [cfs]
Jan	400
Feb	400
Mar	400
Apr	400
May	265
Jun	178
Jul	178
Aug	178
Sept 1-15	178
Sept 16-30	265
Oct	400
Nov	400
Dec	400

Curtailment amounts should be calculated daily and independently for each stream; curtailment may be required due to conditions on both streams, only one stream, or may not be required if both exceed T_a.

ODFW evaluates water right permit curtailment need based on the fraction of target flow achievement (*EQ 1*).

$$T_a = (Q_g - P)/Q_t \qquad \textit{(EQ 1)}$$

T_a = target flow achievement
Q_g = gaged daily flow
P = amount of water conditioned for fish persistence (0.24 cfs for Peterson Creek; 2.19 cfs for Nehalem River)
Q_t = target flow

When target flow achievement (T_a) is greater than 1, no curtailment is recommended. When target flow achievement is less than 1, curtailment of the undeveloped portion of the permit is recommended. For partial curtailment, the curtailed permit rate is determined by scaling the undeveloped portion of the permit by the fraction the flow target is not being met (*EQ 2*).

If $T_a \geq 1$, no curtailment necessary. Otherwise:

$$D_m = T_a * P \qquad \textit{(EQ 2)}$$

D_m= maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition

<u>In relation to Nehalem River flows</u>

Mean daily flow data measured at USGS gaging station #14301000 (Nehalem River near Foss, OR) are suitable for determining target flow achievement in the Nehalem River. When Nehalem River flows are less than those associated with MF-36, the City's water right is subject to regulation by OWRD. This regulation would apply to the developed as well as the undeveloped portion because MF-36 is senior to Permit G-12196. When Nehalem River target flow achievement (T_a) <1, full curtailment (no additional withdrawal) or partial curtailment (conforming to Equation 2 described above) should occur.

For descriptive purposes only, expected levels of flow target achievement are provided in Table 3, which tabulates the analysis described above using daily data from USGS streamgage #14301000 for the period of record from 1989-2018, the undeveloped water right apportioned to the Nehalem River (2.19 cfs, or 90% of the full undeveloped amount), and monthly target flows for fish persistence. For the years analyzed, the fraction of target non-achievement by month (Table 3, column 2) ranged from 0.00 to 0.91. The most frequent incidences of target non-achievement (when T_a<1) occur in late summer.

Table 3. Persistence flow target non-achievement based on historical streamflow data for Nehalem River.

Month	Fraction of Days Target Not Met	Median of Target Flow Achievement (T_a) When $T_a<1$
JAN	0	n/a
FEB	0	n/a
MAR	0	n/a
APR	0	n/a
MAY	0	n/a
JUN	0.01	0.91
JUL	0.29	0.81
AUG	0.83	0.67
SEP 1-15	0.91	0.59
SEP 16-30	0.86	0.37
OCT	0.63	0.34
NOV	0.12	0.72
DEC	0.01	0.64

In relation to Peterson Creek flows

When Peterson Creek flows are less than those associated with IS-70958, the City's water right is subject to regulation by OWRD. This regulation would apply to the developed as well as the undeveloped portion, because IS-70958 is the senior right. When Peterson Creek target flow achievement (T_a) <1, full curtailment (no additional withdrawal) or partial curtailment (conforming to Equation 2 described above) should occur.

Sample Curtailment Calculations

To exemplify ODFW's recommended curtailment procedure, Tables 4a and 4b demonstrate how full curtailment applies to the extension for the month of August. Tables 5a and 5b demonstrate how curtailment equations 1 and 2 (partial curtailment) apply to the extension for the month of October.

Table 4. Example full curtailment for August: a. Nehalem River (using 90% of the total undeveloped portion, or 2.19 cfs) and b. Peterson Creek (using 10% of the total undeveloped portion, or 0.24 cfs).

4a. Nehalem River

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
200	178	1.11	0	2.19
150	178	0.83	2.19	**0**
100	178	0.55	2.19	**0**
50	178	0.27	2.19	**0**

4b. Peterson Creek

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
2.0	1.3	1.35	0	0.24
1.0	1.3	0.58	0.24	**0**
0.8	1.3	0.39	0.24	**0**
0.5	1.3	0.20	0.24	**0**

Table 5. Example partial curtailment equations for October: a. Nehalem River (using 90% of the total undeveloped portion, or 2.19 cfs) and b. Peterson Creek (using 10% of the total undeveloped portion, or 0.24 cfs).

5a. Nehalem River

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
550	400	1.37	0	2.19
450	400	1.12	0	2.19
350	400	0.87	0.29	1.9
250	400	0.62	0.83	1.36

5b. Peterson Creek

Streamflow [cfs]	Target [cfs]	Target Flow Achievement (T_a)	Curtailment [cfs]	D_m (amount that can be appropriated) [cfs]
6.0	4.9	1.18	0.00	0.24
4.5	4.9	0.87	0.03	0.21
3.0	4.9	0.56	0.10	0.14
1.5	4.9	0.26	0.18	0.06

Total daily curtailment should be based on the cumulative curtailment for Peterson Creek and the Nehalem River. For example, if flows on 10/1 are 350 cfs in the Nehalem River (T_a=0.87, resulting in 0.29 cfs curtailment), and 4.5 cfs in Peterson Creek (Ta=0.87, resulting in 0.03 cfs curtailment), total curtailment should be the cumulative 0.29 + 0.03 = 0.32 cfs. Alternatively, if flows on 10/1 are 350 cfs in the Nehalem River (Ta=0.87, resulting in curtailment of 0.29 cfs) and flows in Peterson Creek are 6.0 cfs (Ta>1, so no curtailment), then total curtailment should be the cumulative 0.29 + 0.0 = 0.29 cfs.

Streamflow Measurement Point

USGS gaging station #14301000 (Nehalem River near Foss, OR) is located approximately three river miles upstream from the City's wells and provides appropriate data for target flow achievement monitoring for the Nehalem River. It is the City's responsibility to install an additional streamflow gage or develop an approved daily monitoring approach for Peterson Creek. Peterson Creek near its mouth (though outside a backwater influence zone from the Nehalem River) is recommended as a suitable gage location to determine if target flows in Peterson Creek are being met.

2. Department's Findings Based on Review of ODFW's Advice:

There is an undeveloped portion of 2.43 cfs of water under Permit G-12196 as per ORS 537.630(1). For the purpose of conditioning this permit to maintain the persistence of fish, the Department finds that the amount of the undeveloped portion of water under Permit G-12196 is 2.43 cfs. Therefore, 2.43 cfs is the amount of water under Permit G-12196 that must be conditioned for the persistence of listed fish species.

Use of the undeveloped portion of the groundwater source under Permit G-12196 has the Potential for Substantial Interference (PSI) with both Peterson Creek and the Nehalem River. The Department estimated that the stream depletion rate after 360 days of pumping is 96% of the withdrawal rate. The undeveloped portion of the permit with PSI was determined by OWRD to be 0.24 cfs for Peterson Creek (10%) and 2.19 cfs for the Nehalem River (90%).

Authorization to incrementally expand use of water under this permit beyond 1.17 cfs

up to the permitted quantity of 3.6 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 missed, the proposed conditions may result in a reduction in the amount of water conditioned for fish persistence under Permit G-12196 that can be diverted.

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

a. The flows needed to maintain the persistence of fish must be determined or measured on the Nehalem River and Peterson Creek, by the water user at USGS streamgage #14301000 on Nehalem River near Foss, OR; and measured at an approved location and using an approved method developed by the water user on Peterson Creek.

b. From October 1-June 30, ODFW recommends **partial curtailment** of the undeveloped portion of water right Permit G-12196 when target flows are missed (T_a<1) in Peterson Creek and/or the Nehalem River. Partial curtailment may apply to one or both streams, depending on the independently calculated T_a values.

c. From July 1-September 30, ODFW recommends **full curtailment** of the quantity of the undeveloped portion of water right apportioned to each individual stream, being 2.19 for the Nehalem River, and 0.24 for Peterson Creek, when a target flow is missed (T_a<1). Full curtailment may apply to one or both streams, depending on their independently calculated T_a values. Seasonal low flows and high temperatures during this time coincide with important life stages of STE species identified above, and additional water withdrawals will negatively affect fish persistence.

   ODFW evaluates water right permit curtailment need based on the fraction of target flow achievement (herein referred to as "target flow achievement value") as determined independently for the Nehalem River and Peterson Creek). *(EQ 1)*.

$$T_a = (Q_g - P)/Q_t \qquad \textit{(EQ 1)}$$

T_a = target flow achievement value
Q_g = gaged daily flow
P = amount of water conditioned for fish persistence (0.24 cfs for Peterson Creek; 2.19 cfs for Nehalem River)
Q_t = target flow

When target flow achievement values (T_a) for the Nehalem River and Peterson Creek are greater than 1, no curtailment is recommended.

If $T_a \geq 1$, no curtailment necessary.

From October 1-June 30, when target flow achievement value (T_a) for the Nehalem River and/or Peterson Creek is less than 1, curtailment of the undeveloped portion of the permit is recommended. For partial curtailment, the curtailed rate is determined by scaling the undeveloped portion of the permit, being 2.19 cfs for the Nehalem River and 0.24 cfs for Peterson Creek, by the fraction each flow target is not being met (i.e., the flow achievement value) (*EQ 2*).

$$D_m = T_a * P \qquad \textit{(EQ 2)}$$

D_m= maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition
T_a = target flow achievement value
P = amount of water conditioned for fish persistence (0.24 cfs for Peterson Creek; 2.19 cfs for Nehalem River)

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

The first 1.17 cfs of water under Permit G-12196 or any subsequent water right(s) originating from Permit G-12196 is not and will not be conditioned for maintaining fish persistence.

The portion of Permit G-12196 subject to these fish persistence conditions is established as 2.43 cfs in accordance with ORS 537.630(3)(d). The use of 2.43 cfs as authorized under this permit must be hereafter conditioned with these fish persistence conditions. Therefore, all subsequent water right(s) originating from this portion of Permit G-12196 implemented will include these Conditions to Maintain the Persistence of Listed Fish. If more than one resulting water right is subject to these Conditions to Maintain the Persistence of Listed Fish, then legal use of the 2.43 cfs conditioned to maintain the persistence of listed fish species shall be determined among all the permit/water right holders of record; all the permit/water right holders of record subject to these Conditions to Maintain the Persistence of Listed Fish must ensure that these fish persistence conditions are met.

A. Minimum Fish Flow Needs

Fish persistence target flows in the Nehalem River and Peterson Creek and as recommended by ODFW are in Table 6, below; Nehalem River flows are to be measured at USGS streamgage #14301000 near Foss, OR and, Peterson Creek flows are to be measured at an approved location and using an approved method developed by the water user.

Table 6

Month	ODFW Target Flows at Gage 14301000 (cfs) on the Nehalem River	ODFW Target Flows on Peterson Creek
JAN	400	22.7
FEB	400	18.0
MAR	400	16.1
APR	400	13.4
MAY	265	8.2
JUN	178	5.4
JUL	178	2.1
AUG	178	1.3
SEPT 1-15	178	1.4
SEPT 16-30	265	1.4
OCT	400	4.9
NOV	400	17.1
DEC	400	23.2

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 permit or water right holder provides evidence in writing that ODFW has determined that flows may be measured at an alternate streamflow measurement point and the permit or water right holder 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 maximum amount of the 2.43 cfs conditioned for fish persistence that can be appropriated is determined independently for each stream (up to 2.19 cfs on the Nehalem River, and up to 0.24 cfs on Peterson Creek) in proportion to the amount by which the target flows shown in Table 6 are missed. The amount by which the target flows are missed will be based on measured Nehalem River daily flows at USGS streamgage #14301000, Nehalem River near Foss, OR; *and* on Peterson Creek at an approved location and using an approved method developed by the water user. The proportion by which target flows are missed is expressed as a decimal, and termed "flow achievement value."

The target flow achievement value for the Nehalem River (NR) is defined as:

$$T_{aNR} = (Q_{gNR} - P_{NR}) / Q_{tNR} \qquad \textit{(EQ 1a)}$$

Q_{gNR} = gaged daily flow on the Nehalem River

P_{NR} = amount of water conditioned for fish persistence for the Nehalem River, being 2.19 cfs
Q_{tNR} = target flow for the Nehalem River
T_{aNR} = target flow achievement value for the Nehalem River

The target flow achievement value for Peterson Creek (PC) is defined as:

$$T_{aPC} = (Q_{gPC} - P_{NPC}) / Q_{tPC} \qquad \textit{(EQ 1b)}$$

Q_{gPC} = gaged daily flow on the Peterson Creek
P_{PC} = amount of water conditioned for fish persistence for Peterson Creek, being 0.24 cfs
Q_{tPC} = target flow for Peterson Creek
T_{aPC} = target flow achievement value for Peterson Creek

During any time of the year, when the target flow achievement values are greater than 1 in both the Nehalem River ($T_{aNR} > 1$) and Peterson Creek($T_{aPC} > 1$), no curtailment is recommended. The full undeveloped portion of 2.43 cfs may be utilized.

July 1-Sept 30

When the target flow achievement values are less than 1 in both the Nehalem River ($T_{aNR} < 1$) and Peterson Creek ($T_{aPC} < 1$), the undeveloped portion of 2.43 cfs shall be curtailed in full.

When the target flow achievement value is less than 1 in the Nehalem River ($T_{aNR} < 1$) but greater than 1 in Peterson Creek ($T_{aPC} > 1$), the 2.19 cfs for the Nehalem River shall be curtailed in full, but the 0.24 cfs for Peterson Creek may be fully utilized.

When the target flow achievement value is greater than 1 in the Nehalem River ($T_{aNR} > 1$) but less than 1 in Peterson Creek ($T_{aPC} < 1$) the 2.19 cfs for the Nehalem River may be fully utilized, but the 0.24 cfs for Peterson Creek shall be curtailed in full.

Oct 1 – June 30

When a target flow achievement value is less than 1 for a given stream, partial curtailment of the amount of water conditioned for fish persistence for that stream (up to 2.19 cfs on the Nehalem River, and up to 0.24 cfs on Peterson Creek) is recommended. The maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition is determined independently for each stream by scaling the amount of water conditioned for fish persistence by the fraction each flow target is not being met ("flow achievement value") for that stream. (*EQ 2a & 2b*).

Nehalem River: $D_{mNR} = T_{aNR} * P_{NR}$ *(EQ 2a)*

D_{mNR} = maximum amount of water conditioned for fish persistence that may be appropriated as a result of this fish persistence condition
T_{aNR} = target flow achievement value for the Nehalem River
P_{NR} = amount of water conditioned for fish persistence (2.19 cfs for the Nehalem River)

Peterson Creek: $D_{mPC} = T_{aPC} * P_{PC}$ *(EQ 2b)*

D_{mPC} = maximum amount of water conditioned for fish persistence that may be appropriated as a result of this fish persistence condition
T_{aPC} = target flow achievement value for Peterson Creek
P_{PC} = amount of water conditioned for fish persistence (0.24 cfs for Peterson Creek)

When the target flow achievement value is less than 1 in both the Nehalem River ($T_{aNR} < 1$) and Peterson Creek ($T_{aPC} < 1$), the undeveloped portions of 2.19 cfs and 0.24 cfs shall be curtailed by the fraction each flow target is not being met (i.e, flow achievement value) The maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition would be the sum of $D_{mNR} + D_{mPC}$.

When the target flow achievement value is less than 1 in the Nehalem River ($T_{aNR} < 1$) but greater than 1 in Peterson Creek ($T_{aPC} > 1$) the 2.19 cfs for the Nehalem River shall be proportionately curtailed, but the 0.24 cfs for Peterson Creek may be utilized in full. The maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition would be the sum of $D_{mNR} + 0.24$.

When the target flow achievement value is greater than 1 in the Nehalem River ($T_{aNR} > 1$) but less than 1 in Peterson Creek ($T_{aPC} < 1$) the 2.19 cfs for the Nehalem River may be utilized in full, but the 0.24 cfs for Peterson Creek shall be proportionately curtailed. The maximum amount of water conditioned for fish persistence that can be appropriated as a result of this fish persistence condition would be the sum of $2.19 + D_{mPC}$.

C. Consumptive Use Percentages for Utilization in Peterson Creek and Nehalem River Calculations

a. Initial Consumptive Use Percentages
The City of Wheeler (CITY) has not identified any Consumptive Use Percentages based on the return of flows to the Nehalem 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-12196 that can be diverted 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-12196 that can be diverted 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-12196 that can be diverted 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 wastewater treatment facility resulting in 25% or more reductions in average monthly return flows to the Peterson Creek and Nehalem 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-12196 that can be diverted 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 Peterson Creek and Nehalem 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 CITY 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-12196 that can be diverted 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-12196 that can be diverted 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. Examples

In each example below, the undeveloped portion (2.43 cfs) is partitioned to estimate the use of groundwater impact on each stream, being 90% of the impact being on the Nehalem River (2.19 cfs), and 10% of the impact on Peterson Creek (0.24 cfs).

Example 1: Jan 1 – Dec 31 ($T_{aNR} > 1$ & $T_{aPC} > 1$)

Target flows are met in both the Nehalem River and Peterson Creek.

On August 15, the gaged daily flow of the Nehalem River (Q_{gNA}) is 190.0 cfs. Given that the amount of water for the Nehalem River conditioned for fish persistence (P_{NR}) is 2.19 cfs, then the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is greater than the 178.0 cfs target flow (Q_{tNR}) for August 15. In this example, $(Q_{gNR} - P_{NR})/Q_{tNR} \geq 1$.

$$(190.0 - 2.19)/178 \geq 1$$

On August 15, the measured daily flow of the Peterson Creek (Q_{gPC}) is 3.0 cfs. Given that the amount of water for Peterson Creek conditioned for fish persistence (P_{PC}) is 0.24 cfs, then the gaged daily flow (Q_{gPC}) minus 0.24 (P_{PC}) is greater than the 1.3 cfs target flow (Q_{tPC}) for August 15. In this example, $(Q_{gPC} - P_{PC})/Q_{tPC} \geq 1$.

$$(3.0 - 0.24)/1.3 \geq 1$$

The amount of water conditioned for fish persistence, being 2.43 cfs, may be utilized in full because the target flows are considered met in both the Nehalem River and Peterson Creek.

Example 2: July 1 – Sept 30 ($T_{aNR} < 1$ & $T_{aPC} < 1$)

Target flows are missed in both the Nehalem River and Peterson Creek

On July 15, the gaged daily flow of the Nehalem River (Q_{gNR}) is 160.0 cfs. Given that the amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, then the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is less than the 178.0 cfs target flow (Q_{tNR}) for July 15. The flow target is missed in the Nehalem River.

On July 15, the gaged daily flow of the Peterson Creek (Q_{gPC}) is 1.9 cfs. Given that the amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, the gaged daily flow (Q_{gPC}) minus 0.24 cfs (P_{PC}) is less than the 2.1 cfs target flow (Q_{tPC}) for July 1. The flow target is missed in Peterson Creek.

Step 1: Given that the amount of water conditioned for fish persistence is 2.43 cfs ($P_{NR} + P_{PC}$), if on July 15, the average of the gaged daily flow is 160.0 cfs on the Nehalem River (Q_{gNR}), and 1.9 cfs on Peterson Creek

(Q_{gPC}), and the target flow is 178.0 cfs on the Nehalem River (Q_{tNR}) and 2.1 cfs for Peterson Creek (Q_{tPC}), then each target flow achievement value (T_{aNR} & T_{aPC}) is less than 1.

Nehalem River
$(160.0 - 2.19) / 178.0 = 0.89$

$0.89 < 1$

Peterson Creek
$(1.9 - 0.24) / 2.1 = 0.79$

$0.79 < 1$

None of the water conditioned for fish persistence (2.43 cfs) could be diverted because the target flows are considered missed in both the Nehalem River and Peterson Creek.

Example 3: July 1 – September 30 ($T_{aNR} < 1$ & $T_{aPC} > 1$)
Target flows are missed in the Nehalem River, but met in Peterson Creek

On July 10, the gaged daily flow of the Nehalem River (Q_{gNR}) is 170.0 cfs. Given that the amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is less than the 178.0 cfs target flow (Q_{tNR}) for July 10. The target flow is missed in the Nehalem River.

On July 10, the gaged daily flow of the Peterson Creek (Q_{gPC}) is 3.3 cfs. Given that the amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, then the gaged daily flow (Q_{gPC}) minus 0.24 cfs (P_{PC}) is greater than the 2.1 cfs target flow (Q_{tPC}) for July 10. The flow target is met in Peterson Creek.

Step 1: Given that the amount of water conditioned for fish persistence is 2.43 cfs ($P_{NR} + P_{PC}$), if on July 10, the average of the gaged daily flow is 170.0 cfs on the Nehalem River (Q_{gNR}), and 3.3 cfs on Peterson Creek (Q_{gPC}), and the target flow is 178.0 cfs for Nehalem River (Q_{tNR}) and 2.7 cfs for Peterson Creek (Q_{tPC}), then the target flow achievement value for the Nehalem River (T_{aNR}) is less than 1, but the target flow achievement value for the Peterson Creek (T_{aPC}) is greater than 1.

Nehalem River
$(170.0 - 2.19) / 178.0 = 0.94$

$0.94 < 1$

Peterson Creek

$(3.3 - 0.24) / 2.1 = 1.46$

$1.46 > 1$

Only the amount of water the water conditioned for fish persistence for Peterson Creek, being 0.24 cfs, could be diverted because the target flows are considered missed in the Nehalem River.

Example 4: Oct 1 – June 30 ($T_{aNR} < 1$ & $T_{aPC} < 1$)

Target flows are missed in both the Nehalem River and Peterson Creek

On June 1, the gaged daily flow of the Nehalem River (Q_{gNR}) is 160.0 cfs. Given that the amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is less than the 178.0 cfs target flow (Q_{tNR}) for June 1. The flow target is missed for the Nehalem River.

On June 1, the gaged daily flow of the Peterson Creek (Q_{gPC}) is 4.0 cfs. Given that the amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, the gaged daily flow (Q_{gPC}) minus 0.24 cfs (P_{PC}) is less than the 5.4 cfs target flow (Q_{tPC}) for June 1. The flow target is missed for Peterson Creek.

Step 1: Given that the amount of water conditioned for fish persistence is 2.43 cfs ($P_{NR} + P_{PC}$), if on June 1, the average of the gaged daily flow is 160.0 cfs on the Nehalem River (Q_{gNR}), and 4.0 cfs on Peterson Creek(Q_{gPC}), and the target flow is 178.0 cfs for Nehalem River (Q_{tNR}) and 5.7 cfs for Peterson Creek (Q_{tPC}), the target flow achievement values (T_{aNR} & T_{aPC}) are less than 1.

Nehalem River

$(160.0 - 2.19) / 178.0 = 0.89$

$0.89 < 1$

Peterson Creek

$(4.0 - 0.24) / 5.4 = 0.70$

$0.70 < 1$

Step 2: Given the target flow achievement value for Nehalem River (T_{aNR}) is less than 1 (from Step 1), and amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, the maximum amount of water conditioned for fish persistence for the Nehalem River that can be appropriated as a result of this fish persistence condition is 1.95 cfs. ($D_{mNR} = = T_{aNR} * P_{NR}$)

Nehalem River

0.89 * 2.19 cfs = 1.95 cfs

Step 3: Given the target flow achievement value for Peterson Creek (T_{aPC}) is less than 1 (from Step 1), and amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, the maximum amount of water conditioned for fish persistence for Peterson Creek that can be appropriated as a result of this fish persistence condition is 0.17 cfs. ($D_{mPC} = = T_{aPC} * P_{PC}$)

Peterson Creek

0.70 * 0.24 cfs = 0.17 cfs

Step 4: The maximum amount of water out of the 2.43 cfs conditioned for fish persistence that may be diverted based on Nahalem River and Peterson Creek stream flows is 2.10 cfs. ($D_{mNC} + D_{mPC}$).

1.95 + 0.17 = 2.12 cfs

Example 5: October 1 – June 30 ($T_{aNR} > 1$ & $T_{aPC} < 1$)

Target flows are met in the Nehalem River, but missed in Peterson Creek

On November 1, the gaged daily flow of the Nehalem River (Q_{gNR}) is 420.0 cfs. Given that the amount of water conditioned for fish persistence for the Nehalem River (P_{NR}) is 2.19 cfs, then the gaged daily flow (Q_{gNR}) minus 2.19 cfs (P_{NR}) is more than the 400.0 cfs target flow (Q_{tNR}) for November 1. The target flow is met for the Nehalem River.

On November 1, the gaged daily flow of the Peterson Creek (Q_{gPC}) is 16.0 cfs. Given that the amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, then the gaged daily flow (Q_{gPC}) minus 0.24 cfs (P_{PC}) is less than the 17.1 cfs target flow (Q_{tPC}) for November 1. The target flow is missed for Peterson Creek.

Step 1: Given that the amount of water conditioned for fish persistence is 2.43 cfs ($P_{NR} + P_{PC}$), if on November 1, the average of the gaged daily flow is 420 cfs on the Nehalem River (Q_{gNR}), and 16.0 cfs on Peterson Creek (Q_{gPC}), and the target flow is 400.0 cfs for Nehalem River (Q_{tNR}) and 17.1 cfs for Peterson Creek (Q_{tPC}), then the target flow achievement value for the Nehalem River (T_{aNR}) is greater than 1, but target flow achievement value Peterson Creek (T_{aPC}) is less than 1.

Nehalem River

(420 – 2.19) / 400 = 1.04

1.04 > 1

Peterson Creek

$(16 - 0.24) / 17.1 = 0.92$

$0.92 < 1$

Step 2: The full amount of water the water conditioned for fish persistence for the Nehalem River, being 2.19 cfs, could be diverted because the target flows are not considered missed in the Nehalem River.

Step 3: Given the target flow achievement value for Peterson Creek (T_{aPC}) is less than 1 (from Step 1), and amount of water conditioned for fish persistence for Peterson Creek (P_{PC}) is 0.24 cfs, the maximum amount of water conditioned for fish persistence for Peterson Creek that can be appropriated as a result of this fish persistence condition is 0.19 cfs. ($D_{mPC} = T_{aPC} * P_{PC}$)

Peterson Creek

$0.24 * 0.92 = 0.22$

Step 4: The maximum amount of water out of the 2.43 cfs conditioned for fish persistence that may be diverted is 2.41 cfs.

$2.19 + 0.22 = 2.41$

Oregon
Tina Kotek, Governor

Water Resources Department
North Mall Office Building
725 Summer St NE, Suite A
Salem, OR 97301-1266
Phone: 503-986-0900
Fax: 503-986-0904
www.Oregon.gov / OWRD

May 31, 2024

City of Wheeler
ATTN: Phil Chick or Pax Broder
P.O. Box 177
Wheeler, OR 97147

REFERENCE: Pending Application for Extension of Time for:
Water Right Application G-13479 (Permit G-12196)

Dear Municipal Water Right Holder:

The purpose of this letter is to provide you with notification as per OAR 690-315-0080(2)(f) of fishery resource protection conditions that may be proposed in the proposed final order under OAR 690-315-0050.

On May 20, 2024, the Department received ODFW's Fish Persistence advice for the above referenced permit; it is enclosed for your review.

This letter will also act to provide you notice of your opportunity to request the Department place the above referenced municipal permit extension application on administrative hold.

If you should have any questions concerning your extension request you may contact me at (503) 979-3213.

Sincerely,

Jeffrey D. Pierceall
Extension Specialist

Enclosures

cc: Application File G-13479
Nikki Hendricks, Watermaster District 1

PIERCEALL Jeffrey D * WRD

From: PIERCEALL Jeffrey D * WRD
Sent: Friday, May 31, 2024 2:28 PM
To: Bill Pavlich
Subject: City of Wheeler ODFW Advice Received
Attachments: 13479-City of Wheeler FPAdvice.pdf

Bill,
Not sure if you're still working with the City, but we have received ODFW Advice. See attached.

