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I. Background Information

Subject: Coordinated Water System Plan (CWSP) Update 2016

Summary of Request: County Council review to insure that the CWSP is not inconsistent with the Whatcom County Comprehensive Plan and development regulations and satisfies RCW 70.116.050.

State Environmental Policy Act (SEPA) compliance: The SEPA Official for Whatcom County issued a determination of non-significance on May 12, 2016.

County Council Timeframe: Pursuant to RCW 70.116.050(7), the County Council is to take action on a CWSP within 60 days of receiving it.

II. Analysis of the Proposed Amendment

The Whatcom County Council passed Resolution Nos. 90-73 and 91-075 in the early 1990s, declaring the portion of Whatcom County west of the National Forest, with the exception of certain tribal lands, to be a “critical water supply area” under RCW 70.116. This declaration committed water purveyors with more than 50 connections and County government representatives (collectively known as the “Water Utility Coordinating Committee”) to prepare a Coordinated Water System Plan. Specifically, Resolution No. 90-73 indicates that this CWSP would include “establishment of service boundaries, interconnections, conservation measures, and other provisions regarding the efficient provision of water to meet present and future needs by public and private utilities.”

The Water Utility Coordinating Committee met between November 5, 2014 and April 20, 2016 in a process to update the CWSP. They gave final approval of the CWSP on April 20, 2016. The CWSP has gone through SEPA review and the County Council must find that the CWSP is not inconsistent with County land use plans, and consider several other factors, prior to sending the CWSP to State DOH for final approval.

Specifically, the factors that are to be considered in evaluating a proposed CWSP are set forth in RCW 70.116.050(4) and (7). These factors are addressed below.

(A) Ensure that the CWSP is not inconsistent with the land use plans, shoreline master programs, and/or development policies of the general purpose local government or governments whose jurisdiction the water system plan affects.

Staff has reviewed the CWSP and finds that it is not inconsistent with the Whatcom County Comprehensive Plan and development regulations. Specific land use planning issues are highlighted below.

Issue #1 – City Water Service Areas Extending Outside of Urban Growth Areas

Clearly, urban levels of water service should not be extended outside of UGAs, as evidenced by:
The Countywide Planning Policies (CWPP)

Policy F-6: Unless specifically provided for by state statues, Cities, other municipal corporations, and other public and private utilities shall not extend urban levels of water service to serve urban uses outside Urban Growth Areas. If legally allowed water extensions are made outside of Urban Growth Areas, the maximum number of connections shall not exceed the density allowed under the associated zoning. The number of connections shall be specified in a legally binding document at the time the extension is approved. Property contiguous to extension of utilities necessary to solve existing water deficiencies, but which cannot benefit from them because of zoning constraints, shall not be assessed for those improvements. (Whatcom County Comprehensive Plan, Appendix C, p. C-7)

Policy F-7: The availability of pipeline capacity required to meet local needs and/or supply shall not be used to justify development counter to the county-wide land development pattern and shall not be considered in conversions of agricultural land, forestry, and rural areas (Whatcom County Comprehensive Plan Appendix C, p. C-7).

The Whatcom County Comprehensive Plan

... Outside of Urban Growth Areas, cities and other public and private utilities may extend water only at rural levels of service. If rural levels of service are extended, availability of pipeline capacity to meet local supply needs shall not be used to justify development counter to Countywide land development patterns and shall not be considered in conversions of agriculture land, forestry, or rural lands ... (p. 5-3).

Policy 2Q-1: Ensure that service providers do not extend sewer or urban levels of water service to serve areas outside urban growth areas except when necessary to protect basic public health and safety and the environment and when such services are financially supportable at zoned densities and do not permit urban development.

Policy 5P-3: Discourage extension of urban levels of water service to areas not designated as urban growth areas or Rural Communities, except in those limited circumstances shown to be necessary to protect basic public health and safety and the environment and when such services are financially supportable at rural densities and do not permit urban development.

Policy 2N-4: Ensure that cities or other service providers do not extend sewer or urban levels of water service to serve areas outside urban growth areas except when necessary to protect basic public health and safety and the environment and when such services are financially supportable at zoned densities and do not permit urban development.

(p. 2-25)

As in the previous CWSP, the water service areas of three cities (Bellingham, Ferndale, and Sumas) extend outside of the Urban Growth Areas designated in the Whatcom County Comprehensive Plan. However, the below prior explanations of why, and their service intent, still pertain.
Bellingham – The City of Bellingham's service area extends outside of the Urban Growth Area in four places:

- Chuckanut Dr.;
- Mt. Baker Highway;
- Aldrich Rd. west of Cordata; and
- In the Curtis Rd. area, northwest of the Airport.

In an e-mail memo of 3/20/00, the Bellingham's Superintendent of Utilities, Tony Seman, indicated that these places are included in their service area, even though they are outside of the Urban Growth Area, for the following reasons:

1. We have had a water main to Larrabee state park since 1938.
2. Mt. Baker Highway water main was installed (1958), owned and maintained by the VanWyck Water Association up until 1993, when the association requested the city to take over the ownership and maintenance. They have always been supplied with City water through a master meter until the takeover when the master meter was removed.
3. Aldrich Road – Was Twin Lakes Water Association until 1982 when the master meter for the association was removed and became part of the City's direct service.
4. Curtis Road main installed 1973 (also location of Foster reservoir) – provided service to Water District #2...

Additionally, Mr. Seman's 3/20/00 e-mail stated:

The City has no intent on increasing service potential above the current Whatcom County zoning designations for each area. The Public Works Department has been active in ensuring that as water service requests are received, we only sell services that are consistent with County zoning and that are inside the current City water service zone. Many owners have asked for service outside those areas and we have denied their requests on a continual basis...

