Marysville City Council Work Session

February 1, 2021 7:00 p.m. City Hall

PUBLIC NOTICE:
Pursuant to Governor Inslee's Proclamation 20-28, in an effort to curtail the spread of the COVID-19 virus, City Council Meetings and Work Sessions will take place by teleconference. Councilmembers and members of the public will not attend in person.

To listen to the meeting without providing public comment:
Join Zoom Meeting
https://zoom.us/j/92977133971
Or
Dial by your location
1-888-475-4499 US Toll-free
Meeting ID: 929 7713 3971

Call to Order

Pledge of Allegiance

Roll Call

Approval of the Agenda

Committee Reports

Presentations

Discussion Items

Approval of Minutes *(Written Comment Only Accepted from Audience.)*

Consent

1. Approval of the January 20, 2021 Claims in the Amount of $464,372.91 Paid by EFT Transactions and Check Numbers 145840 through 145904 with Check Number 145547 Voided

Review Bids

2. Consider the 2019 Citywide Highway Safety Improvement Project Contract with X, in the Amount of $X and Approve a Management Reserve of $X, for a Total Allocation of $X. **(Bid Opening 02/02)**

Public Hearings

New Business

3. Consider the Construction and Maintenance Interlocal Agreement with Snohomish County for the Centennial Trail Connector

4. Consider the Supplemental Agreement No. 1 to the Professional Services Agreement with Gray and Osborne, in the Amount of $34,500.00

5. Consider the Pole Attachment License Agreement for Municipal Entities with Snohomish County PUD No. 1

6. Consider the City of Marysville Water Resource Inventory Area (WRIA) 7 Watershed Restoration and Enhancement Committee Representative to Vote to Approve the Final Version of the WRIA 7 Watershed Plan

7. Consider the Memorandum of Understanding with Washington State Department of Health for the Washington Violent Death Reporting System

8. Consider an **Ordinance** to Amend MMC Section 11.08.200 Regarding Truck Parking

9. Consider an **Ordinance** to Amend MMC Section 11.62.020 Regarding Truck Routes

10. Consider an **Ordinance** to Amend the 2021-2022 Biennial Budget for an Additional Wastewater Treatment Plant Operator

Legal

Mayor's Business

Staff Business

Call on Councilmembers

Adjournment/Recess

Executive Session

A. Litigation

B. Personnel

C. Real Estate

Reconvene

Adjournment

Marysville City Council Work Session

February 1, 2021 7:00 p.m. City Hall

Special Accommodations: The City of Marysville strives to provide accessible meetings for people with disabilities. Please contact the City Clerk's office at (360) 363-8000 or 1-800-833-6384 (Voice Relay), 1-800-833-6388 (TDD Relay) two business days prior to the meeting date if any special accommodations are needed for this meeting.

Index #1

CITY OF MARYSVILLE

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: February 8, 2021

AGENDA ITEM: Claims	AGENDA SECTION:	
PREPARED BY: Sandy Langdon, Finance Director	AGENDA NUMBER:	
ATTACHMENTS: Claims Listings	APPROVED BY:	
	MAYOR	CAO
BUDGET CODE:	AMOUNT:	

Please see attached.

RECOMMENDED ACTION: **The Finance and Executive Departments recommend City Council approve the January 20, 2021 claims in the amount of $464,372.91 paid by EFT transactions and Check No.'s 145840 through 145904 with Check No. 145547 voided.**
COUNCIL ACTION:

BLANKET CERTIFICATION
CLAIMS
FOR
PERIOD-1

I, THE UNDERSIGNED, DO HEREBY CERTIFY UNDER PENALTY OF PERJURY THAT THE MATERIALS HAVE BEEN FURNISHED, THE SERVICES RENDERED OR THE LABOR PERFORMED AS DESCRIBED HEREIN AND THAT THE **CLAIMS** IN THE AMOUNT OF **$464,372.91 PAID BY EFT TRANSACTIONS AND CHECK NO.'S 145840 THROUGH 145904 WITH CHECK NUMBER 145547 VOIDED,** THE CITY OF MARYSVILLE, AND THAT I AM AUTHORIZED TO AUTHENTICATE AND TO CERTIFY SAID CLAIMS.

AUDITING OFFICER DATE

MAYOR DATE

WE, THE UNDERSIGNED COUNCIL MEMBERS OF MARYSVILLE, WASHINGTON DO HEREBY APPROVE FOR PAYMENT THE ABOVE MENTIONED **CLAIMS** ON THIS **8th DAY OF FEBRUARY 2021.**

COUNCIL MEMBER

COUNCIL MEMBER

COUNCIL MEMBER

COUNCIL MEMBER

COUNCIL MEMBER

COUNCIL MEMBER

COUNCIL MEMBER

CITY OF MARYSVILLE
INVOICE LIST

FOR INVOICES FROM 1/15/2021 TO 1/20/2021

CHK #	VENDOR	ITEM DESCRIPTION	ACCOUNT DESCRIPTION	ITEM AMOUNT
145840	PREMERA BLUE CROSS	PREMERA CLAIMS PAID 1/1-1/9	MEDICAL CLAIMS	24,032.56
145841	LICENSING, DEPT OF	CPL BATCH 1/5/21	INTERGOVERNMENTAL	1,467.00
145842	AKTIVOV LLC	2021 ANNUAL MAINTENANCE/SUPPORT	UTIL ADMIN	36,499.07
145843	AMAZON CAPITAL	LABELS	FINANCE-GENL	21.85
145844	ARAMARK UNIFORM	UNIFORM SERVICE	SMALL ENGINE SHOP	6.56
	ARAMARK UNIFORM		EQUIPMENT RENTAL	56.95
145845	ASCHERL, ANTON & ZUL	UB REFUND	WATER/SEWER OPERATION	291.34
145846	BAGLEY, ROBERT S		GARBAGE	264.61
145847	BANK OF AMERICA	MEMBERSHIP DUES	MUNICIPAL COURTS	135.00
145848	BANK OF AMERICA	CERTIFICATION AND TRAINING	SEWER PRETREATMENT	102.12
	BANK OF AMERICA		UTIL ADMIN	119.00
145849	BANK OF AMERICA	MEMBERSHIP AND SUPPLIES	LEGAL - PROSECUTION	60.00
	BANK OF AMERICA		LEGAL-GENL	182.12
145850	BANK OF AMERICA	GO TO MEETING & EMPLOYEE APPRECIATION	PUBLIC HEALTH EXPENSE	106.33
	BANK OF AMERICA		PERSONNEL ADMINISTRATION	248.89
145851	BANK OF AMERICA	RENEWALS AND TRAINING	EQUIPMENT RENTAL	124.00
	BANK OF AMERICA		TRAINING	149.00
	BANK OF AMERICA		UTIL ADMIN	158.65
	BANK OF AMERICA		SOLID WASTE OPERATIONS	160.00
	BANK OF AMERICA		UTIL ADMIN	572.60
145852	BANK OF AMERICA	ANNUAL DUES	NON-DEPARTMENTAL	1,400.00
145853	BANK OF AMERICA	RENEWALS/SUPPLIES/EMP APPRECIATION	FINANCE-GENL	8.95
	BANK OF AMERICA		COMMUNITY	60.12
	BANK OF AMERICA		COMPUTER SERVICES	226.98
	BANK OF AMERICA		PERSONNEL ADMINISTRATION	461.45
	BANK OF AMERICA		FINANCE-GENL	468.00
	BANK OF AMERICA		IS REPLACEMENT ACCOUNTS	910.42
145854	BICKFORD FORD	DIAGNOSE AND REPAIR #V047	EQUIPMENT RENTAL	912.98
	BICKFORD FORD	2021 FORD INTERCEPTOR #P208	EQUIPMENT RENTAL	50,436.40
145855	BLUETARP FINANCIAL	HONDA ENGINES FOR WEED EATERS	SMALL ENGINE SHOP	581.45
145856	C & C INC	DUMPSTER SOCIAL MARKETING CAMPAIGN	STORM DRAINAGE	2,000.00
145857	CARTER, MARILYN	UB REFUND	GARBAGE	496.53
145858	COOP SUPPLY	WELD WARREN HOE	ROADSIDE VEGETATION	43.70
145859	CORE & MAIN LP	BRASS PARTS	WATER/SEWER OPERATION	2,299.79
145860	DAVIS, SCOTT	UB REFUND	WATER/SEWER OPERATION	13.13
145861	DELL	LAPTOP	IS REPLACEMENT ACCOUNTS	2,709.30
145862	DIGITAL DOLPHIN SUPP	TONER	POLICE ADMINISTRATION	207.12
145863	DMCJA	MEMBERSHIP-GILLINGS	MUNICIPAL COURTS	700.00
	DMCJA	MEMBERSHIP-TOWERS	MUNICIPAL COURTS	700.00
145864	DMCMA	MEMBERSHIP-ELSNER	MUNICIPAL COURTS	150.00
	DMCMA	MEMBERSHIP-RICKER	MUNICIPAL COURTS	150.00
145865	DOBBS PETERBILT	FAN CLUTCH ASSEMBLY	EQUIPMENT RENTAL	458.20
145866	EAGLE FENCE	GATE REPAIR	SOLID WASTE OPERATIONS	202.21
145867	ENTERPRISE, DEPT OF	ANNUAL FEE	POLICE ADMINISTRATION	900.00
145868	EVERETT TIRE & AUTO	TIRES	EQUIPMENT RENTAL	309.44
145869	EVERETT, CITY TREAS	WATER FILTRATION SERVICES	SOURCE OF SUPPLY	204,943.24
145870	FBINAA WASHINGTON	MEMBERSHIP DUES-LAMOUREUX	POLICE ADMINISTRATION	115.00
145871	FIRESTONE	TIRES	EQUIPMENT RENTAL	124.08
145872	GENUINE AUTO GLASS	REPLACE WINDSHIELD #P159	EQUIPMENT RENTAL	311.51
145873	GRABBER POWER PRODUC	SQUEEGEE BLADES	GENERAL FUND	-7.31
	GRABBER POWER PRODUC		SIDEWALK MAINTENANCE	85.81
145874	GRAINGER	BRUSH, GLOVES AND CABLE TIES	ER&R	102.01
	GRAINGER	SPOTLIGHT	ER&R	114.71
145875	HALL, ROBERT W & GLO	UB REFUND	WATER/SEWER OPERATION	388.40
145876	HBLE LLC	AMMUNITION	POLICE TRAINING-FIREARMS	4,142.47
145877	HOME DEPOT USA	CLEANER, CLOTHS AND GLOVES	CUSTODIAL SERVICES	776.14
145878	HUDSON, MICHAEL & EM	UB REFUND	WATER/SEWER OPERATION	113.48
145879	INDUSTRIAL SOFTWARE	SOFTWARE RENEWAL	WASTE WATER TREATMENT	5,505.07