Jeffrey D. Pierceall
Extension Specialist
Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON WATER RESOURCES DEPARTMENT

PIERCEALL Jeffrey D * WRD

From: PIERCEALL Jeffrey D * WRD
Sent: Monday, May 20, 2024 4:29 PM
To: HAYDEN-LESMEISTER Anne E * ODFW; WOODCOCK Douglas E * WRD
Cc: SAWASKE Spencer R * ODFW
Subject: RE: City of Wheeler fish persistence evaluation (Application #G-13479)

Thank you Anne.
I will have a chance to look at it this week.

Jeffrey D. Pierceall
Extension Specialist
Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON WATER RESOURCES DEPARTMENT

From: HAYDEN-LESMEISTER Anne E * ODFW <Anne.E.HAYDEN-LESMEISTER@odfw.oregon.gov>
Sent: Monday, May 20, 2024 4:09 PM
To: WOODCOCK Douglas E * WRD <Douglas.E.WOODCOCK@water.oregon.gov>
Cc: SAWASKE Spencer R * ODFW <Spencer.R.SAWASKE@odfw.oregon.gov>; PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Subject: City of Wheeler fish persistence evaluation (Application #G-13479)

Sent on behalf Spencer Sawaske, ODFW Acting Habitat Division Deputy Administrator

---

Hello Director Woodcock:

Please find attached ODFW's Division 315 Evaluation of Fish Persistence for Municipal Extension for the City of Wheeler. If you have additional questions, please don't hesitate to contact me.

Thank you,
Anne Hayden-Lesmeister
Instream Flow Specialist | Water Program
Oregon Department of Fish & Wildlife
Cell: 971-707-8512
Pronouns: she/her

PIERCEALL Jeffrey D * WRD

From: PIERCEALL Jeffrey D * WRD
Sent: Monday, March 25, 2024 2:33 PM
To: HAYDEN-LESMEISTER Anne E * ODFW
Cc: SAWASKE Spencer R * ODFW
Subject: RE: City of Wheeler ME

No worries. Dwight is out for a couple weeks, so I won't be issuing any new orders that are not already in the pipeline.

Jeffrey D. Pierceall
Extension Specialist
Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON WATER RESOURCES DEPARTMENT

From: HAYDEN-LESMEISTER Anne E * ODFW <Anne.E.HAYDEN-LESMEISTER@odfw.oregon.gov>
Sent: Monday, March 25, 2024 2:32 PM
To: PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Cc: SAWASKE Spencer R * ODFW <Spencer.R.SAWASKE@odfw.oregon.gov>
Subject: RE: City of Wheeler ME

Hi Jeffrey,

There might be a bit of a delay due to travel schedules this week, but I will work to get this signed and submitted as soon as possible.

Thanks,
Anne Hayden-Lesmeister
Instream Flow Specialist | Water Program
Oregon Department of Fish & Wildlife
Cell: 971-707-8512
Pronouns: she/her

From: PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Sent: Friday, March 22, 2024 8:35 AM
To: HAYDEN-LESMEISTER Anne E * ODFW <Anne.E.HAYDEN-LESMEISTER@odfw.oregon.gov>
Cc: SAWASKE Spencer R * ODFW <Spencer.R.SAWASKE@odfw.oregon.gov>
Subject: RE: City of Wheeler ME

Anne,
I went ahead and accepted all of the changes and it looks good to me.

Jeffrey D. Pierceall
Extension Specialist
Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON WATER RESOURCES DEPARTMENT

From: HAYDEN-LESMEISTER Anne E * ODFW <Anne.E.HAYDEN-LESMEISTER@odfw.oregon.gov>
Sent: Friday, March 8, 2024 9:59 AM
To: PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Cc: SAWASKE Spencer R * ODFW <Spencer.R.SAWASKE@odfw.oregon.gov>
Subject: City of Wheeler ME

Hi Jeffrey,

Given the amount of time that has passed since ODFW's initial submission, we are resubmitting the draft recommendation on maintaining the persistence of listed fish species for the City of Wheeler (Application G-13479; Permit G-12196) to reflect current methods for target flow determination. In addition to the flow target updates, I made a few additional wording changes. Most of them are regarding the methods, although I also made a few minor changes to a) clarify some wording that caused confusion with the City of Philomath ME, and b) indicate the need for the Peterson Cr monitoring location or method to be approved by OWRD/ODFW. Changes are shown using track changes.

I am also attaching the most recent version of the draft PFO that you sent. I updated it to reflect the changes in the letter. If you feel that it is in final form, please accept changes and let me know so that we can finalize and sign the letter with the PFO attachment. If you have additional suggested changes to the draft PFO, please use track changes to indicate those. Let me know of any questions.

Thanks, and have a nice weekend.

Anne Hayden-Lesmeister
Instream Flow Specialist | Water Program
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Sent: Friday, March 8, 2024 9:59 AM
To: PIERCEALL Jeffrey D * WRD
Cc: SAWASKE Spencer R * ODFW
Subject: City of Wheeler ME
Attachments: Revised City of Wheeler G12196_030724_trackchanges.docx; draft conditions_v3_030124.docx

Hi Jeffrey,

Given the amount of time that has passed since ODFW's initial submission, we are resubmitting the draft recommendation on maintaining the persistence of listed fish species for the City of Wheeler (Application G-13479; Permit G-12196) to reflect current methods for target flow determination. In addition to the flow target updates, I made a few additional wording changes. Most of them are regarding the methods, although I also made a few minor changes to a) clarify some wording that caused confusion with the City of Philomath ME, and b) indicate the need for the Peterson Cr monitoring location or method to be approved by OWRD/ODFW. Changes are shown using track changes.

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Instream Flow Specialist | Water Program
Oregon Department of Fish & Wildlife
Cell: 971-707-8512
Pronouns: she/her

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Anne Hayden-Lesmeister
Instream Flow Specialist | Water Program
Oregon Department of Fish & Wildlife
Cell: 971-707-8512
Pronouns: she/her

PIERCEALL Jeffrey D * WRD

From: PIERCEALL Jeffrey D * WRD
Sent: Tuesday, September 5, 2023 7:34 AM
To: HAYDEN-LESMEISTER Anne E * ODFW
Subject: City of Wheeler
Attachments: 13479-FP_Condition-DRAFT_OWRD_v3.docx

Anne,
Attached please find the updated draft conditions for the city of Wheeler.

My apologies for the long delay in getting these back to you, a number of additional projects got put on my plate, and I have also had some health issues making concentrating on this unique set of conditions difficult.

With the impact of withdraws at different levels on the two subject streams, we have tried to capture examples for each situation that may be encountered. If you have questions, please feel free to reach out.

Jeffrey D. Pierceall
Extension Specialist
Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON
WATER
RESOURCES
DEPARTMENT

PIERCEALL Jeffrey D * WRD

From: PIERCEALL Jeffrey D * WRD
Sent: Thursday, August 17, 2023 7:03 AM
To: REECE Ann L * WRD
Subject: RE: track changes off 13479-FP_Condition-DRAFT_OWRD_v2.docx

Thank you Ann, I appreciate you very much.

Jeffrey D. Pierceall
Extension Specialist
Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON WATER RESOURCES DEPARTMENT

From: REECE Ann L * WRD <Ann.L.REECE@water.oregon.gov>
Sent: Wednesday, August 16, 2023 10:51 AM
To: PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Subject: track changes off 13479-FP_Condition-DRAFT_OWRD_v2.docx

Jeffrey,

Interesting scenario. I hope this is helpful (i.e. makes sense), and you can mostly use this. One copy has track changes. I suggest starting with the "track changes off" version. It does contain some changes that don't show up in the track changes version.

Ann

PIERCEALL Jeffrey D * WRD

From: REECE Ann L * WRD
Sent: Wednesday, August 16, 2023 10:51 AM
To: PIERCEALL Jeffrey D * WRD
Subject: track changes off 13479-FP_Condition-DRAFT_OWRD_v2.docx
Attachments: track changes off 13479-FP_Condition-DRAFT_OWRD_v2.docx; 13479-FP_Condition-DRAFT_OWRD_v2.docx

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Ann

PIERCEALL Jeffrey D * WRD

From: PIERCEALL Jeffrey D * WRD
Sent: Monday, August 14, 2023 9:07 AM
To: REECE Ann L * WRD
Subject: RE: Peer Review, EOT FP Conditions and examples
Attachments: DRAFT City of Wheeler G12196_120121.docx

Jeffrey D. Pierceall
Extension Specialist
Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON WATER RESOURCES DEPARTMENT

From: REECE Ann L * WRD <Ann.L.REECE@water.oregon.gov>
Sent: Monday, August 14, 2023 8:58 AM
To: PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Subject: RE: Peer Review, EOT FP Conditions and examples

Jeffrey,
Could you also send me a copy of the ODFW advice?

Best Regards,

OREGON WATER RESOURCES DEPARTMENT

Ann Reece
District Transfer Program Advisor
Oregon Water Resources Department
725 Summer St NE Suite A | Salem OR 97301
Phone: (503) 979-3214
ann.l.reece@water.oregon.gov
https://www.oregon.gov/OWRD/programs/WaterRights/Transfers/DistTransfer

Integrity | Service | Technical Excellence | Teamwork | Forward-Looking

*****Teleworking *** Mon, Tu, Wed, Thurs 7:00 to 4:45; Fri 7:00 to 11AM*****

From: PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Sent: Friday, August 11, 2023 5:08 PM

To: REECE Ann L * WRD <Ann.L.REECE@water.oregon.gov>
Subject: Peer Review, EOT FP Conditions and examples

Ann,
Attached is the proposed FP conditions for the City of Wheeler. Would you have time to review, specifically the examples, to ensure they make sense based on the advice.

This one is odd in the sense that the development of the GW will impact two different streams to differing degrees (90% Nehalem River/10% Peterson Creek). ODFW provided a narrative on how curtailment is to work considering the impacts on both stream, but the narrative approaches it from the combined curtailment vs. the combined max rate like in the examples I generally build. I think I have it right, but a second set of eyes would be great.

Jeffrey D. Pierceall
Extension Specialist
Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

PIERCEALL Jeffrey D * WRD

From: PIERCEALL Jeffrey D * WRD
Sent: Friday, August 11, 2023 5:08 PM
To: REECE Ann L * WRD
Subject: Peer Review, EOT FP Conditions and examples
Attachments: 13479-FP_Condition-DRAFT_OWRD_v2.docx

Ann,
Attached is the proposed FP conditions for the City of Wheeler. Would you have time to review, specifically the examples, to ensure they make sense based on the advice.

This one is odd in the sense that the development of the GW will impact two different streams to differing degrees (90% Nehalem River/10% Peterson Creek). ODFW provided a narrative on how curtailment is to work considering the impacts on both stream, but the narrative approaches it from the combined curtailment vs. the combined max rate like in the examples I generally build. I think I have it right, but a second set of eyes would be great.

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503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON
WATER
RESOURCES
DEPARTMENT

PIERCEALL Jeffrey D * WRD

From: PIERCEALL Jeffrey D * WRD
Sent: Friday, April 28, 2023 2:21 PM
To: PUBLICRECORDS Owrd * WRD
Subject: RE: WaterWatch PRR: municipal extensions list
Attachments: Muni-Track.xlsx

Mindy,
I believe this is the most recent.

Jeffrey D. Pierceall
Extension Specialist
Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON WATER RESOURCES DEPARTMENT

From: PUBLICRECORDS Owrd * WRD <OWRD.PUBLICRECORDS@water.oregon.gov>
Sent: Monday, April 24, 2023 10:01 AM
To: PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Subject: FW: WaterWatch PRR: municipal extensions list

Good morning Jeffrey,

Are you the correct person to handle this request?
If not, do you know who I should reach out to?

If you are the person to handle this request, can you give me an estimate of time of how long it would take you to collect *existing* records?
Are these records maintained/updated?

Thanks in advance for any information you can share! 😊

Thanks,
Mindy

Mindy Lane
Director's Office Executive Assistant & Public Records Support
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301

Desk: (503) 986-0875
Mobile: (503) 930-4303

OREGON WATER RESOURCES DEPARTMENT

Integrity | Service | Technical Excellence | Teamwork | Forward-Looking

From: Lisa Brown <lisa@waterwatch.org>
Sent: Monday, April 24, 2023 9:54 AM
To: PUBLICRECORDS Owrd * WRD <OWRD.PUBLICRECORDS@water.oregon.gov>
Cc: AttorneyGeneral@doj.state.or.us; Wells Inge D <Inge.D.Wells@doj.state.or.us>
Subject: WaterWatch PRR: municipal extensions list

Good morning,
I am requesting the following record(s):

The most current list(s), table(s) or spreadsheet(s) showing:

a) Applications for extensions of time for municipal permits that need a fish persistence review pursuant to ORS 537.230(3)(d) (including those that have been sent to ODFW, those that have not yet been sent to ODFW, and those for which ODFW has returned its advice but no extension has been issued).
b) If available, municipal permits for which no application of extension of time has been filed yet that will need a fish persistence review.

I am flexible as to the form and specifics of this information, which may have changed since the last versions I have. I am not asking for WRD to update any lists, but rather requesting the most current version available.

Pursuant to ORS 192.314(2), because this request relates to a civil judicial proceeding to which a public body is a party (Lower Clackamas extension cases), I am copying this request to the Attorney General in Salem and to OWRD's counsel in this matter, Inge Wells.

Thank you for your assistance with this request. Please let me know if there are any questions.

Best,
Lisa Brown
Staff Attorney
WaterWatch of Oregon
C: 503.789.6442

PIERCEALL Jeffrey D * WRD

From: HAYDEN-LESMEISTER Anne E * ODFW
Sent: Wednesday, April 19, 2023 10:37 AM
To: PIERCEALL Jeffrey D * WRD
Subject: City of Wheeler ME update request

Hi Jeffrey,

Can you give an update on the status of the following ME:

- City of Wheeler (Application G-13479; Permit G-12196) - ODFW submitted the draft fish persistence letter in December 2021, and you provided draft PFO language that I responded to, but I've not received the finalized condition language yet.

Thanks!
Anne Hayden-Lesmeister
Instream Flow Specialist
Oregon Department of Fish & Wildlife | Water Program
office: 503-947-6236 | cell: 971-707-8512
Pronouns: she/her

PIERCEALL Jeffrey D * WRD

From: HAYDEN-LESMEISTER Anne E * ODFW
Sent: Tuesday, October 4, 2022 1:00 PM
To: PIERCEALL Jeffrey D * WRD
Subject: RE: MEs check-in

Hi Jeffrey,

Thanks for the update. I am currently working on the two City of Hood River applications together given their proximity and hope to get a draft letter to you fairly soon.

Anne Hayden-Lesmeister
Instream Flow Specialist
Oregon Department of Fish & Wildlife | Water Program
office: 503-947-6236 | cell: 971-707-8512
Pronouns: she/her

From: PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Sent: Friday, September 30, 2022 2:42 PM
To: HAYDEN-LESMEISTER Anne E * ODFW <Anne.E.HAYDEN-LESMEISTER@odfw.oregon.gov>
Cc: SAWASKE Spencer R * ODFW <Spencer.R.SAWASKE@odfw.oregon.gov>
Subject: RE: MEs check-in

Anne,
Sorry for the delayed response, I have been having emails get directed to my spam and junk folder for some reason.
I just found the email from the Wheeler permit. I will begin reworking the conditions document next week and send it your way.
I am currently working on the conditions for the Philomath permit. I keep getting pulled away with other projects and priorities.

As for McMinnville, Dwight and I have had a number of discussions in regard to the R-2653 permit, and at this time can request that ODFW hold off on doing a fish persistence review for it. Our discussion has lead to the opinion that OWRD will likely deny the extension of time request for this permit because the reservoir has not yet been constructed and is located within a Scenic Waterway. However, Permit S-27520 will still need a fish persistence review for the undeveloped portion of the live flow from Walker Creek because we are reading the ORS 390.835 as making a distinction between impoundments, dams, and reservoirs, as something different than a diversion. Since the right to the diversion on Walker Creek was previously established, an extension may be allowable to complete the development of this portion of the permit.

I will be working on writing a PFO to deny the extension request for Permit R-2653 over the next couple of weeks, which will need to be reviewed by Dwight and potentially Doug prior to issuance. Once issued, I would anticipate a protest being filed, which will probably hold up the final order for an unknown time. With this in mind, ODFW may decide to move forward with review of the undeveloped Walker Creek portion of the permit, or choose to hold off until resolution of the reservoir permit.

Jeffrey D. Pierceall
Extension Specialist

Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

OREGON WATER RESOURCES DEPARTMENT

From: HAYDEN-LESMEISTER Anne E * ODFW <Anne.E.HAYDEN-LESMEISTER@odfw.oregon.gov>
Sent: Monday, August 15, 2022 11:35 AM
To: PIERCEALL Jeffrey D * WRD <Jeffrey.D.PIERCEALL@water.oregon.gov>
Cc: SAWASKE Spencer R * ODFW <Spencer.R.SAWASKE@odfw.oregon.gov>
Subject: MEs check-in

Hi Jeffrey,

I wanted to check on the status of the following MEs:

- City of Wheeler (Application G-13479; Permit G-12196): ODFW submitted the draft fish persistence letter in December 2021, and I then sent some edits to the initial Draft PFO on 4/1/22. Currently awaiting the revised PFO for attachment to the final letter.
- City of Philomath (Application S- 68266; Permit S- 49245): ODFW submitted the draft fish persistence letter on 6/3/22. Currently awaiting Draft PFO.
- City of McMinnville (Application S-32770; Permit S-27520): awaiting information regarding email sent 7/25/22 (attached)
- City of McMinnville (Application R-32825; Permit R-2653): awaiting information regarding email sent 7/25/22 (attached)

I am also hoping you can provide some clarification on the two outstanding MEs for the City of Hood River (Permits S-8387 and S-15312). Based on our previous conversations, I thought that both ME requests needed to be completed before the Dee Hydro Project could move forward. On our recent site visit, the City indicated this was not the case – they were under the impression that once the COBU that the City submitted on 6/20/22 was approved, they would be able to move forward with all needed permitting steps for the Project (they said this amount did not require any fish persistence review). However, after the visit, John Grim sent me a copy of the COBU and I noted that it was for Permit S-15312, which does still have 0.2 cfs undeveloped according to my records. I would think that the 0.2 cfs would need to be conditioned per the ME request prior to COBU approval, is that correct?

Thanks and please let me know of any questions,
Anne Hayden-Lesmeister
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Oregon Water Resources Department
503-979-3213
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OREGON WATER RESOURCES DEPARTMENT

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Oregon Water Resources Department
503-979-3213
Jeffrey.D.Pierceall@water.oregon.gov

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Anne Hayden-Lesmeister
Instream Flow Specialist
Oregon Department of Fish & Wildlife | Water Program
office: 503-947-6236 | cell: 971-707-8512
Pronouns: she/her

PIERCEALL Jeffrey D * WRD

From: Bill Pavlich <billp@paceengrs.com>
Sent: Tuesday, April 30, 2019 4:13 PM
To: PIERCEALL Jeffrey D * WRD
Subject: FW: Wheeler Extension

Hi Jeffrey,

Here's some information that may help clarify the relationships between the various entities involved with the water system. Thanks.

Bill

Bill Pavlich, PE | Senior Project Manager
4500 Kruse Way, Suite 250 | Lake Oswego, OR 97035
p. 503.597.3222 | f. 503.597.7655
www.paceengrs.com

Our Lake Oswego office has moved! Please note our new location.

From: Dan Weitzel <dweitzel@ci.manzanita.or.us>
Sent: Tuesday, April 30, 2019 3:54 PM
To: Bill Pavlich <billp@paceengrs.com>
Subject: RE: Wheeler Extension

Hello Bill,

The joint water system consists of City of Wheeler and City of Manzanita. We provide bulk water sales to Route 53 Water (aka Zaddach Creek) and Tideland Water CO-OP. Nehalem Bay Ste park is considered a standard commercial water user.

The North Tillamook County Regional Water Supply group was formed to provide a source to everyone. In the end most members of the group had left. So it was dissolved.

I would not use the term regional supply co-op.

Manzanita does have a emergency water connection with the City of Nehalem and NEAHKAHNIE water District.

I do not know of any other systems that will be connecting anytime soon.

Thanks,

Dan Weitzel
Public Works Director
City of Manzanita
36730 Hwy. 101 N
P.O. Box 129
Manzanita, OR 97130
Phone (503) 368-5347

Cell (503) 801-5171

From: Bill Pavlich [mailto:billp@paceengrs.com]
Sent: Tuesday, April 30, 2019 1:13 PM
To: Dan Weitzel (dweitzel@ci.manzanita.or.us)
Subject: FW: Wheeler Extension

Hi Dan,
The attached note is from Jeffrey Pierceall with OWRD. He's who I've been coordinating with regarding the permit extension. Before I reply to him I wanted to check my understanding with you and also see if you have anything to add. I looked for but was not able to find the NTCR Plan that Jeffrey referenced. I remember seeing it online some time ago but don't recall much of the detail. Seems to me that Manzanita and Wheeler didn't participate in it?

My understanding is that the Joint Water System consists of Manzanita and Wheeler. The others either contract for water or (Nehalem and Neahkahnie) have agreements and intertie infrastructure for emergency connections.

Is the above correct?
Does "regional supply coop" seem like an appropriate term?
Are there any other entities connected or soon to be connected?

Thanks.

Bill

PACE
An Engineering Services Company

Bill Pavlich, PE | Senior Project Manager
4500 Kruse Way, Suite 250 | Lake Oswego, OR 97035
p. 503.597.3222 | f. 503.597.7655
www.paceengrs.com

Our Lake Oswego office has moved! Please note our new location.

From: PIERCEALL Jeffrey D * WRD <Jeffrey.D.Pierceall@oregon.gov>
Sent: Tuesday, April 30, 2019 11:57 AM
To: Bill Pavlich <billp@paceengrs.com>
Subject: Wheeler Extension

Bill,
I am in the process of writing the orders for the Wheeler extension, and I wanted to touch base with you in regard to the present state of the North Tillamook County Regional Water Supply group that was identified in the Application and through the NTCR Water Master Plan. At the time of submittal, it appears that Wheeler, Manzanita, Nehalem Bay State e Park, Zadduck Creek Water Coop, and Tideland Water Coop had all entered into the regional supply cooperative, with a number of other water suppliers identified as potential entrants into the agreement. I also see that City of Nehalem has an emergency intertie with Manzanita. I was hoping to just get an update if any other entities have entered into the regional supply coop?

Just so you know, I have not received the advice from ODFW as of yet, however I do anticipate it will be submitted fairly soon.

Thank you for the update.

Jeffrey D. Pierceall
Extension and Adjudication Specialist
Oregon Water Resources Department
503-986-0802
Jeffrey.D.Pierceall@oregon.gov

OREGON
WATER
RESOURCES
DEPARTMENT

Bill Pavlich

From: Geoff Wullschlager <citymgrwheeler@nehalemtel.net>
Sent: Wednesday, January 10, 2018 9:28 AM
To: Bill Pavlich
Subject: Water Rights

Dear Bill:

The City hereby gives you authority to complete the Water Right Update form on behalf of the City of Wheeler. Please contact me if you should have any questions or concerns.

All Best,

Geoff Wullschlager
City Manager
Wheeler, OR
(503)368-5767

Extension Application Update Form

For Municipal and Quasi-Municipal Permits issued prior to November 2, 1998

Please review the information on this form, make any necessary updates, and provide any additional information you would like the Department to consider in reviewing your Extension Application.

Return this form to the Department by January 12, 2018, or your Extension Application will be processed based on the information currently on record.

MAIL COMPLETED FORM

Water Resources Department
Attn: Water Right Permit Extensions
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266

RECEIVED
JAN 11 2018
OWRD

Application G-13479
CITY OF WHEELER
Geoff Wullschlager
PO Box 177
Wheeler, OR 97147

1. Report the maximum rate of water that was diverted and applied to beneficial use under this permit as of the later of:
   - June 29, 2005;
   - the time specified in the permit; or
   - the time specified in the last- approved extension of time.

   The evidence in the record shows the maximum instantaneous rate is 1.17 cfs

   The evidence in the record shows the undeveloped portion under this permit is 2.43 cfs

   If this is incorrect please provide documentary evidence substantiating the maximum instantaneous rate, or duty if applicable, of water appropriated may include, but is not limited to: water meter records; dedicated electrical meter records; business records; and/or a sworn affidavit.

   Report in the same units of measurement as specified in the permit.

   Report only water use made under THIS permit only:

   Maximum instantaneous rate as of June 29, 2005 = 1.17 **cfs,** *or* _____ **gpm,** *or* _____ **AF**

2. Your extension application proposes to extend the completion deadline date from **October 1, 1999,** to **October 1, 2047.** OK

☐ Please update our request from **October 1, 2047,** to October 1, _____.

I am the permittee, or have written authorization from the permittee, to apply for an extension of time under this permit. I certify that the information I have provided in this application is true and correct to the best of my knowledge.

William M Parkin, PE, CWRE — Jan 10, 2018

Signature — Date

Oregon
Kate Brown, Governor

Water Resources Department
725 Summer St NE, Suite A
Salem, OR 97301
(503) 986-0900
Fax (503) 986-0904

December 1, 2017

CITY OF WHEELER
Geoff Wullschlager
PO Box 177
Wheeler, OR 97147

Reference: Pending Application for Extension of Time
Application **G-13479** (Permit **G-12196**)

Dear **Geoff**:

You are receiving this letter because you are listed as the contact person for a pending extension on water right permit **G-12196** for **CITY OF WHEELER** that is on file with the Oregon Water Resources Department. The development deadline for this permit was **October 1, 1999**, and an extension of time request was filed with us on **May 3, 2004**. The purpose of this letter is to inform you of some of the recent legislation related to extensions on municipal permits issued prior to November 2, 1998, and the status of your extension. In addition, this letter also requests updated information from you.

Legislation Update

As you may recall, in 2013 a Court of Appeals decision changed the way the Department processed municipal extensions. Since the Court's decision, several workgroups were convened by legislators over multiple legislative sessions to try to reach a resolution. House Bill 2099 (Chapter 704, 2017 Oregon Laws) is the result of those efforts this session. The bill, effective August 15, 2017, makes the following changes to the laws related to municipal water right extensions:

1. Modifies the definition of the undeveloped portion of a municipal water right permit for the purpose of determining the amount of water that may be subject to fish persistence conditioning for the first extension of time after June 29, 2005 for municipal permits issued prior to November 2, 1998.

2. Specifies that the undeveloped portion of a municipal permit is the amount of water that has not been diverted as of the later of June 29, 2005, or the date specified in the permit or last approved extension.

3. Requires that a water management and conservation plan be developed and approved as a condition of an extension of time on a municipal permit, and that none of the undeveloped portion, as defined above, can be diverted until the water management and conservation plan is approved; and

4. Prohibits issuance of water right certificate for municipal use if extension of time is required but an order approving extension has not become final.

Extension Status and Next Steps

The City's extension request is currently under review. The permit authorizes the use of **3.6 cfs.** In its extension request, the City indicated that the maximum rate of water diverted was **1.17 cfs** as of the last authorized date of **October 1, 1999,** resulting in an undeveloped portion of **2.43 cfs.** Your extension application proposes to extend the completion deadline date from **October 1, 1999,** to **October 1, 2047. The Department will be moving forward with processing your extension request, with the information on record, unless updated information is received. It is important that the Department have accurate information on the record to process your extension. Incorrect or inconsistent information may delay processing of your request, or result in a challenge to your application.**

Action Required

In order to assist us with processing your extension, the Department is requesting that you complete the attached form. It is important to:

(1) **Verify the maximum rate of water that was diverted and applied to beneficial use under this permit as of June 29, 2005;**

(2) **Verify** that the date requested to complete construction and complete application of water **is correct.**

(3) **Identify any additional updates to application as needed.**

Please fill out and return the attached form and provide any documentation necessary.