Three of the four service areas outside Bellingham's Urban Growth Area pre-date adoption or the Growth Management Act in 1990, and all four pre-date adoption of final Urban Growth Area boundaries in 1997. These factors, along with the City's commitment to serve these properties at current zoning densities, alleviate concerns that the service area designations are inconsistent with the Whatcom County Comprehensive Plan.

Ferndale – The City of Ferndale's water service area extends outside of the Urban Growth Area in five places:

- Douglas Rd./Olson Rd./Thornton Rd.
- Imhof Rd.
- Gadwa Rd./Kaas Rd./Trigg Rd.
- Northwest Dr./W. Smith Rd.
- Brown Rd./Aldergrove Rd.
In a personal communication dated 6/7/16, the City of Ferndale's Superintendent of Utilities, Mike Olinger, indicated that this City is in the process of updating its Water System Plan and service areas which will bring the service area boundaries within city limits or the UGA boundary except:

- Brown Rd./Aldergrove Rd.
- Douglas Rd./Olson Rd./Thornton Rd.
- Graveline Road and Slater Road east of Interstate-5

Although outside of the UGA, all of these areas are within Ferndale’s UGA reserve.

In addition, there are the following areas:

- Northwest Dr./ W. Smith Rd.
- W. Axton Rd./Ten Mile Creek area

These areas have historically been served by the City of Ferndale since before the GMA was enacted. The City will continue to serve these areas but will not accept new connections except when dealing with a public health emergency. The City has connected one home in this area due to a declared public health emergency.

**Sumas** – The City of Sumas' water service area extends outside of the Urban Growth Area east of the city, into designated Agricultural lands.

In a letter of March 27, 2000, Sumas City Administrator David Davidson addresses this issue by stating:

The water service area identified in the City’s “Declaration,” as filed recently in conjunction with the CWSP process, contains two swaths of land not included within the Sumas UGA. They are an area immediately east of Heron Lane and a triangular area north of Rock Road and east of the Sumas River. They are included in the service area because residents in those areas have been receiving water service from the City for at least a decade. Service was initiated to those properties simply because each was on the City's side of the master meters separating our service area from that of the Sumas Rural Water Association. The City will continue to provide service in those areas consistent with the County's zoning code – i.e., if the County issues a building permit, the City will provide water.

There is a difference between the Sumas UGA legally established by County ordinance and the UGA identified in the City's Comprehensive Plan. Our plan, as well as our declared service area, includes a 40-acre area south of Rock Road and west of the Sumas-Kendall Road, as well as an irregular pocket extending in from Heron Land immediately south of Johnson Creek. The City has included these areas in its future service area because they are included in the City’s desired UGA. In each case the City now provides water to some or all of the residents in the area. However, the City has no intention of using the water service area declaration as a means of justifying future inclusion of those areas within the UGA established by the County. At the next Countywide UGA update, Sumas does intend to argue for inclusion of those areas, but not on the basis of the existing water service.
RCW 57.16.140 states that “The construction of or existence of sewer capacity or water supply in excess of the needs of the density allowed by zoning shall not be grounds for any legal challenge to any zoning decision by the county.” Cities, water districts and associations have historically provided service to development in rural areas of Whatcom County (although in this day of growth management planning, city water service areas should closely resemble Urban Growth Area boundaries). The cities of Bellingham, Ferndale, and Sumas provide water service outside their Urban Growth Areas. These services should continue to be provided at rural densities. Additionally, existence of water service should not be used as justification for expanding Urban Growth Area boundaries and rezoning rural or agricultural properties to higher densities. Therefore, the resolution addressing consistency between the CWSP and the County’s Comprehensive Plan should contain two conditions:

1) Outside of Urban Growth Areas, as designated on the Whatcom County Comprehensive Plan map, City water service shall be provided consistent with planned densities as set forth in the Whatcom County Comprehensive Plan and Official Whatcom County Zoning Ordinance (Title 20).

2) A City’s designation of a water service area that extends outside of an Urban Growth Area shall not be utilized as justification for later expanding the Urban Growth Area.

**Issue #2 – City Service Areas That Don’t Include Portions of the Urban Growth Area**

Under the existing policies, cities are to have plans to provide urban levels of service to their UGAs once annexed.

CWPP D-3: Cities shall develop a plan to provide urban level water and sewer services within their Urban Growth Areas. This plan should be developed in cooperation with existing water purveyors and other municipal corporations providing water or sewer services within each city’s Urban Area…”

The Whatcom County Comprehensive Plan contains the following:

Policy 5Q-2: Ensure provision of urban levels of water service to urban growth within areas designated for urban growth.

It appears that all areas of UGAs are contained within the cities’ service areas.

**Issue #3 – Population Projections**

The Whatcom County Comprehensive Plan provides official population projections for the 20-year planning period (2016-2036). It projects that there will be 275,668 people living in Whatcom County in 2036 (p. 1-10). Approximately 205,800 of these people would live in cities (including their Urban Growth Areas) and the remaining 69,650 people would live in the rural areas of the County. This population growth projected in the Whatcom County Comprehensive Plan represents a 1.3% average annual increase over the 20-year planning period (2016-2036).

The CWSP uses the 20-year population projections established in the Whatcom County Comprehensive Plan. While the CWSP projects population to the year 2066, it assumes that the Comprehensive Plan projections for the year 2036 will be correct, including the distribution among urban and rural areas.
Therefore, the CWSP is wholly consistent with the Whatcom County Comprehensive Plan’s population projections.

**Issue #4 – Utility Policies in the Comprehensive Plan**

Whatcom County Comprehensive Plan policies relating to utilities are found in chapter 5. Goals and policies that govern the provision of water include:

**Goal 5Q:** Work with water purveyors to provide service to all existing and designated urban growth or industrial areas.

**Policy 5Q-1:** Work with the appropriate jurisdictions to ensure adequate water rights and supplies to the Urban Growth Areas and designated industrial areas in northwest Whatcom County. Consider all options, including but not limited to, extension of water service areas, conjunctive management of surface and groundwater, artificial storage, and recovery and reclamation of wastewater to the UGAs and designated industrial areas in northwest Whatcom County.