CITY OF MARYSVILLE
INVOICE LIST

FOR INVOICES FROM 1/15/2021 TO 1/20/2021

CHK #	VENDOR	ITEM DESCRIPTION	ACCOUNT DESCRIPTION	ITEM AMOUNT
145879	INDUSTRIAL SOFTWARE	SOFTWARE RENEWAL	WATER DIST MAINS	5,505.08
	INDUSTRIAL SOFTWARE		WATER FILTRATION PLANT	5,505.08
145880	KULCHITSKIY, LYUBOV	UB REFUND	GARBAGE	24.22
145881	LAB/COR, INC.	LAB ANALYSIS	STORM DRAINAGE	240.00
145882	LAMOUREUX, ROBERT	REIMBURSE MAJOR CRIME EXPENSE	POLICE ADMINISTRATION	47.21
145883	LES SCHWAB TIRE CTR	TIRES	ER&R	823.36
145884	MYERS, MICHAEL	UB REFUND	WATER/SEWER OPERATION	292.36
145885	NAPA AUTO PARTS	EXHAUST FLUID	STREET CLEANING	25.60
	NAPA AUTO PARTS		STREET CLEANING	153.59
145886	NEXTWAREHOUSE	ETHERNET SWITCHES	SOURCE OF SUPPLY	4,873.42
145887	NOREGON SYSTEMS	SUBSCRIPTION RENEWAL	EQUIPMENT RENTAL	2,184.91
145888	NORTHWESTERN AUTO	REPAIR #J051	EQUIPMENT RENTAL	422.77
	NORTHWESTERN AUTO		EQUIPMENT RENTAL	1,090.07
145889	OREILLY AUTO PARTS	MIRROR	EQUIPMENT RENTAL	54.64
145890	PLATT ELECTRIC	ELBOW	SOURCE OF SUPPLY	7.50
145891	PUD	ENG/PLANNING DEPOSIT FOR 1ST STREET	SURFACE WATER CAPITAL	5,000.00
145892	SANTOSE, STEVE	UB REFUND	WATER/SEWER OPERATION	80.46
145893	SCHMELZER, NICHOLAS		WATER/SEWER OPERATION	329.42
145894	SISKUN POWER EQUIPME	DEFLECTOR, SIDE ARM, GUARD AND SHAFT	SMALL ENGINE SHOP	532.04
145895	SNOHOMISH CO 911	DISPATCH SERVICES	COMMUNICATION CENTER	88,026.43
145896	SPONHOLTZ, MARY LYNN	UB REFUND	WATER/SEWER OPERATION	213.55
145897	SWICK-LAFAVE, JULIE	REIMBURSE CLEANING SUPPLIES	DETENTION & CORRECTION	23.84
145898	TABOREK, MICHAEL	UB REFUND	WATER/SEWER OPERATION	288.29
145899	THYSSENKRUPP ELEVATO	PREVENTATIVE MAINTENANCE	CITY HALL	335.50
	THYSSENKRUPP ELEVATO		PUBLIC SAFETY BLDG	335.50
145900	TYLER BUSINESS FORMS	TAX FORMS	FINANCE-GENL	881.61
145901	WATCH SYSTEMS	RSO NOTIFICATIONS	POLICE INVESTIGATION	73.34
145902	WHISTLE WORKWEAR	BOOTS AND JEANS-DIETZ	UTIL ADMIN	335.94
145903	WINGFIELD, MACE	UB REFUND	WATER/SEWER OPERATION	30.20
145904	ZAZYNSKI, TIMOTHY &		WATER/SEWER OPERATION	363.64

WARRANT TOTAL: **466,378.00**

CHECK #145547 **INITIATOR ERROR** **(2005.09)**

464,372.91

REASON FOR VOIDS:

INITIATOR ERROR
CHECK LOST/DAMAGED
UNCLAIMED PROPERTY

Index #2

CITY OF MARYSVILLE AGENDA BILL

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: February 8, 2021

AGENDA ITEM:	
Project Award – 2019 Citywide Highway Safety Improvements Project (HSIP)	
PREPARED BY:	**DIRECTOR APPROVAL:**
Steven Miller, Project Manager	KR for KN
DEPARTMENT:	
Public Works - Engineering	
ATTACHMENTS:	
Certified Bid Tabulation Contract Vicinity Map	
BUDGET CODE: 30500030.563000, R1901	**AMOUNT:** $X

SUMMARY:

The 2019 Citywide HSIP will construct the following traffic safety improvements.

- On 64th St NE (SR 528), the project will change signal phasing at the intersections of 60th Dr NE and 67th Ave NE to allow a flashing yellow arrow.
- On SR 528 near 65th Dr NE, radar speed feedback signs will be installed. In addition, advanced signage will be installed in the westbound direction along SR 528 to warn drivers approaching the intersection of 67th Ave NE.
- At the intersection of 100th and 59th, the project will install pedestrian-actuated rectangular rapid flashing beacons, new sidewalk and upgrade ADA curb ramps.
- Along Smokey Point Blvd, the project will install high friction surface treatment and radar speed warning signs near 1400 block.

The project is funded by FHWA as part of the Highway Safety Improvement Program.

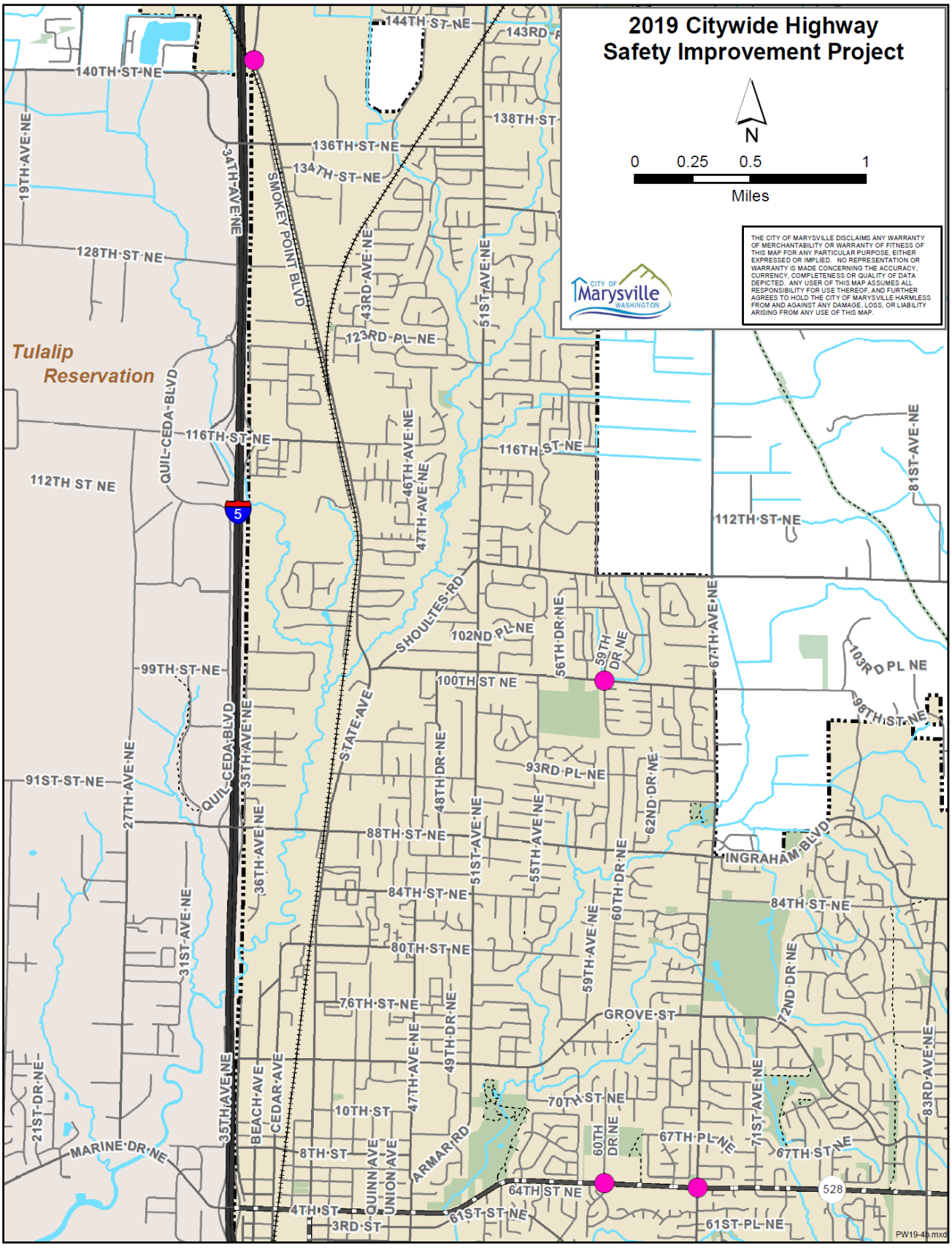
Construction bids were received on January 28. A total of X bids were received and read aloud at a virtual public bid opening meeting. The low bid of $X was from X. The Engineer's Estimate for the project was $492,440. References have been checked and found to be satisfactory.

Contract Bid:	$ X
Management Reserve:	$ X
Total Allocation:	$ X
HSIP Grant	$458,000
Total City Cost:	$X

RECOMMENDED ACTION:
Staff recommends that Council authorize the Mayor to sign and execute the 2019 Citywide Highway Safety Improvement Project contract with X, in the amount of $X and approve a management reserve of $X, for a total allocation of $X.

RECOMMENDED MOTION:
I move to authorize the Mayor to sign and execute the 2019 Citywide Highway Safety Improvement Project contract with X, in the amount of $X and approve a management reserve of $X, for a total allocation of $X.

VICINITY MAP



Index #3

CITY OF MARYSVILLE AGENDA BILL

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: February 8, 2021

AGENDA ITEM:	
Centennial Trail Connector – Interlocal Agreement with Snohomish County	
PREPARED BY:	**DIRECTOR APPROVAL:**
Kyle Woods, Project Engineer	KR for KN
DEPARTMENT:	
Public Works, Engineering	
ATTACHMENTS:	
Snohomish County Interlocal Agreement for Construction and Maintenance of Centennial Trail Connector	
BUDGET CODE:	**AMOUNT:**
31000076.563000, P1601	N/A
SUMMARY:	

The Centennial Trail Connector project proposes to extend the existing Bayview Trail to the Centennial Trail. As part of this project, the trail will connect with the Snohomish County owned Centennial Trail in the vicinity shown on the attached interlocal agreement, Exhibit B. In accordance with the Snohomish County's permitting requirements, the City is obligated to acquire an interlocal agreement for the construction and maintenance of the portion of trail on Snohomish County property.

RECOMMENDED ACTION: Staff recommends that Council authorize the Mayor to sign and execute the enclosed Construction and Maintenance Interlocal Agreement with Snohomish County.

PROPOSED MOTION: I move to authorize the Mayor to sign and execute the enclosed Construction and Maintenance Interlocal Agreement with Snohomish County.

INTERLOCAL AGREEMENT BETWEEN THE CITY OF MARYSVILLE AND SNOHOMISH COUNTY FOR CONSTRUCTION AND MAINTENANCE OF CENTENNIAL TRAIL CONNECTOR

This INTERLOCAL AGREEMENT (this "Agreement"), is made and entered into this ____ day of _____, 20___, by and between SNOHOMISH COUNTY, a political subdivision of the State of Washington (the "County"), and the City of Marysville, a municipal corporation with corporate offices located at 1049 State Avenue, Marysville, WA 98270 (The "City"), pursuant to Chapter 39.34 RCW.

RECITALS

A. The County and City seek to collaborate to allow design, construction, and maintenance of a new section of recreational trail to connect the City to the existing County-owned Centennial Trail ("County Trail") and to allow the City access to construct and maintain that new section of trail for efficiency purposes.

B. Further to this effort, a portion of the County Trail will be used to connect the County Trail to the City-owned Bayview trail, located outside the City of Marysville. This portion of the County Trail shall hereinafter be designated (the "Property") and is legally described in Exhibit A (attached hereto and incorporated herein by this reference) and depicted on Exhibit B (attached hereto and incorporated herein by this reference). Improvements to the Property will include a paved connection to the existing asphalt County Trail utilizing a new asphalt trail surface. The trails will be connected in a way that provides a smooth transition between the two trails at the point of connection. The Property is 864 square feet, and lies entirely within the County Trail corridor.

C. Pursuant to 39.34 RCW, the parties wish to allow the City to construct and maintain the Property for the benefit of the public, while the County continues to maintain ownership of the Property.