Please respond by January 12, 2018, or the Department will use the information on record to issue a Proposed Final Order with fish persistence conditions.

If you have questions or want to discuss your water rights, please contact Jeffery Pierceall at 503-986-0802.

email: Jeffrey.D.Pierceall@oregon.gov

Sincerely,

Dwight French, Administrator,
Water Right Services Division

Enclosures: Muni update form
CC: File Application G-13479

Extension Application Update Form

For Municipal and Quasi-Municipal Permits issued prior to November 2, 1998

Please review the information on this form, make any necessary updates, and provide any additional information you would like the Department to consider in reviewing your Extension Application.

Return this form to the Department by January 12, 2018, or your Extension Application will be processed based on the information currently on record.

MAIL COMPLETED FORM

Water Resources Department
Attn: Water Right Permit Extensions
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266

Application **G-13479**
CITY OF WHEELER
Geoff Wullschlager
PO Box 177
Wheeler, OR 97147

1. Report the maximum rate of water that was diverted and applied to beneficial use under this permit as of the later of:
    - June 29, 2005;
    - the time specified in the permit; or
    - the time specified in the last- approved extension of time.

    The evidence in the record shows the maximum instantaneous rate is 1.17 cfs

    The evidence in the record shows the undeveloped portion under this permit is 2.43 cfs

    If this is incorrect please provide documentary evidence substantiating the maximum instantaneous rate, or duty if applicable, of water appropriated may include, but is not limited to: water meter records; dedicated electrical meter records; business records; and/or a sworn affidavit.

    Report in the same units of measurement as specified in the permit.

    Report only water use made under THIS permit only:

    Maximum instantaneous rate as of June 29, 2005 = _____ cfs, *or* **_____ gpm,** *or* **_____ AF**

2. Your extension application proposes to extend the completion deadline date from **October 1, 1999,** to **October 1, 2047.**

☐ Please update our request from **October 1, 2047,** to October 1, _____.

I am the permittee, or have written authorization from the permittee, to apply for an extension of time under this permit. I certify that the information I have provided in this application is true and correct to the best of my knowledge.

_____

Signature Date

Oregon
John A. Kitzhaber, MD, Governor

Water Resources Department
North Mall Office Building
725 Summer St. NE, Suite A
Salem, OR 97301
Phone 503-986-0900
FAX 503-986-0904
www.wrd.state.or.us

City of Wheeler
Attention: Lee Engineering Inc.
P.O.Box 177
Wheeler, OR 97147

REFERENCE: Pending Application for Extension of Time
Water Right Application G-13479 (Permit G-12196)

Dear Municipal Water Right Holder:

The purpose of this letter is to provide you with notification as per OAR 690-315-0080(2)(b) that the above referenced municipal permit extension application was delivered to ODFW on December 14, 2012 for the fish persistence review required under OAR 690-315-0080.

In addition, I have included a summary of the most current information we have on file for your water right extension for this permit. It is on the document labeled "Extension PFO Checklist for Water Use Permit." Please look this over and make sure the information we have on record is current and correct. Please notify me of any corrections or updates in writing by email or regular mail.

If you should have any questions concerning your extension request you may contact me at (503) 986-0898.

Sincerely,

Joan Smith
Water Rights Services Division
Oregon Water Resources Department
725 Summer St. NE Suite A
Salem, OR 97301
503-986-0898
joan.m.smith@wrd.state.or.us

cc: App. G-13479 (Permit G-12196)
Greg Beaman, Watermaster District # 1

Print Report

Oregon Water Resources Department
Attribute Report

Report Date: Apr 30, 2019

General:

TRSQQ:	WM2.00N9.00W5NWNE WM2.00N9.00W5SWNE WM2.00N9.00W5NENW WM3.00N9.00W32SWSW WM2.00N9.00W5NWNW WM2.00N9.00W5SENW WM2.00N9.00W5SWNW WM3.00N9.00W32SWSE WM3.00N9.00W32SESW
DLC:	-
Latitude:	45.6931741948
Longitude:	-123.8151604420
Buffer ft:	1320
DEM Elev. ft. (NAVD1929):	21.2119
Lidar Elev. ft. (NAVD1988):	28.09
Basin Name:	North Coast
Basin Plan:	-North Coast
County:	Tillamook
WM District:	1
WM Region:	NORTHWEST
ODFW Region, District:	Northwest Region, North Coast District
Irrigation District AOI:	-
Irrigation District, Other:	-
Dams (Permit):	-
Water Rights:	Platcard for WM2.00N9.00W5 Platcard for WM2.00N9.00W5 Platcard for WM2.00N9.00W5 Platcard for WM3.00N9.00W32 Platcard for WM2.00N9.00W5 Platcard for WM2.00N9.00W5 Platcard for WM2.00N9.00W5 Platcard for WM3.00N9.00W32 Platcard for WM3.00N9.00W32
Well Logs:	Logs for WM2.00N9.00W5 Logs for WM2.00N9.00W5 Logs for WM2.00N9.00W5 Logs for WM3.00N9.00W32 Logs for WM2.00N9.00W5 Logs for WM2.00N9.00W5 Logs for WM2.00N9.00W5 Logs for WM3.00N9.00W32 Logs for WM3.00N9.00W32

Rules:

Withdrawn Authority:	-
Groundwater Restricted:	-
GW Restricted Subunit:	-
GW ODEQ Management Area:	-
GW Umatilla Muni Wells (5mile):	-
Rule 4D:	Rules apply
Division 33:	Statewide
Irrigation Season of Use:	**(unajudicated, west side)** Adj. Status: Unadjudicated Subarea: undefined Irr. Season: Mar 1 to Oct 31 Duty: 2.5 Rate: 1/80

Water Quality Limited Pollutant 2012:	**Nehalem River** R. Mile: 0 to 120 HUC4: 17100202 Pollutant: Ammonia Season: NaN Uses: Aquatic life Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: Chlorophyll a Season: NaN Uses: Fishing; Water supply; Water contact recreation; Aesthetics; Livestock watering Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 120 HUC4: 17100202 Pollutant: Chloride Season: NaN Uses: Aquatic life Status: Cat 3: Insufficient data Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: Fecal Coliform Season: NaN Uses: Water contact recreation Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 120 HUC4: 17100202 Pollutant: Phosphate Phosphorus Season: NaN Uses: Aquatic life Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: E. Coli Season: NaN Uses: Water contact recreation Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: Fecal Coliform Season: NaN Uses: Water contact recreation Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: Temperature Season: NaN Uses: Salmonid fish rearing; Anadromous fish passage Status: Cat 4A: Water quality limited, TMDL approved Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202

Water Quality Limited Pollutant 2012:	**Nehalem River** R. Mile: 0 to 120 HUC4: 17100202 Pollutant: Ammonia Season: NaN Uses: Aquatic life Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: Chlorophyll a Season: NaN Uses: Fishing; Water supply; Water contact recreation; Aesthetics; Livestock watering Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 120 HUC4: 17100202 Pollutant: Chloride Season: NaN Uses: Aquatic life Status: Cat 3: Insufficient data Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: Fecal Coliform Season: NaN Uses: Water contact recreation Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 120 HUC4: 17100202 Pollutant: Phosphate Phosphorus Season: NaN Uses: Aquatic life Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: E. Coli Season: NaN Uses: Water contact recreation Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: Fecal Coliform Season: NaN Uses: Water contact recreation Status: Cat 2: Attaining some criteria/uses Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202 Pollutant: Temperature Season: NaN Uses: Salmonid fish rearing; Anadromous fish passage Status: Cat 4A: Water quality limited, TMDL approved Action: No action
	Nehalem River R. Mile: 0 to 14.7 HUC4: 17100202

Pollutant: E. Coli
Season: NaN
Uses: Water contact recreation
Status: Cat 2: Attaining some criteria/uses
Action: No action

Nehalem River
R. Mile: 0 to 14.7
HUC4: 17100202
Pollutant: pH
Season: NaN
Uses: Salmonid fish rearing; Resident fish and aquatic life; Anadromous fish passage; Water contact recreation; Salmonid fish spawning
Status: Cat 2: Attaining some criteria/uses
Action: No action

Nehalem River
R. Mile: 0 to 120
HUC4: 17100202
Pollutant: Alkalinity
Season: NaN
Uses: Aquatic life
Status: Cat 3B: Insufficient data, potential concern
Action: No action

Nehalem River
R. Mile: 0 to 14.7
HUC4: 17100202
Pollutant: pH
Season: NaN
Uses: Water contact recreation; Salmonid fish spawning; Resident fish and aquatic life; Anadromous fish passage; Salmonid fish rearing
Status: Cat 2: Attaining some criteria/uses
Action: No action

Nehalem River
R. Mile: 0 to 36.2
HUC4: 17100202
Pollutant: Dissolved Oxygen
Season: NaN
Uses: Cold-water aquatic life
Status: Cat 5: Water quality limited, 303(d) list, TMDL needed
Action: No action

Nehalem River
R. Mile: 0 to 120
HUC4: 17100202
Pollutant: Biological Criteria
Season: NaN
Uses: Aquatic life
Status: Cat 3B: Insufficient data, potential concern
Action: No action

Nehalem River
R. Mile: 0 to 14.7
HUC4: 17100202
Pollutant: Fecal Coliform
Season: NaN
Uses: Shellfish growing
Status: Cat 4A: Water quality limited, TMDL approved
Action: No action

Nehalem River
R. Mile: 0 to 22
HUC4: 17100202
Pollutant: Cadmium
Season: NaN
Uses: Resident fish and aquatic life
Status: Cat 3B: Insufficient data, potential concern
Action: No action

Nehalem River
R. Mile: 9.1 to 36.2
HUC4: 17100202
Pollutant: Dissolved Oxygen
Season: NaN

Uses: Salmon and steelhead spawning
Status: Cat 2: Attaining some criteria/uses
Action: No action

Nehalem River
R. Mile: 0 to 22
HUC4: 17100202
Pollutant: Lead
Season: NaN
Uses: Resident fish and aquatic life
Status: Cat 3B: Insufficient data, potential concern
Action: No action

Nehalem River
R. Mile: 0 to 14.7
HUC4: 17100202
Pollutant: Chlorophyll a
Season: NaN
Uses: Water contact recreation; Water supply; Aesthetics; Livestock watering; Fishing
Status: Cat 3: Insufficient data
Action: No action

Fish Habitat 2018:

Species: Coastal cutthroat trout
Anad. Run: NA
Life History: AnadRes
Habitat Use: Unknown
Basis: DocObsFish
Stream:
Origin: NativeLocal
Pop. Sustained: Natural
Source Agcy: PSMFC

Species: Coastal cutthroat trout
Anad. Run: NA
Life History: FluvRes
Habitat Use: ResidentMultipleUses
Basis: ConcurProfOpinion
Stream:
Origin: NativeLocal
Pop. Sustained: Natural
Source Agcy: ODF

Species: Chinook salmon
Anad. Run: Fall
Life History: Anadromous
Habitat Use: Spawning
Basis: UndocObsFish
Stream: Peterson Creek
Origin: NativeLocal
Pop. Sustained: Natural
Source Agcy: Nehalem River Fishing Guide

Species: Coho salmon
Anad. Run: NA
Life History: Anadromous
Habitat Use: Spawning
Basis: UndocObsFish
Stream: Peterson Creek
Origin: NativeLocal
Pop. Sustained: Mixed
Source Agcy: Nehalem River Fishing Guide

Species: Chum salmon
Anad. Run: NA
Life History: Anadromous
Habitat Use: Spawning
Basis: UndocObsFish
Stream: Nehalem River
Origin: NativeLocal
Pop. Sustained: Natural
Source Agcy: ODFW

Species: Chinook salmon
Anad. Run: Fall
Life History: Anadromous
Habitat Use: Spawning
Basis: DownstreamDocObsFish
Stream: Nehalem River
Origin: NativeLocal
Pop. Sustained: Natural
Source Agcy: ODFW

Species: Steelhead
Anad. Run: Winter
Life History: Anadromous
Habitat Use: Spawning
Basis: DocObsFish
Stream: Peterson Creek
Origin: NativeLocal
Pop. Sustained: Mixed
Source Agcy: ODFW

Species: Pacific lamprey

Anad. Run: Unknown
Life History: Anadromous
Habitat Use: Unknown
Basis: DownstreamDocObsFish
Stream: Nehalem River
Origin: NativeLocal
Pop. Sustained: Natural
Source Agcy: ODFW

Species: Coho salmon
Anad. Run: NA
Life History: Anadromous
Habitat Use: Rearing
Basis: UndocObsFish
Stream: Nehalem River
Origin: NativeLocal
Pop. Sustained: Mixed
Source Agcy: ODFW

Species: Steelhead
Anad. Run: Winter
Life History: Anadromous
Habitat Use: Spawning
Basis: UndocObsFish
Stream: Peterson Creek
Origin: NativeLocal
Pop. Sustained: Mixed
Source Agcy: Nehalem River Fishing Guide

Species: Chinook salmon
Anad. Run: Spring
Life History: Anadromous
Habitat Use: Rearing
Basis: UndocObsFish
Stream: Nehalem River
Origin: NativeLocal
Pop. Sustained: Natural
Source Agcy: ODFW

Species: Coastal cutthroat trout
Anad. Run: NA
Life History: AnadRes
Habitat Use: Unknown
Basis: DocObsFish
Stream: Peterson Creek
Origin: NativeLocal
Pop. Sustained: Natural
Source Agcy: PSMFC

Species: Coastal cutthroat trout
Anad. Run: NA
Life History: AnadRes
Habitat Use: Unknown
Basis: DocObsFish
Stream: Nehalem River
Origin: NativeLocal
Pop. Sustained: Natural
Source Agcy: PSMFC

Species: Steelhead
Anad. Run: Winter
Life History: Anadromous
Habitat Use: Migration
Basis: DownstreamDocObsFish
Stream: Nehalem River
Origin: NativeLocal
Pop. Sustained: Mixed
Source Agcy: ODFW

Is in Deschutes Study Area: -

Deschutes Zone Impact:	-
Deschutes Zone Overlay:	-
Scenic Water Way:	-

Hydrography:

OWRD Streamcode:	01013000200170 - Peterson Cr
	01013000200170010 - Unn Str
	0101300020 - Nehalem R
Waterbody Name:	-
HUC 10:	1710020206
HUC Watershed:	Lower Nehalem River
WAB Wshed Order:	1 2
WAB Analysis:	NEHALEM R > NEHALEM BAY - AT MOUTH PETERSON CR > NEHALEM R - AT MOUTH
Streamflow:	OWRD Opportunities: Fair ODFW Needs: Highest Combined Priority: Current resources priority
	OWRD Opportunities: Poor ODFW Needs: Moderate Combined Priority: Not a priority
Gaging Station Data:	-

Sources:

General

Oregon Public Land Survey Quarter-quarters. Bureau of Land Management, Oregon Water Resources Department.. n.d. 1:24,000.

Donated Land Claims. Oregon Water Resources Department. January 1, 1995. 1:100,000.

Elevation. DEM 10m. - -

Elevation. Lidar Elevation. DOGAMI Bare Earth 1:3.

OWRD Administrative Basins. Oregon Water Resources Department. January 1, 1995.

Oregon Counties. Bureau of Land Management (BLM), Oregon State Office.. January 1, 2008.

OWRD Watermaster Districts. Oregon Water Resources Department. March 31, 2014.

OWRD Regions. Oregon Water Resources Department. January 1, 1995.

ODFW Districts and Regions. Oregon Department of Fish and Wildlife. August 28, 2012.

Water Organizations Oregon Water Resources Department. April 1, 2013. 1:24,000.

Large Dams Inventory. Oregon Water Resources Department. August 12, 2014. 1:24,000.

Rules

Withdrawn Authority Areas. Oregon Water Resources Commission. January 1, 2007.

OWRD Groundwater Restricted Areas. Oregon Water Resources Department. October 5, 2016.

OWRD Groundwater Restricted Areas - Subunits. Oregon Water Resources Department. April 1, 2009.

ODEQ Groundwater Management Areas (GWMAs). Oregon Department of Environmental Quality. April 21, 2008.

Groundwater Umatilla Municipal Wells 5-mile buffer. Oregon Water Resources Department. June 28, 2012.

National Marine Fisheries Service (NMFS) 4(d) Rule. National Marine Fisheries Service. January 1, 2007.

Division 33. Oregon Water Resources Dept., 2018. September 20, 2018. 1:100,000.

Irrigation Season of Use. Oregon Water Resources Department, 2017.. March 24, 2017.

Oregon Water Quality Assessment 2012. This data set was assembled by the Oregon Department of Environmental Quality, Water Quality Division, Standards and Assessments Section.. December 4, 2014. 1:2,500,000.

Oregon Fish Habitat 2018. Oregon Department of Fish and Wildlife, Jon K. Bowers, Ruth Schellbach, David L. Bradford. Numerous fisheries biologists from ODFW as well as other natural resource agencies and tribes have contributed toward the development of these data. Data originator names are attributed at the feature level.. February 2, 2018. 1:24,000.

Deschutes USGS Groundwater Study Area. Water Resources Commission, U.S. Geological Survey (USGS) Water Resources Division (Portland, OR), Oregon Water Resources Department.. January 1, 2001. 1:100,000.

Deschutes Zones of Impact. Oregon Water Resources Department.. October 25, 2007.

Deschutes Zones Overlay. Oregon Water Resources Department. October 25, 2007.

Oregon State Scenic Waterway areas. Oregon Water Resources Department, Oregon Parks and Recreation Department.. January 1, 2007.

Hydrography

Routed OWRD Streamcodes (conflated to the NHD). Oregon Water Resources Dept.. August 11, 2014.

OWRD Lake Streamcodes (conflated to the NHD). Oregon Water Resources Dept.. August 7, 2015.

Watershed Boundary Dataset (WBD), 10-digit (watershed). Pacific Northwest Hydrography Framework, U.S. Geological Survey (USGS), National Resources Conservation Service (NRCS).. June 11, 2014. 1:24,000.

Water Availability Basins. Oregon Water Resources Department.. n.d. 1:100,000.

Priority Watersheds for Streamflow Restoration. Oregon Water Resources Dept. and the Oregon Dept. of Fish & Wildlife.. January 15, 2004.

Stream Gage Stations. Oregon Water Resources Department and US Geological Survey. n.d.

close

Print Report

STATE OF OREGON

COUNTY OF TILLAMOOK

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

CITY OF WHEELER
PO BOX 177
WHEELER, OREGON 97147

The specific limits for the use are listed below along with conditions of use.

APPLICATION FILE NUMBER: G-13479

SOURCE OF WATER: Wells #4, #6, #13, and #10 within the Nehalem River Basin

PURPOSE OR USE: Municipal use

Rate of use: 3.6 CFS

Period of allowed use: The period of allowed use under this permit is year round, however, if senior instream water rights are not met, water use will be curtailed for all use except human consumption and livestock watering until those instream water rights are met.

DATE OF PRIORITY: July 29, 1993.

POINTS OF DIVERSION LOCATION:

NE 1/4 NW 1/4, SECTION 5, T 2 N, R 9 W, W.M.: WELL #4 - 989.22 FEET SOUTH AND 2204.31 FEET EAST; WELL #6 - 1087.73 FEET SOUTH AND 2214.81 FEET EAST; WELL #13 - 1055.75 FEET SOUTH AND 2547.09 FEET EAST; WELL #10 - 905.91 FEET SOUTH AND 2543.69 FEET EAST; ALL FROM THE NW CORNER OF SECTION 5

THE PLACE OF USE IS LOCATED AS FOLLOWS:

WITHIN THE SERVICE AREA OF THE PROPOSED NORTH TILLAMOOK COUNTY REGIONAL WATER SUPPLY, TOWNSHIPS 1, 2 AND 3 NORTH, RANGE 10 WEST, W.M.

Measurement, recording and reporting conditions:

A. Before water use may begin under this permit, the permittee shall install a meter or other suitable measuring device as approved by the Director. The permittee shall maintain the meter or measuring device in good working order, shall keep a complete record of the amount of water used each month and shall submit a report which includes the recorded water use measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may

require the permittee to report general water use information, including the place and nature of use of water under the permit.

B. The permittee shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this permit, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interferences.

Within one year of formation of the Regional Water Supply Authority, the permittee shall submit a water management and conservation plan consistent with OAR Chapter 690, Division 86.

STANDARD CONDITIONS

The wells shall be constructed in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge adequate to determine water shall be limited when it interferes with any prior surface or ground water rights.

Prior to receiving a certificate of water right, the permit holder shall submit the results of a pump test meeting the department's standards, to the Water Resources Department. The Director may require water level or pump test results every ten years thereafter.

The use shall conform to such reasonable rotation system as may be ordered by the proper state officer.

Prior to receiving a certificate of water right, the permit holder shall submit the results of a pump test meeting the department's standards, to the Water Resources Department. The Director may require water level or pump test results every ten years thereafter.

Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.

This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

The Director finds that the proposed use(s) of water described by this permit, as conditioned, will not impair or be detrimental to the public interest.

Actual construction of the wells shall begin within one year from permit issuance, and shall be completed on or before October 1, 1997. Complete application of the water to the use shall be made on or before October 1, 1999.

Issued this date, November 6, 1995

Water Resources Department
for Martha O. Pagel
Director

Water Resources Department **State of Oregon**

Interoffice Memorandum 12/8/2014

To: File G-13479 (Permit G-12196, Wheeler Municipal)

From: Michael Thoma

Subject: Update to review of municipal extension of time

Permit G-12196: Wheeler Municipal permit extension of time – originally reviewed on September 25, 2006 – was re-reviewed to reflect changes to the undeveloped portion of the right and updated information on aquifer parameters. The same model (Hunt, B. 1999, Unsteady stream depletion from groundwater pumping. *Groundwater* 37(1). p. 98-102) was run as the original 2006 review but some parameters were changed, in part, to include information from aquifer tests provided by Lee Engineering. Additionally, the original 2006 review partitioned the stream impacts to 75% of the impact coming from the Nehalem River and 25% coming from Peterson Creek. In the updated review and model that partitioning was changed to 90% Nehalem River and 10% Peterson Creek. There is no data available to provide an accurate value to this partitioning of impact, but a 90/10 split more closely matches with our conceptual hydrologic model of the aquifer system. Peterson Creek is a small creek with low flows (discharge < 1% of Nehalem River) and so over any considerable time of pumping the majority of the impact would be to the Nehalem River. The confluence of Peterson Creek and the Nehalem River is approx. 1000 ft downstream from the well site on this permit so any impacts to Peterson Creek in the form of decreased flow would be nearly immediately felt in the Nehalem River below the confluence.

OREGON WATER RESOURCES DEPARTMENT
GROUND WATER REVIEW: MUNICIPAL PERMIT EXTENSION OF TIME

Date: December 8, ~~2008~~ 2014

To: Water Rights Section

From: Michael Thoma / Karl Wozniak, Staff Hydrogeologists

Extension Review for File # G- 13479 **/ Permit # G-** 12196

*This review supersedes previous review by Ivan Gall on September 25, 2006. The purpose of this re-review is to account for a change in the undeveloped portion of the right and to make use of updated information on hydrologic parameters. Only the first page of the original September 25, 2006 review required changes; all other pages remained unchanged.

****

The undeveloped portion of this permit has been evaluated under the Department's 690-09 rules and **was** ☒ **/ was not** ☐ found to have the Potential for Substantial Interference with surface water. The evaluation was conducted pursuant to OAR 690-315. Forward files found to have the potential for substantial interference to Oregon Department of Fish and Wildlife.

Undeveloped Portion of Permit in CFS: 3.6

Estimate of impact and location of evaluation (River mile or PLS)
Stream depletion occurs over a stream reach. Depletion can be variable due to the presence or absence of confining layers within the aquifer. The majority of the impact will extend over a reach twice the distance between the well and the stream.

Stream: Peterson Cr. **Location** 02N/09W-05 NW

Days of Pumping

30	60	90	120	150	180	210	240	270	300	330	360
0.31	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.35

Interference in CFS

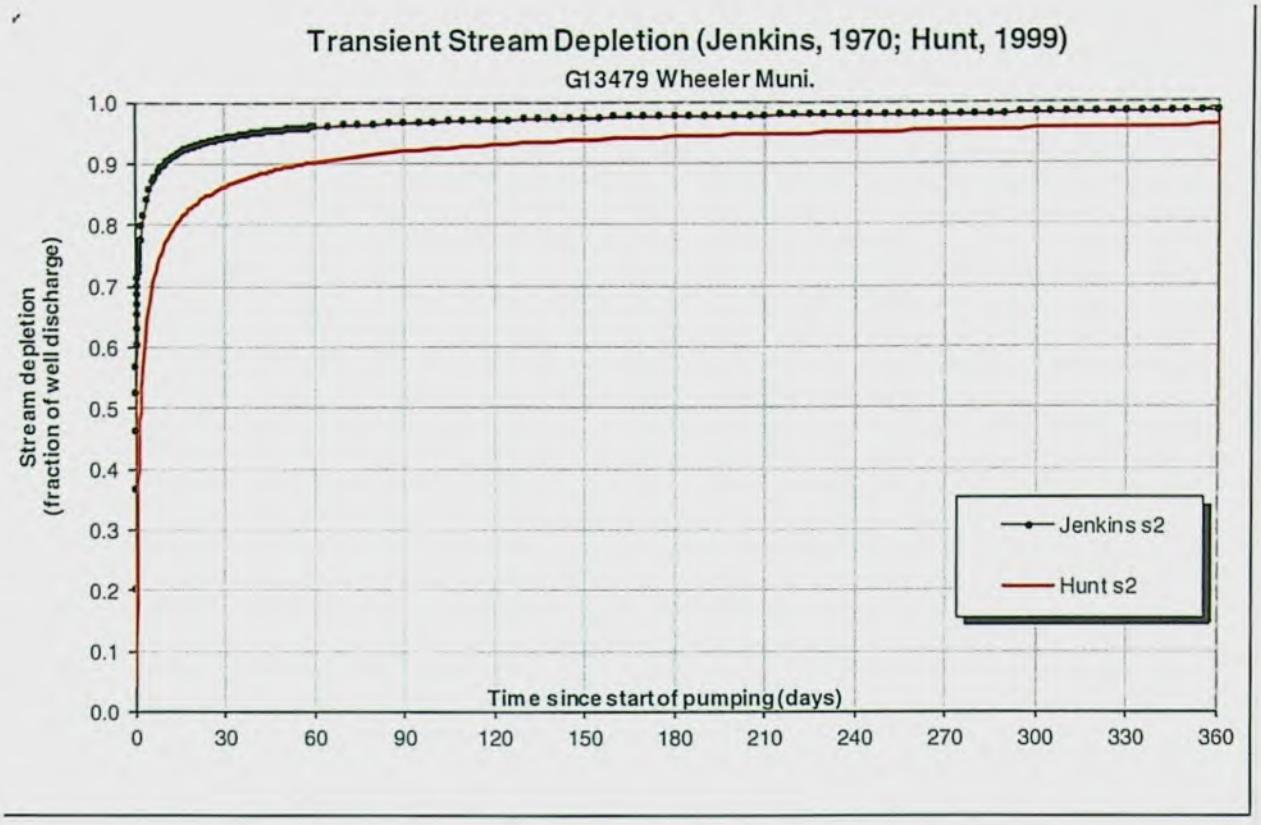
Stream: Nehalem River **Location** 02N/09W-05 NW

Days of Pumping

30	60	90	120	150	180	210	240	270	300	330	360
2.80	2.93	2.98	3.02	3.04	3.06	3.07	3.08	3.09	3.10	3.11	3.11

Interference in CFS

The following page provides results of modeling stream depletion using the Hunt (1999) stream depletion model. The following hydrologic parameters were updated from the 2006 review to reflect new information: Pumping Rate (Qw), Aquifer Hydraulic Conductivity (K), Aquifer Thickness (b), Transmissivity (T), Stream Width (ws), and Streambed Hydraulic Conductivity (Ks). Additionally, the partitioning of impact, which was originally set to 75% impact to Nehalem River, 25% impact to Peterson Creek, was changed to 90% and 10%, which is more reasonable given the conceptual model of the aquifer system. Additional information can be found in the memo attached to this review.