**Staff Comment:** The County works with the appropriate jurisdictions to ensure adequate water rights and supplies to the UGAs and designated industrial areas in northwest Whatcom County through the development of the CWSP. Additionally, staff works with the various purveyors when they are developing their individual service plans.

**Policy 5Q-2:** Ensure provision of urban levels of water service to urban growth within areas designated for urban growth.

**Staff Comment:** This policy is enacted through the Comprehensive Plan UGA review and evaluation process conducted by PDS, wherein the County ensures through preparation of the 20-Year Capital Facilities Plan (CFP) that all areas designated for urban growth are contained within one of the providers’ service areas and that those service area plans provide for the provision of water at urban service levels.

**Policy 5Q-3:** Periodically review Urban Growth Areas to ensure adequate water supplies.

**Staff Comment:** By law, the County reviews its Urban Growth Area boundaries at least every 8 years to ensure, among other things, that there are adequate water supplies to serve the area(s).

**Policy 5Q-4:** Encourage annexation of areas zoned for urban densities concurrent with extension of urban level services.

**Staff Comment:** The County has long encouraged cities to annex areas of their UGAs concurrent with the extension of urban level services. Additionally, most cities have policies in place that do the same.

**Policy 5Q-5:** The County should work closely with purveyors and the State Department of Health in the development and review of Comprehensive Water Plans to ensure consistency with land use and urban growth area needs.
Staff Comment: The Water Utility Coordinating Committee, which is composed of representatives of water purveyors that have 50 or more connections, and County representatives worked collaboratively to develop the CWSP. Additionally, State Department of Health representatives participated in the meetings during development of the CWSP.

Policy 5Q-6
The County will work with the Department of Ecology, City of Bellingham, the Port of Bellingham, the PUD, and local, regional, and state economic development agencies to ensure an adequate water supply to areas planned for industrial development.

Staff Comment: The County works with the appropriate jurisdictions to ensure adequate water supplies to designated industrial areas through the development of the Comprehensive Plan UGA review and evaluation process.

Goal 5R:
Ensure that potable water supplies required to serve development are available at the time the development is available for occupancy and use.

Staff Comment: There are two components to the CWSP: The “supplemental provisions,” which are included in the document currently under review, and Water System Plans submitted by individual purveyors (see RCW 70.116.030 and CWSP, p. 1-5). These Water System Plans are the primary documents that the individual purveyors use to plan for water needs of development within their service area. Additionally, the CWSP “supplemental provisions” establish a procedure for obtaining water if the designated purveyor is not able to provide service in a timely and reasonable fashion.

Policy 5R-1: Building permit applicants, new subdivisions, short plats, and binding site plans will be required to provide evidence that adequate and legal (in consultation with the Department of Ecology) supplies of water are available prior to their approval by the County.

Staff Comment: The CWSP indicates that the “utility service review procedure,” which is intended to identify an existing water purveyor willing and able to provide water, applies to subdivisions, binding site plans, and building permits. While the actual requirement to provide proof of water supply for a subdivision or permit is contained in other statutes, the CWSP guides applicants in the process for obtaining an acceptable water supply.

Policy 5R-2: Work with purveyors to assist them in modifying their systems as required to support the land use element of the comprehensive plan.

Staff Comment: The County reviews Water System Plans of individual purveyors for consistency with land use plans and is willing to assist if conflicts are identified.

Issue #5 – Coordination with Zoning
The CWSP’s “utility service review procedure” sets up a process to obtain water for land use activities that conform to the “local zoning ordinance” (CWSP, p. 6-4). However, the CWSP also recognizes that rezone applications are submitted from time to time. In these cases, water purveyors are given the opportunity to comment on the rezone request (CWSP, p. 6-9). Additionally, fire flow standards in the
CWSP have been coordinated with zoning designations (CWSP, p. 1-2 and 5-13). Finally, water system plans that are periodically submitted by individual purveyors are reviewed in light of the zoning densities allowed within the purveyor's service area.

**Issue #6 – Coordination with Land Division Regulations**

Since the last CWSP, Whatcom County amended its land division regulations to provide a uniform set of criteria for determining whether a public water supply would be required in long and short plats. The CWSP sets up a process for identifying a public water purveyor who is willing and able to provide public water service, should the land division regulations require such a public water supply (CWSP, pp. 6-4 to 6-9). If existing purveyors are unwilling or unable to provide service, a new public water system may be created (CWSP, p. 6-8).

**Issue #7 – Coordination with Shoreline Management Program**

Section 23.100.180.10.12 of the Whatcom County Shoreline Management Program contains the following policies relating to water systems:

(a) Only those components of public water systems which are shoreline dependent should be located on shorelines, unless alternatives are infeasible.

(b) Private and public intake facilities and wells on shorelines should be located where there will be no adverse effects upon natural features and other users.

Staff has not identified any components of the CWSP that conflict with these policies.

(B) **Recognize all water resource plans, water quality plans, and water pollution control plans which have been adopted by units of local, regional, and state government.**

Within Whatcom County there are a number of water plans that have been adopted or are under development. These include plans related to wellhead protection areas, surface water source protection, shellfish districts, watershed planning under RCW 90.82, Lake Whatcom, stormwater, marine resources, and salmon recovery. The Coordinated Water System Plan has been and will be integrated and coordinated with these plans.

(C) **Incorporate the fire protection standards developed pursuant to RCW 70.116.080.**

RCW 70.116.080 indicates that the State Department of Health has the responsibility of developing fire protection standards for new and expanding public water systems. These standards are embodied in WAC 246-293-601 through 690. According to WAC 246-293-670, alternative methods may be utilized if approved by the local fire protection authority and the State Department of Health. The Whatcom County Fire Marshal was involved in the process of developing the fire protection standards in the CWSP and officially approved these standards. The CWSP will proceed to the State Department of Health for its approval after the County Council concludes its review.
(D) Identify the future service area boundaries of the public water system or systems included in the plan within the critical water supply service area.

