October 13, 2017

Jocelyn W. Jones
Dept. of Ecology
Water Quality Program
PO Box 47600
Olympia, WA 98504-7600

RE: City of Arlington Comments on Proposed Reclaimed Water Rule Revision

Dear Ms. Jones:

The City of Arlington has reviewed the proposed revision of the Reclaimed Water Rule (Chapter 173-219 WAC). As one of approximately 28 water reclamation facilities (WRFs) in Washington State, we offer our comments as an entity that is both vested [173-505-010 (6) WAC] and invested in the reclamation of municipal wastewater, and reuse of high quality reclaimed water.

Background

The City of Arlington has operated three water utilities (water, wastewater, stormwater) in WRIA 5 (Stillaguamish River), and partly in WRIA 7 (Snohomish River), for more than a century. Most of the City's potable water is withdrawn from wells adjacent the Stillaguamish River that draws groundwater under the influence of surface water. The Arlington Water Treatment Plant (WTP) treats and distributes drinking water to Arlington's citizens. Wastewater is then returned to a Water Reclamation Facility (WRF) where, since 2010, it is reclaimed using membrane bioreactor (MBR) technology. Effluent of Class B reclaimed water quality or better is returned to the river. Since March 2014, the City's NPDES discharge permit has been accompanied by a Reclaimed Water permit for the reuse of reclaimed water in a constructed treatment wetland (CTW). Groundwater recharge and streamflow augmentation are specifically *excepted* within the permit as areas for re-use.

Stormwater runoff from approximately 287 acres of Old Town Arlington did discharge untreated directly to the river until 2011, when the 9-acre CTW came on-line. Since then, WTP backwash has also been permitted and directed to the CTW, and re-use of WRF reclaimed water in the CTW has also been allowed. A map and schematic of Arlington's treatment facilities are provided in **Exhibit A** and **Exhibit B**, respectively. A digest of these and other water management milestones in the City are presented in **Exhibit C**.

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Projected water demands for the City of Arlington exceed water rights and wholesale purchases currently secured for long-term water service. Under the Stillaguamish Instream Flow Rule (WAC 173-505), closure of the basin to new appropriations and establishment of minimum instream flows make re-use of reclaimed water an attractive, valuable, and perhaps a critical component of the City's future water supply.

Comments

Comment #1 — The Rule, as written for implementation under Ecology policy, does not meet the full intent of the Legislature.

The Legislature identified by statute its desire for a regulatory atmosphere that would facilitate the production and re-use of reclaimed water to help meet the growing water requirements of the State (RCW 90.46.005). It envisioned a management tool that would reduce water resource conflicts that may arise when implementing statutes regarding both water quality (Chapter 90.48 RCW) and water quantity (Chapter 90.54 RCW). For example, the Legislature desires: preservation of potable water for drinking purposes; restoration and protection of instream flows for fish; reductions of wastewater discharge; and development of an alternative and drought resistant source of water supply. However, implementation of this proposed rule will not provide these benefits in numerous areas across the State, including the Stillaguamish basin near Arlington.

When asked during the Ecology-sponsored webinar and online public hearing held September 27, 2017 whether dischargers to freshwater systems (as opposed to marine systems) would instead be able to reclaim that water and re-use it to provide additional beneficial uses, Ecology initially responded "Yes, but it depends—each situation is unique". Upon further inquiry, Ecology revealed that water right impairment analyses could prohibit or at least restrict meaningful re-use of reclaimed water. This is because many river and stream systems in Washington are subject to basin closures (to new water appropriations), instream flow limitations, the priority of senior water rights, and flow-related water quality concerns. Ecology's website indicates that 34 of 64 (53%) WRIAs (basins) in the state are or soon will be subject to minimum instream flows (http://www.ecy.wa.gov/programs/wr/instream-flows/isf-rule.html). Quite a few WRIAs are subject to complete or seasonal closures which prohibit new appropriations of water rights. And many streams in Washington are identified as impaired for water quality. Except for marine dischargers, the likelihood for successful reclaimed water facilities appears low.

Many surface water diversions or groundwater withdrawals for "inland" utilities result in discharges of treated wastewater back to freshwater systems. In these situations, even the smallest reduction in flows for the shortest length of affected stream channel would be identified as impaired, and the re-use of reclaimed water would be denied (without in-kind mitigation). However, a municipality that diverts water at a mountain source and discharges wastewater into the Puget Sound, resulting in much larger reductions in streamflow for much greater lengths of streams, would be able to re-use as much reclaimed water as they could demonstrate beneficial uses for. In terms of net benefits, the "divert high" (elevation) — "discharge low" (elevation)

scenarios may appear to reclaim much more water, but they generate a much greater impact to habitat.