Output for Hunt Stream Depletion, Scenerio 2 (s2): Time pump on = 360 days

Days	30	60	90	120	150	180	210	240	270	300	330	360
Qw, cfs	3.600	3.600	3.600	3.600	3.600	3.600	3.600	3.600	3.600	3.600	3.600	3.600
Jenk SD %	0.941	0.958	0.966	0.971	0.974	0.976	0.978	0.979	0.980	0.981	0.982	0.983
Jen SD cfs	3.388	3.450	3.478	3.494	3.505	3.513	3.520	3.525	3.529	3.533	3.536	3.539
Hunt SD %	0.863	0.903	0.921	0.931	0.938	0.944	0.948	0.951	0.954	0.956	0.958	0.960
Hunt SD cfs	3.108	3.250	3.314	3.352	3.378	3.397	3.412	3.424	3.434	3.443	3.450	3.457

Parameters:		Scenario 1	Scenario 2	Scenario 3	Units
Net steady pumping rate	Qw	3.6	3.6	3.6	cfs
Distance to stream	a	330	330	330	ft
Aquifer hydraulic conductivity	K	3000	1000	500	ft/day
Aquifer thickness	b	50	50	50	ft
Aquifer transmissivity	T	150000	50000	25000	ft*ft/day
Aquifer storage coefficient	S	0.15	0.15	0.15	
Stream width	ws	150	150	150	ft
Streambed hydraulic conductivity	Ks	3	3	3	ft/day
Streambed thickness	bs	2	2	2	ft
Streambed conductance	sbc	225	225	225	ft/day
Stream depletion factor (Jenkins)	sdf	0.1089	0.3267	0.6534	days
Streambed factor (Hunt)	sbf	0.495	1.485	2.97	

Results of stream depletion from pumping of undeveloped portion of right using the Hunt (1999) model. Highlighted row ("Hunt SD cfs") shows total impact to surface water; this value was portioned 90% to the Nehalem River and 10% to Peterson Creek, which is reported on page 1.

References Used: Hunt, B. 1999. Unsteady stream depletion from ground water pumping. Groundwater 37(1). p 98-102.

Permit Extension Ground Water Review

Date: Aug 6, 2014

To: Ivan Gall, Ground Water Section Manager

From: Ann Reece, Permit Extension Review

Subject: Ground Water Review for File G- 13479 / Permit G- 12196

(Date permit issued: Nov 6, 1995 *)*

The above referenced permit is currently being reviewed for an extension of time. Before I can determine whether or not an extension of time should be granted, a Ground Water review for this file is necessary. Special designations affecting this permit are as follows:

NOTE: *Original Division 9 review completed by:* _____

☐ Located within a Ground Water Administrative Area (Critical, Limited, etc.) _____

☐ 5-Year Limited Permit

☐ Other: update undeveloped portion = 3.6 cfs
Please determine estimate of impacts for 3.6 cfs.

For Ground Water / Hydrology Staff Use:

Please review as per checked boxes:

☒ Does the ground water source under this permit have the potential for substantial interference with surface water? Yes or No (please circle one)
*[**NOTE:** Applies **ONLY to Municipal permits issued before November 2, 1998** - see OAR 690-315-0080(1) & (2)]*

- If the ground water source is determined to have potential for substantial, please estimate the impacts that would result from use of the undeveloped portion of the ground water permit.
- The undeveloped portion of this permit = _____ cfs

☐ Are there any ground water special use designations established since permit issuance relevant to this extension of time that the Department should consider? *[see OAR 690-315-0040(4)(b) or (OAR 690-315-0080(5)(b)]* _____

_____

_____

*[**NOTE:** Does **NOT** apply to **Quasi- Municipal or Municipal permits issued before November 2, 1998** - see OAR 690-315-0080(5)]*

☐ Should any additional conditions be added to this permit to mitigate the effects of the subsequent development on competing demands on the resource? For example: Should the Department establish a reference level for water level declines? *[see OAR 690-315-0050(5)(b)]*

_____

_____

_____

REECE Ann L

From: Bill Pavlich <billp@paceengrs.com>
Sent: Wednesday, August 06, 2014 7:59 AM
To: 'REECE Ann L'
Subject: RE: City of Wheeler 2005 Extension

Thanks Ann. I looked through the attachment. The historical elements are fine and the substance and intent haven't changed. The wells have not been improved or expanded so any reference to capacity is still current (minus the effects of some impellor damage). Flow and population statistics have changed, but the extent of change has likely been mitigated somewhat by the length and impact of the economic recession. Costs are out of date. Leasing existing stream water rights (excepting Anderson Creek) to ODFW may still be a possibility, but I don't think anyone has followed up on this to assess its viability as an option. The Plan/Schedule on p.17 for perfection of the water right is out of date and it is difficult to determine at this time when or if the other communities will connect to the system. I think they will most likely exhaust whatever lower cost options are available prior to constructing the needed infrastructure. In addition, the curtailment requirements that are currently under consideration may severely limit the reliability of the supply to potential new communities since the "curtailment season" is when most of them are in need of water.

Dan Weitzel, City of Manzanita, indicated that from his records it looks like October 1, 2003 was the first day of well use for municipal water supply.

Bill Pavlich

PACE
Civil | Structural | Planning | Survey
www.paceengrs.com

Bill Pavlich | Sr. Project Manager
5000 Meadows Road | Suite 345 | Lake Oswego, OR 97035
p. 503.597.3222 | *f.* 503.597.7655
Celebrating 20 Years of Success

From: REECE Ann L [mailto:ann.l.reece@state.or.us]
Sent: Tuesday, August 05, 2014 9:29 AM
To: Bill Pavlich
Subject: City of Wheeler 2005 Extension

Bill,

I am sure we will be in touch soon!

Best Regards,

Ann Reece

- -
Water Right Services Division
Hydroelectric Analyst / Municipal Extension Specialist
Oregon Water Resources Department
725 Summer St. NE Suite A
Salem, OR 97301
503-986-0834
reeceal@wrd.state.or.us

Application File Number: G-13479
Permit Number: G-12196
Applicant: City of Wheeler
Water Source: Wells #4, #6, #13, and #10 within the Nehalem River Basin
Authorized Use of Water Under Permit: Municipal

COLUMBIA RIVERKEEPER

Clean Water = Healthy Rivers = Our Future

Columbia Riverkeeper
111 Third Street
Hood River, OR 97031
www.columbiariverkeeper.org

January 10, 2013

Dwight French, Administrator
Water Right Services Division
Oregon Water Resources Department
725 Summer St. NE, Ste. A
Salem, OR 97301

RE: Request for Notification of Proposed Fisheries Resource Protection Conditions for Municipal Permit Extensions (December 18, 2012 Public Notice).

Dear Mr. French:

Columbia Riverkeeper (Riverkeeper) requests notification of any proposed fisheries resource protection conditions for the fourteen municipal permit extension applications listed on the attached pages from the OWRD Public Notice issued on December 18, 2012. Riverkeeper makes this request pursuant to Or. Admin. R. 690-315-0080(2)(f) ("Upon receiving ODFW's written advice, the Department shall notify the applicant *and any persons that requested notification* of any fishery resource protection conditions that may be proposed in the proposed final order under OAR 690-315-0050) (emphasis added).

If you have any questions regarding this request, please contact Riverkeeper's Clean Water Attorney, Miles Johnson, at (541)272-0027 or miles@columbiariverkeeper.org. Thank you for your attention to this matter.

Sincerely,

Miles Johnson
Clean Water Attorney
Columbia Riverkeeper

Pending Municipal Permit Extension Applications Sent to Oregon Department of Fish and Wildlife for Review

Consistent with OAR 690-315-0080 the Department must notify Oregon Department of Fish and Wildlife of certain pending municipal water use extension applications. If applicable under OAR 690-315-0080 any undeveloped portion of a municipal permit must be conditioned to maintain the persistence of listed fish species in the portions of waterways affected by water use under the permit. The following applications were referred to the Oregon Department of Fish and Wildlife on December 14, 2012.

Application File Number: S-73332
Permit Number: S-53492
Applicant: Arch Cape Water Service District
Water Source: Asbury Creek, a Tributary of Pacific Ocean
Authorized Use of Water Under Permit: Municipal

Application File Number: S-6320
Permit Number: S-3945
Applicant: Astoria Water Commission
Water Source: Big Creek, tributary to Columbia River
Authorized Use of Water Under Permit: Domestic

Application File Number: S-10226
Permit Number: S-7257
Applicant: City Astoria
Water Source: Youngs River, tributary to the Columbia River
Authorized Use of Water Under Permit: Municipal

Application File Number: S-25856
Permit Number: S-27092
Applicant: City of Astoria
Water Source: Youngs River and Youngs River Reservoir, tributary of the Columbia River
Authorized Use of Water Under Permit: Municipal

Application File Number: S-51053
Permit Number: S-43858
Applicant: City of Bay City
Water Source: Kilchis River, tributary to the Tillamook Bay
Authorized Use of Water Under Permit: Municipal

Application File Number: R-25855
Permit Number: R-2568
Applicant: City of Astoria
Water Source: The Youngs River Reservoir, Youngs River, a tributary to the Columbia River
Authorized Use of Water Under Permit: Municipal

Application File Number: R-32825
Permit Number: R-2653
Applicant: City of McMinnville
Water Source: McMinnville 4B, Walker Creek, tributary of Nestucca River and Pacific Ocean
Authorized Use of Water Under Permit: Municipal

Application File Number: S-32770
Permit Number: S-27520
Applicant: City of McMinnville
Water Source: Nestucca River and McMinnville Reservoir 4C, Walker Creek and McMinnville Reservoir 4B, tributary to the Pacific Ocean
Authorized Use of Water Under Permit: Municipal

Application File Number: S-59448
Permit Number: S-45008
Applicant: City of Nehalem
Water Source: West branch of Coal Creek, an unnamed tributary of Coal Creek, Coal Creek, all tributary to North Fork Nehalem River
Authorized Use of Water Under Permit: Municipal

Application File Number: G-7902
Permit Number: G-5070
Applicant: City of Warrenton
Water Source: The Lewis and Clark River, a tributary to the Columbia River
Authorized Use of Water Under Permit: Municipal

Application File Number: G-13479
Permit Number: G-12196
Applicant: City of Wheeler
Water Source: Wells #4, #6, #13, and #10 within the Nehalem River Basin
Authorized Use of Water Under Permit: Municipal

Application File Number: S-45629
Permit Number: S-34032
Applicant: Neahkahnie Water District
Water Source: Pirate Springs
Authorized Use of Water Under Permit: Municipal

Application File Number: S-72306
Permit Number: S-51578
Applicant: Neahkahnie Water District
Water Source: Three Springs, tributaries of Nehalem Bay
Authorized Use of Water Under Permit: Municipal

Application File Number: G-10574
Permit Number: G-9829
Applicant: City of Tillamook
Water Source: A Well
Authorized Use of Water Under Permit: Municipal

WATERWATCH

PROTECTING NATURAL FLOWS IN OREGON RIVERS

G13479
City of
Wheeler

Lisa Brown
WaterWatch of Oregon
213 SW Ash Street, Suite 208
Portland, OR 97204

January 9, 2013

Dwight French
Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301-1271

RE: Request for Notification of Proposed Municipal Extension Fishery Resource Protection Conditions (December 18, 2012 Public Notice)

Dear Mr. French:

I am writing to request notification of any proposed fishery resource protection conditions for the 12 coastal municipal permit extension applications listed on the attached pages from the December 18, 2012 OWRD Public Notice (omitting the two noted that were not sent to ODFW according to the December 25, 2012 Public Notice).

This request is made pursuant to OAR 690-315-0080(2)(f) ("Upon receiving ODFW's written advice, the Department shall notify the applicant and any persons that requested notification of any fishery resource protection conditions that may be proposed in the proposed final order under OAR 690-315-0050").

Please do not hesitate to contact me at 503.295.4039 x4 or lisa@waterwatch.org if there are any questions regarding this request. Thank you for your assistance.

Sincerely,

Lisa A Brown

Lisa Brown

Attachment: excerpt of Public Notice (2 pages)

cc: Ann Reece (by email only)

RECEIVED
JAN 11 2013
WATER RESOURCES DEPT
SALEM, OREGON

Pending Municipal Permit Extension Applications Sent to Oregon Department of Fish and Wildlife for Review

Consistent with OAR 690-315-0080 the Department must notify Oregon Department of Fish and Wildlife of certain pending municipal water use extension applications. If applicable under OAR 690-315-0080 any undeveloped portion of a municipal permit must be conditioned to maintain the persistence of listed fish species in the portions of waterways affected by water use under the permit. The following applications were referred to the Oregon Department of Fish and Wildlife on December 14, 2012.

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Permit Number: S-3945
Applicant: Astoria Water Commission
Water Source: Big Creek, tributary to Columbia River
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Permit Number: S-7257
Applicant: City Astoria
Water Source: Youngs River, tributary to the Columbia River
Authorized Use of Water Under Permit: Municipal

Application File Number: S-25856 (NOT SENT TO ODFW ACCORDING TO 12/25/2012 PUBLIC NOTICE)
Permit Number: S-27092
Applicant: City of Astoria
Water Source: Youngs River and Youngs River Reservoir, tributary of the Columbia River
Authorized Use of Water Under Permit: Municipal

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Permit Number: S-43858
Applicant: City of Bay City
Water Source: Kilchis River, tributary to the Tillamook Bay
Authorized Use of Water Under Permit: Municipal

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Water Source: McMinnville 4B, Walker Creek, tributary of Nestucca River and Pacific Ocean
Authorized Use of Water Under Permit: Municipal

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Applicant: City of McMinnville
Water Source: Nestucca River and McMinnville Reservoir 4C, Walker Creek and McMinnville Reservoir 4B, tributary to the Pacific Ocean
Authorized Use of Water Under Permit: Municipal

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Permit Number: S-45008
Applicant: City of Nehalem
Water Source: West branch of Coal Creek, an unnamed tributary of Coal Creek, Coal Creek, all tributary to North Fork Nehalem River
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Water Source: Wells #4, #6, #13, and #10 within the Nehalem River Basin
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Permit Number: S-34032
Applicant: Neahkahnie Water District
Water Source: Pirate Springs
Authorized Use of Water Under Permit: Municipal

Application File Number: S-72306
Permit Number: S-51578
Applicant: Neahkahnie Water District
Water Source: Three Springs, tributaries of Nehalem Bay
Authorized Use of Water Under Permit: Municipal

Application File Number: G-10574
Permit Number: G-9829
Applicant: City of Tillamook
Water Source: A Well
Authorized Use of Water Under Permit: Municipal

CC to Bill Fujii

City of Manzanita / City of Wheeler

from John Handler - WT2/WD2 #3358
Water Operator (**DRC**) for **Manzanita & Wheeler**
Person in Direct Responsible Charge
PO Box 129
Manzanita, OR 97130

Thursday, June 28, 2007

RECEIVED
JUN 29 2007
WATER RESOURCES DEPT
SALEM, OREGON

TO: **Oregon Water Resources Department**
Debbie L. Colbert, ... Senior Water Policy Advisor
725 Summer Street N.E.
Salem, OR 97301

RE: **Water Management and Conservation Plan for - City of Wheeler Permit G-12196**

Dear Debbie:

My name is John Handler, and I am the Water Operator DRC (Person in Direct Responsible Charge for Treatment and water sources) for the cities of Manzanita and Wheeler.

I have just been in contact with Kim French and via Kim, Ann Reese.

We currently have an Administrative Hold on our Water Management and Conservation Plan dated Aug 29, 2006 which was submitted in August 16, 2006 ... as part of our 2004 Water Right Extension Application for Permit # G-12196

Kim and Ann have recommended I contact you and Bill Fujii about asking for a **"Temporary Administrative Hold"** on the **Water Management & Conservation Plan,** delivered to the WRD on September 30, 2005. I have therefore directed this letter to you with a copy to Bill!

Water Management & Conservation Plan History

The Cities of Manzanita & Wheeler in (2002 & 2003) completed extensive water system improvements including two supply wells and transmission mains that form the backbone of what is currently used as a regional water supply. The new water system was built and is owned by the City of Manzanita. The Water Rights are in the City of Wheeler's name and the system is operated via an Intergovernmental agreement between both cities. The IGA's (Intergovernmental Cooperative Agreements) were signed in October of 2000 and March of 2005.

Currently the system serves The City of Manzanita, the City of Wheeler, Nehalem Bay State Park, Paradise Cove Resort, the community of Zaddack Creek Coop and the community of Tideland Water Coop.

Water rights permit G-13479 from Ore WRD (Oregon Water Resources Department) governs withdrawals at the systems two new wells and includes a requirement that a **Water Management & Conservation Plan** (WMCP) consistent with OAR Chapter 690, Division 86, be submitted to the Oregon Water Resources Department.

Since the water rights are listed in the City of Wheeler's name, this ultimately was the responsibility of the City of Wheeler. ... When the City of Wheeler was having difficulty with several changes of staff members

in the 2002 thru 2005 time period, the City of Manzanita offered to complete the needed work concurrently with the City of Manzanita's Master Water Plan. …

The final joint …**City of Manzanita / City of Wheeler - Water Management & Conservation Plan** was completed by HGE Engineers (Bill Pavlich PE), and 2 copies delivered to the State of Oregon - Water Resources Department (Bill Fujii & Lisa Juel) on September 30, 2005.

Current Status

I have been in contact with the Oregon Water Resources Department off and on for the past years, checking on the status of our Water Management & Conservation Plan and well site Water Rights Extension. I last talked to Kim French at WRD on June 28, 2007.

Kim mentioned that since our Water Right Extension has not yet been issued, … she and Ann Reece recommended writing a letter to you, asking for a **"Temporary Administrative Hold"** on the review of our "Water Management & Conservation Plan" (WMCP), that is required as part of our Well Site Water Rights Extension for Permit # G-12196 / Application # G-13479.

I was told the temporary administrative hold, will prevent the cities having to resubmit another **WMCP** and the associated costs. The "Temporary Administrative Hold" is needed due to the slow process currently underway for our Water Rights Extension. … It is our understanding that our Water Rights Extension is currently one of multiple Municipal Water Right extensions in the queue, for review, by WRD/Oregon Fish & Wildlife. Our extension application has been in the queue for approximately 3 years. … According to a discussion I had June 28th, 2007, with Kim French at OR WRD , it may be another 1 to 2 years before our Water Right Extension is completed.

I have met with the Wheeler & Manzanita City Managers and have been directed to write this letter.

Therefore the City of Wheeler is formally asking for a Temporary Administrative Hold, on the City of Manzanita / City of Wheeler - "Water Management & Conservation Plan" … for the groundwater permit # G-12196, Until such time that the Water Rights Extension is completed. … This is based on the current and past recommendations from Kim French, Ann Reece and Bill Fujii,

If you need to contact me about this, please feel free to call my cell phone 503 801-0905 or my office phones 503 368-3940 or 503 368-5347.

Sincerely,
John Handler

Water Operator / DRC for; … City of Manzanita & City of Wheeler

cc: Doug Hooper - City of Wheeler, Manager
Jerald Taylor - City of Manzanita, Manager
Bill Fujii - Oregon Water Resources Department

Oregon
Theodore R. Kulongoski, Governor

Water Resources Department
North Mall Office Building
725 Summer Street NE, Suite A
Salem, OR 97301-1266
503-986-0900
FAX 503-986-0904

August 29, 2006

John Hanler
City of Wheeler
PO Box 177
Wheeler, Oregon

RE: Request for Administrative Hold

Dear Mr Hanler:

We received your August 16, 2006 request to place the City of Wheeler's Water Management and Conservation Plan (WMCP) on administrative hold to complete the water right extension process so you may include this information in the WMCP. Your letter did not specify a date to end your administrative hold.

Pursuant to OAR 690-086-0910 the request is granted the plan will be on administrative hold until August 16, 2007. At that time the Department will confer with you on the review and completion of the plan.

Please do not hesitate to contact Bill Fujii of the Department staff if we can be of further assistance. Bill's phone number is 503-986-0887 and his e-mail address is william.h.fujii@wrd.state.or.us .

Sincerely,

Debbie Colbert, Senior Policy Coordinator

cc: wmcp file

This is a final order in other than contested case. This order is subject to judicial review under ORS 183.484. Any petition 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 137-004-080 and OAR 690-01-005 you may either petition for judicial review or petition the Director for reconsideration of this order.

City of Manzanita
P.O. Box 129
Manzanita, Oregon 97130-0129

Oregon Water Resources Department
Attn: Bill Fujii
725 Summer Street NE
Salem, OR 97301

97301$1266 C007

fax

State of Oregon
Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
Tel: 503-986-0900
http://www.wrd.state.or.us

From: CITY of Wheeler, OR
~~To:~~ City Engineer or Public Works Director
Company:
Fax:
Phone:
To:
~~From:~~ Leona Albin

Fax: 503-986-0901

Phone: 503-986-0818

Pages: 3, including this cover sheet.

Date: February 22, 2006

* Please note correction to March 6, 2006.
Sorry for any confusion

February 16, 2006

REFERENCE: Adoption of New Administrative Rules for Municipal Water Use Permit Extensions

Dear Municipal Water Use Permit Extension Applicant:

The Water Resources Commission adopted new administrative rules that govern the processing of municipal use permit extension of time requests. The new rules took effect on November 22, 2005, and are contained in Oregon Administrative Rules Chapter 690, Division 315 (OAR 690-315-0070 through 690-315-0100). If you wish to view a copy of the new Chapter 690, Division 315 Water Right Permit Extension rules, you may access the document from the Department's web page at:

http://oregon.gov/OWRD/LAW/oar.shtml

The new extension of time rules require extension applications for municipal water use permits issued before November 2, 1998, to include a copy of any agreements regarding use of the undeveloped portion of the permit between the permit holder and a federal or state agency that include conditions or required actions that maintain the persistence of listed fish species in the portions of waterways affected by water use under the permit.

The Department has determined that you are the holder of a municipal water use permit for which an extension of time application has been submitted. In accordance with OAR 690-315-0070(q), therefore, if your municipal water use permit was issued before November 2, 1998, you must either:

1. Submit a copy of any agreements between the permit holder and a federal or state agency, as described above, that maintain the persistence of listed fish species in the portions of waterways affected by water use under the permit; or
2. Notify the Department that you do not hold any such agreements. we do not

Please submit this information to the Department no later than March 6, 2006.

If you do not respond to this letter by March 6, 2006, the Department will assume that you do not have an agreement with a federal or state agency that will maintain the persistence of listed fish species in the portions of waterways affected by water use under the permit.

ok T. 3/6/06

City of Wheeler
P.O. Box 177 Wheeler OR 97147

Tim Grossnickle
Public Works Supt.

File 6 - 13479

City of Manzanita / City of Wheeler

from John Handler - WT2/WD2 #3358
Water Operator (**DRC**) for Manzanita & Wheeler
Person in Direct Responsible Charge
PO Box 177
Wheeler, OR 97147

Wednesday, August 16, 2006

TO: **Oregon Water Resources Department**
Debbie L. Colbert, ... Senior Water Policy Advisor
725 Summer Street N.E.
Salem, OR 97301

RE: **Water Management and Conservation Plan for - City of Wheeler Permit G-12196**

Dear Debbie:

My name is John Handler, and I am the Water Operator DRC (Person in Direct Responsible Charge for Treatment and water sources) for the cities of Manzanita and Wheeler.

I have been in contact with William (Bill) Fugii in your office, who recommended I contact you about asking for a **"Temporary Administrative Hold"** on the **Water Management & Conservation Plan** delivered to the WRD (Bill Fugii & Lisa Juul) on September 30, 2005. I have therefore directed this letter to you!

Water Management & Conservation Plan History

The Cities of Manzanita & Wheeler recently (2002 & 2003) completed extensive water system improvements including two supply wells and transmission mains that form the backbone of what is currently used as a regional water supply. The new water system was built and is owned by the City of Manzanita. The Water Rights are in the City of Wheeler's name and the system is operated via an Intergovernmental agreement between both cities. The IGA's (Intergovernmental Cooperative Agreements) were signed in October of 2000 and March of 2005.

Currently the system serves The City of Manzanita, the City of Wheeler, Nehalem Bay State Park, Paradise Cove Resort, the community of Zaddack Creek Coop and soon the community of Tideland Water Coop.

Water rights permit G-13479 from Ore WRD (Oregon Water Resources Department) governs withdrawals at the systems two new wells and includes a requirement that a **Water Management & Conservation Plan** (WMCP) consistent with OAR Chapter 690, Division 86, be submitted to the Oregon Water Resources Department.

Since the water rights are listed in the City of Wheeler's name, this ultimately was the responsibility of the City of Wheeler. ... When the City of Wheeler was having difficulty with several changes of staff members in the 2002 thru 2005 time period, the City of Manzanita offered to complete the needed work concurrently with the City of Manzanita's Master Water Plan. ...

The final joint ...**City of Manzanita / City of Wheeler - Water Management & Conservation Plan** was completed by HGE Engineers (Bill Pavlich PE), and 2 copies delivered to the State of Oregon - Water Resources Department (Bill Fugii & Lisa Juul) on September 30, 2005.

Current Status

I have been in contact with the Oregon Water Resources Department off and on for the past year, checking on the status of our Water Management & Conservation Plan and well site Water Rights Extension. I last talked to Bill Fugii at WRD on July 28, 2006.

Bill mentioned that since our Water Right Extension has not yet been issued, … he recommended writing a letter to you, asking for a "**Temporary Administrative Hold**" on the review of our "**W**ater **M**anagement **&** **C**onservation Plan" (WMCP), that is required as part of our Well Site Water Rights Extension for Permit # G-12196 / Application # G-13479.

I was told the temporary administrative hold, will prevent the cities having to resubmit another **WMCP** and the associated costs. The "Temporary Administrative Hold" is needed due to the slow process currently underway for our Water Rights Extension. … It is our understanding that our Water Rights Extension is currently one of 80 some extensions in the queue, for review, by Oregon Fish & Wildlife, and has already been in the queue for several months. … According to a discussion I had July 28th, 2006, with Ann Reece at OR WRD , it may be another 2 years before our Water Right Extension is completed.

I met with the Wheeler City Council last night and was directed to write this letter.

Therefore the City of Wheeler is formally asking for a **Temporary Administrative Hold**, on the City of Manzanita / City of Wheeler - "**W**ater **M**anagement **&** **C**onservation **P**lan" … for the groundwater permit # G-12196, Until such time that the Water Rights Extension is completed. … This is based on the recommendations from Bill Fugii and Ann Reece.

If you need to contact me about this, please feel free to call my cell phone 503 801-0905 or my office phones 503 368-3940 or 503 368-5343.