A service area map for all Group A water systems (generally defined as those serving 15 or more connections) that responded to the County's request for information has been included in the CWSP. The current map includes 169 of the approximately 186 Group A system in the county. Additionally, 92 Group B systems—generally defined as those systems service less than 15 connections—that are expanding were mapped. Some of the water purveyor's service area boundaries overlap. The County Health Department plans to contact additional purveyors that have not yet declared their service area boundaries so that the map can be periodically updated and contact purveyors with overlapping boundaries in an attempt to eliminate or reduce such overlaps.

(E) Identify feasible emergency interties between adjacent purveyors.

Interties are addressed in section 8.6.2 of the CWSP, which states:

An intertie is an interconnection between public water systems, which permits the exchange or delivery of water between the systems. An intertie can be for emergency or seasonal use, for use during repairs or facility maintenance only or used on a continual basis. Interties are recognized as valuable management tools for public water systems because they improve overall system reliability, enhance the manageability of the system, provide opportunities for conjunctive use, or delay the need to develop new water sources... (CWSP, p. 8-21)

Existing interties for expanding Group A water systems are listed in Table 8-6 of the CWSP. Additionally, Water System Plans for individual water purveyors (which are part of the CWSP) include a section on interties (WAC 246-290-100(4)).

(F) Include satellite system management requirements consistent with RCW 70.116.134.

Satellite management is addressed in section 6 of the CWSP. This section states:

Prior to 1991, the term SMA (Satellite Management Agency) was applied loosely to those water utilities that provided service to remote systems.

In 1991, the legislature modified the Public Water System Coordination Act rules to establish criteria for designating entities approved as SMAs. The current definition of a SMA is:

A person or entity that is approved by DOH to own or operate more than one public water system on an area wide-basis, without the necessity for a physical connection between such water systems.

Currently, the laws and policies relating to the provision of satellite management services are embodied in legislation passed in 1995... which required all new public water systems to be owned or managed and operated by an “approved” SMA, where one was available... (p. 6-11).

RCW 70.116.134 contains two basic requirements for the County relating to Satellite Management Agencies (SMAs):
• Identifying potential satellite management agencies where no purveyor has designated a future service area and where the existing purveyor is unable or unwilling to provide service.

• Prior to construction of a new public water system, the County must direct the proponent to a SMA to explore the possibility of the SMA either owning or operating the new water system.

Regarding the first issue, Section 6.4.7 of the CWSP lists the approved SMAs (p. 6-12). This list could expand in the future if additional SMAs are approved.

The second issue is addressed in Section 6.4.6 of the CWSP, which indicates that when an applicant cannot obtain water from an existing purveyor, he will be referred to a SMA prior to being allowed to create a new water system. If a SMA is not available, then a new water system may be created (pp. 6-11 and 6-12).

(G) Include policies and procedures that generally address failing water systems for which counties may become responsible under RCW 43.70.195.

Failing water systems are addressed in section 7 of the CWSP. This section states:

RCW 43.70.195 provides that whenever an action is brought by the Secretary of Health or a local health officer to place a public water system in receivership, the petition shall include the names of one or more suitable candidates for receiver who have consented to assume operation of the water system. If there is no other person or entity willing and able to be named a receiver, the court shall appoint the county in which the water system is located as receiver.

Existing utilities have accepted the lead responsibility for providing public water supply within their designated service areas through the establishment of service area boundaries in the Coordinated Water System Plan (CWSP) and the review process described above. Therefore, these utilities should be considered the primary candidate as receiver for a failing system within or adjacent to their system. A logical extension of this responsibility is for the designated utilities to assist in correcting problems of failing systems within the boundaries of their service areas and ultimately accept ownership of the failing system following the designated system’s upgrade to standards. Designated satellite management agencies (SMAs) are candidates named as the receivers of failing systems outside all other designated service areas and within designated service areas where suitable candidates are not otherwise available.

Group A – Community systems with 100 or more permanent connections, and all expanding public water systems that intend to have 100 or more permanent connections, will be considered candidates to assume the receivership role described in RCW 43.70.195 for failing systems within their designated service area.

The Secretary of Health or Whatcom County Health Officer will advise the court of the name of one or more suitable candidates for receiver who have consented to assume operation of the water system in any future petition for receivership.

As stated above, if no other entity is willing or able to be the receiver, the court shall designate the county as the receiver of last resort. If Whatcom County is named the receiver, RCW
36.94.150 allows the County to lien the owner’s real property and foreclose against such property within 60 days of delinquency should the owner fail to pay rates and charges. Additionally, all of the County’s costs for administrating the receivership, including staff time (salary and benefits), are billable directly to the system owners as receivership administrative expenses (RCW 7.60.060). (pp. 7-1 and 7-2)

III. Recommendation

Based upon the above analysis, Planning and Development Services recommends that the County Council approve the resolution relating to the Coordinated Water System Plan so that it can be sent to the State Department of Health for final approval.
Section 8 – Issues with Potential Implications for Public Water Systems in Whatcom County
8.0 Introduction

The CWSP encourages implementation of regional solutions to resource issues commonly shared by water utilities throughout the area. During development of the 1993 and 2000 CWSPs, several issues were identified as impediments to adequately meeting current and future water service responsibilities. In this section, a brief summary of the status of some of these issues are presented.

The purpose of this section is to identify the issues that may affect the management of water by and for public water systems in Whatcom County. The discussions provided below are summary in nature and solely intend to provide general awareness and understanding of the various issues so that water system may consider the potential ramifications on the operation and maintenance of their systems. It is not the role of the CWSP to propose or implement solutions for these issues. Rather, the CWSP is intended to serve as a part of the County’s larger overall efforts related to water supply issues. These issues would be addressed best as part of an overall water supply plan that includes all beneficial uses of water and would ultimately inform the County’s comprehensive plan as it relates to water supply and water use in the County. The information provided also encourages consideration of these issues in the broader comprehensive planning effort mentioned above.