Comment #2 — The Rule, as written for implementation under Ecology policy, is not consistent with the Stillaguamish Instream Flow Rule (IFR) (WAC 173-505).

In closing the basin to new appropriations of water and establishing minimum instream flows, the IFR identified "*there is a continuing need for ongoing and reliable sources for new water uses. This need dictates the continued development and use of alternative sources of water*" [WAC 173-505-120 (1)]. The first of several alternatives then listed in the rule is "Reuse of reclaimed water", which the City of Arlington has taken at face value and considered when making decisions and capital investments regarding all three of its utilities. For example, we already obtained a reclaimed water permit for a single re-use, and we have a mile of purple pipe in the ground for the distribution of reclaimed water to other re-use sites when the City is permitted in the future.

Other water supply alternatives cited in the Rule have also been pursued by the City [WAC 173-505-120 (1)]. Since the effective date of the 2005 Stillaguamish IFR:

- A 2006 hydrogeology study concluded that artificial aquifer recharge and recovery (ARR) was not feasible in or near the City;
- Arlington has an active water conservation program with numerous efficiency measures implemented; and
- We have acquired five additional water rights since 2007, four by change applications to transfer former irrigation water rights. The transfers are conditioned by instream flows, however, which cause our production capacity to fluctuate from season to season.

During the development of the Stillaguamish IFR, the City of Arlington lobbied for a reservation for municipal water supplies. This would have supported the Growth Management Act (GMA) requirement of cities to accommodate increasingly greater population densities. Contrary to the municipal reservation in the Skagit IFR, which at the time was recognized but would later be removed subsequent to the court ruling in the *Swinomish* case, the City was attempting to "do things right the first time" by using appropriate procedure that would have benefitted the small-but-growing, rural cities of Arlington and Stanwood with a source of water for future growth as well as protection of aquatic habitat.

Without this reservation, all new water sources in the basin will generate some quantitative impacts. Efforts to mitigate-in-kind (with water) will compound the impact on utilities rather than rectify it. This Catch-22 effect occurs, for example, with the purchase and change of existing water rights in the Stillaguamish basin. The City requires additional water for future water supply, but the transfer results in some diminishment of the water right, conditions the water right on instream flows, and makes the water right effectively junior to the IFR. We can try to mitigate the impact of the transfer through the purchase and transfer of another right but that in itself results in similar

impacts to the source and to the utility. The result is an increased impact on the City's source water, making it increasingly subject to flow-based interruptions.

In this situation, Ecology has in the past allowed compensatory mitigation in the form of out-of-kind aquatic habitat improvements which are deemed to provide a net habitat benefit that is greater than or equal to the impact of a quantitative water loss. Steve Hirschey is a former Ecology-staff member who led the development of the Stillaguamish IFR. At that time Steve, who knew the City and its vision well, assuaged the City's voiced concerns over the IFR with his expertise that the City's water management and aquatic habitat projects (such as the construction of the stormwater treatment wetland) would more than offset the impacts of a City faced with developing long-term water supplies in a basin with minimum instream flows that is closed to new water appropriations. Of course Steve could not foresee the effects of the recent court decision in the *Foster* case. But the Reclaimed Water rule now has a chance to assure that many cities in a similar position can operate in a similar setting by using reclaimed water to reduce the overall demand for new water, or increasing the water available for mitigation.

Comment #3 — The Rule, as written, removes the only authorized re-use in the City's current reclaimed water permit, effectively dismantling Arlington's reclaimed water program.

This has the effect of immediately reducing the number of reclaimed water facilities in the State from 28 to 27, hardly the effect the legislature had hoped for (http://www.ecy.wa.gov/programs/wq/reclaim/MapFacilityinfo20141020.pdf). The 1997 reclaimed water standards (on which our reclaimed water permit is based), and the 2015 and March 2017 drafts of the Reclaimed Water Rule recognized the application of reclaimed water on constructed treatment wetlands (CTW) as a beneficial use. This was in addition to the re-use of reclaimed water on certain natural wetlands and constructed beneficial use (i.e., mitigation) wetlands. However, the current version of the Rule no longer authorizes re-use of reclaimed water in a manner consistent with the reclaimed water permit Ecology issued for our operations at the City of Arlington. Note that Ecology was aware of the City's long-term plan of operation when it provided over $900,000 in grants to develop the CTW.