Sincerely,
John Handler

Water Operator / DRC for; … City of Manzanita & City of Wheeler

cc: Doug Hooper - City of Wheeler, Manager
Jerald Taylor - City of Manzanita, Manager
Bill Fugii - Oregon Water Resources Department
Ann Reece - Oregon Water Resources Department

File in
GW

State of Oregon
Water Resources Department

Interoffice Memorandum January 25, 2006

To: Water Rights File G-13479

From: Ground Water Hydrology Section (Sabrina White)

Subject: Status of wells listed as POAs on Permit G-12196

Summary:

Original Application

App #	Permit #	Well Log	Owner's Well Name
G-13479	G-12196	TILL 50076	Production Well 1 (was referred to as Well 6 on permit)
		TILL 50077	Production Well 2 (was referred to as Well 13 on permit)
		TILL 50078 *	Abandoned Well (located near legal for Well 10 on permit)
		TILL 50080 *	Test Well (located near legal for Well 4 on permit)

* INFORMATION FOR THE TEST WELL AND ABANDONED WELL HAVE BEEN SENT, BY THE CITY OF WHEELER, AS CURRENT STATUS OF WELLS 4 AND 10 ON THE PERMIT. IT IS UNCLEAR WHETHER THEY STILL PLAN ON DRILLING PRODUCTION WELLS AT THESE LOCATIONS. FOR THAT REASON, I DID NOT MAKE THE POA CORRELATION IN WRIS. HOWEVER, I DID CREATE RECORDS IN GWM AND DIGITIZED BOTH WELLS.

OREGON WATER RESOURCES DEPARTMENT
GROUND WATER REVIEW: MUNICIPAL PERMIT EXTENSION OF TIME

Date: September 25, 2006

To: Water Rights Section

From: Ivan Gall, Staff Hydrogeologist

Extension Review for File # G- 13479 **/ Permit # G-** 12196

****

The undeveloped portion of this permit has been evaluated under the Department's 690-09 rules and **Was** ☒ **/ was not** ☐ found to have the Potential for Substantial Interference with surface water. The evaluation was conducted pursuant to OAR 690-315. Forward files found to have the potential for substantial interference to Oregon Department of Fish and Wildlife.

Undeveloped Portion of Permit in CFS: 2.43

Estimate of impact and location of evaluation (River mile or PLS)
Stream depletion occurs over a stream reach. Depletion can be variable due to the presence or absence of confining layers within the aquifer. The majority of the impact will extend over a reach twice the distance between the well and the stream.

Stream: Peterson Creek **Location 02N/09W-05 NW**

Days of Pumping

30	60	90	120	150	180	210	240	270	300	330	360
0.463	0.502	0.521	0.532	0.542	0.600	0.600	0.600	0.601	0.602	0.602	0.602

Interference in CFS

Stream: Nehalem River **Location 02N/09W-05 NW**

Days of Pumping

30	60	90	120	150	180	210	240	270	300	330	360
1.390	1.507	1.562	1.595	1.627	1.799	1.801	1.802	1.803	1.804	1.805	1.806

Interference in CFS

Stream: _____ **Location** _____

Days of Pumping

30	60	90	120	150	180	210	240	270	300	330	360

Interference in CFS

Municipal/Quasi-Municipal Extension of Time Review

TO: Water Rights Section Date **September 25, 2006**

FROM: Ground Water/Hydrology Section **Ivan Gall**
Reviewer's Name

SUBJECT: File G- **13479** Supersedes review of **n/a**
Date of Review(s)

Criteria for Department Review of Extension Applications for Municipal and Quasi-Municipal Water Use Permits (Ground Water)

OAR 690-315-0080 (2)(c): *For ground water permits submitted to ODFW under this rule* (permits determined to have the potential for substantial interference), *the Department shall provide to ODFW and the applicant the Department's estimate of surface water impacts that would result from the use of the undeveloped portion of the ground water permit.* **This review is based upon available information and agency policies in place at the time of evaluation.**

A. GENERAL INFORMATION: Applicant's Name: **City of Wheeler** County: **TILL**

Applicant(s) seek(s) **3.6*** ** cfs from **4** well(s) in the **Nehalem River** Basin,

Peterson Creek subbasin Quad Map: **Foley Peak**

Proposed use: **Municipal** Seasonality: **Year-round**

Well and aquifer data (**attach and number logs for existing wells; mark proposed wells as such under logid**):

Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	**TILL 50076**	**1 (prev. 6)**	**Alluvial**	**3.6**	**02N/09W-05 NENW**	**1087' S, 2214' E fr NW cor S 5**
2	**TILL 50077**	**2(prev. 13)**	**Alluvial**	**3.6**	**02N/09W-05 NENW**	**1055' S, 2547' E fr NW cor S 5**
3	**TILL 50080**	**4**	**Alluvial**	**3.6**	**02N/09W-05 NENW**	**989' S, 2204' E fr NW cor S 5**
4	**TILL 50078**	**10**	**Alluvial**	**3.6**	**02N/09W-05 NENW**	**905' S, 2544' E fr NW cor S 5**
5						

* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	**30**	**9**	**14**	**7/24/96**	**63**	**0-33.5**	**+3-55**	**na**	**43-53**	**1012**	**3.5**	**P ***
2	**30**	**16**	**14**	**7/28/96**	**63**	**0-33.5**	**+3-45**	**na**	**45-60**	**1025**	**3.5**	**P***
4	**30**	**9**	**14**	**7/11/96**	**64**	**0-33.5**	**na**	**na**	**45-60**	**na**	**na**	
10	**30**	**na**	**14**	**6/28/96**	**49**	**na**	**ns**	**ns**	**ns**	**>100**	**ns**	

Use data from application for proposed wells.

Comments: As of September 2006, it appears that only two wells have been drilled and are being used as municipal POAs. One well (TILL 50078) has been abandoned; one well (TILL 50080) was drilled as a test well.
*24-hour pump tests were conducted on each well.

*** *Undeveloped portion of water right is* ***2.43 CFS.***

☐ **Well(s) #** _____, _____, _____, _____, _____, tap(s) an aquifer limited by an administrative restriction.
Name of administrative area: _____
Comments: _____

File G-13479 continued Date September 25, 2006

GROUND WATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040

690-09-040 (1): Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	**alluvial**	☐	☒
2	**alluvial**	☐	☒
4	**alluvial**	☐	☒
10	**alluvial**	☐	☒
		☐	☐

Basis for aquifer confinement evaluation: Shallow alluvial nature of aquifer with no evidence of continuous, thick clay layers at land surface that would act as a confining bed.

690-09-040 (2) (3): Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected? YES	NO	ASSUMED	Potential for Subst. Interfer. Assumed? YES	NO
1	1	**Peterson Creek**	**16**	**10**	**300**	☐	☐	☒	☒	☐
2	1	**Peterson Creek**	**16**	**10**	**300**	☐	☐	☒	☒	☐
1	2	**Nehalem River**	**16**	**10**	**450**	☐	☐	☒	☒	☐
2	2	**Nehalem River**	**16**	**10**	**450**	☐	☐	☒	☒	☐
4	1	**Peterson Creek**	**16**	**10**	**150**	☐	☐	☒	☒	☐
10	1	**Peterson Creek**	**16**	**10**	**100**	☐	☐	☒	☒	☐
4	2	**Nehalem River**	**16**	**10**	**560**	☐	☐	☒	☒	☐
10	2	**Nehalem River**	**16**	**10**	**600**	☐	☐	☒	☒	☐
						☐	☐	☐	☐	☐

Basis for aquifer hydraulic connection evaluation: Proximity of wells to surface water, similar head in aquifer to surface water stage, surface water in direct connection with alluvial aquifer.

Water Availability Basin the well(s) are located within: Peterson Creek and Nehalem River

690-09-040 (4): Evaluation of stream impacts for each well that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% *natural* flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked ☒ box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
1	1	☒	☐	**72503**	**.18**	☒	**.09**	☒	**>25%***	☒
2	1	☒	☐	**72503**	**.18**	☒	**.09**	☒	**>25%**	☒
4	1	☒	☐	**72503**	**.18**	☒	**.09**	☒	**>25%**	☒
10	1	☒	☐	**72503**	**.18**	☒	**.09**	☒	**>25%**	☒
1	2	☒	☐	**59752**	**100**	☒	**121**	☒	**>25%**	☒
2	2	☒	☐	**59752**	**100**	☒	**121**	☒	**>25%**	☒
4	2	☒	☐	**59752**	**100**	☒	**121**	☒	**>25%**	☒
10	2	☒	☐	**59752**	**100**	☒	**121**	☒	**>25%**	☒

File G-13479 continued Date September 25, 2006

690-09-040 (4): Evaluation of stream impacts by total appropriation for all wells determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. **Complete only if Q is distributed among wells.** Otherwise same evaluation and limitations apply as in C3a above.

	SW #		Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐
			☐			☐		☐		☐

Comments: *Use Hunt (1999) analytical model. Given DTW and bedrock occurrence between 44-64 feet bgs, assume aquifer thickness = 35 feet. Aquifer hydraulic conductivity range estimate for gravel from Freeze and Cherry (1979) and Domenico and Schwartz (1990). Took greatest distance of 600 feet (model not sensitive to distance given the high hydr. conductivity and aquifer storage values). Assume aq. storage = 15%, reasonable for a moderately-sorted gravel aquifer. Assume stream width = 60 ft and streambed thickness = 2 ft; took vertical streambed conductivity 3 orders of magnitude less than horizontal hydr. conductivity. Note that all model assumptions are not met, including presence of two streams.

690-09-040 (5): Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													

Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Total Interf. CFS													

Comments:

Extension Review Remarks / Conditions: The impact to surface water was estimated by taking an intermediate distance between Peterson Creek and the Nehalem River (330 feet) and assigning a 2.43 cfs rate to that point. I estimated a 75%-of-pumping impact to the Nehalem River and 25% to Peterson Creek. The Nehalem will take the greatest impact due to its greater width and incisement and subsequent greater degree of hydraulic connection with the alluvial aquifer.

The stream width of 60 feet is less than the Nehalem River and greater than Peterson Creek. The stream bed thickness estimate of 2 feet is probably reasonable for the Nehalem River and too thin for Peterson Creek. A short-coming of the analytical model is the difficulty of assessing a system with more than one hydraulic boundary.

Attach estimates of surface water impacts to this review

References Used:

Hunt, B., 1999, Unsteady stream depletion from ground water pumping: Ground Water, v. 37, no. 1, p. 98-102.

Domenico, P.A., and F.W. Schwartz, 1990. Physcial and Chemical Hydrogeology. John Wiley and Sons, New York.

Freeze, R.A., and J.A. Cherry, 1979. Groundwater. Prentice-Hall, Inc., New Jersey.

Water Availability as of 9/21/2006 for
PETERSON CR > NEHALEM R - AT MOUTH
Watershed ID #: 70958 Basin: NORTH COAST Exceedance Level: 80
Time: 11:02 Date: 09/21/2006
Select an Item Number for More Details

Item #	Watershed ID #	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sto
1	36	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
2	70958	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

STREAM NAMES
Water Availability as of 9/21/2006 for
PETERSON CR > NEHALEM R - AT MOUTH
Watershed ID #: 70958 Basin: NORTH COAST Exceedance Level: 80
Time: 11:02 Date: 09/21/2006

Item	Watershed ID	Stream Name
1	36	NEHALEM R > NEHALEM BAY - AT MOUTH
2	70958	PETERSON CR > NEHALEM R - AT MOUTH

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
Water Availability as of 9/21/2006 for
NEHALEM R > NEHALEM BAY - AT MOUTH
Watershed ID #: 36 Basin: NORTH COAST Exceedance Level: 80
Time: 11:02 Date: 09/21/2006

Month	Natural Stream Flow	Consumptiv Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Require-ments	Net Water Available
1	2580.00	8.54	2570.00	0.00	270.00	2300.00
2	3130.00	8.52	3120.00	0.00	270.00	2850.00
3	2600.00	8.50	2590.00	0.00	270.00	2320.00
4	1820.00	8.67	1810.00	0.00	270.00	1540.00
5	936.00	9.58	926.00	0.00	200.00	726.00
6	465.00	12.00	453.00	0.00	150.00	303.00
7	224.00	16.50	207.00	0.00	100.00	107.00
8	126.00	14.70	111.00	0.00	100.00	11.30
9	**121.00**	9.48	112.00	0.00	100.00	11.50
10	174.00	8.54	165.00	0.00	270.00	-105.00
11	1170.00	8.41	1160.00	0.00	270.00	892.00
12	3070.00	8.52	3060.00	0.00	270.00	2790.00
Stor-50%	1950000	7370	1940000	0	153000	1790000

DETAILED REPORT OF **INSTREAM** REQUIREMENTS
Water Availability as of 9/21/2006 for
NEHALEM R > NEHALEM BAY - AT MOUTH
Watershed ID #: 36 Basin: NORTH COAST Exceedance Level: 80
Time: 11:02 Date: 09/21/2006

	ISWRs							
APP #	MF 36	0	0	0	0	0	0	MAXIMUM
Status	Cert.							
1	270.00	0.00	0.00	0.00	0.00	0.00	0.00	270.00
2	270.00	0.00	0.00	0.00	0.00	0.00	0.00	270.00
3	270.00	0.00	0.00	0.00	0.00	0.00	0.00	270.00
4	270.00	0.00	0.00	0.00	0.00	0.00	0.00	270.00

5	200.00	0.00	0.00	0.00	0.00	0.00	0.00	200.00
6	150.00	0.00	0.00	0.00	0.00	0.00	0.00	150.00
7	100.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
8	**100.00**	0.00	0.00	0.00	0.00	0.00	0.00	100.00
9	100.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
10	270.00	0.00	0.00	0.00	0.00	0.00	0.00	270.00
11	270.00	0.00	0.00	0.00	0.00	0.00	0.00	270.00
12	270.00	0.00	0.00	0.00	0.00	0.00	0.00	270.00

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

Water Availability as of 9/21/2006 for

PETERSON CR > NEHALEM R - AT MOUTH

Watershed ID #: 70958 Basin: NORTH COAST Exceedance Level: 80

Time: 11:02 Date: 09/21/2006

Month	Natural Stream Flow	Consumptiv Use and Storage	Expected Stream Flow	Reserved Stream Flow	Instream Require-ments	Net Water Available
1	3.95	2.34	1.61	0.00	12.20	-10.60
2	5.32	2.34	2.98	0.00	10.80	-7.82
3	4.16	2.34	1.82	0.00	8.51	-6.69
4	2.30	2.34	-0.04	0.00	4.05	-4.09
5	0.88	2.34	-1.46	0.00	1.45	-2.91
6	0.46	0.11	0.35	0.00	1.13	-0.78
7	0.20	0.06	0.14	0.00	0.52	-0.38
8	0.10	0.03	0.07	0.00	0.23	-0.16
9	**0.09**	0.03	0.06	0.00	0.18	-0.12
10	0.14	0.05	0.09	0.00	0.45	-0.36
11	1.53	2.34	-0.81	0.00	5.98	-6.79
12	4.52	2.34	2.18	0.00	10.90	-8.72
Stor-50%	3390	1001	2440	0	3390	0

DETAILED REPORT OF **INSTREAM** REQUIREMENTS

Water Availability as of 9/21/2006 for

PETERSON CR > NEHALEM R - AT MOUTH

Watershed ID #: 70958 Basin: NORTH COAST Exceedance Level: 80

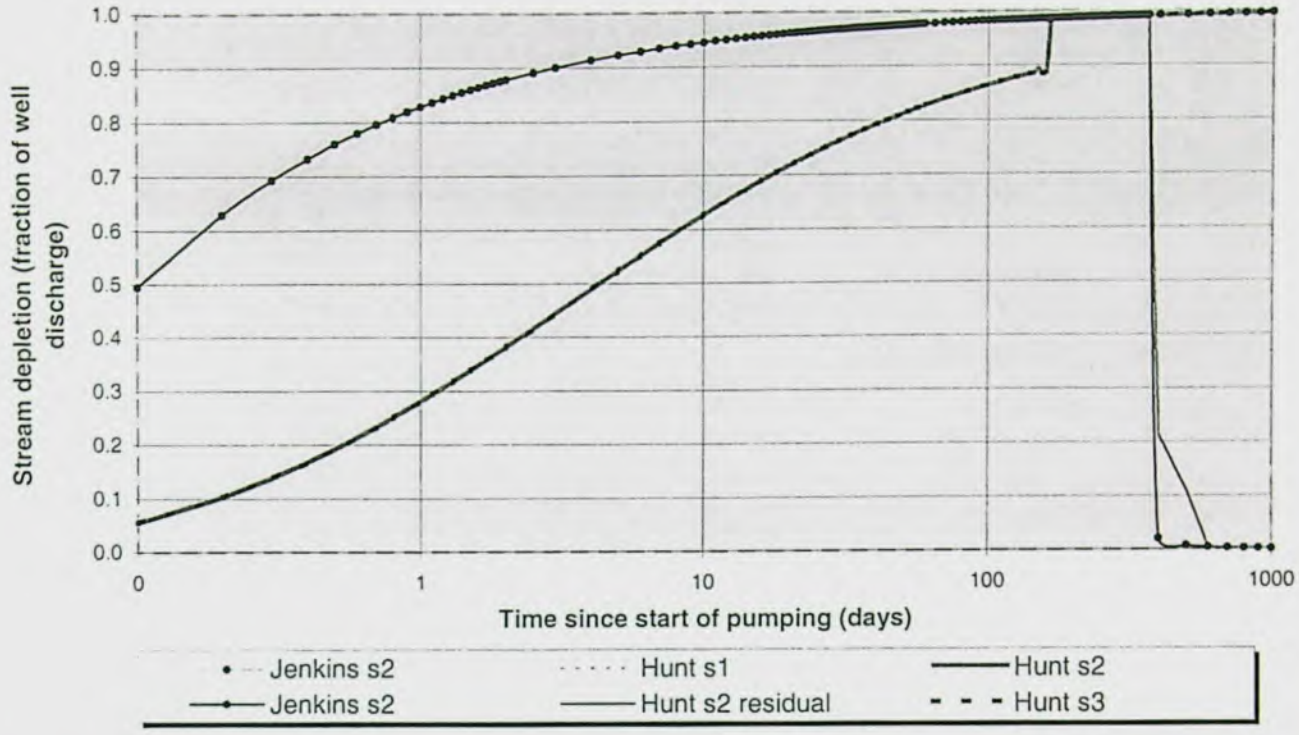
Time: 11:02 Date: 09/21/2006

	ISWRs							
APP #	IS 70958	0	0	0	0	0	0	MAXIMUM
Status	Cert.							
1	12.20	0.00	0.00	0.00	0.00	0.00	0.00	12.20
2	10.80	0.00	0.00	0.00	0.00	0.00	0.00	10.80
3	8.51	0.00	0.00	0.00	0.00	0.00	0.00	8.51
4	4.05	0.00	0.00	0.00	0.00	0.00	0.00	4.05
5	1.45	0.00	0.00	0.00	0.00	0.00	0.00	1.45
6	1.13	0.00	0.00	0.00	0.00	0.00	0.00	1.13
7	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.52
8	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.23
9	**0.18**	0.00	0.00	0.00	0.00	0.00	0.00	0.18
10	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.45
11	5.98	0.00	0.00	0.00	0.00	0.00	0.00	5.98
12	10.90	0.00	0.00	0.00	0.00	0.00	0.00	10.90

x/x/2006
original model

Transient Stream Depletion (Jenkins, 1970; Hunt, 1999)

G-13479 Wheeler Extension



Output for Hunt Stream Depletion, Scenerio 2 (s2):

Days	30	60	90	120	150	180	210	240	270	300	330	360
Hunt SD s2	0.7625	0.8268	0.8569	0.8754	0.8927	0.9872	0.9881	0.9889	0.9895	0.9900	0.9905	0.9909
Qw, cfs	2.430	2.430	2.430	2.430	2.430	2.430	2.430	2.430	2.430	2.430	2.430	2.430
H SD s2, cfs	1.853	2.009	2.082	2.127	2.169	2.399	2.401	2.403	2.405	2.406	2.407	2.408

Parameters:		Scenario 1	Scenario 2	Scenario 3	Units
Net steady pumping rate	Qw	2.43	2.43	2.43	cfs
Distance to stream	a	330	330	330	ft
Aquifer hydraulic conductivity	K	5000	5000	5000	ft/day
Aquifer thickness	b	35	35	35	ft
Aquifer transmissivity	T	175000	175000	175000	ft*ft/day
Aquifer storage coefficient	S	0.15	0.15	0.15	
Stream width	ws	60	60	60	ft
Streambed hydraulic conductivity	Ks	5	5	5	ft/day
Streambed thickness	bs	2	2	2	ft
Streambed conductance	sbc	150	150	150	ft/day
Stream depletion factor (Jenkins)	sdf	0.093342857	0.093342857	0.093342857	days
Streambed factor (Hunt)	sbf	0.282857143	0.282857143	0.282857143	

Municipal Permit Extensions -
Remaining Undeveloped Portion of Water

Date: Dec. 29, 2005

To: Doug Woodcock, Ground Water Section Manager

From: Lisa Jaramillo, Permit Extension of Time Review

Subject: Remaining undeveloped portion of water under municipal use permit

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For purposes of determining impacts related to streamflow as a result of use of the undeveloped portion of the permit *[OAR 690-315-0080(2)]*, the following information identifies the ***remaining undeveloped portion of water*** under the municipal water use permit described below:

Name of City: City of Wheeler

Application # G-13479 / Permit # G-12196

Permitted quantity of water: 3.6 cfs

Maximum quantity of water developed: 1.17 cfs

- Date this information provided by City: 6-22-2005 (Ext.)

Remaining undeveloped portion: 2.43 cfs

Alluvium

HGE INC

ARCHITECTS
ENGINEERS
SURVEYORS
PLANNERS

Offices:
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OREGON
97209

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PROJECT #:

CITY OF MANZANITA/ CITY OF WHEELER

WATER MANAGEMENT AND CONSERVATION PLAN

for:
City of Manzanita/City of Wheeler, Oregon

September 2005

City of Manzanita

City of Wheeler

WATER MANAGEMENT AND CONSERVATION PLAN

September 2005

City of Manzanita
543 Laneda Ave
Manzanita, OR 97130

City of Wheeler
P.O Box 147
Wheeler, OR 97147

Prepared by:
HGE, Inc., Architects, Engineers, Surveyors & Planners
19 NW 5th Ave
Suite 300
Portland, OR 97420

TABLE OF CONTENTS

Section 1: Introduction

Section 2: Municipal Supplier Description

Section 3: Conservation Element

Section 4: Curtailment Plan Elements

Section 5: Municipal Water Supply Element

SECTION 1: INTRODUCTION

1.1 BACKGROUND

The City of Manzanita and the City of Wheeler recently (2003) completed extensive water system improvements including two supply wells and transmission mains that form the backbone of what was ultimately planned as a regional water supply. Currently the system serves the City of Manzanita, the City of Wheeler, the community of Zaddack Creek Coop, and the Nehalem Bay State Park. Joint elements of the water system are covered by an intergovernmental cooperative agreement between Wheeler and Manzanita. Neither City has previously submitted a water management and conservation plan.

1.2 PURPOSE

Water rights permit G-13479 which governs withdrawals at the system's two new wells includes a requirement that a water management and conservation plan (WMCP) consistent with OAR Chapter 690, Division 86, be submitted to the Oregon Water Resources Department (OWRD). The purpose of this document is to fulfill the permit requirement.

1.3 PLAN DEVELOPMENT

The City of Manzanita and the City of Wheeler provided most of the information and data used to develop this plan. Overall plan development is consistent with described objectives and discussions with representatives of both cities.

1.4 PROPOSED PROGRESS REPORT AND UPDATE SCHEDULE

Because of high area development (growth) rates and the potential for adding additional communities to the system, it is recommended that an update of the WMCP be completed in five years (2010). The update should include a review of system progress in meeting the objectives and schedules included in this WMCP.

SECTION 2: MUNICIPAL SUPPLIER DESCRIPTION

2.1 SERVICE AREA AND POPULATION

2.1.1 Service Area

The service area for the Manzanita/Wheeler water system is shown in Exhibit 2.1 (at the end of Section 2). Currently, the system includes the City of Manzanita, the City of Wheeler, the community of Zaddack Creek, and Nehalem Bay State Park. There is an emergency connection with the City of Nehalem. Tideland Water Coop may also be added to the system in the near future. Water rights, sources, and transmission mains are located outside the service area in the hills above Manzanita and Wheeler and near the Nehalem River to the east.

2.1.2 Resident Population Estimates and Census Data

Table 2.1 includes recent decennial census population figures and population estimates from the Center for Population Research and Census at Portland State University.

Table 2.1: Historical and Recent Residential Populations

Year	City of Manzanita Total Population	City of Wheeler Total Population	Zaddack Creek and Tideland Services Coop Total Population	Water System Total Population
1980	443	319	-	-
1990	513	335	-	-
2000	564	391	-	-
2001	580	400	-	-
2002	590	400	-	-
2003	610	410	-	-
2004	630	410	89	1,129

City of Wheeler and City of Manzanita figures:
Source: U.S. Census for 1980, 1990, and 2000 figures. Center for Population Research Census for 2001-2004 figures.
Zaddack Creek and Tideland Services Coop Figure:
Estimate based on 40 service connections and 2000 Census figure of 2.22 persons per occupied household (for Wheeler).

2.1.3 Non-resident Population Estimates

Both Manzanita and Wheeler have significant non-resident populations that are not included in the official census figures and population estimates. Non-resident populations peak during the summer; however, there may also be a significant presence in shoulder periods extending into spring and fall based on weather. Seasonal peaking occurs on summer weekends and holidays (such as the 4th of July). Both cities are located on Highway 101 and receive considerable tourist traffic during the summer season. Proximity to Portland and other major municipalities facilitates visits by non-resident homeowners throughout the year.

Census 2000 figures for Manzanita and Wheeler do show relative proportions of resident and non-resident housing occupancy.

Table 2.2: Housing Occupancy (Source: U.S. Census 2000 Data)

	City of Manzanita	City of Wheeler
Total Housing Units	1,078	244
Occupied Housing Units (residents)	307 (28.5%)	176 (72.1%)
Seasonal, recreational, or occasional use housing units.	723 (67.1%)	52 (21.3%)
Other (vacant) housing units	48	16
Average household size of occupied (resident) units	1.84	2.22

Manzanita, in particular, exhibits a very high ratio of non-resident to resident housing units.

2.2 WATER CUSTOMERS

2.2.1 Communities Served

Communities currently served by the water system include:

City of Manzanita	1,459 service connections
City of Wheeler	230 service connections
Zaddack Creek	24 service connections
Nehalem Bay State Park	1 service connection
Total	1,714 service connections

2.2.2 City of Manzanita Customers

Based on February 28, 2005 data, the City of Manzanita serves the following customers:

Residential (3/4" meter)	1,374 meters
Commercial (<2" meter)	56 meters
Commercial (2" or larger meter)	2 meters
Bulk (Nehalem Bay St. Park 2" meter)	1 meter
City of Manzanita Services	12 meters
Service turned off	15 meters
Total	1,460 meters

2.2.3 City of Wheeler Customers

Based on September 2005 data, the City of Wheeler serves the following customers:

Residential (3/4" meter)	200 meters
Commercial	30 meters
Total	230 meters

2.2.4 Other Communities

Zaddack Creek includes 24 residential service connections. Nehalem Bay State Park is included in Section 2.2.2 since it is directly fed from the City of Manzanita's distribution system. The City of Nehalem receives some finished water through one connection under emergency or high demand periods.