AGREEMENT

NOW, THEREFORE, in consideration of the respective agreements set forth below and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the County and City agree as follows:

PROVIDED THAT SUCH AGREEMENT IS SUBJECT TO ALL ACQUISITION AND FUNDING SOURCE GRANT REQUIREMENTS, in compliance with RCO Project Agreements 91-15A and 92-362D, administered by the Recreation and Conservation Office, and Conservation Futures funds administered by Snohomish County pursuant to County Code. RCO Project Agreements 91-15A and 92-362D are incorporated herein by this reference.

1. Purpose of Agreement.

This Agreement is authorized by and entered into pursuant to Chapter 39.34 RCW. The purpose and intent of this Agreement is to define the responsibilities of the County and City

regarding the construction and maintenance of the Property for public recreational use.

2. Effective Date and Duration.

This Agreement shall take effect once it has been duly executed by both parties and either filed with the County Auditor or posted on the County's Interlocal Agreements website (the "Effective Date"). This Agreement shall remain in effect for five (5) years following the Effective Date, unless earlier terminated pursuant to the provisions of Section 12 below, PROVIDED, HOWEVER, that the term of this Agreement may be extended or renewed for up to three (3) additional five (5) year terms, for a total of 20 years, at the sole discretion of the County, by written notice from the County to City.

3. Administrators.

Each party to this Agreement shall designate an individual (an "Administrator"), who may be designated by title or position, to oversee and administer such party's participation in this Agreement. The parties' initial Administrators shall be the following individuals:

County's Initial Administrator:	City's Initial Administrator:
SNOHOMISH COUNTY Kye Iris Park Property Administrator 6705 Puget Park Drive Snohomish, WA 98296 425-388-6623	CITY OF MARYSVILLE 1049 STATE AVE Kyle Woods, PE 425-344-1505

Either party may change its Administrator at any time by delivering written notice of such party's new Administrator to the other party.

4. **Enforcement.** Nothing contained in this Agreement shall be considered to diminish the governmental or police powers of the County. The Property is subject to Title 22 of the Snohomish County Code and all other rules and regulations adopted by the County. The County may, at its sole cost and expense, enforce the Snohomish County Code, rules and regulations within the Property, and monitor the Property for appropriate use.

5. Responsibilities of City.

5.1 The City agrees to perform maintenance of the Property. Such maintenance work shall include but not be limited to:

(a) Maintenance of the asphalt trail surface to provide a smooth, uniform surface for pedestrian and bicycle traffic.
(b) Maintenance of the connection point of the Bayview Trail and the Centennial Trail with a smooth coat of AR400W or similar in the area shown on Exhibit A.
(c) Maintaining the Property free of vegetation such as branches and trees.

(d) Providing 48 hours' notice to the appropriate Snohomish County staff for any trail maintenance activities that would impede pedestrian and bicycle traffic on the Centennial Trail.
(e) Responding to any maintenance item requested by the County.
(f) Resolving drainage issues such as standing water on the trail surface.

6. Alterations and Improvements.

6.1 **No Conversion or Non-Compliance with Grant Sources.** City may not make additions, changes, alterations, or improvements to the Property that are inconsistent with this Agreement, conveyance deed(s), easements, third party agreements, or Grant contracts associated with the Property. The Property shall continue to be used for the approved purpose for which it was acquired and for no purpose in conflict therewith.

6.2 **Consent by the County.** City may not make alterations to the Property ("Alterations") without first obtaining the prior written consent of the County.

6.3 **Alterations by City**. All Alterations shall be performed: (a) at City's sole cost and expense unless funding is obtained through a RCO or other grant or donation source; (b) in a good safe environment and performed in a professional workmanlike manner, with all materials used being of a quality at least as good as or better than existing condition those already in use on the Property; (c) in accordance with plans and specifications approved by County and associated grant/sponsor agencies; and (d) in compliance with all applicable laws, codes and regulations including but not limited to those related to prevailing wages (see RCW 39.12), retainage (see RCW 60.28), bonding (see RCW 39.08), use of licensed contractors (see RCW 39.06), and competitive bidding (see RCW 36.32 and RCW 35.21.278), and all codes and regulations. The County hereby expressly disclaims any responsibility or liability for same.

6.4 **Disposition of Alterations at Termination.** Upon the expiration or earlier termination of this Agreement, all fixed Alterations shall remain in and be surrendered with the Property as a part thereof, unless, with respect to any Alteration, the County specifies in its consent to the construction of such Alteration that such Alteration must be removed prior to surrender, in which case City shall, prior to surrender, remove the Alteration in question and repair any damage to the Property caused by such removal.

6.5 **Liens**. City shall keep the Property free from any liens arising out of work performed for, materials furnished to, or obligations incurred by, or on behalf of, City. Any construction liens filed against the Property for work claimed to have been furnished to City will be discharged by City, by bond or otherwise, within ten (10) days after the filing of the claim or lien, at City's sole cost and expense. Should City fail to discharge any such construction lien, the County may at its election pay that claim or post a bond or otherwise provide security to eliminate the lien as a claim against title and the cost to the County shall be immediately due and payable by City. City shall indemnify and hold the County harmless from and against any liability arising from any such lien.

7. Independent Contractor.

City will perform all work associated with the Property as an independent contractor and not as an agent, employee, or servant of the County. City shall be solely responsible for control, supervision, direction and discipline of its personnel, who shall be employees and agents of City and not the County. The County shall only have the right to ensure performance.

8. Indemnification/Hold Harmless.

City shall hold harmless, indemnify, and defend the County, its officers, elected and appointed officials, employees, and agents from and against all claims, losses, suits, actions, counsel fees, litigation costs, expenses, damages, judgments, or decrees by reason of damage to any property or business, and/or any death, injury, or disability to or of any person or party, including, but not limited to, any employee, contractor, licensee, invitee and/or any other persons who may be in, on, around or upon the Property with the express or implied consent of City or arising out of or suffered, directly or indirectly, by reason of or in connection with the rights granted to City with relation to the Property or the performance of this Agreement, or any act, error, or omission of City, City's employees, agents, and subcontractors, whether by negligence or otherwise. In the event of the concurrent negligence of the parties, the City's obligations hereunder shall apply only to the percentage of fault attributable to City. It is specifically and expressly understood that the indemnification provided in this Agreement constitutes City's waiver of immunity under the state industrial insurance laws, Title 51 RCW, solely for the purpose of this indemnification. City agrees that this waiver has been mutually negotiated. Nothing contained herein is intended to limit either party's immunity under RCW 4.24.200 or RCW 4.24.210.

9. Condition of Property.

City acknowledges and agrees that it has had an adequate opportunity to inspect the Property and is accepting the Property in its current condition, AS IS, WHERE IS, subject to all faults and defects, known and unknown. City further represents and warrants to the County that except for the County's express representations, warranties, covenants and obligations under this Agreement and the exhibits hereto, City has not relied and will not rely on, and the County is not liable for or bound by, any warranties, guaranties, statements, representations or information pertaining to the Property and the Property Improvements.

10. Compliance with Laws.

In the performance of its obligations under this Agreement, each party shall comply with all applicable federal, state, and local laws, rules and regulations.

11. Default and Remedies.

11.1 Default. If either the County or City fails to perform any act or obligation required to be performed by it hereunder, the other party shall deliver written notice of such failure to the non-performing party. The non-performing party shall have twenty (20) days after its receipt of such notice in which to correct its failure to perform the act or obligation at issue, after which time it shall be in default ("Default") under this Agreement; provided, however, that if the non-

performance is of a type that could not reasonably be cured within said twenty (20) day period, then the non-performing party shall not be in Default if it commences cure within said twenty (20) day period and thereafter diligently pursues cure to completion.

11.2 Remedies. In the event of a party's Default under this Agreement, then after giving notice and an opportunity to cure pursuant to Section 11.1 above, the non-Defaulting party shall have the right to exercise any or all rights and remedies available to it in law or equity.

12. Early Termination.

12.1 180 Days' Notice. Except as provided in Sections 12.2 and 12.3 below, either party may terminate this Agreement at any time, with or without cause, upon not less than one hundred eighty (180) days advance written notice to the other party, PROVIDED, HOWEVER, that the County may terminate this Agreement immediately if, in the County's sole discretion, immediate termination is necessary to protect the public health, safety or welfare. A termination notice given under this Section 12.1 shall specify the date on which the Agreement shall terminate.

12.2 Lack of Funding. This Agreement is contingent upon governmental funding and local legislative appropriations. In the event that funding from any source is withdrawn, reduced, limited, or not appropriated after the effective date of this Agreement, this Agreement may be terminated by either party immediately by delivering written notice to the other party. The termination notice shall specify the date on which the Agreement shall terminate.

12.3 Termination for Breach. In the event that City commits a Default as described in Section 11, the County may terminate this Agreement immediately by delivering written notice to CITY.

12.4 Termination upon Change of Ownership. Upon a change of ownership of the Property, this Agreement shall terminate immediately. Upon a change of ownership comprising "Property" for purposes of this Agreement, this Agreement shall terminate.

13. Dispute Resolution.

In the event differences between the parties should arise over the terms and conditions or the performance of this Agreement, the parties shall use their best efforts to resolve those differences on an informal basis. If those differences cannot be resolved informally, the matter may be referred for mediation to a mediator mutually selected by the parties. If mediation is not successful or if a party waives mediation, either of the parties may institute legal action for specific performance of this Agreement or for damages. The prevailing party in any legal action shall be entitled to a reasonable attorneys' fee and court costs.

14. Notices.

All notices required to be given by any party to the other party under this Agreement shall be in writing and shall be delivered either in person, by United States mail, or by electronic mail (email) to the applicable Administrator or the Administrator's designee. Notice delivered in person

shall be deemed given when accepted by the recipient. Notice by United States mail shall be deemed given as of the date the same is deposited in the United States mail, postage prepaid, and addressed to the Administrator, or their designee, at the addresses set forth in Section 3 of this Agreement. Notice delivered by email shall be deemed given as of the date and time received by the recipient.

15. Nondiscrimination.

It is the policy of the County to reject discrimination which denies equal treatment to any individual because of his or her race, creed, color, national origin, families with children, sex, marital status, sexual orientation, age, honorably discharged veteran or military status, or the presence of any sensory, mental, or physical disability or the use of a trained dog guide or service animal by a person with a disability as provided in Washington's Law against Discrimination, Chapter 49.60 RCW, and the Snohomish County Human Rights Ordinance, Chapter 2.460 SCC. These laws protect against specific forms of discrimination in employment, credit transactions, public accommodation, housing, county facilities and services, and county contracts.

City shall comply with the substantive requirements of Chapter 2.460 SCC, which are incorporated herein by this reference. Execution of this Agreement constitutes a certification by City of City's compliance with the requirements of Chapter 2.460 SCC. If CITY is found to have violated this provision, or to have furnished false or misleading information in an investigation or proceeding conducted pursuant to this Agreement or Chapter 2.460 SCC, this Agreement may be subject to a declaration of default and termination at the County's discretion. This provision shall not affect City's obligations under other federal, state, or local laws against discrimination.

16. Miscellaneous.

16.1 Entire Agreement; Amendment(s). This Agreement constitutes the entire agreement between the parties regarding the subject matter hereof, and supersedes any and all prior oral or written agreements between the parties regarding the subject matter contained herein. This Agreement may not be modified or amended in any manner except by a written document executed with the same formalities as required for this Agreement and signed by the party against whom such modification is sought to be enforced.

16.2 Conflicts between Attachments and Text. Should any conflicts exist between any attached exhibits or schedule and the text or main body of this Agreement, the text or main body of this Agreement, or to any modifications or amendments to this Agreement shall prevail.