8.1 Tribal Water Issues

8.1.1 Lummi Peninsula Groundwater Settlement

In January 20013, the United States, in its own right and on behalf of the Lummi Nation, commenced suit in the United States District Court for the Western District of Washington regarding the use of groundwater against landowners who owned wells on a portion of the Lummi Reservation, referred to here as the Lummi Peninsula, and against the Washington State Department of Ecology. The Lummi Nation intervened in the suit as a plaintiff, and the Court ordered the plaintiffs to join all non-Lummiñce landowners within the litigation area. Negotiations between the parties occurred and the settling parties filed a Notice of Filing, along with the revised Settlement Agreement and all exhibits, on November 13, 2007. On November 20, 2007, Judge Zilly signed and filed the Order and Judgment in this case, which approved the Settlement Agreement as it was filed with amendments required by the Court. This concluded the litigation at the Court. The settlement agreement was appealed by some objectors, and twice the Ninth Circuit Court of Appeals affirmed the Court’s judgment approving the Settlement Agreement.
Figure 8-1 shows the extent of the area included in the settlement agreement in relation to the entire Lummi Reservation uplands.

The settlement agreement provided clarity to all users of groundwater on the Lummi Peninsula and established a framework for Ecology to appropriate the remainder of the state’s allocation. The agreement laid out the rights and obligations of all parties and developed a framework to protect the groundwater resource and ensure compliance with the settlement agreement. It also established metering requirements, maximum annual pumping volume, water quality monitoring requirements, replacement well setbacks, and reporting requirements.

Ecology is charged with making sure that all of the public water systems and individual water users pumping water from the state’s allocation comply with the settlement agreement. The Lummi Nation is charged with making sure that the Lummi Nation Peninsula Tribal Water District system and the individual tribal water users pumping water from the Tribe’s allocation comply with the settlement agreement. A federal water master has been assigned to guarantee compliance by all parties with the settlement agreement.

The state-regulated water users were originally granted 120 acre-feet per year (afy) of water, and the Lummi Nation could take the remainder of the water physically available (estimated to be up to 780 afy based on groundwater modeling). Even though the Lummi Nation could assert that its water rights are senior, since they date from the time of formation of the reservation (1855), the Tribe agreed not to assert the senior priority of water rights on the state water users as long as the conditions of the settlement agreement were followed. Under the settlement, water quality monitoring and triggers were put in place to protect the resource from saltwater intrusion. Setbacks were established between single and group domestic wells to prevent a new well from being drilled within a specified distance of an existing well to help spread withdrawal over the aquifer and reduce interference drawdown between neighboring wells. All wells supplying single homes were granted an annual volume of 0.39 afy, which equates to an annual average withdrawal of 350 gallons per day (gpd) per home. Public water systems were granted either the volume of water listed on the face of their water right documents, or 0.39 acre-feet for each connection if the system was served by a permit-exempt well. (Harnden Island Water Association is limited to 11 connections on a permit-exempt well, and Bell Bay Community Water Association is limited to 5 connections on a permit-exempt well.) The public water systems included in the settlement are shown in Table 8-1 and on Figure 8-1.

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1 The Lummi Tribal Water District is established under Title 16 of the Lummi Nation Code of Laws.
Table 8-1
Public Water Systems within the Lummi Peninsula Settlement Area that are Currently Regulated under the CWSP

<table>
<thead>
<tr>
<th>Water System Name</th>
<th>Public Water System ID</th>
<th>Group</th>
<th>Water System Type</th>
<th>Annual Volume (afy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunset Water Association</td>
<td>86200</td>
<td>A</td>
<td>Comm</td>
<td>35.0 (^1)</td>
</tr>
<tr>
<td>Georgia Manor Water Association</td>
<td>27450</td>
<td>A</td>
<td>Comm</td>
<td>20.0 (^1)</td>
</tr>
<tr>
<td>Leeward/Northgate Water Association</td>
<td>64916</td>
<td>B</td>
<td>- (^\ast)</td>
<td>7.0 (^1)</td>
</tr>
<tr>
<td>Harnden Island View Water Association</td>
<td>31366</td>
<td>B</td>
<td>- (^\ast)</td>
<td>4.29 (^2)</td>
</tr>
<tr>
<td>Bell Bay Community Water Association</td>
<td>05400</td>
<td>B</td>
<td>- (^\ast)</td>
<td>1.95 (^2)</td>
</tr>
</tbody>
</table>

\(^\ast\) The DOH Sentry database does not specify a water system type.
\(^1\) Volume from Water Right Documents.
\(^2\) Volume from number of lots served at an allocation of 0.39 afy per lot.

On the Lummi Reservation, the CWSSA (and thus the applicability of the CWSP) only includes fee lands within existing service areas that are under state and County jurisdiction and are not currently receiving water service from the Lummi Indian Nation\(^2\). The settlement agreement allows individuals and public water systems that have rights to the state allocation to transfer their rights to the Lummi Nation in exchange for being connected to the larger Lummi Tribal Water District Lummi Nation Peninsula water system. Some public water systems have done this since the 2000 CWSP update.

In 2004, the Gooseberry Point Water Association settled separately with the Lummi Nation and agreed to have their water system integrated into the larger Lummi Tribal Water District Lummi Nation Peninsula water system. With this change, the Gooseberry Point Water Association no longer falls within the definition of the CWSSA; therefore, it is no longer included in the CWSP.