2.3 SOURCE OF SUPPLY

2.3.1 Summary of Existing Sources

Water Rights. City of Manzanita and City of Wheeler Water Rights are described in Table 2.3

Table 2.3: Water Rights Summary
City of Manzanita and City of Wheeler

Owner	Priority Date	Permit No.	Certificate No.	Use	Type	Rate (cfs)	Description
Manzanita	12/15/1978	43756	NA	MU	S	0.50	W. Fork Anderson Cr.
Manzanita	12/10/1945	17073	4775	MU	S	0.25	Middle Fork Anderson Cr.
Manzanita	12/10/1945	17073	4775	MU	S	0.25	N. Fork Anderson Cr.
Manzanita	8/14/1950	21913	21707	MU	S	0.867	Neahkahanie Cr.
Manzanita	9/14/1948	18634	21684	MU	S	0.50	Alder Cr.
Manzanita	6/12/1951	21913	21708	MU	R	(1.23 ac-ft)	Alder Cr./ Neahkahnie Cr.
Manzanita	8/14/1950	21913	21707	MU	S	0.433	Alder Cr.
Wheeler	1/24/1913	S1455	2440	MU	S	3.00	Jarvis Cr.
Wheeler	3/14/1930	S9558	9250	MU	S	0.28	Jarvis Cr.
Wheeler	8/15/1974	S39355	NA	MU	S	4.00	Vosburg Cr.
Wheeler	7/29/1993	G12196	NA	MU	GW	3.60	Well #1 and #2

Abbreviations: NA - not applicable
MU - municipal
S - surface water
R - reservoir
GW - ground water

Wheeler currently relies on Well #1 and Well #2 for it's (potable) municipal supply. Wheeler has recently connected its Jarvis Creek surface water source to a hydrant located at 3rd Street and Rowe Street with the intent of using the water for City related purposes exclusive of potable consumption.

Manzanita, and other parts of the system, utilize Well #1 and Well #2, and the Anderson Creek surface water sources for municipal supply. Manzanita has not

utilized its other surface water sources in recent years due to low flows and high iron concentration.

2.4 SUMMARY OF RECENT USE

2.4.1 Recent Water Withdrawals

Well #1 and #2, and the Manzanita Water Treatment Plant, came on-line in March 2003. Zaddack Creek came on-line in September 2004. Prior to March 2003, Manzanita and Wheeler had separate systems. Water withdrawals for water years 2003-2004 and 2004-2005 are shown in Table 2.4 for each active source.

Table 2.4: Recent Water Withdrawals (Source: OWRD Water Use Reporting Forms)
2003-2004

Month/Year	Well #1	Well #2	Anderson Cr. N. Fork	Anderson Cr. W. Fork	Total gal
Oct 2003	1,236,164	3,154,185	2,386,000	2,386,000	9,162,349
Nov 2003	1,364,480	2,779,584	2,299,215	2,299,215	8,742,494
Dec 2003	2,661,835	1,980,320	2,709,442	2,709,442	10,061,039
Jan 2004	1,533,660	2,146,441	2,701,038	2,701,038	9,082,177
Feb 2004	1,437,567	1,208,947	1,997,659	1,997,659	6,641,832
Mar 2004	1,422,960	1,207,407	2,531,472	2,531,472	7,693,311
Apr 2004	1,252,268	1,141,808	2,468,601	2,468,601	7,331,278
May 2004	1,394,049	1,182,319	2,759,492	2,759,492	8,095,352
June 2004	1,691,686	734,234	3,143,043	3,143,043	8,712,006
July 2004	1,734,160	2,247,276	5,363,728	5,363,728	14,708,892
Aug 2004	266	4,176,718	4,953,783	4,953,783	14,084,550
Sept 2004	910,737	1,953,267	3,941,830	3,941,830	10,747,664
2003-04 Total	16,639,832	23,912,506	37,255,303	37,255,303	115,062,944
% of Total	**14.46%**	**20.78%**	**32.38%**	**32.38%**	**100%**

2004-2005

Month/Year	Well #1	Well #2	Anderson Cr. N. Fork	Anderson Cr. W. Fork	Total
Oct 2004	1,394,560	1,115,191	2,673,582	2,673,582	7,856,915
Nov 2004	2,084,093	2,146,017	1,112,316	1,112,316	6,454,742
Dec 2004	2,524,047	3,708,240	786,048	786,148	7,804,483
Jan 2005	2,972,148	2,926,222	168,650	168,650	6,235,670
Feb 2005	3,521,806	2,212,809	206,124	206,124	6,146,863
Mar 2005	2,526,811	4,296,866	207,513	207,513	7,238,703
Apr 2005	2,666,621	3,561,172	157,308	157,308	6,542,409
May 2005	3,501,241	4,896,163	175,033	175,033	8,747,470
Jun 2005	4,829,308	4,632,135	188,381	188,381	9,838,205
Jul 2005	6,079,746	6,908,156	61,516	61,156	13,110,574
Aug 2005	5,523,361	8,190,691	170,328	170,328	14,054,708
Sep 2005[1]	4,752,300	5,632,700	170,000	170,000	10,725,000
2004-05 Total	42,376,042	50,226,362	6,076,799	6,076,539	104,755,742
% of Total	**40.45%**	**47.95%**	**5.80%**	**5.80%**	**100%**

[1] September 2005 data estimated based on ratio of August 2004 total and September 2004 total; assumption that Anderson Creek withdrawals will be similar to previous month; and ratio of well withdrawals, for period Oct 2004 to August 2005, to allocate remainder between well #1 and well #2.

2.4.2 Seasonal Usage and Peaking

Seasonal peaking typically occurs in July and August with the largest (recent) water withdrawal in July 2004 (see Table 2.4). Annual average withdrawal for the system is 303,600 gpd (October 2003-September 2005). Peak month is 474,500 gpd (July 2004). For the month of July 2004, Manzanita utilized an average of 319,968 gpd of source water with a peak day of 422,000 gpd; the ratio of peak day to peak month is 1.32. Table 2.5 shows measured and estimated peaking for the system's raw source water.

Table 2.5: Raw Water Withdrawals

Parameter	gpd	gpm	cfs	Peaking Factor
Average Day	303,600	210.8	0.47	1
Peak Month	474,500	329.5	0.73	1.56
Peak Day	626,300	434.9	0.97	2.06[2]

2.5 FACILITIES DESCRIPTION

2.5.1 Water System - General

Exhibit 2.1 shows the general location of key water components. Exhibit 2.2 shows the water system in schematic form. (Note Tideland Water Coop is not yet connected to the system.)

2.5.2 Source/Treatment

Well #1 and well #2 were recently constructed and brought on-line (March 2003). All phases of their planning, funding, design, construction, and operation were conducted in compliance with prevailing standards and regulatory requirements. Water quality is excellent and treatment is limited to pH adjustment (with soda ash) and disinfection (with hypochlorite). Each well is provided with a 50 Hp pump and variable frequency drive. Well #1 is rated at 500 gpm; installed maximum pumping capacity is 520 gpm (748,800 gpd). Well #2 is rated at 1000 gpm (1,440,000 gpd); installed maximum pumping capacity is 525 gpm. Duplex well pumping capacity is 750 gpm.

The Anderson Creek sources are located high in the watershed. Locked gates

[2] Product of 1.56 x 1.32.

restrict access to the area. The North Fork and West Fork have small, permanent diversion dams to facilitate withdrawals. The Middle Fork diversion dam washed out a few years ago and has not yet been repaired. Water quality is generally excellent. Citizens of Manzanita, in numerous public meetings, expressed preference and support for continued utilization of the surface water sources rather than reliance on the new groundwater source. Citizen demands resulted in construction of the new membrane filtration plant to treat Andersen Creek water and bring the City into compliance with surface water treatment rules.

The recently constructed Manzanita Water Treatment Plant came online in March 2003. The facility utilizes a microfiltration membrane process with an installed capacity of 350 gpm. Overall design allows for a future capacity expansion to 690 gpm. Filtered water is disinfected and pumped directly to the City's reservoirs. The facility is new and functioning well.

2.5.3 Transmission

Well water transmission mains were constructed in 2002. The mains are HDPE and include: 1200 LF of parallel 8" main between the wells and the well control building, 2,200 LF of 12" main between the well control building and the Wheeler Inter-tie, 3,300 LF of 8" main between the Wheeler Inter-tie and Wheeler at 1st Street, and 16,900 LF of 12" main between the Wheeler Inter-tie and the Manzanita Water Treatment Plant.

The Anderson Creek sources have collector lines of approximately 1000 LF each that join to the primary raw water transmission main. The transmission main includes a 15,200 LF section of predominantly 8 inch AC pipe and a 5000 LF section of 8 inch PVC pipe that extends to the new treatment facility in Manzanita.

2.5.4 Distribution

The Manzanita distribution system includes two pressure zones and over 15 miles of pipelines. Diameters range from 2" to 10". Approximately 80 percent of the lines are 6" diameter or smaller. Materials are predominantly AC and PVC. Lower areas of the low elevation pressure zone have static pressures of approximately 20-95 psi.

The Wheeler distribution system was extensively upgraded in 2003. The system has two pressure zones. Many older AC mains are still in use. Prior to the departure of the Public Works director in September 2005, several large main leaks were repaired.

2.5.5 Storage

Finished water storage facilities in Manzanita and Wheeler are summarized in Table 2.6:

Table 2.6 : Finished Water Storage Facilities

Owner	Description	Capacity	Construction Date
Manzanita	Reservoir #2 (concrete)	0.25 MG	1960
Manzanita	Reservoir #1 (steel)	0.50 MG	1979
Manzanita	Reservoir #3 (steel)	1.60 MG	1997
Manzanita	Treatment Plant Clearwell	0.07 MG	2003
Wheeler	Jarvis Reservoir	0.25 MG	2003
Wheeler	Vosburg Reservoir	0.25 MG	2003
Manzanita Total Storage Capacity: 2.42 MG			
Wheeler Total Storage Capacity: 0.50 MG			

2.6 SYSTEM EFFICIENCY

2.6.1 Typical Residential Water Usage

Typical residential water usage in Manzanita and Wheeler is shown in Table 2.7.

Table 2.7: Typical Residential Water Usage
(Manzanita data: October 2003 - September 2004)
(Wheeler data: September 2004 - August 2005)

Parameter	Manzanita	Wheeler
Gallons per Day (gpd)		
Minimum	57,819	12,792
Average	84,384	18,740
Maximum	154,098	25,281
Gallons per Capita per Day (gpcd)[1]		
Minimum	91.8	31.2
Average	133.9	45.7
Maximum	255.6	61.7
Gallons per Residential Connection per Day[2]		
Minimum	42.1	64.0
Average	61.4	93.7
Maximum	112.2	126.4

1. Manzanita resident population: 603; Wheeler resident population: 410.
2. Manzanita: 1,374 residential connections; Wheeler: 200 residential connections.

The per capita figures for Manzanita are somewhat misleading in that there is a significant non-resident presence in the community even in winter.

2.6.2 Unaccounted Water

For the one-year period (October 2003 to September 2004), Manzanita produced an average of 185,378 gpd of finished water. The service meter total for the same period is 144,969 gpd. Based on this data, there is an estimated unaccounted for water fraction of 21.8 percent. During this time, the City had conducted widespread and frequent line flushing in efforts to clear a "white water" problem that lasted for well over a year. The problem, dissolved oxygen concentrations as high as 130 percent of saturation, was recently rectified.

For the one-year period (September 2004 to August 2005), Wheeler's master meter indicated 80,060 gpd supplied finished water to the City. The service meter total for this period is 60,258 gpd. Based on this data, there is an estimated unaccounted for water fraction of 24.7 percent.

Unaccounted for water computed above does not include estimates for hydrant flushing, construction activities, or discovered/repaired leaks. As noted above, Manzanita had conducted extensive hydrant flushing during this period. Both communities have also located and repaired leaks.

T 2.1: EXISTING
ANITA/WHEELER
SYSTEM
MAP


CLATSOP COUNTY
6
101
OSWALD WEST
STATE PARK
T.N.F.
MIDDLE FORK
ANDERSON CREEK
(SOURCE) SITE
NORTH FORK
ANDERSON CR
WEST FORK
ANDERSON CREEK
OREGON
COAST
BOB'S CREEK (NEHAL
MASTER METER
8" AC
BOB'S CREEK
101
PACIFIC
OCEAN
RESERVOIR #3
RESERVOIR #2
RESERVOIR #1
HWY.
NEAHKAHNIE CREEK
ALDER CREEK
8" PVC
NEHALEM
MANZANITA
WATER TREATMENT PLANT
TIDELAND
WATER CO
12" HDPE
53
NEHALEM
STATE
AIRPORT
NEHALEM
BAY
Nehale
Jct.
8" HDPE
WHEELER
WHEE
NEHALEM BAY
STATE PARK
101
JARVIS RE
VOSBURG RESERVOIR
VOSBURG
SCALE
1" = 3,000'
0
1 MILE

EXHIBIT 2.1: EXISTING MANZANITA/WHEELER WATER SYSTEM AREA MAP

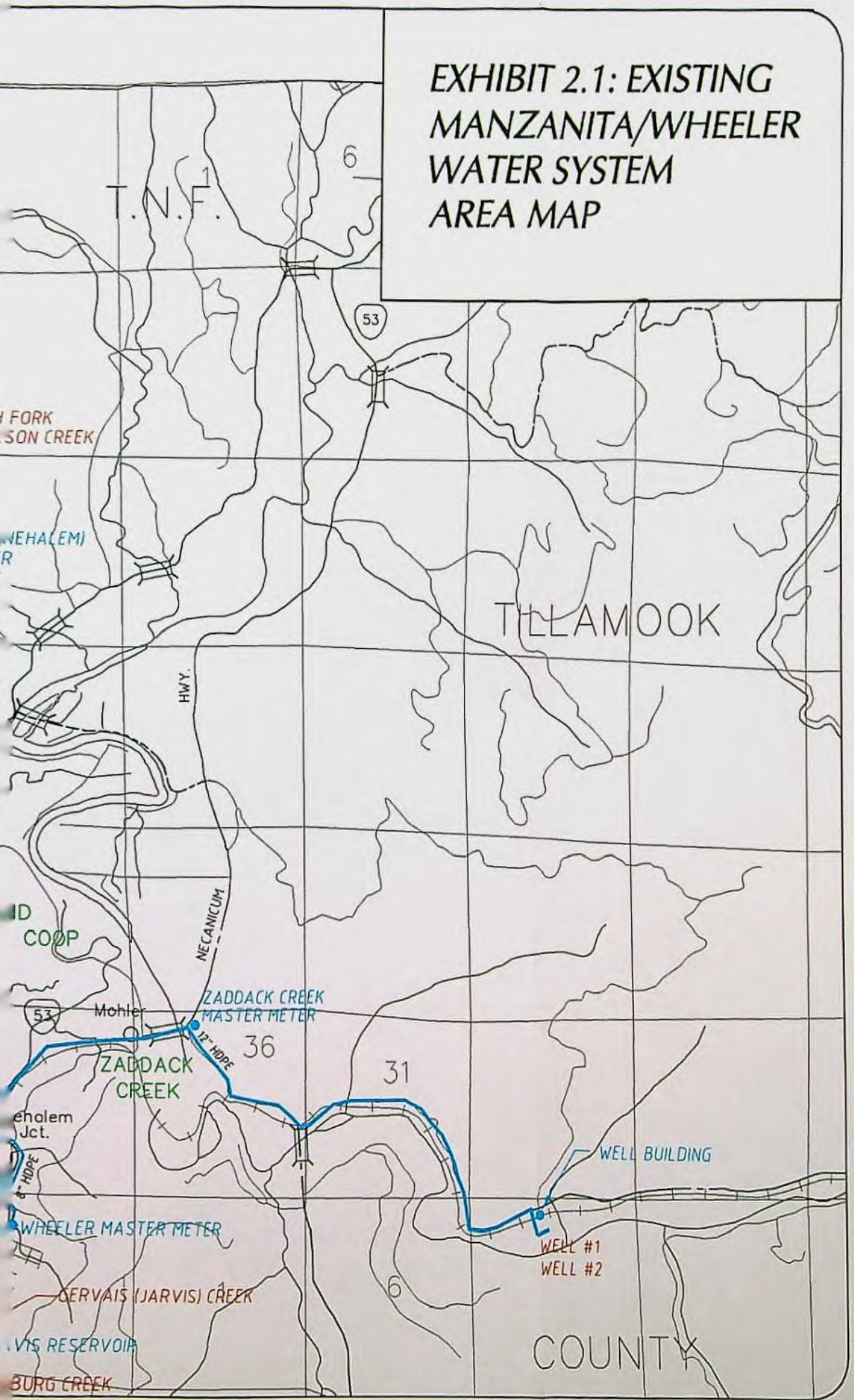
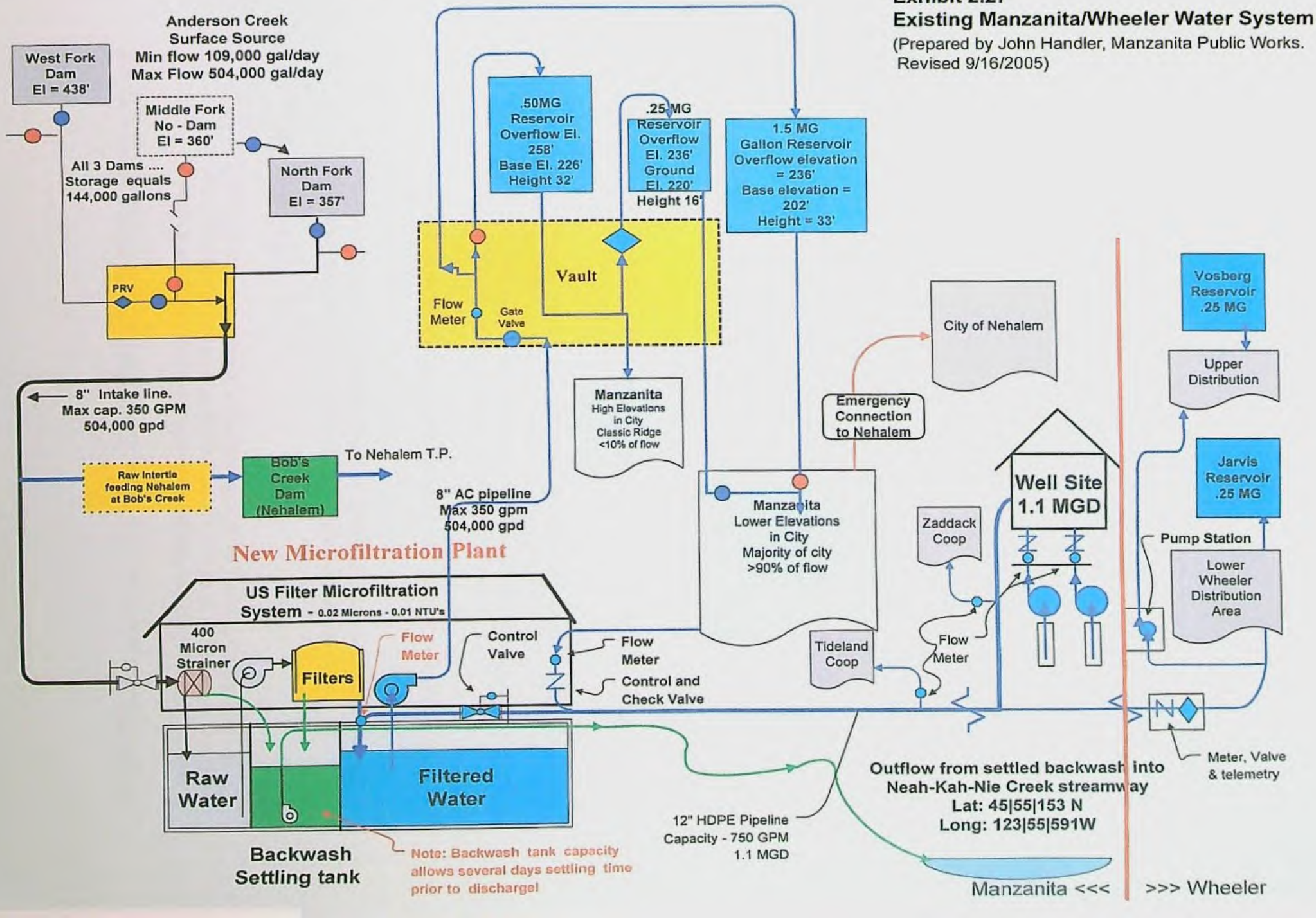


Exhibit 2.2:
Existing Manzanita/Wheeler Water System

(Prepared by John Handler, Manzanita Public Works. Revised 9/16/2005)



SECTION 3: CONSERVATION ELEMENT

3.1 PREVIOUS AND CURRENT CONSERVATION EFFORTS

3.1.1 Metering

Metering and data acquisition is currently in place for:

- All raw water sources. Anderson Creek North Fork and West Fork water passes through the same meter; Manzanita assumes a 50/50 contribution from each of these sources.
- All interties and bulk sales. The only exception is the finished water intertie with Nehalem. Manzanita is currently planning to install a meter.
- All customer service connections.
- Reservoirs
- Treatment processes including backwashing and discharge to waste.

Full metering of customer service connections provides data for usage based rates and billing. Metering and usage based rates are probably the single most effective means of promoting water conservation. Both Manzanita and Wheeler are fully metered and base water billings in part of metered usage.

Service meters are read quarterly in Manzanita and every other (odd numbered) month in Wheeler.

Manzanita has an active meter testing and replacement program. Approximately one tenth of Manzanita's service meters are replaced annually.

3.1.2 Monitoring

Manzanita is highly vigilant in monitoring data for changes, discrepancies, or other indicators of problems in the system. The City's SCADA system is set up to compile and compare usage throughout the system, including Wheeler's. Leaks

as small as that occurring in 3/4-inch service lines can be detected. (The SCADA system is configured to establish the general area in which a leak occurs; it cannot establish the exact location.) Manzanita's Public Works Department maintains exhaustive computer files and spreadsheets that track and compare planning, flow, water quality, and usage data. The City's billing software also tracks usage and notes departures from previous usage patterns and/or excessive use.

3.1.3 Leak Detection and Repair

Reported leaks, and potential leaks identified by the SCADA system or billing programs, are promptly addressed by public works personnel. Manzanita also monitors (via SCADA) Wheelers system and notifies Wheeler Public Works if there is a potential leak detected.

Manzanita has installed new valves in many areas to facilitate isolation of lines and repairs. Both Manzanita and Wheeler have replaced many older AC lines. Manzanita has replaced sections of the raw water transmission line from the Anderson Creek sources to correct leaks. Wheeler recently (September 2005) located and repaired several very large leaks.

3.1.4 Policies

Manzanita currently requires installation of Lo-Flow water fixtures on all new (or remodel) construction. The City also recommends native plant landscaping during plan review; however, there are no requirements that recommendations be implemented. The City reports that most new homes in the area are opting for native landscaping. Drip irrigation is recommended for those that do choose to irrigate plantings. The City also reports a significant number of residents have changed their plantings to low (or no-use) water demand landscaping because of the relatively high water rates stemming, in part, from debt service on recent improvement projects.

Manzanita Public Works will check suspected leaks, or customers suspicions of a leak, at no charge to the customer. Customers who have a leak repaired are eligible to have the effected billing adjusted to what the average billing would have been upon proof of the repair (such as a receipt from a plumber) and a City follow-up check of the water meter. Manzanita also follows up (with an onsite visit) on water accounts that are flagged by the City's billing software as exhibiting abnormal usage.

3.2 PLANNED CONSERVATION MEASURES

Currently, the area has sufficient water rights and source development to meet customer needs and to allow for system growth; consequently, conservation efforts are not being driven by water demand. Both Manzanita and Wheeler have recently completed extensive improvement projects including source development/expansion and a new surface water treatment plant in Manzanita; consequently, conservation efforts are also not being driven by economics. Manzanita's conservation efforts to date reflect a progressive attitude toward the inherent benefits of conservation and the long-term sustainability and reliability of its water supply. It also reflects a commitment by the City and Public Works Department to promptly address system deficiencies within the constraints of affordability and practicability. Manzanita extends its assistance to Wheeler in monitoring the system and providing technical assistance.

Policies and practices currently in place are anticipated to be carried forth indefinitely into the future. Additional measures to be implemented by the City of Manzanita include:

- Install a water meter on the (finished) water line that connects to the City of Nehalem's system. The line is currently unmetered and used for emergencies.
- Replace the existing transmission line from the Anderson Creek sources. The line is old and susceptible to breakage.
- Replace AC and other old mains as practicable and affordable.
- Develop short articles and information on conservation for inclusion in the City's quarterly newsletter.
- Annual water audit that includes detailed estimates of all unmetered usage (such as hydrant flushing).
- Complete a new water master plan.

OAR 690-086-0150 (4) requires all water suppliers to implement the following conservation measures:

- An annual water audit.
- Full metering of service connections.

- A meter testing and maintenance program.
- A rate structure that reflects and incorporates consideration of metered water consumption.
- A leak detection program if the annual water audit indicates system leakage in excess of 10 percent.
- A public education program to encourage efficient water use and low water use landscaping.

Manzanita is largely in compliance with these requirements; Wheeler needs to develop programs and policies that reflect these requirements. The City of Wheeler has not, to date, implemented specific conservation related measures other than replacement of defective mains, and repairs of leaks, to the extent practicable and affordable, complete metering of service connections, and the development of usage based water rates. The City has part-time public works staff with multiple responsibilities and a very limited public works budget. Currently, the City is looking for a new public works director to fill the vacancy left by the departure of the prior director in September 2005. Implementation of new conservation measures is unlikely until a new director is hired, oriented, and allowed to catch up on other pressing matters. The implementation schedule reflects this consideration.

Specific conservation and related measures to be implemented by Wheeler include:

- Compile list of known or suspected leaks (if any) that need to be checked or corrected.
- Develop a plan to check and correct known or suspected leaks.
- Implement leak correction plan.
- Conduct an annual water audit. The audit should include all metered connections and estimates of all unmetered usage (such as hydrant flushing).
- Develop a plan for service meter testing/repair and/or replacement.
- Implement service meter plan

- Develop a public education program that, at a minimum, provides information on low water use landscaping, encourages efficient water use, and provides information on Wheeler's conservation activities and implementation schedule.

- Implement public education program.

3.3 CONSERVATION MEASURES SUMMARY AND 5-YEAR IMPLEMENTATION PLAN

OAR 690-086-0150(4) requires a list of the 5-year conservation measures (benchmarks) and an implementation schedule. 5-year benchmarks and implementation schedules are provided below in Table 3.1 and Table 3.2 for Manzanita and Wheeler respectively. Manzanita is currently completing a water system master plan (anticipated complete in November 2005) that will address recommended improvement projects; consequently, improvement scheduling is very approximate and tentative. As noted above, Wheeler is currently recruiting a new public works director. The City has had several staff changes in recent years; consequently, there is a limited knowledge/experience base or extant records upon which to draw for planning and implementation of the measures listed. The benchmark schedule for Wheeler is therefore also tentative and subject to change; however, the overall goal is full implementation of the listed measures prior to the WMCP update in five years (2010).

Table 3.1: City of Manzanita 5-Year Conservation Benchmarks

Benchmark	Date (Goal)	Frequency
Ongoing Efforts		
Service meter replacement	September 2005	10-yr. cycle
Service meter checking	September 2005	On-call
System monitoring	September 2005	(Varies according to parameter)
Leak detection and repair	September 2005	As required
Lo-flow water fixture requirements	September 2005	Policy
Financial incentives for leap repair	September 2005	Policy
Water audit	September 2005	Annually
Newsletter with information on conservation	September 2005	Quarterly
Planned Programs		
Install water meter on Nehalem connection	2006	-
Replace Anderson Creek transmission main	2007	-
Replace selected AC and other old mains	2010	-
Public information on conservation	January 2006	Quarterly
Complete water system master plan	November 2005	-

Table 3.2: City of Wheeler 5-Year Conservation Benchmarks

Benchmark	Date (Goal)	Frequency
Planned Programs		
Compile list of known or suspected leaks (if any)	May 2006	-
Develop plan to check and correct leaks	July 2006	-
Implement leak correction	September 2007	-
Conduct annual water audit	November 2008	Annually
Develop plan for service meter check/repair or replacement program	July 2006	-
Implement service meter plan	August 2006	According to plan
Develop public education plan	December 2006	According to plan
Implement public education plan	April 2007	According to plan

SECTION 4: CURTAILMENT PLAN ELEMENTS

4.1 CONTEXT

With development of the new well source and transmission mains, it is unlikely that water supply will be affected by seasonal weather patterns or changes in raw water availability. Disruptions in supply will likely be limited to emergencies or localized impacts from construction or maintenance activities. Manzanita has prepared a detailed emergency response plan that addresses water related emergencies. Construction and maintenance activities are typically coordinated to avoid unnecessary disruptions of water supplies.