16.3 Governing Law and Venue. This Agreement shall be governed by and enforced in accordance with the laws of the State of Washington. The venue of any action arising out of this Agreement shall be in the Superior Court of the State of Washington, in and for Snohomish County. In the event that a lawsuit is instituted to enforce any provision of this Agreement, the prevailing party shall be entitled to recover all costs of such a lawsuit, including reasonable attorney's fees.

16.4 Interpretation. This Agreement and each of the terms and provisions of it are

deemed to have been explicitly negotiated by the parties, and the language in all parts of this Agreement shall, in all cases, be construed according to its fair meaning and not strictly for or against either of the parties hereto. The captions and headings in this Agreement are used only for convenience and are not intended to affect the interpretation of the provisions of this Agreement. This Agreement shall be construed so that wherever applicable the use of the singular number shall include the plural number, and vice versa, and the use of any gender shall be applicable to all genders.

16.5 Severability. If any provision of this Agreement or the application thereof to any person or circumstance shall, for any reason and to any extent, be found invalid or unenforceable, the remainder of this Agreement and the application of that provision to other persons or circumstances shall not be affected thereby, but shall instead continue in full force and effect, to the extent permitted by law.

16.6 No Waiver. A party's forbearance or delay in exercising any right or remedy with respect to a Default by the other party under this Agreement shall not constitute a waiver of the Default at issue. Nor shall a waiver by either party of any particular Default constitute a waiver of any other Default or any similar future Default.

16.7 No Assignment. This Agreement shall not be assigned, either in whole or in part, by City without the express written consent of the County, which may be granted or withheld at the County's sole discretion. Any attempt to assign this Agreement in violation of the preceding sentence shall be null and void and shall constitute a Default under this Agreement.

16.8 Warranty of Authority. Each of the signatories hereto warrants and represents that he or she is competent and authorized to enter into this Agreement on behalf of the party for whom he or she purports to sign this Agreement.

16.9 No Joint Venture. Nothing contained in this Agreement shall be construed as creating any type or manner of partnership, joint venture or other joint enterprise between the parties.

16.10 No Separate Entity Necessary. The parties agree that no separate legal or administrative entities are necessary to carry out this Agreement.

16.11 Ownership of Property. Except as expressly provided to the contrary in this Agreement, any real or personal property used or acquired by either party in connection with its performance under this Agreement will remain the sole property of such party, and the other party shall have no interest therein.

16.12 No Third Party Beneficiaries. This Agreement and each and every provision hereof is for the sole benefit of the Town and the County. No other persons or parties shall be deemed to have any rights in, under or to this Agreement.

16.13 Execution in Counterparts. This Agreement may be executed in two or more counterparts, each of which shall constitute an original and all of which shall constitute one and

the same agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

COUNTY:

SNOHOMISH COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF WASHINGTON

By_____
Name: Dave Somers
Title: Snohomish County Executive

CITY:

CITY OF MARYSVILLE

By_____
Its:

Approved as to Form:

_____
Deputy Prosecuting Attorney

Exhibit A

Legal Description

A portion of Assessor's Parcel #30051300300900

A portion of the SW ¼ of Section 13, Township 30N, Range 05 E W.M.

Further depicted on Exhibit B attached and incorporated herein by this reference

Exhibit B

QUARTER	SECTION	TOWNSHIP N.W.B.L.	RANGE E.W.M.
SW	13	30	5

Centerline · Lot · Block · Section · City Limits
Gov Lot · Subdiv · ROW · Quarter · Tax Acct
Major Water · Other Lot · Vac ROW · 16th · Easement
Minor Water · Other Subdiv · Vac Lot

N

0 200 400
Feet

1 inch = 200 feet

Map produced on October 02, 2015

A product of the Assessor's Office
Snohomish County, Washington

NW-13-30-05

1-016 · 2-008 · 14 · 2-019 · 13 · 2-007 · 8 · 91ST AVE NE · (SEE STATE HWY MAP GETCHELL RD TO A)

4-002 · 24 · 4-002 · 4-002

CENTENNIAL TRAILS (9118)

3-009 · BURLINGTON NORTHERN SANTA FE RAILROAD (NORTHERN PACIFIC RAILROAD) ABANDONED

3-001 · (SECONDARY STATE HWY 1-A)

TR 998 · TR 989 · TR 990 · TR 999 · TR 988 · TR 986 · TR 983 · TR 985 · TR 987

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

83RD AVE NE · 96TH ST NE · PRIVATE 84TH DR NE · PRIVATE 85TH DR NE

CENTENNIAL TRAILS DIV 2 (9278)

SE-14-30-05 · SE-13-30-05

SR 9 NE

Construction and Maintenance Agreement Area - Enlarged - 864 ft2

36' · 24' · 24' · 36'

Consruction and Maintenance Agreement Area

4-006 · 3-011 · 3-007 · 3-008 · 3-009 · 3-010 · 1-023 · 2-011

CITY OF MARYSVILLE

14 13 23 24

NW-24-30-05

Index #4

CITY OF MARYSVILLE AGENDA BILL

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: February 8, 2021

AGENDA ITEM:	
Supplemental Agreement No. 1 w/ Gray and Osborne re Historic Downtown Green Retrofit	
PREPARED BY:	**DIRECTOR APPROVAL:**
Adam Benton, Project Engineer	KC for KN
DEPARTMENT:	
Public Works / Engineering	
ATTACHMENTS:	
Supplemental Agreement No. 1	
BUDGET CODE:	**AMOUNT:**
40250594.5630000, D1803	$34,500.00
SUMMARY:	

The City contracted with Gray and Osborne, Inc. on May 14, 2019, to provide design and engineering services for the Historic Downtown Green Retrofit project. The original professional services agreement for this project included scope and fee to take the design to 90% plans and specifications. This supplement will provide additional scope and fee to finalize the design and ultimately prepare bid documents.

The City has secured grant funding, through the Department of Ecology, for construction of the proposed improvements on Cedar Avenue from 1st Street to 4th Street and 2nd Street from 47th Ave NE to State Avenue. Construction of the low impact development (LID) Improvements for Cedar Avenue is anticipated for summer of this year, while construction of the LID Improvement for 2nd Street are planned for the summer of 2022. While construction of the project will be managed and inspected by in-house staff, retaining the design consultant to provide services during construction is often necessary in order to address questions or issues as they arise.

The attached Supplement No. 1 to the City's agreement with Gray and Osborne includes additional scope and fee to prepare 100% plans and specifications, prepare bid documents, provide bid support, provide limited construction support services and prepare record drawings. This supplement also extends the term of the original contract to June 30, 2023.

RECOMMENDED ACTION:
Staff recommends that Council authorize the Mayor to sign and execute the Supplemental Agreement No. 1 to the Professional Services Agreement with Gray and Osborne, in the amount of $34,500.00.

RECOMMENDED MOTION:
I move to authorize the Mayor to sign and execute the supplemental agreement.

SUPPLEMENTAL AGREEMENT NO. 1 TO PROFESSIONAL SERVICES AGREEMENT BETWEEN CITY OF MARYSVILLE AND GRAY AND OSBORNE, INC.

THIS SUPPLEMENTAL AGREEMENT NO. 1 ("Supplemental Agreement No. 1") is made and entered into as of the date of the last signature below, by and between the City of Marysville, a Washington State municipal corporation ("City") and Gray and Osborne, Inc., a coporation licensed to do business in Washington State, organized under the laws of the state of Washington, located and doing business at 1130 Rainier Avenue South, Suite 300, Seattle, WA 98144 ("Consultant").

WHEREAS, the parties hereto have previously entered into an agreement for design and engineering services, up to 90% plans and specifications, associated with proposed Low Impact Development improvements on 2nd Street and Cedar Avenue (the "Original Agreement"), said Original Agreement being dated May 14, 2019; and

WHEREAS, both parties desire to supplement the Original Agreement, by expanding the Scope of Services to provide for the development of 100% plans and specifications, bid documents, bid support, limited construction support and record drawings and to provide compensation therefore;

NOW THEREFORE, in consideration of the terms, conditions, covenants, and performances contained herein or attached and incorporated, and made a part hereof, the parties hereto agree as follows:

1. Exhibit A, as referenced and incorporated in Section 1 of the Original Agreement, "SCOPE OF SERVICES", shall be replaced by Exhibit A-1, attached hereto and by this references made part of this Supplemental Agreement No. 1, and a part of the Original Agreement.

2. Section 2 of the Original Agreement, "TERM", is amended to add that the parties agree to extend the term of the Original Agreement to terminate at midnight June 30, 2023.

3. Section 3 of the Original Agreement, "COMPENSATION", is amended to include the additional Consultant fee of $34,500.00 and shall read as follows: "In no event shall the compensation paid to Consultant under this Agreement exceed $279,115.00 within the term of the Agreement, including extensions, without the written agreement of the Consultant and the City."

The total compensation payable to the Consultant is summarized as follows:

Original Agreement	$244,615.00
Supplemental Agreement No.1	$34,500.00
Grand Total	$279,115.00

4. Each and every provision of the Original Agreement for Professional Services dated May 14, 2019, shall remain in full force and effect, except as modified herein.

DATED this _____ day of _____, 2021.

CITY OF MARYSVILLE

By _____
Jon Nehring, Mayor

DATED this _____ day of _____, 2021.

GRAY AND OSBORNE, INC,

By _____
Michael Johnson
Its: President

ATTEST/AUTHENTICATED:

_____
_____, Deputy City Clerk

Approved as to form:

_____
Jon Walker, City Attorney

EXHIBIT A

SCOPE OF WORK

CITY OF MARYSVILLE
HISTORIC DOWNTOWN GREEN RETROFIT – AMENDMENT 1

In May 2019, Gray & Osborne was contracted to prepare 90 percent design level plans, specifications, and estimates (PS&E) for the City's Historic Downtown Green Retrofit project which is providing utility, street, and low impact development (LID) improvements along both 2nd Street and Cedar Avenue. In January 2021, Gray & Osborne completed and submitted the 90 percent PS&E package to the City for review. Concurrent with the design work, the City has secured additional grant funding from the Department of Ecology to complete the final (100 percent) project PS&E documents and construct the project. The City of Marysville has now requested that Gray & Osborne complete the project documents, provide assistance during the bid process, provide in-office support to City staff during construction, and prepare record drawings. The current schedule is to bid, award, and construct Cedar Avenue in 2021 while 2nd Street will be constructed in 2022.

Our scope for this additional work is provided below.

DESIGN

Task 1 – Additional Project Management and Oversight

Objective: Continue to provide overall project management and oversight of the project work.

A. Provide overall project management and oversight services to include:

- Ensure sufficient staff resources are dedicated to the project.
- Continue to manage and control project budget and schedule.
- Continue to manage and provide monthly progress reports and invoices.

Task 2 – Complete Design Plans, Specifications, and Cost Estimates (100 percent)

Objective: Complete final (100 percent) design plans, specifications, and estimates. In order to offset construction impacts in the area, the City has elected to construct these projects separately. As such, there will be separate bid packages for both Cedar Avenue and 2nd Street.

Subtask 2.1 – Plans, Specifications, and Estimates

A. Revise existing 90 percent level plans, specifications, and cost estimates for both Cedar Avenue and 2nd Street to incorporate the City's latest comments and minor details.

Task 3 – Quality Assurance/Quality Control

Objective: Oversee one in-house quality assurance/quality control (QA/QC) meeting at Gray & Osborne's office for each of the final design documents for Cedar Avenue and 2nd Street. These meetings will include senior project staff, selected design team members, and City staff (as required and/or desired).