\(^2\) The Lummi Nation disputes any jurisdiction by the State of Washington or Whatcom County within the external boundary of the reservation, regardless of the status of land ownership and water purveyor. The DOH’s position is that the Washington State Department of Health (DOH) indicated that the U.S. EPA has jurisdiction over those systems on the reservation that are either Lummi tribally owned or have been integrated into the Lummi Tribal Water District System. The EPA can, but currently does not, regulate the non-tribal Lummi-owned systems that are on the reservation. The DOH is in discussions with the EPA to identify which agency has authority over systems within the Lummi Reservation. In the absence of the EPA exerting its authority, the non-tribal Lummi-owned systems within the reservation are, for the purposes of this CWSP update, considered to be under the jurisdiction of the DOH. For this reason, the County has elected to continue to include those state and County-regulated water systems located on the reservation as part of this CWSP.
In 2007, shortly after the settlement agreement was implemented, Gulfside Mobile Home Park, which served six connections, was purchased by the Lummi Nation. In 2011, this system was connected to the larger Lummi Tribal Water District Lummi Nation Peninsula water system. With these changes, the Gulfside Mobile Home Park public water system no longer falls within the definition of the CWSSA and is no longer governed by the CWSP.

The Lummi Nation disputes any jurisdiction by the State of Washington or Whatcom County within the external boundary of the reservation, regardless of the status of land ownership and water purveyor. The Washington State Department of Health (DOH) indicated that the U.S. EPA has jurisdiction over those systems on the reservation that are either tribally owned or have been integrated into the Lummi Water System. The EPA can, but currently does not, regulate the non-tribal systems that are on the reservation. The DOH is in discussions with the EPA to identify which agency has authority over systems within the Lummi Reservation. In the absence of the EPA exerting its authority, the non-tribal systems within the reservation are, for the purposes of this CWSP update, considered to be under the jurisdiction of the DOH. For this reason, the County has elected to continue to include those state and County-regulated water systems located on the reservation as part of this CWSP.

### 8.1.2 Public Water Systems on Lummi Reservation Outside of Peninsula Settlement Area

There are also a few non-tribal Lummi-owned public water systems that are located inside the boundaries of the reservation, but outside of the peninsula settlement area discussed above. These water systems are identified in Table 8-2.

**Table 8-2**

<table>
<thead>
<tr>
<th>Public Water Systems outside the Lummi Peninsula Settlement Area but on the Lummi Reservation that are Currently Regulated under the CWSP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water System Name</strong></td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Sandy Point Improvement Company</td>
</tr>
<tr>
<td>Fertile Meadows Water Association</td>
</tr>
<tr>
<td>Neptune Beach Water Association</td>
</tr>
</tbody>
</table>

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1. Volume from Water Right Documents.
2. Group B water systems are not categorized by water system type.
3. Fertile Meadows Water Association and River Road Water Association (which is outside of the Lummi Reservation) utilize the same well as a source.

The service areas of these water systems are either wholly located within the boundaries of the Lummi Reservation or they straddle the reservation boundary (Figure 8-1). These systems are included in the CWSSA.
8.1.3 Tribal Claims of Treaty-reserved Fishing and Water Rights

In addition to the settlement efforts related to the ground-water of the Lummi Peninsula, in March 2011, the Nooksack Tribe, in a letter to the U.S. Department of the Interior, requested “that the United States commence litigation against the State of Washington for the purpose of obtaining a declaratory judgment that quantifies the Nooksack Tribe’s treaty reserved water rights and enjoins the issuance of, or reliance upon, state water permits that would impair these rights.” The Lummi Nation sent a similar request in June 2011.

In their letters, the Nooksack Tribe and the Lummi Nation made three principal assertions:

1. The Lummi Nation and the Nooksack Indian Tribe have federal reserved water rights for instream flows necessary to support its treaty fishery;

2. The Lummi Nation and the Nooksack Indian Tribe have federal reserved rights in an amount necessary to fulfill the “homeland” purposes of their reservations, including, but not limited to, instream flow for treaty fisheries; and

3. Federal action is necessary to protect and preserve Lummi Nation and Nooksack Tribe water rights and the Lummi Nation and Nooksack Tribe treaty fishery.

In their letters to the U.S. Department of the Interior, the Lummi Nation and Nooksack Tribe cited the failure of ongoing negotiations to resolve these issues locally. The water rights in the Nooksack Basin (Water Resource Inventory Area (WRIA) 1) have not been the subject of a general stream adjudication. The Lummi Nation and Nooksack Tribe’s assertion of treaty-based water rights held in trust by the federal government has not been established by the courts and no such rights have been quantified by either the federal government or a general stream adjudication.

As of publication of this CWSP, no response has been provided by the United States. The ultimate resolution of these issues will have significant implications for all water users in the County. All water users, including public water systems, are encouraged to closely monitor any actions taken by the United States on behalf of the Lummi Nation and the Nooksack Tribe, and to become actively involved in any local efforts aimed at the resolution of these issues, which are beyond the scope of this CWSP update.

8.2 Water Rights

A water right summary for each of the Group A community water systems is contained in Appendix 1 and discussed in more detail in Section 3. Appendix 2 includes a brief description of the water rights procedures that have been in place for many years. The appendix also highlights changes in water right procedures since 2000 that are applicable to public water supplies.

8.2.1 Background

The water rights procedures that have been in place for many years in the State of Washington are based on the State Surface Water Code of 1917 (Chapter 90.03 RCW), the State Ground Water Code of 1945 (Chapter 90.44 RCW), and the various state regulations adopted by Ecology and its predecessor agencies for administration of these two codes.

Historically, Ecology has been charged with processing water right applications. The typical process applies to either a new application to appropriate public surface or ground waters, or an
reconstruct the source to eliminate any surface water; install a disinfection system with a minimum contact time (CT) of 6 (concentration x contact time); and conduct microscopic particulate analysis (MPA) to determine the source’s relative risk to the presence of surface water organisms such as *Giardia* and *Cryptosporidium*. If these surface water organisms are present, the source is classified as a surface water source and treatment is required.