Comment #4 — An underlying issue appears to regard application of Ecology Policy No. 1020, its definitions of consumption of water, and its interpretation within the proposed rule.

With technological improvements in water treatment in the 26 years since this policy was written, and in the 21 years since it has had any revision, the policy ignores any application of all known, available, and reasonable methods of prevention, control, and treatment (AKART), or Best Available Science (BAS). For convenience, a copy of Ecology Policy 1020 is attached to this letter as **Exhibit D**. Generally, the definitions and examples it contains remain appropriate:

- **Consumptive**—water use causing diminishment of the source at the point of appropriation
- **Nonconsumptive**—water use which is not diverted from the source or which does not diminish the source
- **Diminishment**—to make smaller or less in quantity, quality, rate of flow, or availability

Municipal and other water withdrawal facilities, where the diversion and discharge points are separated by a significant distance, deplete or quantitatively diminish flows and create a bypass reach that is considered a consumptive water use under this definition. This includes operations which "divert high" — "discharge low", creating bypass reaches from hundreds of feet to tens of miles in length.

In Arlington's case, the WRF outfall into the Stillaguamish River is 400 feet downstream of the point of riverbank well withdrawals. The channel width averages about 325 feet, for a length/width ratio of 1.23. In fluvial geomorphology, the wavelength of a meandering channel is 10 to 14 channel widths, and the reach extending from the top of one riffle to the top of the next riffle (a half-wavelength) is considered 5 to 7 channel widths. With only 1.23 channel widths separating the point of diversion and the outfall, the two are substantially the same location. To argue otherwise would require ignoring the scale of the river when declaring that the two are "not in close proximity". Within a half wavelength, the heads of the riffles (aka the pool tailouts) are the features which primarily control the elevations and rates of flows which define the reach.

In practice, Arlington water withdrawals from its Haller well field are typically 570 to 1140 gpm, and the rate reaches its upper limit of 1,710 gpm when all three well pumps are running. WRF effluent typically discharges to the Stillaguamish between 500 and 1,500 gpm, with a maximum capacity exceeding 2,200 gpm. Accordingly, there are no substantial differences in location, elevation, or off-channel flow rates that can support a claim of quantitative diminishment, and therefore, consumptive use.

A similar observation can be made regarding water quality. With the treatment technologies available in the 1990s, it was difficult if not impossible to argue that treated effluent was as good or better quality than the withdrawn source water. Arlington couples MBR technology (i.e., enhanced microfiltration) with advanced biological nutrient removal (BNR) and ultraviolet disinfection (UV) so that the fully reclaimed product meets stringent water quality standards. There is no substantial difference between reclaimed water that is put to beneficial re-use, and water that is discharged through an outfall. It comes down to the permit governing its fate—re-use occurs under a reclaimed water permit, while "the waste discharge" of effluent meeting stringent reclaimed water quality standards occurs under an NPDES permit (technically a pollution control permit). Accordingly, there are no substantial differences in water quality that can support a claim of quantitative diminishment, and therefore, consumptive use.

Policy No. 1020 continues to provide examples of what constitutes non-consumptive use and why. Specific uses include run-of-the-river hydroelectric facilities, fish hatcheries, and ponds intended

purely for aesthetic purposes. Explanations are provided to address characteristics of these operations which make clear definitions complex. As a catch-all bottom line, the policy states:

> "Some of the above described projects may cause an increase in bank storage, evaporation rate, or preclude others uses of the water body in the vicinity of the project. The Department recognizes the consumptive nature of these factors. However, due to the complexity of quantifying these factors, it is the Department's policy to classify the project's water use as nonconsumptive."

Therefore, any "accounting" concerns that consumption must total absolutely zero in order to be nonconsumptive are alleviated. On the same point, treatment facilities employing AKART should not be called consumptive just because they historically and qualitatively have been.

As an example in Policy No. 1020, a run of the river hydroelectric facility is considered nonconsumptive even though there are minor changes in elevation and channel hydraulics which affect rates of flow, the placement of habitat features, and water quality changes such as percent saturation of dissolved gases. We contend municipal operations which create minor variations within the same reach that provides the water source and the receiving water likewise should also be considered nonconsumptive.

Similarly, a fish hatchery holds water rights for nonconsumptive use, but it still may hold an NPDES permit for waste discharge back to the river. If a hatchery can be quantitatively nonconsumptive regarding flows, and still diminish water quality to the point of requiring an NPDES permit, it should not be unreasonable that a WRF employing advanced technology be allowed to do the same.