A. Ensure incorporation of relevant recommendations and suggestions into bid/construction documents resulting from QA/QC reviews.

Task 4 – Bid Support

Objective: Assist the City during the bid phase.

A. Support City staff to answer bid inquiries during the bid phase.

B. Support City staff to prepare any bid addenda as may be required.

Task 5 – In-Office Support Services During Construction

Objective: Provide in-office support to address and respond to contractors and City staff questions and concerns during construction.

A. Provide in-office support as necessary to respond to contractor's and City's questions during construction including questions related to submittal review.

B. Prepare drawings/exhibits as required to clarify design/construction issues.

Task 6 – Record Drawings

Objective: Prepare record drawings based on the markups provided by the contractor and/or City once construction has been completed.

BUDGET

The maximum amount payable to the Engineer for completion of work associated with this scope of work, including contingencies, salaries, overhead, direct non-salary costs,

and net fee, is set forth in the attached Exhibit A. This amount will not be exceeded without prior written authorization of the City.

DELIVERABLES

At the conclusion of the final design efforts for Cedar Avenue and again at the conclusion of 2nd Street, Gray & Osborne will deliver the following documents for each street segment to the City:

1. Four copies of final full-size (22″ x 34″) plans
2. Four copies of the final project specifications and cost estimate
3. One electronic set of final construction drawings (PDF and CAD)
4. One electronic set of final project specifications (PDF and Word)
5. One electronic set of record drawings (PDF and CAD)

PROJECT ASSUMPTIONS REGARDING CITY RESPONSIBILITIES

This scope of work and the resulting maximum amount payable are based on the following assumptions as required for the development of the project. See also item assumptions noted in the aforementioned tasks. Changes in these assumptions and responsibilities may cause a change in scope of the services being offered and result in a corresponding adjustment of the contract price.

1. This scope of work assumes that the City will provide overall coordination and approval of the project, including timely review of all submittals.
2. This scope of work is based on the 90 percent plan set prepared in December 2020. It assumes the City will provide redline markups of this plan set in a timely manner.
3. This scope of work assumes no further effort with permits will be necessary from Gray & Osborne.
4. This scope of work assumes that the City will agree to appear as "Applicant" on all permits, will function as lead agency for the environmental documentation process, and will pay all costs or fees associated with the various permits that may be required.
5. This scope of work assumes that the City will provide day-to-day construction administration and inspection of the project.

6. This scope of work assumes that the City will submit documents to the Department of Ecology, respond to any specific questions (Gray & Osborne will assist the City as needed), and coordinate all approvals.

7. The City will provide "redline" drawings of the as-built condition for each street location. This information will be used in the preparation of the record drawings.

EXHIBIT A - (Continued)

ENGINEERING SERVICES
SCOPE AND ESTIMATED COST

City of Marysville - Historic Downtown Green Retrofit - Amendment 1

Tasks	Principal Hours	Project Engineer Hours	Civil Engineer Hours	AutoCAD/ GIS Tech./ Eng. Intern Hours
1 Additional Project Management and Oversight	4			
2 Complete Design Plans, Specifications, and Cost Estimates (100%)		108	68	32
3 Quality Assurance/Quality Control	4	4	4	
4 Bid Support		8		
5 In-Office Suport Services During Construction		24		
6 Record Drawings		2		8
Hour Estimate:	8	146	72	40
Fully Burdened Billing Rate Range:*	$138 to $205	$119 to $148	$93 to $135	$50 to $134
Estimated Fully Burdened Billing Rate:*	$160	$140	$120	$100
Fully Burdened Labor Cost:	$1,280	$20,440	$8,640	$4,000

Total Fully Burdened Labor Cost:	$	34,360
Direct Non-Salary Cost:		
Mileage & Expenses (mileage @ current IRS rate)	$	40
Printing	$	100
TOTAL ESTIMATED COST:	**$**	**34,500**

* Actual labor cost will be based on each employee's actual rate. Estimated rates are for determining total estimated cost only. Fully burdened billing rates include direct salary cost, overhead, and profit.

Index #5

CITY OF MARYSVILLE AGENDA BILL

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: February 8, 2021

AGENDA ITEM:	
Snohomish County PUD No. 1 Pole Attachment License Agreement for Municipal Entities	
PREPARED BY:	**DIRECTOR APPROVAL:**
Karen Latimer, Utility Manager	
DEPARTMENT:	
Public Works	
ATTACHMENTS:	
Pole Attachment License Agreement for Municipal Entities	
BUDGET CODE:	**AMOUNT:**
N/A	N/A
SUMMARY:	

On December 12, 2008 the City entered into a Pole Attachment License Agreement for Municipal Entities (PALA) with PUD No. 1 of Snohomish County (PUD) that allowed the City to attach communication facilities, associated equipment and appurtenances to utility poles owned by PUD. The primary purpose for entering into this agreement was to install City-owned automated meter reading equipment on PUD utility poles. On June 19, 2020, the PUD sent a Notice of Termination of the PALA effective January 1, 2021, with a commitment to provide a new replacement PALA for execution in advance of the termination date. City staff participated in a joint process the past few months to review and comment on the proposed replacement PALA, including providing comments from the City's Legal and Risk/Emergency Management departments. The City received the new replacement PALA on December 22, 2020.

RECOMMENDED ACTION:
Staff recommends that Council authorize the Mayor to sign and execute the Pole Attachment License Agreement for Municipal Entities with Snohomish County PUD No. 1.

RECOMMENDED MOTION:
I move to authorize the Mayor to sign and execute the Pole Attachment License Agreement with Snohomish County PUD No. 1.

POLE ATTACHMENT LICENSE AGREEMENT FOR MUNICIPAL ENTITIES

This is a Pole Attachment License Agreement ("Agreement") between the Public Utility District No. 1 of Snohomish County, a Washington State Municipal Corporation ("Licensor"), and City of Marysville, a Washington State Municipal Corporation}, ("Licensee"). Licensor and Licensee are also referred to herein individually as "Party" and collectively as "Parties".

WHEREAS, Licensee desires to attach various communications facilities and equipment including cables, wires and appliances, strand mounted equipment (including amplifiers, and devices that may be operated without an individual license from the Federal Communications Commission ("FCC")) together with associated cable messengers, anchors, power supplies, and other appurtenances (collectively and individually referred to herein as "Equipment") to the utility poles of the Licensor in its Distribution Area

WHEREAS, subject to the terms and conditions hereof, Licensor is willing to permit, to the extent it may lawfully do so, the Licensee to attach its Equipment upon the poles of the Licensor where, in the judgment and opinion of Licensor such attachment will not interfere with the service requirements of the Licensor or other Licensor authorized joint users, including considerations of economy and safety.

NOW, THEREFORE, in consideration of the mutual covenants, terms and conditions herein contained, the Parties agree as follows:

I. GENERAL AGREEMENT

1.01 Permits - In General

Subject to the terms, conditions and limitations set forth in this Agreement, Licensor agrees that it will issue specific permits to Licensee to permit the Licensee to attach its Equipment to specific points of contact on specific poles of Licensor within the distribution area defined in Section 1.03.

However, under certain circumstances, and in the sole judgment and opinion of the Licensor, Licensor may refuse to grant a specific permit for a particular pole. Circumstances which may justify Licensor's refusal include, but are not limited to, the following:

(a) There is insufficient capacity for Licensee's Equipment on the pole; and

(b) For reasons of safety, reliability, and/or the inability to meet generally applicable engineering standards and practices.

In the event a specific permit has been granted by the Licensor for a particular pole but the Licensee has not made its attachment to that pole within one hundred twenty (120)

days from the date the permit was issued, Licensor shall have the right to cancel and revoke such permit on twenty (20) days' written notice subject to Licensee having the right to maintain said permit should it make its attachment to said pole within the first ten (10) days of said twenty (20) day period. Nothing contained in this Agreement, or any permit issued pursuant to this Agreement, shall be construed to compel the Licensor to maintain any of its poles for a period longer than is necessary for Licensor's service requirements. In the event that Licensor elects to discontinue use of any pole or poles for which a specific permit has been granted to Licensee, Licensor will send a written notice to that effect to Licensee, and Licensee agrees to remove its Equipment from such pole or poles within thirty (30) days of the date of such notice in accordance with Section 6.05.

1.02 Specific Permits Required

The Licensee shall have no right pursuant to this Agreement to attach to any pole of the Licensor until a specific permit has been granted as to that pole for each attachment.

1.03 Distribution Area

The Distribution Area covered by this Agreement shall be that portion of Snohomish County and Camano Island as served by the Licensor.

1.04 Joint Ownership

It is understood that some of the poles for which permits are sought from the Licensor under this Agreement will not be owned solely and entirely by this Licensor and that such poles may be owned, in part, jointly with others. Accordingly, all references herein to "Licensor's poles" or "its poles" shall mean all poles in which the Licensor has an ownership interest including poles solely owned by the Licensor and poles owned by the Licensor jointly with others. The Licensor does not, by granting of a permit for any poles to which it does not have complete or full ownership, in any manner warrant or grant or convey any permit or permitting rights on behalf of any other joint owner(s) of such poles and Licensor hereby specifically states that it has no rights to bargain for or permit for or on behalf of any other joint owner of any pole. As to jointly owned poles, the Licensee specifically understands and agrees that it will be required to make appropriate agreements for permits, licenses, or other written consent for Licensees' use of a jointly owned pole with all other joint owners of such poles; provided, further, that Licensee hereby agrees to be responsible for obtaining the appropriate permission from all joint owners and Licensee further agrees to hold harmless and indemnify the Licensor herein from any claims or damages alleged against Licensor by reason of the failure of Licensee to secure or obtain the appropriate permission, license, or permit from any other joint owners of such poles.

1.05 Licensor/Licensee Relationship

No use, however extended, of the Licensor's poles under this Agreement shall create or vest in Licensee any ownership or property right in said poles. It is expressly understood and agreed that the privileges of Licensee shall be and shall remain the privileges of a mere Licensee. Moreover, Licensee specifically understands and agrees that the permit privileges granted herein and the specific permits granted pursuant to this Agreement are

non-exclusive, and Licensor may grant attachment privileges to other Parties for the use of the same poles for which Licensee has specific attachment permits; provided, however, that pole attachment privileges subsequently granted by Licensor to other parties pursuant to licenses, permits and/or rental agreements shall not limit or interfere with any prior attachment privileges granted to Licensee hereunder or result in further rearrangement or make-ready costs to Licensee.

1.06 Other Users

It is specifically understood and agreed that the permits granted pursuant to this Agreement are non-exclusive and that other parties including utility companies, municipalities, and private parties have attachment privileges on Licensor's poles and, further, Licensor may continue to grant attachment privileges to other parties after Licensee has attached its facilities to a particular pole. Nothing in this Agreement or elsewhere shall give the Licensee any exclusive privilege to the use of the Licensor's poles for any purpose, and the Licensor shall be free at any time, if Licensor so desires, to grant attachment privileges to other users. Nothing herein contained shall be construed as affecting the privileges previously conferred by the Licensor, by contract or otherwise, to Licensor's continuing right to extend attachment privileges to other users. The attachment privileges granted by the Licensor to Licensee shall be at all times subject to any contracts, agreements, and arrangements made by Licensor and such other users. However, pole attachment privileges subsequently granted by Licensor to other parties pursuant to licenses, permits and/or rental agreements shall not limit or interfere with any prior attachment privileges or uses granted to Licensee hereunder or result in further rearrangement or make-ready costs to Licensee.