4.2 CURTAILMENT PLAN

A proposed curtailment plan is described in Table 4.1. Development of a water curtailment ordinance would allow the designated City authority to promulgate a water supply emergency, enact the curtailment plan, and police customer compliance through the issuance of warnings and fines. Without an ordinance, the curtailment plan becomes an advisory plan that can be used as a reference to base requests for public actions to reduce consumption. The issue is complicated by the multiple jurisdictions involved. It is strongly recommended that Manzanita and Wheeler coordinate prior to the development and adoption of curtailment ordinances (should they desire to do so) so as to maintain consistency and to avoid potential conflicts.

Table 4.1: Proposed Curtailment Plan

Stage	Trigger	Goal	Implementation Measures
Mild	Use reaches 80% of capacity	General awareness and modest reductions in consumption.	• Activate curtailment plan • Provide information (guidance) to the public on conservation methods. • Request customers to limit irrigation. • Avoid flushing hydrants.
Moderate	Use reaches 90% of capacity	Enhanced awareness and moderate reductions in consumption.	• Continue "mild" stage measures. • Request irrigation be minimized to that necessary for plant survival. • No lawn irrigation.
Critical	Use reaches 95% of capacity	Awareness of critical supply shortage and maximum reduction in consumption.	• Continue "moderate" stage measures. • No outdoor irrigation. • No vehicle washing. • No hosing of paved surfaces.

SECTION 5: MUNICIPAL WATER SUPPLY ELEMENT

5.1 FUTURE SERVICE AREA

Planning for the regional water system anticipated the eventual future connection of: Neahkahanie Water District, Tideland Water Coop, Brighton, City of Rockaway Beach, and Watseco/Barview Water District. There is no schedule for adding communities; communities must obtain approval from both Manzanita and Wheeler City Council's before being admitted to the regional water system. Since there are no requirements for the identified communities to join the system, motivation or reticence will likely be driven by local politics and the perception of an actual or impending water supply crisis.

Resident population growth in both Manzanita and Wheeler has averaged approximately 1.5 percent per year since 1990. Tillamook County's recent long term projects for the County as a whole and for each municipality incorporates a rate of 0.98 percent on an average annual growth basis. County provided (high) projections for the municipalities potentially involved with the water system are included in Table 5.1.

Table 5.1: Population Projections
(Source: Tillamook County)

City	2010	2015	2020	2025	2040
Manzanita	655	690	728	764	874
Nehalem	336	354	373	391	448
Rockaway	1,438	1,516	1,598	1,677	1,920
Wheeler	444	468	493	518	592

The most significant additions in resident population for the water system is likely to be the addition of new communities, Rockaway in particular, rather than in population growth within the current service area.

The existing, and potential, service area can be characterized as having considerable potential for expansions in non-resident presence and the businesses that cater to them. Between 1989 and 1996, Manzanita's total water service connections grew at a rate of 3.84 percent per year. High development levels have persisted and as a consequence, Manzanita uses a general planning figure of 3% AAGR (average annual growth rate). Growth pressures have increased in Wheeler as well and the City is seeing considerable activity and interest in new residential development. Accommodating the growth does not appear problematic. Both Manzanita and Wheeler have available undeveloped land

for continued development. Infill development and subdivisions are also occurring: in April 2005 Manzanita reported 2014 plotted lots in developed areas - an increase of 12 percent over the November 2000 figure of 1799 lots.

Manzanita's general planning figure of 3 percent AAGR will be used for general future planning of the joint water system until more accurate planning data is available. If one of the larger communities, such as Rockaway, requests to become part of the regional system, planning figures will need to be adjusted and the impacts of the connection assessed. It must also be borne in mind that future system connections, such as Rockaway, may not rely fully on the regional water system and only use it to supplement their own supplies during periods of high demand or for emergencies. The 3 percent AAGR figure should be evaluated and adjusted in the next update of this WMCP in 2010.

5.2 FUTURE DEMAND

Future water demand based on 3% average annual growth are presented in Table 5.1. As noted in Section 5.1, this is a tentative planning figure and does not take into account major system expansions, to accommodate new communities, as discrete events.

Table 5.1: Future System Water Demand
(Based on 3% AAGR)

Parameter	2005	2010	2015	2020	2025	2050
Average Day						
gpd	**303,600**	352,000	408,000	473,000	548,000	1,148,000
gpm	210.8	244	283	329	381	797
cfs	0.47	0.54	0.63	0.73	0.85	1.78
Peak Month						
gpd	**474,500**	550,000	638,000	739,000	857,000	1,794,000
gpm	329.5	382	443	513	595	1,246
cfs	0.73	0.85	0.99	1.14	1.33	2.78
Peak Day						
gpd	**626,300**	726,000	842,000	976,000	1,131,000	2,368,000
gpm	434.9	504	585	678	786	1,645
cfs	0.97	1.12	1.30	1.51	1.75	3.66

The demand figures do not take into account reductions in demand due to water conservation efforts. Improved water auditing needs to be performed on the system to more accurately determine the nature of the unaccounted for water. Manzanita has conducted numerous flushing operations without estimating water utilized and there is an

occasional problem with finished water recycling back into the clearwell (in effect getting metered twice). Wheeler has old water service meters, and based on very low per capita usage (Table 2.7), it is very possible the meters are, on average, under reporting. With implementation of improved auditing and conservation measures, more accurate data should be available for the WMCP update in 2010.

5.3 LONG RANGE SUPPLY PLAN

5.3.1 Capacity Assessment

The regional system has permitted access to 3.6 cfs at the well site. Current installed well capability (duplex mode) is 750 gpm (1.67 cfs). Based on Table 5.1, installed well capacity should be adequate to meet peak demands for the next 15-20 year period; however, addition of any new communities to the system will shorten the timeline according to the size of the communities added and their need (whether it is for full water supply or only to supplement existing sources).

With Manzanita's Anderson Creek sources (0.75 cfs of water rights currently utilized), the regional system should be well positioned to serve the area needs through the next 20 year planning period under the 3% AAGR and qualifications previously discussed.

5.3.2 Projected 20-year Withdrawals

Projected 20-year peak withdrawals are presented in Table 5.3. The figures are consistent with discussions and qualifications presented elsewhere in Section 5.

Table 5.3: 20-year Peak Withdrawals and Permitted Capacity

Permit No.	Permitted Capacity		20-year Peak Withdrawal	
	(cfs)	(gpm)	(cfs)	(gpm)
43756	0.50	224.4	0.50	224.4
17073	0.50	224.4	0.50	224.4
G12196	3.60	1,615.7	1.67	750

Table 5.3 reflects both Manzanita's preference to use its surface water source when available and the need, at times, to operate both wells simultaneously. Other permitted sources may be utilized on occasion for non-potable municipal use; however, there are no specific plans or estimates in place.

5.4 SCHEDULE FOR BENEFICIAL USE

Existing water right permits and certificates are listed in Table 2.3. Perfection of the groundwater permit (G12196) is unlikely within the next 20 years unless there is a significant expansion of the regional system. Manzanita is currently evaluating its Anderson Creek supply and transmission infrastructure and will likely implement some improvement, including replacement of the transmission main. The City may decide to pursue perfection of Permit 43756 after the improvements have been completed. The issue will be addressed in the WMCP update in 2010.

F. DUANE LEE, P. E.

CONSULTING ENGINEER

Civil
Environmental
Structural

June 21, 2005

Lisa Juul, Water Rights Specialist
Water Resources Department
North Mall Office Building
725 Summer Street NE, Ste. A
Salem, OR 97301-1271

Ref: City of Wheeler, OR (Permit #G-12196)
Pending Application for Extension of Time

Dear Lisa:

I have revised the pending application for extension of time as you requested in your letter of February 28, 2005. I have reviewed it with both Wheeler and Manzanita. A copy of the information I have assembled is submitted herewith.

You make note that you want copies of information I have referenced in the application. To my knowledge I have sent these documents to the WRD in prior years. Will you look to see if they are in your library? If not, I will see to it that you get copies.

In our original draft submittal we requested an extension to the year 2050, not recognizing the impact of requesting an extension longer than fifty years. The owner and I have agreed to amend the application for an extension to 2047, a period not longer than fifty years.

I have amended the application to include "current" population and water use information.

Discussions under Question # 10 on current peak water demand, potential growth, and inventory of existing water rights have been modified per your request and our discussions of late April.

Question #11 has been modified per your request. However, the responses are still somewhat vague because of the nature of this particular project. There are still a lot of unanswered issues regarding future players in the proposed regional water supply to be very definitive about the scheduling of future projects.

14819 Crupper * Sisters, OR 97759 * Phone: 541.549.0905 * Fax: 541.549.2092

Finally, I would like to thank you for allowing me the extra month to complete the revised application. I didn't expect major surgery would set me back quite so far as it did. The extra rest was appreciated. The doctor says all is well.

Sincerely,

F. Duane Lee

F. Duane Lee, P. E., CWRE

Cc: City of Wheeler
City of Manzanita

Enc.

14819 Crupper * Sisters, OR 97759 * Phone: 541.549.0905 * Fax: 541.549.2092

City of Wheeler

Water Right Permit G-12196
(Application G-13479)

Application for Extension of Time

April 30, 2004
Revised June 20, 2005

F. Duane Lee, P.E., CWRE

LEE ENGINEERING, INC.
1300 John Adams Street
Oregon City, Oregon 97045
Phone: 503.655.1342 Fax: 503.655.1360

LEE ENGINEERING, INC.
CONSULTING ENGINEERS

Civil • Structural • Environmental

David A. Lee, P.E., P.L.S.
Richard P. (Phil) Beverly, P.E., W.R.E.
Joseph D. Eskew, P.E.
James R. Shaver, P.E.
Mark D. Nelson, P.E.
Brian D. Lee, P.E.
Patrick K. Murphy, P.E.

June 21, 2005
Project No. 3178.040

Water Right Permit Extensions
Water Resource Department
725 Summer Street N.E., Suite A
Salem, OR 97301-1271

Attention: Lisa Juul

Re: City of Wheeler, Permit G-12196 (Application G-13479)
Revised Application for Extension of Time

Dear Ms. Juul:

This letter is in response to an Application for Extension of Time form provided by your office, with the last revision date of January 24, 2004. Although I am not using the exact form, the following explanations are in keeping with that form, and the information that follows is in the numerical order of the requests in the State's form. As you are aware, I have been in contact with your office for several months attempting to identify the exact nature of the information that you require. If additional information is needed, please contact me directly at Lee Engineering, Inc.

The CITY OF WHEELER, P.O. Box 177, Wheeler, Oregon 97147, Phone: (503) 368-5767, owner of record, and duly authorized agent, of Application No. G-13479, Permit No. G-12196, does hereby REQUEST that the time in which to complete construction and accomplish beneficial use of water to the full extent under the terms of the permit, which time now expires on October 1, 1997, be extended to October 1, 2047.

In order for the Department to evaluate the extension of time request for a Quasi-Municipal or Municipal water use permit, please provide the following:

1. **Appropriate fee.**

A check in the amount of $250 on behalf of the City of Wheeler is enclosed.

2. **For Quasi-Municipal water use permits, evidence of the actions taken to begin actual construction on the project, if required under the applicable statute.**

A brief history of the project is in order. Beginning in the early 1990's, the City of Wheeler and several other water purveyors in the North Tillamook County area were under Administrative Order by the Oregon Health Department to upgrade their existing water supplies in order to meet the Surface Water Treatment Rules, or find alternative sources. The City of Wheeler undertook a Water Master Plan to identify their specific needs and costs to upgrade their water system. A condition of the terms imposed by

1300 John Adams Street • Oregon City, OR 97045 • office: 503.655.1342 • fax: 503.655.1360 • e-mail: general@lei-ce.com

the Oregon Economic and Community Development Department in awarding a technical assistance grant required that the City of Wheeler, together with nine other water purveyors in North Tillamook County area, undertake a regional water study to identify the potential for alternative water sources. Hence, the Oregon Economic and Community Development Department awarded two separate grants, one to undertake a Water Master Plan Update for the City of Wheeler, and a separate grant to prepare a report to identify regional water sources.

The studies were completed in March of 1993. In the preparation of the reports, a Technical Advisory Committee was established by the Tillamook County Economic Development Office. Ten jurisdictions were identified as potential participants in a regional water supply. They included:

1. City of Wheeler
2. City of Manzanita
3. City of Nehalem
4. City of Rockaway Beach
5. Neahkanie Water District
6. Zadduck Creek Water Coop
7. Tideland Water Coop
8. Nehalem Bay State Park
9. Watseco-Barview Water District
10. Brighton Water Company

The Oregon Department of Human Services - Drinking Water Program, Tillamook County Economic Development office, and Rural Community Assistance Corporation also participated in the early planning of the project.

Following completion of the reports and meetings with the various state agencies, municipalities, water districts, and water coops, the Cities of Wheeler and Manzanita agreed to proceed with the project and offered service to all those parties interested. Only the Nehalem Bay State Park, Zadduck Creek, and Tideland Water Coop elected to proceed with a project. Also at that time, the City of Wheeler applied on the behalf of all the jurisdictions for a water right permit to appropriate water from the most promising source identified, which was the Nehalem River. Initially, applications were submitted for both surface water and groundwater withdrawals.

Shortly after the initial meetings, but prior to formation of any cooperative agreements, the City of Wheeler applied for funds to develop potential wells along the Nehalem River. A grant was offered to the City of Wheeler to drill test wells along the Nehalem River approximately between River Mile 9 and 11. Property owners were contacted, and an agreement was eventually reached with one property owner and a site was selected at approximate River Mile 10.5 for development of a potential groundwater source. A groundwater geologist was hired. Lee Engineering, Inc. assisted the City in issuing contracts for construction of test wells, and the project was completed in July, 1996. Two wells, one with a capacity of 500 gpm and the other with a capacity of 1,000 gpm, were eventually developed. A coarse gravel aquifer

was discovered approximately 400 feet north of the Nehalem River at River Mile 10.6. See the attached well logs in Appendix 11.

One of the conditions of the permit was that construction of the wells was to begin within one year from issuance of the permit, November 6, 1995, and should be completed on or before October 1, 1997. The construction of the wells met this condition. However, the permit further required that complete application of the water to the beneficial use should be made on or before October 1999. This condition obviously was not met, for a host of reasons.

The location for production wells was identified and the yield of a groundwater source was measured. Then Lee Engineering, Inc., on behalf of the City of Wheeler, withdrew the surface water application on the Nehalem River and indicated to the Water Resource Department that the City intended to proceed forward with development of the project that would appropriate waters from the two recently constructed wells. Preliminary engineering reports for estimating the cost of the project were developed. Applications for grants and/or loans were made to the federal office of Rural Development to move forward with the project. The Cities of Wheeler and Manzanita were both awarded funding for their projects.

Early attempts to form a regional water authority to manage the project were eventually abandoned because of remonstrances by the voting public. Further, two separate issues were placed before the voters of Wheeler and Manzanita to fund the loan portions of the financing for the project. Both issues were defeated at the polls. Eventually, the projects were reconfigured in Wheeler and Manzanita and were successful at the polls in passing revenue bonds in Manzanita and general obligation bonds in Wheeler for the local responsibility for costs of the projects. The public information programs, various ballot measures, and other activities, took place between 1997 and 2000.

Following acceptance of the project at the polls by the citizens of Wheeler and Manzanita, the two jurisdictions moved forward with several projects. The City of Manzanita took responsibility for construction and oversight of the water source development. The project included development of the wells, disinfection facilities and control facilities near the well site, a transmission pipeline from the well site to both the cities of Wheeler and Manzanita, and other improvements within each jurisdiction. The primary project for Manzanita included a new water treatment plant to continue to use waters from their surface source on Anderson Creek. The City of Wheeler elected to abandon its existing water sources and receive water totally from the new well field. In addition, Wheeler needed to upgrade its water distribution network, install two new steel reservoirs, and provide other control and valving features to improve both its domestic water delivery and fire protection throughout the City. Previously, the City had no in-system storage. All the storage that existed was within the creeks and impoundments from which they drew water.

At this time, the Cities of Wheeler and Manzanita have entered into an Intergovernmental Agreement (see Appendix 12) pursuant to ORS 190 which provides for the joint ownership and operation of the regional water supply. Water service is currently accruing to Nehalem Bay State Park, the City of Wheeler, and the City of Manzanita. Soon to be connected to the system through a master meter is the Zadduck Creek Water Coop. (This was completed in September 2004.) Discussions are under way to provide water service to Tideland Water Coop. During construction of the main transmission line to the City of

Manzanita, an emergency connection was made to the City of Nehalem. However, Nehalem is not intending to use water from the regional water supply at this time except for emergencies. A more comprehensive arrangement is being discussed.

Future water users are likely to include all 10 of the initial participants in the regional water study. Future connections are likely to be made to Brighton, Rockaway Beach, Watseco-Barview Water District, and Neahkanie Water District. The timeline for those connections is not known.

The following is the evidence that shows the beginning of actual construction for the project. The projects were completed in various phases, and hence there are various starting and substantial completion dates associated with each phase.

For the City of Manzanita, the following are the dates for the Notices to Proceed:

A. Moore Excavation, Inc., Schedule A pipelines, May 13, 2002.
B. Moore Excavation, Inc., Schedule B pipelines, May 13, 2002.
C. Schneider Equipment, Schedule C – well site development, May 13, 2002

For the City of Wheeler, Notice to Proceed for all phases of their projects, including the pipelines and reservoirs, was October 7, 2002.

Substantial completion dates were as follows:

A. Moore Excavation, Inc. – pipelines – December 15, 2002
B. Schneider Equipment, well site, December 10, 2002
C. City of Wheeler – all projects, September 18, 2003.

These projects were completed and administered under the Rural Development program, with financing by RUS. (See Appendix 5.)

3. Evidence of actions taken to develop the right within the permitted time period and/or time period of the previous extension.

The original permit required that the water be put to beneficial use on or before October 1, 1999. Although various pieces of correspondence exist between myself and the Water Resource Department, the City of Wheeler has been under considerable duress the past few years because of changes in administration, elected officials, and other circumstances. It appears as though there has been some oversight with regard to processing of necessary paperwork for requests for additional extensions of time as required by the Water Resource Department. The City of Wheeler at this time is requesting the Water Resource Department to take exception to the processing of formal paperwork and accept this formal Request for an Extension of Time as meeting the intent of the various statutes for the development of Quasi-Municipal and Municipal water use permits. The City hereby requests that the extension of time be granted as requested in Item 10 below.

4. Evidence of compliance with conditions contained in the permit and any previous extension or extensions. If any of the conditions have not been satisfied, please explain the reason or reasons why.

Water Meters

Water meters have been installed on the pipelines from each well. The wells are located approximately 2,500 feet from the meter locations. However, an individual 8" pipe serving each well has been extended from the well sites to a control building located above the floodplain approximately 2,500 feet north and west of the well sites. The meters are magnetic flow meters manufactured by Dan Foss Company. The meter type is Mag 3100 Water, Serial No. 031129T172, for Well No. 1, and Serial No. 18329T222 for the magnetic flow meter serving Well No. 2. The magnetic flow meters include provisions for instantaneous flow indication and totalizing features. The meter flow information is stored in a PLC and is remotely and locally read by operators on a daily basis.

Access

Access for the flow meters is available upon request by contacting the City of Manzanita Public Works Department.

Water Management and Conservation Plan

Another condition of the permit was that a Water Management and Conservation Plan be submitted within one year of formation of the water supply authority. However, the regional water supply authority was ultimately abandoned in lieu of an ORS 190. Further, the City of Manzanita is currently undertaking an upgrade of their Water Master Plan and is intending to contract for development of a Water Management and Conservation Plan simultaneously. That Conservation Plan is also to include an analysis of the City of Wheeler's water conservation program. Hence, this request for time extension asks the Water Resource Department to formally extend the development of a Water Management and Conservation Plan to no later than October 1, 2005.

Well Construction Standards

Standard conditions of the permit included well construction standards. The wells were constructed in keeping with the general standards for construction and maintenance of water wells in Oregon. A separate report was prepared by AGI Technologies, Hydrogeologists, and outlined in a report prepared by them as subconsultants to Lee Engineering, Inc. dated October 11, 1996.

Pump Tests

Another standard condition included the results of pump tests. The pump test was required prior to receiving a certificate (Certificate of Water Right). Since a certificate is not being requested at this time, the pump test has been deferred.

Beneficial Use

Waters from the wells are currently being put to beneficial use for both the Cities of Wheeler and Manzanita. Further, the City of Manzanita delivers water through its distribution system to Nehalem Bay State Park. Zadduck Creek Coop will soon also be connected to the water system (completed in September 2004).

Other Conditions

All other conditions of the permit are being adhered to, such as putting the water to beneficial use, limitations of use during minimum stream flows, and other requirements.

5. **Evidence of the maximum rate of water diverted to date, if any, for Quasi-Municipal or Municipal purposes.**

Although the wells were developed at different rates, ie., 1,000 and 500 gpm, the design of the system at this time includes the installation of two pumps of equal capacity, approximately 525 gpm each. Both pumps are Goulds, Model SV9RCHC-7STG. The pumps are identical, and are rated at the design point of 525 gpm at a total dynamic head of 296 feet. It is intended at some future date that one of the pumps will be replaced with a pump having a 1,000 gpm capacity. The rate of use in the permit is for 3.6 cfs, or approximately 1,600 gpm. With one pump running, the capacity of the system is approximately 525 gpm, or 1.17 cfs. With both pumps running, the calculated output rate would be approximately 583 gpm, or approximately 1.30 cfs. The pumps are driven by variable frequency drive motors which allow for control of rotating speed and a variable rate of flow. To determine these pumping rates, a hydraulic model was prepared. Data from the pump curves and the configuration of piping was input into a computer model. The analysis is included in Appendix 1 and Appendix 2 for one pump running and both pumps running, respectively.

In order for the maximum permitted rate to be developed, the wells would need to be reconfigured with higher yield pumps, and it may be necessary at some future date to drill a third well to fully appropriate the permitted rights from this site.

According to the City of Manzanita Public Works Department records, the maximum flow delivered from the wells to beneficial use occurred on November 25, 2003, and was recorded at 525 gallons per minute. This occurred following the repair of the variable frequency drive in Well No. 2, and water was delivered to both Wheeler and Manzanita. Typically, the variable frequency drives are set at each well to deliver approximately 300 gallons per minute (0.67 cfs) to Wheeler.

Total water use from the wells varies day-to-day and month-to-month. For the period of July, 2003 through January 2004, the maximum month's usage was 4,642,155 gallons in December 2003. The minimum delivery use from the well field was recorded at 2,708,639 gallons during the month of September 2003. See Appendix 3.

Water delivered to Wheeler amounts to 100,000 to 150,000 gallons per day through the City's master meter. However, Wheeler only sells approximately one-half to one-third of this water through their individual service meters. Hence, water loss in Wheeler varies from 50% to 100% of their sales. Clearly, the City of Wheeler has significant leakage in their system, approximating 50 to 70 gpm. The City is attempting to aggressively locate and eliminate these leaks. Wheeler located a major leak several months ago on a pipeline that crossed Jarvis Creek at 3rd Street. Repair of the leaks has reduced water loss significantly, but more time is needed to assess the impact the repair will have on the water loss totals. It is clear that more work needs to be done.

The City of Manzanita operates their water treatment plant and treats water from their source, Anderson Creek, during most of the year. However, during the months of August and September, 2003, Manzanita also used water from the wells, approximately 100,000 to 400,000 gallons per day, and totaled about 6,350,000 gallons for the period August 7 through September 5, 2003. During August and September, Manzanita diverted their Anderson source supply to Nehalem, as Nehalem's Bob's Creek supply flow had depleted to a point where they were not able to meet demand. As a courtesy, Manzanita allowed Nehalem to use their Anderson Creek supply, and Manzanita then used water from the well field.

Please see the enclosed daily readings of the well site for the period of June 2003 through January 2004 (Appendix 3 and additional current information in Appendix 13).

6. An estimate of the population served under this permit and a description of the methodologies used to make this estimate.

6.1 Current Resident Population

The current, historical and future populations for both the Cities of Wheeler and Manzanita are enclosed in both graphical and tabular form in Appendix 4. Historical census data for the City of Wheeler for the Year 2000 indicates that approximately 391 people were permanent residents of Wheeler. The Year 2000 population for Manzanita is given at 564. These numbers are extracted from the Year 2000 Census. Current and historical as well as projected populations have been developed by the Population Estimates Manager for the Population Research Center, Portland State University. The estimated population for Wheeler for July 1, 2004, is 410. For Manzanita, it is 630. (See "2004 Oregon Population Report" in Appendix 4.)

Population growth in Wheeler according to the City's Comprehensive Plan is approximately 1% per year and the historical record for the City of Manzanita indicates that Manzanita's growth has averaged about 3.3% per year. The estimated population for Wheeler through the year 2047 is 670, based on the

assumption of approximately 0.9% per year growth rate; the population estimate for Manzanita in the year 2047 is 5,407, based on an average assumed growth of 3.3% per year.

6.2 Current Transient Population

Each community consists of a significant number of recreational homes, second homes, and associated transient populations. Hence, the population served by both cities exceeds their base population. Further, the total water demand for each city is highly dependent upon tourism and recreational activities. Peak water use frequently occurs during the months of July, August and early September as a result of the influx of tourist activities. These activities and associated service population are also highly affected by weather and can vary significantly from year to year. Since the history of the existing water supply system under this water rights permit is relatively new, it is difficult to make any long-range projections as to the water needs for the region.

No detailed studies have been completed with regard to short and long-term transient populations. However, using available information, an attempt is made below to approximate the "Equivalent Transient Population" of the two cities, Wheeler and Manzanita. "Equivalent Transient Population" is meant to imply the water use by commercial and part-time residents that would equal the water use of a full-time resident. Clearly, a typical commercial customer or part-time resident would likely use less water per day than a full-time resident, and, therefore, the total people served would be more than the "Equivalent Transient Resident."

Water sales were reported Ann Morgan, Wheeler City Recorder, for November 2003 through February of 2004 as follows:

City of Wheeler, Oregon
Summary of Water Sales

Period	Total Sales, Gallons
Jan – Feb, 2004	2,764,286
Nov – Dec, 2003	2,542,525
Total:	5,306,811

The average use for these four months is:

5,306,881 / 4 = 1,326,705 gallons

The population of Wheeler as reported by Portland State University was 410. The average use per person was, therefore:

1,326,705 / 410 = 3,236 gallons per month

Or, using 121 elapsed days, November 2003 through February 2004:

3,236 / (121/4) = 107 gallons per day per person

This estimate includes some minor commercial and part-time customers and ignores some full-time residents that may be out of town or vacationing in warmer climates during the winter months.

Water production for three of the four months, i.e., water measured through the master meter on First Street that is produced at the wells, totaled 12,398,320 gallons (see Appendix 3). This averages 4,132,733 gallons per month. The unaccounted-for water in Wheeler during this period is:

4,132,733 - 1,326,705 = 2,806,068 gallons per month

or about 136,000 gallons per day (94 gpm). This amount is reported by Wheeler to be about 50 gpm as of May 2005. This issue needs further investigation in the upcoming Water Conservation Plan for Wheeler and Manzanita. It is assumed that this level will be reduced to about 10 percent of water sales, or about 133,000 gallons per month (4,430 gallons per day or 3 gpm).