Finally, it can be argued that no municipal system which draws water and generates effluent can be completely nonconsumptive. We do not argue this in situations where one source pipe out and one return pipe in to the same reach. However an equitable approach to quantifying consumption should allow a net consumption as the difference between withdrawals from and return flows to the same basin. This is a straightforward approach that even Ecology uses under the Stillaguamish IFR when calculating the net effect of exempt well withdrawals and return flows via septic systems under its specific reservation [WAC 173-505-090(6)(a)]. It is also consistent with Policy 1020 (4) regarding concurrent use of ground and surface waters.

In conversations the City had with Ecology late in 2016, however, Ecology made it clear they have no regulatory mechanism for providing such a net calculation of impact on water. That is, Ecology cannot give "credits" for return flows. In an email dated December 20, 2016, Ecology hydrogeologist Jay Cook stated:

> "While we recognize the benefits of Arlington discharging high-quality wastewater into the Stillaguamish surface system, there simply is not a regulatory/permitting pathway to give water-resources credit for this discharge. The fact is that the water has always been in the watershed and has always made it to the river via various

> pathways. Simply put, new consumptive uses that would occur with new water rights will reduce the amount of water in the system and Arlington's discharge will not make up for that reduction.
>
> We also recognize that legally Arlington could increase its consumptive use of withdrawn water (i.e. smaller percentage of water sent to the treatment plant). Arlington's efforts to discharge a large portion of withdrawn water at such high quality are certainly noteworthy and appreciated…"

Here, in or with the Reclaimed Water Rule update, is the perfect opportunity for Ecology to align all of its definitions and applications of impairment and diminishment and consumption, and even the playing field, especially for municipal utilities.

Recommendations

Recommendation #1a — WAC 173-219-090, Water rights protection, should be modified in order to respond to the Legislature with a Reclaimed Water Rule that provides realistic reclaimed water and re-use opportunities to all municipalities, not only marine dischargers. In particular, the Rule's impairment section (4) and/or corresponding procedures in the draft Reclaimed Water Facilities Manual ("Purple Book") are too restrictive.

Recommendation #1b — Ecology Water Resources Policy 1020, Consumptive and Nonconsumptive Use, and similar concepts within other water right and reclaimed water policies and procedures need to be brought into the 21st century. Incorporate technology considerations into performance criteria that can be used within impairment analyses to evaluate whether definitions of consumptive, nonconsumptive, and diminishment of the quantity, quality, rate of flow, or availability of water are met (e.g., AKART, all known, available, and reasonable methods of prevention, control, and treatment).

Recommendation #1c — Develop uniform definitions and evaluation procedures for determining net quantitative impacts to municipalities operating both water and water reclamation facilities, similar to Ecology's assumptions for exempt well withdrawals and septic system return flows. Provide credit to systems that can demonstrate return flows effectively offset the impacts of withdrawals.

Recommendation #2 — For municipalities with both water and water reclamation facilities, recognize a City's right to consumptively use its water up to the point of compliance for WRF effluent—the entrance to the outfall pipe. This would allow traditional POTWs, particularly those which utilize the same location for source and receiving waters, to meet the Legislature's objectives for reclaimed water.

Recommendation #3 — Include Constructed Treatment Wetlands (CTW) as an authorized re-use in WAC 173-219-390, and in other locations as appropriate.

Recommendation #4 — Recognize the beneficial use of reclaimed water in instream *and riparian* applications (mitigation) as one solution to the in-kind mitigation requirement created in the court ruling in the *Foster* case. The quantities remain the same, and with demonstrated hydraulic connectivity, only the location is slightly different.

Thank you for the opportunity to comment. Please do not hesitate to contact me if you would like clarification on any of our remarks.

Sincerely,

James X. Kelly
Public Works Director

Michael D. Wolanek
Water Resources Planner

Cc List:

Senator Kirk Pearson (Leg 39)

Representative Carolyn Eslick (Leg 39)

Representative Dan Kristensen (Leg 39)

Senator Barbara Bailey (Leg 10)

Representative Dave Hayes (Leg 10)

Representative Norma Smith (Leg 10)