1.07 Primary Use of Poles

The Licensee expressly recognizes and agrees that the Licensor's poles are used and are to continue to be used primarily for the Licensor's purposes and for the purpose of joint users and, accordingly, the Licensee's use will be a secondary use and that this Agreement is made and all permits granted hereunder are granted as an accommodation to the Licensee. Therefore, Licensee specifically agrees that it will pay, in addition to the charges specified in Article III below, all costs incurred by Licensor in connection with any work performed by the Licensor pursuant to this Agreement in order to provide or maintain space on any poles for the Licensee's Equipment, and any other costs incurred by the Licensor arising out of this Agreement, as hereinafter provided. Licensee further agrees to be responsible for any consents, permits, taxes, licenses or other requirements that may be imposed upon Licensor by reason of this Agreement and to pay all such taxes, fees, charges, and expenses as may be imposed upon Licensor as a result of this Agreement.

1.08 Prohibited Equipment

Pole mounted or strand mounted FCC licensed radios are not be permitted under this Agreement. Attachment of FCC licensed radios may be permitted under a separate Master License Agreement (MLA) or Small Cell Master License Agreement (SCMLA) with Licensor. Additionally and in the event that Licensee desires to attach other equipment or facilities to Licensee's pole(s) that are neither Equipment as that term is defined in this

Agreement or FCC licensed radios, Licensee will need to enter into a separate agreement with Licensor containing terms and conditions for said attachments.

1.09 Administrators

Each Party to this Agreement shall designate an individual ("Administrator"), which may be designated by title or position, to oversee and administer such Party's participation in this Agreement. The Parties' initial Administrators shall be the following individuals:

Licensor's Initial Administrator:	Licensee's Initial Administrator:
Beth A. Haskin	Karen Latimer
Joint Use & Permits Administrator	Utility Manager
Snohomish Co PUD #1	City of Marysville
1802 75th St SW, MS-O3	80 Columbia Avenue
Everett, WA 98203-6264	Marysville, WA 98270
425-783-4315	(360) 363-8161

Either Party may change its Administrator at any time by delivering written notice of such Party's new Administrator to the other Party.

II. PROCEDURES AND COSTS

2.01 Application Permit Form

The Licensee is required to obtain a permit to attach its Equipment to any of the Licensor's poles. Licensee shall make a written application therefor on the application form provided by Licensor, a copy of the current version of which is attached to this Agreement as Exhibit "A", and which application form may be revised from time to time in the sole discretion of Licensor. The Licensee shall provide all information listed on Exhibit "C". Notwithstanding the foregoing, no permit shall be required for the installation of a service drop from one of Licensor's poles (for which Licensee has already obtained a permit from Licensor for attachment of its Equipment) to a structure of Licensee's customer.

2.02 Application Fee

Each application shall be accompanied by an application fee ("Application Fee") in the amount set forth in the Licensor's Joint Use Schedule, as amended from time to time. Such Application Fee shall cover the average costs of the preliminary administrative and engineering review described in Section 2.03 and audit of the completed attachment. Licensor may annually review the Application Fee amount and provide at least six (6) months written notice to Licensee of any increase or decrease in such Application Fee and the Joint Use Schedule shall be amended accordingly.

2.03 Administrative and Engineering Review of Application

Upon receipt of the complete application, the Licensor agrees to review the pole(s) in question to determine among other things:

(a) Whether such poles are available for the Licensee's Equipment;

(b) Whether, in order to accommodate the attachment of Equipment of Licensee, any rearrangements or other changes are necessary to the facilities of the Licensor or the facilities of other joint users of the poles in question;

(c) Whether any poles in question require strengthening (guying and anchoring) in order to support the attachment of Licensee's Equipment;

(d) Whether any poles require replacement by taller or stronger poles in order to support the attachment of Licensee's Equipment; and

(e) Whether any vegetation management and/or tree trimming is required.

The administrative and engineering review shall include an engineering estimate of the costs of performing those items described in subsections (b), (c), and (d) of this Section. Such engineering estimates shall constitute "make-ready work" within the meaning of Section 2.04.

Licensor shall review each application submitted by Licensee for completeness and shall notify Licensee whether said application is complete or incomplete within forty-five (45) days of receipt of the application. If incomplete, the notice shall describe what information is needed to make the application complete. Licensee shall have forty-five (45) days (or longer as determined by Licensor) to submit any missing information and complete any action(s) described in the notice of incompleteness. If Licensee fails to provide such information or complete such action(s) within the required time period, Licensor may reject the application and retain the Application Fee.

Within sixty (60) days of an application being deemed complete, Licensor shall notify the applicant as to whether the permit application has been accepted or rejected. In extraordinary circumstances, and with the approval of the applicant, the Licensor may extend the sixty (60) day timeline. If the application is rejected, the Licensor shall provide Licensee with the reasons for the rejection and such reasons shall be in accordance with this Agreement and applicable state and federal law.

2.04 Make Ready Work

The phrase "make-ready work" shall include those items described in subsections 2.03(b), (c), (d), and (e) above.

(a) Make Ready Assessment. Upon completion of the review under Section 2.03, Licensor agrees to notify Licensee as to which of the poles in question are available for the Licensee's Equipment, including the exact location on the poles available or which will be available for attachment of Licensee's Equipment. Licensor further agrees to notify Licensee as to the make-ready work which will be required in order to accommodate

attachment of the Licensee's Equipment, including an estimate of the costs of such make-ready work. The Licensor agrees to consider any reasonable objections or comments made by the Licensee; provided, however, that the final decision as to the necessity for any make-ready work and the cost of such make-ready work shall be made by the Licensor. Upon execution of a Customer Service Contract (described in Section 2.05) receipt of the advance payment of the estimated make-ready costs (described in subsection 2.04(b)), the Licensor shall proceed with such make-ready work, subject to the availability of the necessary materials, equipment and labor, and subject to the further requirement that such work not interfere with the service requirements of the Licensor.

(b) Cost Accounting. The Licensor shall determine the costs of make-ready work and such costs shall include but not be limited to the following:

- Materials and supplies;
- Engineering services;
- Labor costs, including but not limited to regular rates of pay, overtime rate of pay, and any other applicable premium rate of pay;
- Supervision;
- Transportation of Licensor personnel;
- Any applicable taxes;
- General overhead, including appropriate loadings for such items as pension accruals, social security taxes, vacations, holidays, sickness, workman's compensation; and
- Any other accounts under the uniform system of accounts applicable to Licensor as prescribed by the Federal Energy Regulatory Commission.

(c) Pole Replacement Costs. With respect to the replacement of any pole, the costs shall be determined by the Licensor and shall include the total costs of the new pole, and removal of the old pole, of all transferring of the Licensor's Equipment from the old to the new pole, and such other costs, if any, necessitated by the Licensee's requirements, all as defined above, less the total of salvage, if any, and the costs of such portion of the new pole, if any, which represents space reserved for the use of the Licensor and any joint users, greater than that provided for on the old pole.

2.05 Advance Payment of Estimated Costs and Customer Service Contract

Within ninety (90) days after the Licensor notifies the Licensee of the contemplated make-ready work and the estimated make-ready cost, the Licensee shall enter into a separate Customer Service Contract with the Licensor for the work to be performed by the Licensor and shall pay the Licensor the estimated costs for doing such work (as determined by the Licensor) at the time the Customer Service Contract is executed. Licensee shall not commence any construction or attempt to attach its Equipment to the Licensor's poles until Licensee has paid to Licensor the costs of all make-ready work and Licensor has authorized Licensee in writing to proceed. In the event Licensee does not enter into a Customer Service Contract with Licensor and pay the estimated costs within said ninety (90) days period, the application may be deemed withdrawn at the discretion of the Licensor. In such event, the Application Fee provided by the Licensee shall be retained by the Licensor.

2.06 Required Modifications of Licensee's Attachments

(a) If, in the Licensor's judgment, after the granting of any permit to the Licensee, the service needs of the Licensor, or any hazardous conditions,–requires the moving and/or modification of the Licensee's Equipment, the Licensee agrees to make such changes at its own expense within thirty (30) days after the Licensor sends a notice to such effect, or within such shorter period as is feasible in the case of any hazardous condition.

(b) In the event of the Licensee's failure to comply with any request made by the Licensor under this Section, the Licensor shall have the right to exercise any one or more of the following options:

(i) Provide Licensee with written notice that Licensee has fifteen (15) days (or longer as determined by Licensor) to cure/address/resolve identified issue to the satisfaction of Licensor or permit may be cancelled and Licensee be required to remove its Equipment from subject pole(s) in accordance with Section 6.05;

(ii) Cancel Licensee's permit on fifteen (15) days' written notice with respect to any subject pole(s) and require Licensee to remove its Equipment from subject pole(s) in accordance with Section 6.05.

(c) The granting of attachment privileges to any other party(ies) and the addition of the equipment of any such third party(ies) to a pole or poles then occupied by Licensee shall not result in any further rearrangement expense or cost of additional make-ready work to Licensee, and any such costs or expense shall, pursuant to agreement between Licensor and such other party(ies), be the exclusive responsibility of such other party(ies).

2.07 Unauthorized Pole Attachments - Penalty

In the event Licensee shall attach Equipment to any pole of Licensor without specific permit for such attachment, in addition to the Application Fees, make-ready costs, and permit fees set forth herein, Licensee also understands and agrees that it shall pay a penalty for each unauthorized pole attachment in the amount set forth in the Licensor's Joint Use Schedule; provided that such amount may be increased from time to time upon at least six (6) months written notice to the Licensee. In addition to said penalty, Licensee also understands and agrees to pay an Application Fee for such poles as described in Section 2.02, and pole attachment fees as described in Section 3.01. In addition, Licensee shall pay accrued attachment fees as determined in accordance with Section 3.01 calculated from the date of such unauthorized attachment. In the event the Licensee cannot provide Licensor with satisfactory documentation (as solely determined by Licensor) as to the actual date of such unauthorized attachment, the Licensee shall be liable to Licensor for accrued charges for such attachment for a period of five (5) years preceding the date of discovery by the Licensor of such unauthorized attachment. The amount calculated for such accrued charges will be based on the current attachment fee(s) in effect for a wholly-owned Licensor pole on the date of discovery by the Licensor of such unauthorized attachment. Said penalty, Application Fee, and accrued attachment fees shall be paid by

Licensee within thirty (30) days of the date Licensor notifies Licensee of the unauthorized pole attachment.

2.08 Overlashing

The following permit application process will be utilized for proposed overlash construction.

(a) Licensee will submit application form and Application Fee in accordance with Sections 2.01 and 2.02.

(b) Licensor shall review the application in accordance with Section 2.03 and will identify and record any existing NESC violations. If during the review, Licensor identifies any defects and/or violations that would constitute a critical safety hazard (as solely determined by Licensor), then Licensor will correct the defect/violation to eliminate safety hazard prior to allowing Licensee to proceed with overlash construction.

(c) Subject to review and correction of any identified critical safety hazards per Section 2.08(b), if the proposed overlash construction does not create an NESC violation or worsen an existing violation, Licensor will approve the application and allow Licensee to proceed with overlash construction.

(d) Upon completion of overlash construction, Licensee will complete/close out the National Joint Use Notification System ("NJUNS") ticket generated by Licensor when the permit for the overlash construction was issued by Licensor and Licensor may review completed overlash construction.

(e) There shall be no annual attachment fee associated with such approved overlash permits.

III. FEES

3.01 Amount

(a) Annual Attachment Fee. The Licensee agrees to pay to the Licensor for each attachment per pole, as consideration for the permits to place its Equipment on Licensor's poles as described herein, the annual attachment fee(s) set forth in the Licensor's Joint Use Schedule to this Agreement. Such annual charges shall be paid within thirty (30) days of Licensee's receipt of Licensor's pole count and pole attachment identified itemized invoices in semi-annual installments. In the event Licensor does not receive payment within said thirty (30) day period, a late penalty of one percent (1.0 %) per month may be added on the unpaid amount past due.