A ratio between peak summer use and average winter use would provide an estimate of the impact of "Transient Population" on the water system. A review of the data in Appendix 3 for July 2003 shows a period from July 18 through July 20 that averages about 176,000 gallons per day for Wheeler. A three-day average better represents the impact on the source than a single day. The reservoirs within Wheeler (and Manzanita) can buffer a single day high demand without stressing a high withdrawal rate from the wells. There were two other periods of similar high demand, early July and early September (July 4th weekend and Labor Day weekend). The average peak day production of 176,000 gpd appears reasonable. This amount includes unaccounted-for water in Wheeler. It ignores irrigation, since few people in Wheeler sprinkle lawns or gardens. It also does not include industrial use, since there is no industry.

The ratio of peak day during summer use to average winter day use is estimate as:

(176,000 - 70,000) / (44,000 x 1.1)

or Ratio (Peaking Factor) = 2.19

The 70,000 figure is a rough estimate of unaccounted-for water in July 2004. The 44,000 figure is a rounded number representing the average annual daily water sales. The 1.1 number is an estimate of the target value for unaccounted-for water.

Using the peaking factor of 2.19, an estimate of the current "Equivalent Transient Population" is:

(2.19 - 1.0) (410) or 488 people.

Total peak day water use for Wheeler is, therefore, estimated to serve:

410 + 488 = 898 people.

A similar approach was used to determine the "peaking factors" for all of the potential users of the Regional Water Supply in a report entitled "North Tillamook County Regional Water Supply Master Plan" prepared for the City of Wheeler by the author, dated March 1993. The potential water users and their estimated peaking factors are summarized below.

Potential Wholesale User	Estimated Peaking Factor (Figure 6.1, pages 6.31 and 6.32
Wheeler	2.0
Manzanita	2.2
Neahkahnie Water District	1.8
Nehalem Bay State Park	1.9
Nehalem	2.0
Tideland Water Co-op	2.0
Zadduck Creek	2.0
Brighton	2.0
Rockaway Beach	2.5
Watseco/Barview	1.7

Wheeler's peaking factor as reported in 1993 is slightly lower than the current estimate. In 1993, the peaking factor was 2.0. The current estimate is 2.19. The difference is due to the use of more current and more accurate information. The numbers vary from 1.7 to 2.5. Neahkahnie at 1.8 has little or no commercial customers. Rockaway Beach at 2.5 has a high ratio of motels and condominiums.

The estimated current "Equivalent Population" for Manzanita is:

(2.2 - 1.0) x (630) = 756 people.

The total peak day water use for Manzanita is, therefore, estimated to serve:

630 + 756 = 1,386 people.

7. **A description of the financial expenditures made toward completion of the water development.**

The City of Wheeler has expensed $1,963,889 toward their share of the project through January 31, 2004. This amount is included in a final report submitted to Rural Development for finalization of the documentation of the project.

The City of Manzanita has expensed the following amounts for their projects:

1.	Schedule A Pipeline -	$1,008,128.50
2.	Schedule B Pipelines -	$1,140,134.00
3.	Schedule C – Well Sites -	$ 520,100.00
	Total Well Project Construction Cost:	$2,668,362.00

Total amounts expensed by Manzanita for their project is $5,823,783, which includes about $2 million for their water treatment plant, and other related expenses, including engineering, adminsitration, legal, land, and interest on interim financing. These amounts are certified in Manzanita's project monitoring report submitted on June 30, 2003 to Rural Development for finalization of their funding package. Copies of these project-monitoring reports on behalf of both Manzanita and Wheeler are enclosed in Appendix 5. Various photographs of some of the improvements are shown in Appendix 7.

8. **An estimate of the cost necessary to complete the water development.**

Estimates of costs in order to develop the total water development to the permitted 3.6 cfs are at best difficult to estimate at this time. The existing wells have a capacity of 1,500 gpm, or approximately 3.35 cfs. However, the wells have only been developed to a maximum rate of about 583 gpm, or 1.30 cfs. Reconfiguring the wells, installing new pumps and drives, and changing out electrical equipment costs would be minimal, probably less than $200,000. However, to develop the wells to the full 3.6 cfs of permitted rights would cost considerably more. In order to develop the wells to the full permitted value of 3.6 cfs, additional service areas would have to commit to sharing the costs of the new regional water supply. Those new connections would include pipelines to Rockaway Beach, Neahkanie Water District, Watseco Barview Water District, and to Brighton. Further, an additional well would likely need to drilled and the well would have to be developed.

Following is a tabulation of the estimated costs for full development of the permitted water rights.

Description		Estimated Construction Cost
1. Drill new well		$150,000
2. Develop new well and pipeline to Control Building		$350,000
3. Rehabilitate existing wells	a. Two new pumps	$50,000
	b. Two new VFD drives	$30,000
	c. New electrical service and controls	$100,000
4. New pipeline to Rockaway Beach with Booster Pump		$3,100,000
5. Interconnection to Neahkahnie Water District		$200,000
6. Connection to Watseco-Barview		$100,000
7. Connection to Brighton		$10,000
Total Estimated Construction Cost:		$4,090,000
Engineering and Contingencies at 30%		$1,260,000
Total Estimated Project Cost:		**$5,350,000**

It is clear that the City of Nehalem will need to make arrangements with the regional water system in the near future to meet its peak day demands, or develop its water rights on Coal Creek. The experience of this past summer indicates that its existing development of its Bob's Creek supply is insufficient to meet its peak day demands during the minimum stream flows on Bob's Creek. It has been estimated in previous studies that the cost of developing a water from their other permitted right on Coal Creek is considered to be more expensive than the marginal cost of connecting to the regional water supply, which is the subject of these permits. However, it is not possible to predict the preferences of the City of Nehalem at this time.

Further, the City of Rockaway Beach will be instrumental in the decision as to whether or not to extend a pipeline to Rockaway from the existing regional well field. That pipeline will be necessary in order to accommodate the connections to Watseco-Barview and Brighton. Without Rockaway Beach's financial participation in the project, it is unlikely that the regional water supply could be extended to either Brighton or Watseco-Barview.

Finally, interconnection between the City of Manzanita and the Neahkanie Water District is currently under discussion. Such an interconnection would be relatively inexpensive and easy to accomplish.

9. **A summary of any events that delayed completion of the water development or application of water to full beneficial use, including other governmental requirements, if any, relating to the project that have significantly delayed completion of construction or perfection of the water right.**

The most significant delays occurred as a result of the need for Wheeler and Manzanita to secure voter approval for the local financing needed to be committed to the project. As indicated in Item 2 above, two

attempts were made early on to secure voter approval, and each failed. The project was eventually reconfigured to be more expensive, but politically acceptable, including treatment of waters from the City of Manzanita's existing source, Anderson Creek. The City is currently analyzing the cost of treated water from their new water treatment plant versus the cost of water delivered from the new well field. There is no question that water can be delivered less expensively from the new wells. However, the political environment in Manzanita is unknown with regard to the potential for setting aside major diversions of water from Anderson Creek. The ultimate decision may be based on the realization that delivery of water from Anderson Creek impacts the lower reaches of the stream in a negative way. Continued diversion of waters in Anderson Creek affect the ultimate development of the Nehalem watershed portion of the "Oregon Plan." Deliveries of water from the wellfield along the Nehalem River have yet to show any significant impact on the lower reaches of the river between the well field and Nehalem Bay's tide zone. This reach of the river extends for less than two miles, and the amount of water currently withdrawn from the wells is insignificant compared to the minimum stream flows in the river. Further, evidence indicates no direct surface water influence on the wells during their daily pumping period. Monitoring is ongoing and shows that water chemistry, temperature, and other factors are significantly different between the surface waters of the Nehalem River and the well waters of the regional water supply. (See the enclosed data sheets and graphs of pH, temperature and conductivity in Appendix 6.)

10. **An estimated demand projection and a description of the methodology(ies) used for the subject water right permit, considering the other water rights and contracts held by the Municipal or Quasi-Municipal water use permit holder, and a date by which the water development is anticipated to be completed and water put to full beneficial use.**

10.1 Existing Water Rights Information

Attached hereto is Table 3.2 entitled "North Tillamook County Regional Water Master Plan – Summary of Existing Water Rights." (See Appendix 9.) This table was taken from the "North Tillamook County Regional Water Supply Master Plan," prepared for the City of Wheeler by Lee Engineering, Inc., dated March 1993. The existing water rights by the 10 water purveyors in the North Tillamook County area totals approximately 23.1 cfs.

Although many of the water rights are for springs and wells, a large amount of the existing water rights are for streams that discharge to the Nehalem River and Nehalem Bay. Most of the water rights are for diversions that exceed the minimum stream flows in each of the streams. For example, the water right on Vosburg Creek for the City of Wheeler of 4 cfs exceeds minimum stream flow by a factor of 10.

One of the underlying reasons for the development of a regional water supply for North Tillamook County is to return flows in the small streams discharging to Nehalem Bay and Nehalem River to a more natural flow characteristic that would support salmon, steelhead, and trout habitat. Most of the streams are listed in the Oregon Plan as critical salmon, steelhead and trout habitat. Currently, little or no fisheries exist within these streams. However, they are judged to be capable of supporting riverine habitat for many of the depleted species frequenting the Nehalem watershed.

Also in Appendix 9 is detailed information about an existing water right and permits for Wheeler and Manzanita, Attachment A and Attachment A-1, respectively. This information was obtained from the Water Resource Department files via the Internet, at address wrd.state.or.us. Both summaries and water rights information query results showing details are included.

Currently, the Cities of Wheeler and Manzanita are entertaining the option of leasing their existing stream flow water rights in most of their streams to the Department of Fish and Wildlife. In lieu of the stream diversions, with the exception of Anderson Creek for the City of Manzanita, waters will be delivered for domestic purposes through the new regional water well field. Hence, it is believed that the streams will return to a more natural environment that will support aquatic life in its indigenous form.

10.2 Estimated Current Peak Water Demands

Records of current water demands are generated by both Wheeler and Manzanita. The information is generated by computer. Both systems have been automated and monthly reports are readily available. Spreadsheets of current information were prepared by John Handler, Water Superintendent of Manzanita, and are included in Appendix 13. One of the spreadsheets is for a 12-month period from March 2004 to February 2005. Total water production was about 111,266,000 gallons. Wheeler received water solely from the wells, totaling 29,996,000 gallons, or an average daily demand (ADD) of 82,180 gallons.

The peak seasonal water use for both cities is from the July 4th holiday through Labor Day in early September, or a period of about two months. Total water use for this period was about 6,700,000 for Wheeler (108,000 gallons per day) and about 19,297,000 for Manzanita (311,000 gallons per day). Please note that Wheeler's water use continues to include a large percentage of unaccounted-for water.

Peak daily water demand is reported by Manzanita at 520,000 gpd (see Appendix 4). Peak daily demand for Wheeler is estimated at 176,000 gpd. See Section 6.2, page 9. This includes the unaccounted-for water. The actual maximum peak day demand for Wheeler may be as low as 105,000 gpd; i.e. (44,000 x 1.1 x 2.19 = 105,000 gpd). 1.08cfs

10.3 Potential Growth

Potential growth for Wheeler and Manzanita is limited primarily to residential and commercial development within the existing Urban Growth Boundaries. Both communities are constrained by physial and political barriers, including wetlands, beaches, geologically unstable terrain, federal and private forest land, etc. For all of North Tillamook county, Only wheeler has any industrial land identified in their Comprehensive Plan, and that is limited to 5.6 acres (see Appendix 4), in all work done to date for the development of a regional water supply, future development is assumed to be limited to the existing Urban Growth Boundaries, and only Wheeler has or will have any industrial land, so the industrial component is minor.

The major component for future growth will be residential infill and possible changes in existing land use. For example, Manzanita is experiencing a change in land use whereby existing land owners are razing older homes and replacing them with larger new homes, multiple family units, condominiums, etc., increasing the density of housing units, all within the conditions of existing land use plans. Hence, growth in water demand is expected to continue to increase at or near historical trends.

A spreadsheet and graph were prepared for the estimated water peak day demand for Wheeler and Manzanita for the period of 2004 through 2047 (see Appendix 14). Average day and peak day demands are projected. Total peak day demand for both cities is estimated in 2047 to be about 1,818,000 gallons per day, or 2.82 cfs. This is less than the permitted water right of 3.6 cfs. However, the potential exists for serving more than Wheeler and Manzanita. Nehalem and Rockaway Beach are two of the larger potential future users of well water from the new regional supply.

Nehalem has recently experienced more demand than they can produce. Although they have additional permitted rights on Coal Creek that they could develop, it would be more expensive and environmentally damaging to proceed with that option. Also, operating and maintaining or replacing the existing treatment works on their Bob's Creek supply will be financially cumbersome.

The "Regional Water Supply Mater Plan," Table 4.1 (see a copy in Appendix 8) projects Nehalem's future peak day water demand at 510,000 gpd (0.79 cfs) for the year 2050. Should they elect to join Wheeler and Manzanita, they may or may not abandon their existing water supply system. Therefore, their demand on the new regional supply may be up to 0.79 cfs, or less.

Rockaway Beach is in a similar situation. The previous studies indicate their long-range peak-day demand may be as high as 1,680,000 gpd (2.60 cfs). However, they are more likely to continue maintaining and operating their Jetty Creek supply. It has a capacity of 1,000,000 gpd or 1.55 cfs. Therefore, their demand on the regional supply may be more nearly 1.05 cfs.

Other potential customers could include Tideland (currently negotiating), Brighton, Watseco/Barview, and Neahkahnie Water District. Nehalem Bay State Park is currently a wholesale customer of Manzanita. Zadduck Creek Water Coop has recently connected.

Estimated future demand projections were also made during the early phases of the development of the regional water supply. The most recent projections are included in a report entitled "City of Wheeler and City of Manzanita - Water Facilities Master Plan Update," prepared by Lee Engineering, Inc. in October 1994. Chapter 3 develops estimated water demands for the revised project at that time. Included in Table 3.1, attached hereto in Appendix 10, is an estimate of the number of services and average daily demands in 1994, and services and average daily demand and peak day demand extended to 2010 and 2050. The number of services information was provided by the various water users. Average day demands were also provided at that time. Projections through 2010 and 2050 were made based on the historical growth rates in the various communities and throughout northern Tillamook County according to then existing census data. The number of future services was calculated from statistical projections. The average day water demand was taken based on the 1994 information. Peak day demand was estimated based on the

historical flows during July, August and January of each year in comparison to the total annual water use. Peaking factors were found to vary from 1.7 to 2.5 throughout the North Tillamook County area. This high peaking factor resulted from the large recreational population each summer, the large proportion of second home ownership throughout the area, associated recreational use, and high wintertime flows based on freezing weather conditions which were addressed by continuously running faucets during subfreezing weather.

The average daily water use through 2050 is estimated as slightly less than 1 million gallons per day. Peak day demand is estimated at about 2.1 mgd, relating to the jurisdictions shown in Table 3.1.

The projected average day and peak day water demands through the year 2050 are considerably larger if all of the original participants of the regional water study are eventually connected to the regional water supply. Table 4.1 of the "North Tillamook County Regional Water Supply Master Plan" projects future water demands for all of the original 10 participants. Average day demands may extend to as high as 1.4 mgd (2.2 cfs), and peak day demands can be as high as 3.6 mgd (5.58 cfs). If demands were reached as high as those predicted, then additional water rights application would need to be made to permit the use of water for an additional 2 cfs. (A copy of Table 4.1 is included in Appendix 8.)

Chapter 4 of the "Water Facilities Master Plan Update" discussed the estimated well yield that would result from test wells that had recently been constructed. The second paragraph on page 4.2 reads:

> "Assuming the minimum yield of approximately 400 gpm per well, the well site appears to have the potential to serve the region's peak day water demand through the year 2050. That is, approximately four wells can be developed at the proposed site. Each well will have a capacity of approximately 400 to 600 gallons per minute. Minimum yield at this site is estimated to be about 1,600 gallons per minute. The peak day demand for the proposed regional water users will be approximately 1,450 gallons per minute."

Based on the test wells, the projected need for water service through the year 2050, and other information, an application was made to appropriate 3.6 cfs of water at the proposed well site. 3.6 cfs is approximately 1,612 gallons per minute, the amount addressed in the report.

The current well field is developed (limited by pumping capacity) for a maximum of about 583 gallons per minute, or slightly more than half of the permitted amount. Two wells have been constructed. One well has a capacity of about 1,000 gallons per minute (2.23 cfs), and the other well has a maximum capacity of 500 gpm (1.12 cfs). This is slightly less than the projected 3.6 cfs, however it is possible to drill a third well to ultimately develop the full permitted amount.

A date by which the water development is anticipated to be completed and the water put to full beneficial use is difficult to predict. The politics of the North Tillamook County makes full development of a regional water system difficult. Initial studies concerning regional water supplies throughout Tillamook County were developed in the mid- to late 1950's. Several interim reports were also prepared by various jurisdictions throughout the 60's, 70's, and 80's. It has taken about 50 years to make the first step toward

a regional water supply. The only other water systems currently in Tillamook County pursuing regionalization of the delivery of domestic water is the City of Tillamook and its surrounding wholesale customers. There have also been some attempts by Bay City to regionalize water service in its area.

The projected schedule for completing full development of a regional water supply is likely to be driven by the emphasis to return the major streams in the North County area to their original states, and cease the full diversion of waters during minimum stream flow periods. The Oregon Plan and the activities of the local watershed council have made some strides toward this end. However, the rate at which the future users from Watseco-Barview north to Neahkanie are willing to commit to the regional water supply cannot be predicted with any certainty. If history is any indication, it may take another 50 years.

11. **A summary of the plan and schedule to complete construction and/or perfect the water right.**

The production capacity of the existing regional water supply is limited by the existing pumping units installed in the two wells. This capacity is estimated at 583 gpm, or 1.29 cfs.
Growth in Wheeler and Manzanita and associated water demand will approach this capacity in the year 2020. This capacity limit could be reached earlier if Nehalem elects to connect to the system.

The useful life of the pumping units and electrical motors will necessitate their replacement sometime in the range of 2015. It is therefore recommended that planning begin by or before 2010 to address the increase in water production from the existing 1.29 cfs to the permitted amount of 3.6 cfs.

The planning process should include as a minimum the following activities:

1. Reconvene the North Tillamook County Regional Water Supply Technical Advisory Committee by 2010.
2. Contact RD (RUS). Their permission is needed to add any new users per conditions of the existing RD loans – by 2010.
3. Involve all stakeholders. Stakeholders may include, but are not limited to:
   - Oregon Department of Human Services – Drinking Water Program
   - Oregon Department of Fish & Wildlife
   - Environmental Protection Agency
   - Local Watershed Council
   - Oregon Water Watch
   - Oregon Trout
   - Federal Fish & Wildlife Agencies
4. Update the "Regional Water Plan" by 2012.
5. With or without additional regional water users, plans and specifications should be prepared by 2013 to modify the existing pumps and electrical equipment.
6. Construciton should be completed by 2014 to obtain a capacity of at least 2.5 cfs (Item 3, Section 8).
7. Extend service to Nehalem and Rockaway Beach by 2025. Add new well, pipelines, etc. to a capacity of the full 3.6 permitted right. (Items 1, 2, 4, 5, 6 and 7, Section 8).

8. By 2025, determine need and/or availability of water rights beyond 3.6 cfs.
9. If needs exceed 3.6 cfs by 2025, file for additional water rights or develop an as yet unidentified alternative.
10. In the interim, as existing surface water sources are modified or unused, consider leasing existing rights to the Oregon Department of Fish & Wildlife for instream use. 2005 through 2025.
11. Constantly monitor the Legislature for changes in Oregon Water Law that may impact local water development – ongoing.
12. Conduct other planning, design and construction as necessary to meet future water needs – ongoing.
13. Incrementally perfect water rights as law and rules allow. Verify with Water Resource Department.

12. **Justification for the time requested to complete the project and/or apply the water to full beneficial use.**

See Item 10 above.

I have authorization from the permittee to apply for an extension of time under this permit. I certify that the information I have provided in this application is true and correct to the best of my knowledge.

F. Duane Lee — F. Duane Lee, P.E., CWRE — 6/21/05 — Date

Dongel W. Hooper, City Manager — City of Wheeler — 6-22-05 — Date

cc: City of Wheeler
City of Manzanita
Greg Beaman

Certified Water Right Examiner
#279 WRE
F. Duane Lee
F. Duane Lee
May 30, 1991
STATE OF OREGON
Exp. 12/21/06

Application for Extension of Time
Appendix
Table of Contents

APPENDIX 1

Waterworks for Excel
MANZANITA/WHEELER WATER RIGHTS
WELL NO. 2 ON, WELL NO. 1 OFF
File: 3178WHEELER03.XLS

PIPE TABLE

	INPUT						OUTPUT			INPUT	
Seq#	Pipe	UpNode	DnNode	Length ft	Diameter in	Roughness	Flow US gpm	Velocity ft/sec	HeadLoss ft	Status	Description
1	1	3	1	75.0	6.0	150.0	0.00	0.00	0.00		
2	2	4	2	75.0	6.0	150.0	-473.92	-5.38	1.09		
3	3	5	3	2730.0	9.5	150.0	0.00	0.00	0.00	c	
	4	5	4	2430.0	9.5	150.0	-473.92	-2.16	3.82		
5	5	6	5	350.0	10.7	150.0	-473.92	-1.69	0.30		
6	6	7	6	21850.0	10.7	150.0	-473.92	-1.69	18.93		
7	7	8	7	3300.0	7.9	150.0	-473.92	-3.07	12.23		
8	8	9	8	7350.0	8.0	150.0	-473.92	-3.03	26.25		
9											
10											

Total System Demand = 0.00

NODE TABLE

INPUT			OUTPUT		INPUT			
Node	Elevation ft	Demand US gpm	Pressure psi	HGL ft	XCoord	YCoord	Status	Description
1	6.0	0.00	148.05	348.00				Well No. 2
2	6.0	0.00	127.98	301.62				Well No. 1
3	23.0	0.00	140.69	348.00				Top of Well No. 2
4	23.0	0.00	120.15	300.54				Top of Well No. 1
5	63.0	0.00	101.18	296.72				Control Building
6	100.0	0.00	85.03	296.42				Foss Rd.
7	10.0	0.00	115.79	277.48				Hwy. 101 at Hwy 53
8	10.0	0.00	110.50	265.25				Wheeler at 1st St.
9	214.0	0.00	10.82	239.00				Vosberg Reservoir

PUMPED SOURCES TABLE

INPUT		OUTPUT		INPUT	
OpCurve	Estimate	Actual	Inflow US gpm	Status	Description
PUMP1	0.50	0.00	0.00		
PUMP2	0.50	-1.00	-473.92		

FIXED GRADE SOURCES TABLE

INPUT			OUTPUT		INPUT	
Node	Top Of Water ft	Estimate	Actual	Inflow US gpm	Status	Description
9	239.00	0.00	1.00	473.92		

BOOSTER PUMP TABLE

INPUT			OUTPUT	INPUT	
Pipe	Pumps	OpCurve	Boost Head ft	Status	Description

REDUCING (PRV) TABLE

INPUT					OUTPUT		INPUT	
Pipe	Source	Pressure psi ft	OpenK	CKV	PRVLoss psi	CKVState	Status	Description

SUSTAINING (PSV) TABLE

INPUT				OUTPUT		INPUT	
Node	UpSrcNode	DnDemNode	Pressure psi	Options	DnDemand US gpm	Pressure psi	Status	Description

PUMP CURVES

CHECK VALVE TABLE			
INPUT	OUTPUT	INPUT	
Pipe	State	Status	Description

PUMP1	
INPUT	
Flow US gpm	Head ft
0	342
210	326
420	310
525	282
630	243

PUMP2	
INPUT	
Flow US gpm	Head ft
0	342
210	326
420	310
525	282
630	243

PUMP3	
INPUT	
Flow US gpm	Head ft

PUMP4	
INPUT	
Flow US gpm	Head ft

APPENDIX 2

Waterworks for Excel
MANZANITA/WHEELER WATER RIGHTS
TWO PUMPS RUNNING, SERVICE TO VOSBERG
File: 3178WHEELER02.XLS

PIPE TABLE

Seq#	INPUT Pipe	UpNode	DnNode	Length ft	Diameter in	Roughness	OUTPUT Flow US gpm	Velocity ft/sec	HeadLoss ft	INPUT Status	Description
1	1	3	1	75 0	6 0	150 0	-290.42	-3.30	0.44		
2	2	4	2	75 0	6 0	150.0	-292.57	-3.32	0.45		
3	3	5	3	2730 0	9.5	150.0	-290.42	-1.32	1.73		
	4	5	4	2430 0	9 5	150.0	-292.57	-1.33	1.56		
5	5	6	5	350 0	10 7	150.0	-582.99	-2.08	0.45		
6	6	7	6	21850 0	10 7	150 0	-582.99	-2.08	27.79		
7	7	8	7	3300 0	7 9	150 0	-582.99	-3.78	17.94		
8	8	9	8	7350 0	8 0	150.0	-582.99	-3.72	38.53		
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
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36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
46											
47											
48											
49											
50											

Total System Demand = 0.00

NODE TABLE

INPUT			OUTPUT		INPUT			
Node	Elevation ft	Demand US gpm	Pressure psi	HGL ft	XCoord	YCoord	Status	Description
1	60	0.00	138.47	325.87				Well No. 2
2	60	0.00	138.40	325.71				Well No. 1
3	230	0.00	130.92	325.43				Top of Well No. 2
4	230	0.00	130.85	325.26				Top of Well No. 1
5	630	0.00	112.86	323.70				Control Building
6	1000	0.00	96.65	323.26				Foss Rd.
7	100	0.00	123.58	295.47				Hwy. 101 at Hwy 53
8	100	0.00	115.81	277.53				Wheeler at 1st St.
9	2140	0.00	10.82	239.00				Vosberg Reservoir

PUMPED SOURCES TABLE

INPUT				OUTPUT		INPUT	
Node	Pumps	OpCurve	Estimate	Actual	Inflow US gpm	Status	Description
1	1	PUMP1	0.50	-0.50	-290.42		
2	1	PUMP2	0.50	-0.50	-292.57		

FIXED GRADE SOURCES TABLE

INPUT			OUTPUT		INPUT	
Node	Top Of Water ft	Estimate	Actual	Inflow US gpm	Status	Description
9	239.00	0.00	1.00	582.99		

BOOSTER PUMP TABLE					
INPUT			OUTPUT	INPUT	
Pipe	Pumps	OpCurve	Boost Head ft	Status	Description

REDUCING (PRV) TABLE

INPUT					OUTPUT		INPUT	
Pipe	Source	Pressure psi	OpenK ft	CKV	PRVLoss psi	CKVState	Status	Description

SUSTAINING (PSV) TABLE

INPUT				OUTPUT		INPUT	
Node	UpSrcNode	DnDemNode	Pressure psi	Options	DnDemand US gpm	Pressure psi	Status	Description

CHECK VALVE TABLE

INPUT	OUTPUT	INPUT	
Pipe	State	Status	Description

PUMP CURVES

PUMP1	
INPUT	
Flow US gpm	Head ft
0	342
210	326
420	310
525	282
630	243

PUMP2	
INPUT	
Flow US gpm	Head ft
0	342
210	326
420	310
525	282
630	243

PUMP3	
INPUT	
Flow US gpm	Head ft

PUMP4	
INPUT	
Flow US gpm	Head ft

APPENDIX 3