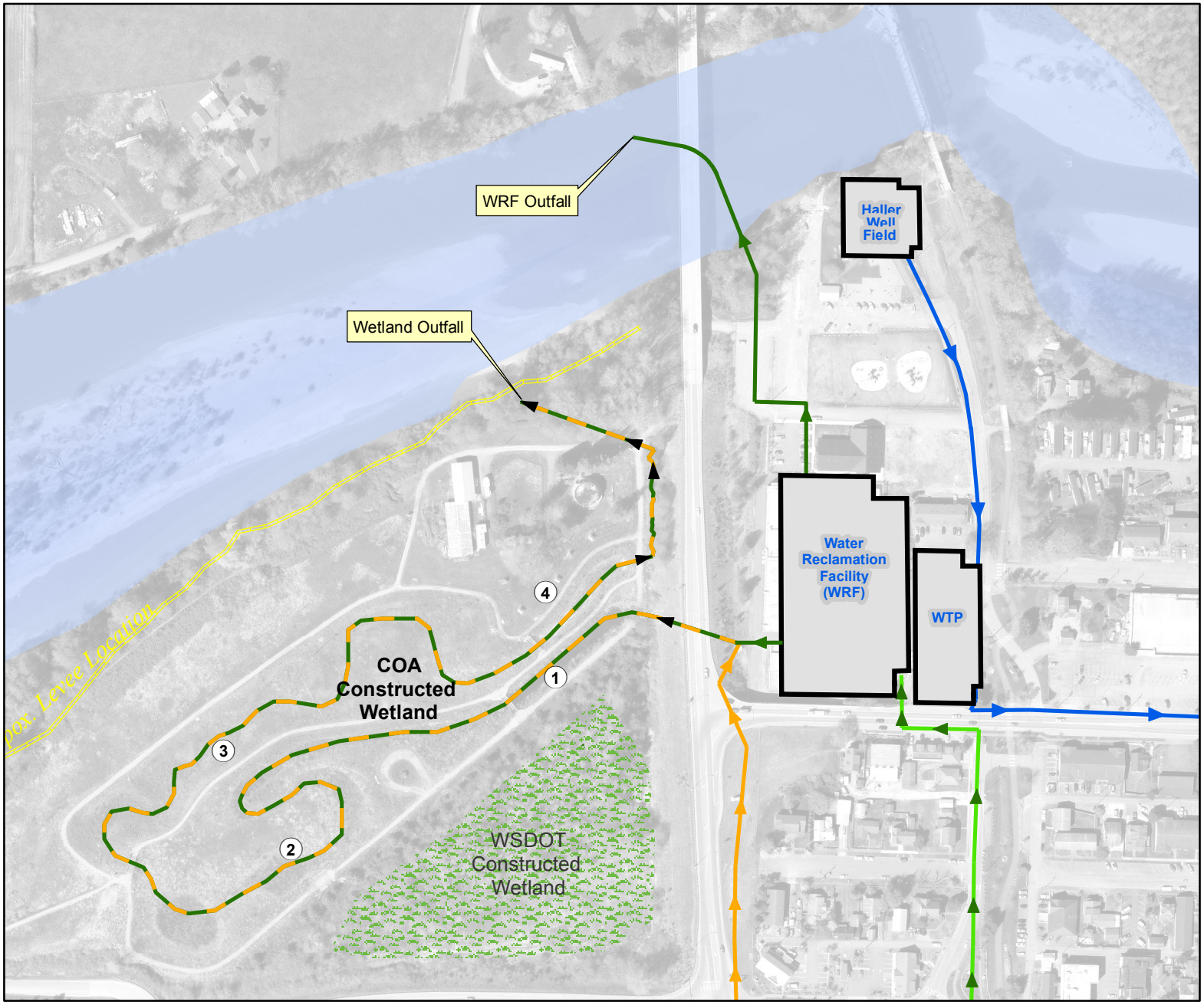
Shawn Yanity, Chair, Stillaguamish Tribe of Indians

Richard Rodriguez, Department of Health, Office of Drinking Water, NWRO

Al Aldrich, Strategies 360

Kevin Nielsen, Marysville Public Works Director

Kevin Hushagen, Stanwood Public Works Director



City of Arlington

Exhibit A
Arlington Utilities and the Stillaguamish River

Legend

- Combined Storm/Reclaim
- Reclaimed-Quality Effluent
- Water Mains
- Sewer Trunk Lines
- Storm Trunk Lines
- (1) Wetland Cell Number

N

0 75 150 300
Feet

Date:
10/13/2017

Cartographer:
akc

File:
WRF_Overview8.5x11_17

GIS parcel and stream data provided by Snohomish County Department of Information Services, 2009

Maps and GIS data are distributed "AS-IS" without warranties of any kind, either express or implied, including but not limited to warranties of suitability for a particular purpose or use. Map data are compiled from a variety of sources which may contain errors and users who rely upon the information do so at their own risk. Users agree to indemnify, defend, and hold harmless the City of Arlington for any and all liability of any nature arising out of or resulting from the lack of accuracy or correctness of the

Exhibit B. Water resources management in the City of Arlington before and after upgrade of the wastewater treatment plant and construction of a treatment wetland. This application seeks approval to distribute reclaimed water from the WRF as shown in the "After" schematic.