(b) Method of Computation. The amount of semi-annual payment due for each six (6) month period shall be determined by Licensor based upon the total number of attachments on poles permitted as of December 15 for the January 1 to June 30 period and as of June 15 for the following July 1 to December 31 period.

(c) Interim Fees. The amounts set forth in the Joint Use Schedule shall be prorated per attachment per pole per month or fraction of a month from the dates of the granting of the permit for each attachment to the beginning of the next semi-annual billing period. Said interim charges shall be payable in advance at the time the permit application is filed for the remainder of the current six (6) month period.

3.02 Licensor's Right to Change Amount

Licensor may from time to time increase or decrease the attachment fees set forth in the Licensor's Joint Use Schedule hereto upon at least six (6) months written notice to Licensee and in accordance with applicable state and federal law. Such increase or decrease in fees shall take effect on the date specified in such notice or such other later time as determined by the District Board of Commissioners. Licensee shall have ninety (90) days from the date of the written notice to provide written comments to the District concerning any proposed fee increase or decrease. If such changes are not acceptable to Licensee, Licensee may terminate this Agreement as hereinafter provided.

3.03 Refund

In the event the Licensor cancels any permit or permits for reason other than the Licensee's default, the Licensee shall be entitled to a refund for each full month remaining in the period for which rental has been paid.

IV. PERMIT ATTACHMENTS

4.01 Permission from Other Authority

Before attaching any Equipment to the Licensor's poles, Licensee shall secure any necessary licenses, franchises, permissions or consents from federal, state or municipal authorities and shall secure any necessary easements from the owners of any property required for the construction and maintenance of Licensee's Equipment at the locations of the poles of the Licensor to which it desires to attach. Upon request from Licensor, Licensee shall provide a copy of any such license, franchise, permit, consent and/or easement.

(a) Existing Easements. Licensee understands that Licensor's existing easements rights may not include the rights necessary for Licensee to attach its Equipment at the locations of the poles of the Licensor to which it desires to attach. In that event, it shall be the responsibility of Licensee to secure the necessary rights for Licensee to attach its Equipment to said poles.

(b) Future Easements. In the event Licensor elects to procure easement rights for its poles and facilities, Licensor will seek rights which cover the poles and facilities of Licensor only.

4.02 Specifications and Standards

The Licensee at its own cost and expense shall construct, maintain and replace its Equipment on Licensor's poles in accordance with applicable local, state and/or federal law and the requirements and specifications of the current National Electrical Safety Code and any amendments or revisions thereof. In addition, all attachments shall be made by the Licensee in accordance with the Construction Standards attached hereto and made a part hereof, which may be revised from time to time by the Licensor. Licensor shall notify Licensee in writing of any such revisions to the Construction Standards applicable to Licensee's attachments.

4.03 Maintenance Duties

The Licensee shall, at its own cost and expense, operate and maintain all of its Equipment on the Licensor's poles in a safe manner and condition.

4.04 Damage to Facilities

The Licensee shall avoid damage to facilities of the Licensor or other joint users on ~~said~~ poles of Licensor, and hereby assumes all responsibility for any and all loss and damage to said poles caused by the acts, omissions or facilities of the Licensee, its employees or agents. The Licensee shall make an immediate report to the Licensor of the occurrence of any damage and hereby agrees to reimburse the Licensor or other owners of the property damaged for the expense incurred in making repairs.

4.05 Modifications - Licensor Permission Required

Permits, when granted, are for the specific equipment, facilities and location specified in the original application. Any subsequent modification in the nature or location of the attachment specified on the permit shall require the Licensee to request modification to the existing permit or to apply for a separate permit for such additional attachment. Modifications performed by Licensee in the nature or location of attachments without such a modification to the existing permit or a separate permit are unauthorized under this Agreement and shall be subject to the penalties specified in Section 2.07 (relating to unauthorized pole attachments) and to the provisions set forth in Section 4.11 (requiring prompt removal of such modified attachments). Notwithstanding the foregoing, no permit modification or new permit shall be required for the installation of a service drop from one of Licensor's pole (for which Licensee has already obtained a permit from Licensor for attachment of its Equipment) to a structure of Licensee's customer.

4.06 Inspection

The Licensor may inspect and audit each new installation of the Licensee on its poles and in the vicinity of its lines or facilities and may make periodic inspections of all attachments of the Licensee; and the Licensee shall reimburse the Licensor for the cost of such surveys, inspections and audits. Such inspections and audits shall not operate to relieve the Licensee of any responsibility, obligation or liability assumed under this Agreement.

4.07 Maintenance Rights

The Licensor reserves for itself, its successors and assigns, the right to maintain its poles and to operate its facilities thereon in such manner as will best enable it to fulfill its public service requirements.

4.08 Claims by Licensee and Licensee's Customers

(a) The Licensor shall not be liable to the Licensee or the Licensee's customers, and the Licensee shall indemnify, protect and save harmless the Licensor against any claims by the Licensee's customers, for any interruption to the service of the Licensee, or for interference with the operation of the cables, wires and appliances of the Licensee arising in any manner whatsoever, including, without limiting the generality of the foregoing, any such interruption or interference arising out of action taken by the Licensor pursuant to Section 6.05 , or for any other damage suffered by the Licensee or its customers, except to the extent that any such interruption, interference or damage is caused by the negligence or misconduct of the Licensor or of other joint users or of agents or employees of the Licensor or other joint users.

(b) Licensor shall not be liable to the Licensee for any special, indirect, incidental, consequential, exemplary and/or punitive damages in connection with or otherwise arising out of this Agreement and Licensee expressly waives any claim for such damages.

(c) The provisions of this section shall survive the expiration or termination of this Agreement with respect to any event occurring prior to such expiration or termination.

4.09 Time for Removal

Whenever, pursuant to the provisions of this Agreement, Licensee is required to remove its Equipment from any poles, such removal shall be made in accordance with Section 6.05.

4.10 Transfer of Equipment

(a) The Licensor, in the course of replacement or removal of solely owned poles or jointly owned poles, shall provide the Licensee with notification prior to the performance of the work, via a Joint Pole Notification (JPN) or other written or electronic notice. Licensor is under no obligation to coordinate such work with Licensee with the exception of work sites which require all entities involved to coordinate the work for the purpose of safety of the crews and the public.

(b) Licensee, upon receipt of said notice, may elect to contact Licensor and attempt to coordinate the work. In the event Licensee is able to coordinate the transfer of Licensee's Equipment during the course of Licensor's work simultaneously with the work being performed by Licensor, Licensee shall perform such transfer of Equipment work in a time and manner so as to permit Licensor to remove its obsolete and/or depreciated pole(s) during the course of Licensor's work. Licensor shall not be required to remain at a

work site longer than thirty (30) minutes to allow Licensee to complete its transfer of Equipment work such that removal of obsolete and/or depreciated poles can be performed by the Licensor.

(c) If the Licensee has not completed its transfer of Equipment work within said thirty (30) minutes, the Licensor shall provide written notification to the Licensee of its completion date of Licensor's work. Licensor agrees that Licensee shall have thirty (30) days following such notice by Licensor in which to transfer or overlash its Equipment; provided, however, that said time period may be shortened in the event of an emergency situation (as determined by the Licensor) requiring prompt action by Licensee.

(d) In the event multiple Licensees have facilities on Licensor's poles, the last Licensee removing its facilities shall assume complete responsibility for any obsolete and/or depreciated poles and their subsequent removal. Licensor shall maintain records of all Licensee's' notification(s) made to the Licensor (including the date of all such removals or transfers of all Licensees' facilities). Copies of such records shall be provided to Licensee upon request. In the event a dispute arises as to which Licensee was the last to remove its facilities, Licensor may rely on such records to determine Licensee responsibility for such pole removal. In the event Licensee fails to arrange for such pole removal in the time specified above, then Licensor may remove such pole and charge all costs associated with such removal to Licensee. Notwithstanding the foregoing, if the Licensee is present at the worksite during the replacement or removal of Licensor's poles as set forth above and, due to operational or other reasons, the Licensor does not permit the Licensee to proceed with the removal of such facilities, the Licensor shall assume the obligation to remove such obsolete and/or depreciated poles.

4.11 Prompt Removal Required

Upon written notice from Licensor to Licensee that: (i) Licensee's use of any pole or poles is in violation of applicable local, state and/or federal law; (ii) Licensee's Equipment is attached to a pole without the permission of the underlying property owner if the property owner's permission is legally required; (iii) Licensor has notice of any misstatement or omission in the information provided by the Licensee in its application form; (iv) Licensee has modified its attachments without complying with Section 4.05; or Licensee failed to transfer its Equipment in accordance with Section 4.10, the Licensor shall have the right to exercise any one or more of the following options:

(a) Provide Licensee with written notice that Licensee has fifteen (15) days (or longer as determined by Licensor) to cure/address/resolve any identified issue(s) to the satisfaction of Licensor. In the event Licensee fails to cure/address/resolve any identified issue(s) within said time period to the satisfaction of Licensor, Licensor may cancel the permit for the Equipment on the pole(s) associated with the issue(s) and Licensee shall thereafter be required to remove its Equipment from said pole(s) in accordance with Section 6.05; or

(b) Cancel Licensee's permit on fifteen (15) days' written notice with respect to any subject pole(s) and require Licensee to remove its Equipment from subject pole(s) in accordance with 6.05.

V. LIABILITY, DAMAGES AND INSURANCE

5.01 Indemnification and Hold Harmless Provision

(a) The Licensee shall indemnify, defend, hold harmless and release the Licensor and its commissioners, officers, employees and agents from and against any and all liabilities, losses, claims, damages, costs, demands, fines, judgments, penalties, obligations and payments, together with any reasonable costs and expenses (including, without limitation, reasonable attorneys' fees and out-of-pocket expenses and reasonable costs and expenses of investigation) incurred in connection with any of the foregoing, to the extent they result from, relate to or arise out of or in connection with (i) any negligent failure of the Licensee, its employees and/or agents to perform or observe any term, provision, covenant, agreement or condition hereunder to be performed or observed by or on behalf of the Licensee or (ii) any negligence or intentional misconduct of the Licensee, its employees and/or agents.

(b) In the event that the Licensee and the Licensor are both negligent, then Licensee's liability for indemnification of the Licensor shall be limited to its contributory negligence for any resulting suits, actions, claims, liability, damages, judgments, costs and expenses (including reasonable attorneys' fees and disbursements) that can be apportioned to the Licensee, its employees, and/or agents.

(c) Solely and expressly for purposes of its duties to defend, indemnify and hold harmless Licensor as set forth above, the Licensee specifically waives any immunity it might have under the State Industrial Insurance law, RCW Title 51, or any similar worker's compensation act, in the event that a claim is made against the Licensor for an injury to any employee of Licensee. THE LICENSEE ACKNOWLEDGES THAT THIS WAIVER HAS BEEN MUTUALLY NEGOTIATED BY THE PARTIES.

(d) The Licensor's inspection or acceptance of any of the Licensee's work and/or services when completed shall not be grounds to avoid any of these covenants of indemnification.

(e) Nothing contained in this Section shall be construed to create a liability or a right of indemnification in any third party.

(f) In the event that Licensee contracts/subcontracts with another party to perform work and/or services needed and/or required pursuant to this Agreement, the Licensee shall require and ensure that any such contract/subcontract contains an indemnification and hold harmless provision substantially similar to this Section 5.01.

(g) The provisions of this Section shall survive the expiration or termination of this Agreement with respect to any event occurring prior to such expiration or termination.