The seven systems in the CWSSA listed in Table 8-5 were evaluated by the DOH (c. 2005) as “potential” GWI sources. All seven of these systems were determined not to be GWI as described in the “GWI Status” column of Table 8-5.

<table>
<thead>
<tr>
<th>Water System Name</th>
<th>Public Water System ID</th>
<th>Group</th>
<th>Water System Type</th>
<th>GWI Status*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samish Park</td>
<td>15064</td>
<td>A</td>
<td>TNC</td>
<td>D-GW(MPA)</td>
</tr>
<tr>
<td>Deming Water Association</td>
<td>18800</td>
<td>A</td>
<td>Comm</td>
<td>D-GW(MPA)</td>
</tr>
<tr>
<td>Double L Mobile Home Park</td>
<td>19890</td>
<td>A</td>
<td>Comm</td>
<td>D-GW(MPA)</td>
</tr>
<tr>
<td>Evergreen Retreat MHP</td>
<td>24164</td>
<td>A</td>
<td>Comm</td>
<td>D-GW(MPA)</td>
</tr>
<tr>
<td>Glacier Springs Water System</td>
<td>27755</td>
<td>A</td>
<td>Comm</td>
<td>D-GW(MPA)</td>
</tr>
<tr>
<td>Plantation Range</td>
<td>52681</td>
<td>A</td>
<td>TNC</td>
<td>D-GW(MPA)</td>
</tr>
<tr>
<td>Slavic Gospel Church Water System</td>
<td>AA034</td>
<td>A</td>
<td>TNC</td>
<td>D-GW(MPA)</td>
</tr>
</tbody>
</table>

*GWI Status key:
D-GW(MPA) means system was determined to be groundwater based on water quality monitoring (MPA results) and are required to disinfect to CT6.
D-GW means source was determined to be groundwater based on water quality monitoring (temp, conductivity) and no disinfection treatment is needed.

The DOH indicated that now that the groundwater rule is in effect they may conduct assessment source water monitoring under WAC 246-290-300(3)(e), which could lead to new interpretation and implementation around the definition of potential GWI. This may occur for wells that tap shallow, unconfined aquifers with indicators of surface contamination risk (e.g., nitrates in agricultural areas).

### 8.4.5 Seawater Intrusion

Seawater intrusion occurs from over pumping of groundwater in areas where the aquifer is hydraulically connected to seawater. Seawater intrusion results in excessive levels of chloride, sodium, and other related contaminants. The MCL for chloride is a secondary contaminant with a secondary MCL of 250 mg/L. Chloride concentrations above 100 mg/L this level in areas prone to seawater intrusion are generally considered to be an indicator that seawater intrusion is occurring. While seawater intrusion was reported to have been a historic issue for systems located along the marine shoreline, there are currently no public water systems in the CWSSA exceeding the secondary MCL for chloride.
While there is no established MCL for sodium at this time, the DOH can require treatment for chloride based on the Policy for Treatment of Secondary Contaminants, which considers consumer complaints.

8.4.6 Relic Saltwater

In many parts of Whatcom County, west of the Mount Baker – Snoqualmie National Forest, there is evidence of relic saltwater, especially in the deeper sediments. It is generally believed this is due to seawater that was trapped either within glacial sediments that were deposited when marine water covered the area or in sediment and bedrock that was already in place when marine water covered the area. Chloride levels in relic saltwater can exceed the MCL of 250 mg/L. The presence of relic saltwater is not considered a significant problem countywide but can be an issue in localized areas where it prevents the use of groundwater for potable supply.

8.4.7 Deep Wells

Deep wells have been drilled in many locations of the County, primarily for the following reasons: searching for a source that is not contaminated with nitrates or relic saltwater; searching for a deep aquifer that is not in hydraulic continuity with surface water bodies with the hopes of obtaining new water rights; and searching for a suitable aquifer storage and recovery reservoir. Some deep wells have successfully found productive aquifers with good water quality (primarily located in the vicinity of the City of Blaine), while the remainder drilled in the CWSSA have only tapped marginal, deep, unconsolidated, and bedrock aquifers that typically contain relic saltwater, as described above.

As of 2015, a suitable deep aquifer for aquifer storage and recovery has not yet been identified.

8.4.8 Volatile Organic Chemicals (VOCs) and Pesticides

Sandy soils overlying shallow aquifers in the County can allow agricultural chemicals applied to the ground to enter the drinking water easily. Many studies have been conducted since 1984 that provide information about water quality in northern Whatcom County. Ecology, among other agencies, has conducted several studies in the County, such as the 1986 Phase I Investigation of Sites in Whatcom County, the 1990 Washington State Agricultural Chemicals Pilot Study, and the 1991 Bertrand Creek EDB Site Study. These studies show the presence of soil fumigants such as 1,2-dichloropropane (1,2-DCP) and ethylene dibromide (EDB) in groundwater in specific areas of the County.

Historically, five water systems have detected 1,2-DCP at levels below the MCL of 5.0 mg/L. In 1998, only one water system detected 1,2-DCP (and the results were below the MCL. Historically, no EDB has been detected in public water system sources. Since 2000, no systems have exceeded the MCL for volatile organic chemicals although, as discussed below, some individual groundwater wells have been found to contain some volatile organic contaminants and EDB.

Ecology, the City of Lynden, and the Whatcom County Health Department (WCHD) collaborated to construct a pipeline to supply Nooksack River water for domestic supply to properties where the groundwater in private wells were contaminated with EDB and/or 1,2-DCP. The pipeline, called either the Bertrand Creek Water Main Extension or EDB-line, is connected to the City of Lynden’s water system. The extension consists of 5.4 miles of
distribution system for domestic service to approximately 51 existing residences with wells that were contaminated at the time of construction. The system has the capacity to serve up to 86 equivalent residential units, and is located on the following roads:

- Birch Bay Lynden Road from Tromp Road to 500 feet west of Bob Hall Road;
- Bob Hall Road from Birch Bay Lynden Road to 1,000 feet north of Birch Bay Lynden Road;
- Rathbone and Wiley’s Lake Roads from Birch Bay Lynden Road to 7,700 feet south of Birch Bay Lynden Road;
- Berthusen Road between Birch Bay-Lynden and Loomis Trail Road;
- Loomis Trail Road from Berthusen Road to approximately 600 feet west of Weidkamp Road; and
- Weidkamp Road for 1,000 feet north of Loomis Trail.