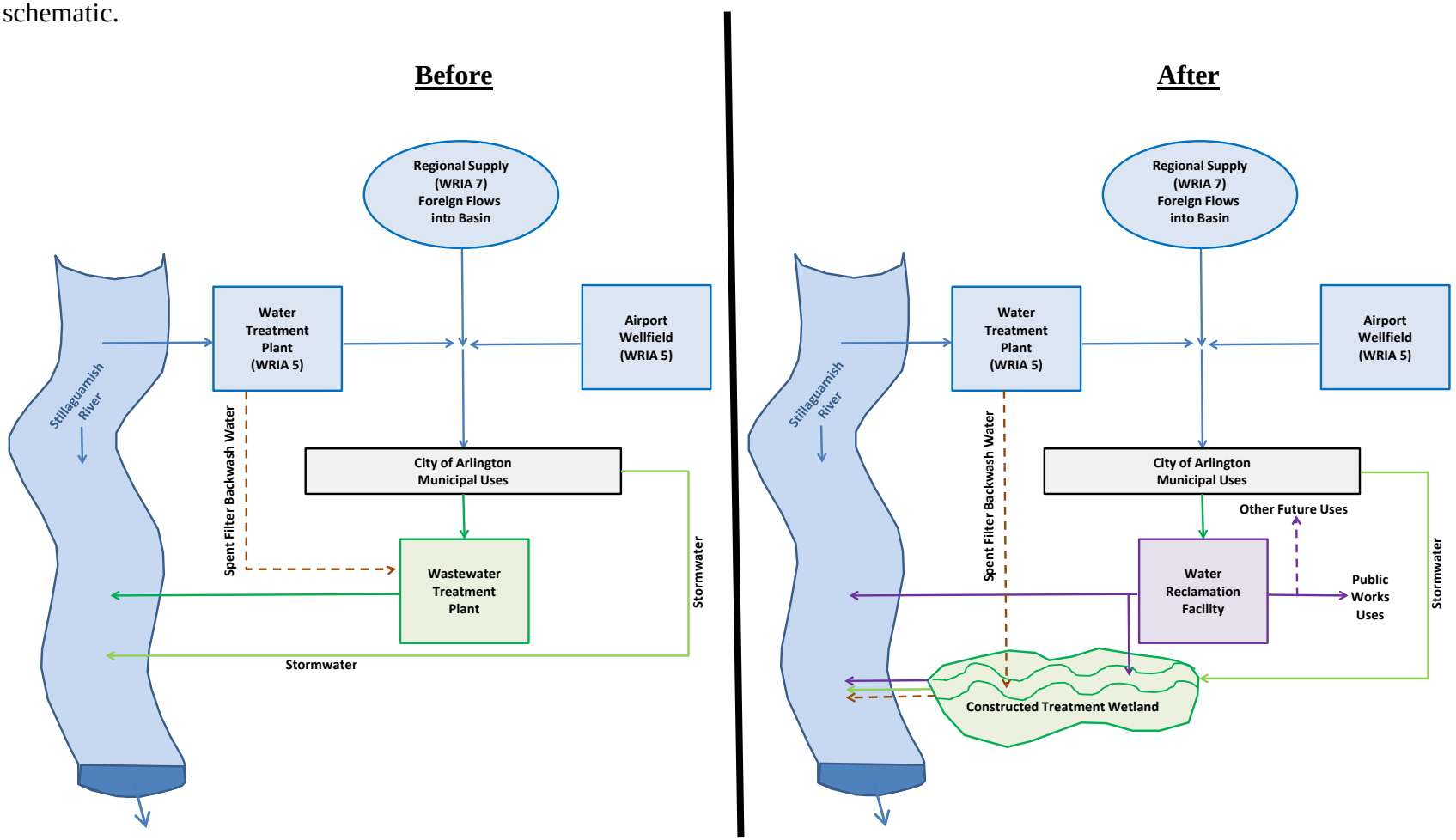


EXHIBIT C

A Historical Digest of the Water Utilities of the City of Arlington and their Relationship to the Stillaguamish River

The City of Arlington was established in the late 1890s on the south bank of the Stillaguamish River (WRIA 5) and has always been dependent on the river for its water supply and the handling of its wastewater, as well as its economy and quality of life. It recognizes the need to maintain the quality and reliability of its water supply from the Stillaguamish River, and has embraced its responsibility for its stewardship. A digest of Arlington's history with the Stillaguamish River is provided below. The context it provides is helpful for understanding the City of Arlington's views and policies for the production and management of multiple water sources, including reclaimed water.

<=1900	Water and power is conveyed into Town from the riverbank well that primarily served one of the areas many shingle mills (known as the Haller community).
1905	A group of City leaders and businessmen construct one of the largest hydroelectric reservoirs and facilities in the United States on Jim Creek, a tributary to the South Fork Stillaguamish River. It washes out a couple years later.
1913	Construction of sewer system begins. 36" outfall discharges combined sewage and storm drainage.
1916	The Town grants a water franchise to Puget Sound Power and Light (PSPL) to operate the water system which still utilized the Haller well.
1924	PSPL improves the water source, constructs a treatment plant, and obtains a water right for the river.
1939	After much public debate, the City voted to purchase the water utility from PSPL.
1957	Construction of new storm sewer system begins and initiates separation of storm and sanitary sewers.
1959	City's first wastewater treatment plant (WWTP) completed. Primary treatment for the removal of settled solids, and maintain same outfall.
1961	Water system expansion, including drilling two additional river bank wells adjacent to the Haller well, and connecting the airport well and water system to the rest of the City.
1965	Priority date for additional water rights obtained for Haller and Airport well fields.

1974 Arlington upgrades to one of the first secondary treatment WWTPs in the State for the decomposition of organic matter. New outfall for treated effluent constructed in river thalweg and is still used today.

1996 Stillaguamish River is first identified as impaired for not meeting certain water quality standards.

1998 The City upgrades its WWTP to a sequencing batch reactor (SBR) facility for improved secondary treatment. SBR technology was considered cutting edge at the time.

2000 City completes construction of new WTP to replace the 1924 facility, and filter and disinfect water drawn from the river via bank filtration into the adjacent Haller well field.

2000 City purchases the property tagged for a constructed wetland to clean the untreated stormwater runoff from about 280 acres of Old Town Arlington. This runoff had discharged to the river unchecked for almost 100 years.

2001 The City is recognized for meeting the advanced objectives in the first year of the Water Treatment Optimization Program (TOP), a set of optional, more stringent treatment targets established by the Department of Health (Health).

2005 The Stillaguamish Instream Flow Rule (IFR) is effective in September. The IFR closes the entire basin to new appropriations of water. Minimum flows are established to restrict the use of water rights junior to the IFR. Despite the repeated requests of the City, reserves are established for exempt (rural) wells, stock watering, and residences on the shores of Lake Cavanaugh, but not for the municipal supply necessary to serve the growth the City is required to facilitate under the Growth Management Act.

2009 City begins cooperative study with USGS and the Stillaguamish Tribe of emerging contaminants within the Stillaguamish River and in the wastewater effluents discharged within the basin.

2010 At a milestone during the expansion and upgrade of its WWTP (prompted sooner than expected due to rapid growth), microfiltration using membrane bioreactors (MBR) is implemented, and the facility becomes known as a water reclamation facility (WRF). Completed in 2011, the WRF also provides additional treatment for the removal of phosphorus and nitrogen using advanced biological nutrient removal (BNR). Coupled with ultraviolet disinfection, the WRF can produce “effluent of Class A reclaimed water quality”.

2011 A 9-acre Constructed Treatment Wetland (CTW) is constructed for the treatment of stormwater runoff.

2011 City continues cooperative study with USGS and the Stillaguamish Tribe of emerging contaminants within the Stillaguamish River and in the wastewater effluents discharged within the basin. Focus sheet published circa 2014.

2013 NPDES waste discharge permit re-issued, and Reclaimed Water Reuse permit newly issued, to the WRF. Recognized beneficial uses are limited to the irrigation of the CTW and maintenance of wetland hydrology.

2014 WTP filter backwash waste, formerly discharged only to the WRF, begins discharge, in part, to the CTW.

2017 The City is recognized for meeting the advanced TOP objectives for the 17th consecutive year of Health's program. Arlington is one of only four utilities in the State to earn this recognition in each and every year since the program was implemented. We credit our success, in part, to the quality of the river water filtered through the bank of the river channel.