For the purposes of the EDB pipeline project, domestic supply refers to the use of water typically associated with human hygiene in a residence, specifically including potable supply for drinking and cooking, toilet flushing, hand washing, showers, bathing, etc. It also includes the use of water outside of the residence for up to 1/2 acre of non-commercial lawn and garden watering and other typical residential uses such as car washing. The human hygiene uses described above may also be associated with pre-existing commercial operation; however, the water may not be used for commercial purposes such as food processing, parts washing, industrial cooling, or any other types of industrial process activities (Source: Protested ROE for S1-28116, Department of Ecology).

In 2002, Ecology issued a water right permit to the City of Lynden (S1-28116P) for the water supply to serve the extension in an amount not to exceed an instantaneous diversion rate of 0.57 cubic feet per second (cfs) (approximately 266 gallons per minute) and an annual volume of 70 afy.

The water right established the following criteria under which a property is eligible to receive water under Ecology Report of Examination S1-28116, Recommendation No. 3:

Only property where 1,2-DCP has been detected by a certified laboratory at or above 2.5 parts per billion (one-half of the Maximum Contamination Level, or MCL, of 5.0 parts per billion or where EDB has been detected at or above 0.01 parts per billion (one-half the MCL of 0.02 parts per billion) are eligible to receive water pursuant to this permit. The level of 0.01 parts per billion is also the Practical Quantification Limit which is essentially the lowest level at which a substance can be reliably detected.

In 2007, a follow-up study was conducted to determine the current state of pesticides in groundwater in the Abbotsford-Sumas aquifer. The results of this study indicated that pesticides were still present in groundwater in some private water systems and that EDB, 1,2-DCP, and nitrates also remained contaminants of concern for users of wells in the Abbotsford-Sumas aquifer.

Metering data from 2004 through 2013 show that the amount of water utilized by those along the Bertrand Creek Water Main Extension has ranged from 11.83 afy in 2013 up to 19.31 afy in 2009.
8.4.9 Iron/Manganese

Iron (secondary maximum contaminant level (SMCL) of 0.3 mg/L) and manganese (SMCL of 0.05 mg/L) are aesthetic water quality problems through much of the sand and gravel aquifers in the County. Iron and manganese are naturally occurring substances that do not pose a known health threat, but can cause taste and staining problems if untreated. They are relatively common throughout much of the County, but can generally be treated with relative ease and reasonable costs.

8.5 Data Management and Lack of Water Quality and Quantity Data

8.5.1 Data Management

Implementation of many state laws, such as the State Environmental Policy Act, the Water Pollution Control Act, and the Water Resources Act of 1971, requires various agencies to collect water data. In addition, water data is generated from private well testing, solid waste site monitoring wells, surface and groundwater studies, hatchery facilities, and public water system testing. Water data is captured and maintained by a variety of federal, state, and local governments. There is no uniformity to the format, nomenclature, or units of measurement used in the data at this time.

At the state level, the DOH developed a drinking water database referred to as Sentry. The database is available on the Internet and provides local health departments and the general public with current information on public water systems in the County and the state. WCHD uses the Sentry database and is able to map Sentry data as needed. Data for private one- and two-party wells are captured as scanned documents and are not in a searchable database format that can be extracted for reports or mapping.

8.5.2 Quantity

There has been relatively little water quantity data collected in Whatcom County. Those that have been conducted include the Blaine Ground Water Management Study, the Lynden Everson Nooksack Sumas Ground Water Study, the Lummi Peninsula Aquifer Study, and the Lummi Island Ground Water Study. Due to funding limitations, the major focus of these studies has been on water quality. The LENS study, for example, was unable to thoroughly explore the physical availability and quality of groundwater at bedrock depths. If a deep aquifer existed, it would probably not be in hydraulic continuity with the closed surface water sources.

Since passage of the Municipal Water Law, most public water systems are now collecting data on current water usage and reporting that data to DOH on an annual basis. This data has been used in this CWSP and will be useful to those interested in reviewing the volume of water withdrawn and diverted for public water system use in the future. Most systems have source meters and all systems will eventually have individual service meters installed to enable data collection and analysis for different user categories. Water use data is necessary to evaluate the effectiveness of WUE efforts.

In addition, due to shallow aquifers, some water systems have wells that go dry during the summer and early fall. For these sources, interties with other water systems, emergency sources, and WUE measures may be options for increasing source reliability year-round.
June 8, 2016

Whatcom County Council
311 Grand Avenue, Suite 105
Bellingham, WA 98225

RE: Support for Whatcom County Coordinated Water System Plan 2016 Update

Dear Councilmembers:

I am writing in support of the 2016 update of the Whatcom County Coordinated Water System Plan (CWSP) that will be before the Council for acceptance on June 14, 2016. Because of another work related conflict, I will not be able to attend your meeting and discussion on June 14th. During this update process, I served as chair of the Water Utility Coordinating Committee, which is the body tasked to oversee the update process. However, I would like for the record to represent that the update before you contains many improvements over the current 2000 CWSP and represents many hours of staff and volunteer work. I believe that this update is an important and necessary step in addressing the water issues facing residents of Whatcom County and will lead to better coordination between land use and water planning. The CWSP received unanimous approval from the WUCC at its final meeting on April 20, 2016. I urge the Council to vote to accept the CWSP update so that it can be forwarded to the Washington State Department of Health for final approval.

Sincerely,

Patrick Sorensen
General Manager
Lake Whatcom Water and Sewer District