EXHIBIT D

Ecology Water Resources Program Policy No. 1020
Consumptive and Nonconsumptive Water Use

Document follows this header page.

POL 1020 WATER RESOURCES PROGRAM POLICY

Resource Contact: Coordination & Hydrology Section Effective Date: 10-31-91
Revised: 10-31-91

CONSUMPTIVE AND NONCONSUMPTIVE WATER USE

References: Chapter 173-500 WAC

Purpose: To expand upon the definition of consumptive and nonconsumptive water use as defined in WAC 173-500-050.

Application: These classifications of water use apply to water right appropriations and adjudicated certificates issued pursuant to chapters 90.03 and 90.44 RCW.

The consumptive and nonconsumptive classifications of water are important when assessing the quantity o£ water allocated. Water used consumptively diminishes the source and is not available for other uses; whereas nonconsumptive water use does not diminish the source or impair future water use.

1. Consumptive Use of Surface and Ground Water

Consumptive water use causes diminishment of the source at the point of appropriation.

Definition: Diminishment is defined as to make smaller or less in quantity, quality, rate of flow, or availability.

By-pass reach defined. A water use may be consumptive to a specific reach of a stream when water is diverted, used, and returned to the same source at a point downstream not in close proximity to the point of diversion. The stream reaches between the point of withdrawal and point of discharge is the by-pass reach.

2. Nonconsumptive Water Use, Surface Water

Surface water use is nonconsumptive when there is no diversion from the water source or diminishment of the source. Additionally, when water is diverted and returned immediately to the source at the point of diversion following its use in the same quantity as diverted and meets water quality standards for the source, the water use is classified as nonconsumptive. Examples of this classification include the following:

a. Water use in hydroelectric projects when the water is not diverted away from the natural confines of the river or stream channel. These hydroelectric projects are commonly called run-of-the-river projects.

b. Water use in some beautification ponds and fish hatcheries when the outflow is returned to the point of diversion, i.e., there is no bypass reach in the system. The

continuous use of water by such a facility does not result in diminishment of the source; inflow is equal to outflow.

These facilities normally require water to fill or charge the system once a year. The water used to fill or hydraulically charge such a system is consumptive and does cause a diminishment of the source. Water use to fill these facilities will be allowed, subject to instream flows and existing rights, when water is available.

Exception to 2.B. Water use can be classified as nonconsumptive when the water is returned to the same pool from which it is diverted and the pool's water elevation is not changed by the initial start-up and stopping of the diversion.

Definitions:

A pool in a river system is a body of water which has the same water surface elevation, within 0.05 of one foot, at any point between the point of diversion and the point of discharge.

A pool in a lake system is the body of water with no flow restriction between the diversion point and the point of discharge and the velocity of the water at both points is the same or within ten (10) percent of each other. If the diversion point and the discharge point are separated by a restrictive, natural or artificial, channel the water bodies are considered separate and distinct.

Some of the above described projects may cause an increase in bank storage, evaporation rate, or preclude others uses of the water body in the vicinity of the project. The Department recognizes the consumptive nature of these factors. However, due to the complexity of quantifying these factors, it is the Department's policy to classify the project's water use as nonconsumptive.

3. Nonconsumptive Water Use, Ground Water

Ground water use is nonconsumptive when there is no diminishment of the source. In order not to diminish the source, the withdrawn water is injected or infiltrated immediately back to the aquifer. The water must be returned in the same quantity and quality (excluding temperature change) at a point in close proximity to the withdrawal wells. An example of this use is a heat pump.

Before issuing a permit which proposes to use injection wells, ensure that the applicant can obtain an injection well permit if required by the Water Quality Program. See Chapter 173-218 WAC.

4. CONCURRENT USE OF GROUND AND SURFACE WATER

Combined use of ground and surface water use may be classified nonconsumptive if the quantity of water captured is returned in close proximity to the source immediately after use.

Direct hydraulic continuity between the source and point of discharge must be unequivocal.

When a project proposed nonconsumptive combined use of surface and ground water, the draft report of exam shall be sent to the section supervisor of the Hydrology and Coordination Section for review and comment.

Hedia Adelsman
Program Manager
Water Resources Program

Special Note: These policies and procedures are used to guide and ensure consistency among water resources program staff in the administration of laws and regulations. These policies and procedures are not formal administrative regulations that have been adopted through a rule-making process. In some cases, the policies may not reflect subsequent changes in statutory law or judicial findings, but they are indicative of the department's practices and interpretations of laws and regulations at the time they are adopted. If you have any questions regarding a policy or procedure, please contact the department.