5.02 Liability Insurance

The Licensee shall carry insurance, at its sole cost and expense to protect the Licensor and joint users in respect of the Licensee's liability for all claims and demands and from and against any and all actions, judgments, costs, expense and liabilities of every name and nature arising out of and/or resulting from use and occupancy of premises or by reason of the acts or omissions of the Licensee hereunder.

(a) Liability Limits. Commercial General Liability with a limit of $2,000,000 per occurrence for bodily injury and property damage and $2,000,000 general aggregate including personal and advertising injury.

(b) Increase in Limits. Licensee understands that circumstances may change and that an increase in the limits of liability insurance may be necessary. Accordingly, Licensee agrees, upon sixty (60) days' prior written notice to Licensee that states proposed insurance limit increase, that Licensor may reasonably require an increase in the limits of liability insurance and Licensee further agrees to provide such insurance in increased amounts as a condition to Licensee's continued use of Licensor's poles. If Licensee is unwilling or unable to obtain insurance in such increased limits, Licensee shall be deemed to have terminated this Agreement and shall be required to remove its attachments and facilities from Licensor's poles in accordance with Section 4.10.

(c) Worker's Compensation. Licensee agrees to comply with the requirements of any applicable Worker's Compensation laws.

(d) Evidence of Insurance. Licensee agrees to provide a Certificate of Insurance and additional insured endorsement annually upon the anniversary date of this Agreement. All insurance required hereunder shall remain in force for the entire life of this Agreement. The company or companies issuing such insurance be rated A-, VII or better by AM Best or otherwise be reasonably acceptable to Licensor. The Licensor shall be included as an additional insured party as its interest may appear under this Agreement on the commercial general liability and commercial automobile-liability policies. Upon receipt of notice from insurer(s), Licensee shall provide Licensor with thirty (30) days prior written notice of cancellation of any required insurance coverage.

(e) Primary Coverage Required. The insurance shall provide primary coverage to Licensor and shall not be contributory with or excess to any other insurance maintained by Licensor.

5.03 Notification of Claims

To the extent known and when known, the Licensee shall promptly advise the Licensor of all claims relating to damage to property or injury to or death of persons, arising or alleged to have arisen in any manner by, or directly or indirectly associated with, the erection, maintenance, presence, use or removal of the Licensee's Equipment located on Licensor's poles. After such an advisement, Licensee shall provide Licensor with copies of all accident or other reports made to any insurer.

5.04 Licensee's Responsibility

The insurance requirements contained herein shall not in any manner be deemed to limit, ~~or~~ qualify, or otherwise alter the liabilities or obligations assumed by Licensee under this Agreement.

5.05 Insurance Requirements for Contractors/Subcontractors

In the event that Licensee contracts/subcontracts with another party to perform work and/or services needed and/or required pursuant to this Agreement, the Licensee shall require and ensure that any such contract/subcontract contains insurance requirements substantially similar to this Section 5.02 through Section 5.04, including but not limited to type and amount of insurance coverage. The Licensee shall require any such contractor/subcontractor to furnish to the Licensee (and, upon request, the Licensor) a Certificate of Insurance showing evidence of such coverage.

VI. REMEDIES ON DEFAULT

6.01 Licensor's Termination Rights

(a) If Licensee fails to pay any sum due Licensor under this Agreement, or to provide and to maintain the security required in this Agreement, Licensor shall have the right to terminate this Agreement; provided, however, that Licensor shall give Licensee written notice of such default and Licensor's intent to terminate, and Licensee shall have thirty (30) days in which to cure such default.

(b) In addition to Licensor's right of termination set forth above, and Licensor's rights of termination set forth in other provisions of this Agreement, Licensor shall have the further right to terminate this Agreement or to cancel a particular permit or permits for specific pole attachments if the Licensee shall default in any manner in performing any action required under this Agreement; provided, however, that the Licensor shall give Licensee written notice of such default and Licensor's intent to terminate, and Licensee shall have thirty (30) days in which to cure such default.

(c) Licensee's rights under this Agreement shall remain subject to the express condition that Licensee continue to comply with all applicable laws, statutes, rules, and regulations now in effect or which may hereafter be issued by local, state and federal governmental entities. Accordingly, this Agreement is subject to termination by Licensor upon thirty (30) days' written notice (or longer period at the discretion of Licensor) to Licensee upon appropriate request or mandate issued by a governmental agency with requisite authority and claiming such failure to comply. Should Licensee thereafter comply within said thirty (30) day notice period (or longer period at the discretion of Licensor) with applicable laws, statutes, rules, and regulations now in effect or which may hereafter be issued by local, state and/or federal governmental entities to the satisfaction of said governmental agency, Licensor's right to terminate the Agreement shall cease with respect to said noncompliance.

(d) The Licensor may terminate this Agreement upon written notice in the event the Licensee has not applied for any permit within six (6) months from the date hereof;

provided, however, that Licensee shall have thirty (30) days from the date of the written notice to apply for a permit(s) and cure such default.

(e) The Licensor may terminate this Agreement upon written notice in the event that no permit has been granted hereunder within one (1) year from the date hereof; provided, however, that Licensee shall have thirty (30) days from the date of the written notice to remedy the reason why no permit has been granted if due to the fault or inaction of Licensee; provided additionally that Licensor may not terminate this Agreement under this subsection if Licensee has pending an application for a permit, and Licensor has failed to act thereon within such period due to no fault of Licensee.

(f) Any termination pursuant to this Section shall be effective immediately upon the Licensor's mailing the notice of termination to Licensee following the expiration of the thirty (30) day period to cure the default.

(g) Termination of this Agreement or any specific permit shall not release Licensee from any liability or obligations under this Agreement, including, without limiting the generality of the foregoing, the obligation to continue to pay pole attachment fees as provided in Article III of this Agreement for such time as Licensee's Equipment remain on Licensor's poles, Licensee's obligation to pay any costs and expenses incurred by Licensor for the removal of Licensee's Equipment, and financial penalties imposed by Licensor for failure of Licensee to remove its Equipment in accordance with the terms and conditions of this Agreement .

6.05 Licensee's Duty to Remove Equipment

Upon termination of this Agreement, or cancellation of any permit or permits issued pursuant to this Agreement, Licensee agrees to remove its attachments from any poles affected within thirty (30) days after the effective date of such termination or cancellation (or such other time period required by applicable local, state and/or federal law or within such shorter period as is feasible in the case of any hazardous condition).

(a) Licensee's Failure to Remove or Make Changes. After the expiration of any applicable notice and/or cure period, in the event that Licensee has failed to make any change in its Equipment required by Licensor, or failed to remove any Equipment upon cancellation of any specific permit or upon termination of this Agreement, Licensor shall have the right to make such changes or effect such removals subject to any applicable advance notice requirement under this Agreement.

(b) Emergency. In case of emergency or immediate service needs of Licensor, Licensor may perform such removal or change work without notice to Licensee or upon such notice as may be reasonable under the circumstances. If no notice is provided to Licensee prior to such removal or change work, Licensor will provide reasonable notice given the circumstances to Licensee after the removal or change work is performed.

(c) Costs of Licensor's Work. Licensee shall pay all costs and expenses of any Equipment removal or changes performed by Licensor in accordance with this Agreement. Said costs shall be determined in accordance with the provisions of Article II of this

Agreement. Licensee shall pay such costs within thirty (30) days of the date of Licensor's billing for such costs.

(d) Retention and Disposal of Licensee's Equipment. If Licensor removes any of Licensee's Equipment on Licensor's poles pursuant to this Section or any other Section of this Agreement, Licensor has the right to any one or combination of the following options with regard to the removed Equipment:

(i) Licensor may hold such Equipment as additional security for the payment of any sums due under this Agreement;

(ii), Licensor may sell such Equipment at a public or private sale without notice to Licensee;

(iii) If Licensor determines such Equipment is of little or no value, Licensor may dispose of the Equipment without notice to Licensee; and/or

(iv) Licensor may turn such Equipment over to Licensee.

In the event Licensor sells any of Licensee's Equipment, Licensor shall apply the proceeds to the payment of sums due under this Agreement and shall turn over the balance, if any, to Licensee.

(e) Liquidated Damages for Failure to Remove Equipment. In the event that Licensee fails to remove its Equipment within the required time period and in recognition of the difficulty in calculating the actual costs, expenses and other damages ("Loss") that Licensor will incur due to such failure, the Parties agree that, Licensor may impose liquidated damages upon Licensee of $20 for each day per utility pole Licensee fails to remove its Equipment beyond the thirty (30) day timeline or other specified timeline. The Parties further agree that said daily amount represents a reasonable valuation of the Loss Licensor will incur due to Licensee's failure to remove its Equipment in a timely manner. Said liquidated damages shall be paid by Licensee to Licensor within thirty (30) days of the date of any liquidated damages notice issued pursuant to this subsection.

VII. DURATION OF AGREEMENT

7.01 Term of Agreement

The term of this Agreement shall commence upon full execution hereof and shall end midnight, March 31, 2030, subject to the rights of earlier termination of either Party as set forth herein.

7.02 Termination without Cause

Either Party shall have the right to terminate this Agreement without cause by giving six (6) months written notice of termination.

7.03 Cancellation of Specific Permits

(a) Licensee's Rights to Cancel Permits. The Licensee may cancel its permit or permits to any specific pole or poles by removing its Equipment therefrom and giving written notice of such removal to Licensor on a form provided by Licensor, a copy of which is attached to this Agreement as Exhibit "D". Licensees liability for pole attachment fees for such attachments shall terminate as of the end of the month in which such notice is given and after the Equipment has been removed. The amount of refund or credit shall be based upon the pole attachment charges set forth in Article III above, and as the same may from time to time be adjusted; provided, however, that in no event may the amount of refund exceed the amount actually paid by Licensee for the months in question.

(b) Licensor's Rights to Cancel Permits. In addition to permit cancellation rights provided elsewhere in this Agreement, Licensor may at any time cancel a permit to attach to any specific pole or poles by giving thirty (30) days' written notice to Licensee. Such written notice to specify the reason(s) for such revocation or cancellation and such reason(s) shall be consistent with applicable local, state and/or federal law. Licensee agrees to remove its Equipment from the pole or poles in question in accordance with Section 6.5. In such event, Licensee shall be entitled to a refund of prepaid pole attachment fees commencing on the date the Equipment is removed through the remaining period for which such charges have been paid.

VIII. GENERAL PROVISIONS

8.01 Assignment

The Licensee shall not in any way assign, transfer, sublet or encumber this Agreement, nor any of the privileges hereby granted to it, without the prior written consent of the Licensor. For the purpose of this Agreement, assignment and transfer shall be deemed to include (but not be limited to) the assignment and transfer of this Agreement to any joint venture of which the Licensee is a partner, to any subsidiary, parent or affiliated or controlled corporation, to any corporation with which Licensee may be merged or consolidated, or to any corporation to which Licensee may sell substantially all its assets. Licensor agrees that it will not unreasonably withhold, delay and/or condition approval of a written request by Licensee. However, Licensor reserves the right to require Licensee to provide appropriate information in order to properly evaluate the request including information pertaining to the financial stability and technical expertise of the proposed assignee, transferee, or sublicensee. Subject to the foregoing, however, this Agreement shall extend to and bind the successors and assigns of the Parties hereto.

8.02 Non-Waiver

Failure to enforce or insist upon compliance with any of the terms or conditions of this Agreement shall not constitute a general waiver or relinquishment of any such terms or conditions, but the same shall be and remain at all times in full force and effect.

8.03 Entire Agreement, Amendments

This Agreement constitutes the entire Agreement between the Parties and supersedes and replaces all prior agreements concerning the subject matter of this Agreement. Any amendments to this Agreement or any SLA must be in writing and duly executed by both Parties.

8.04 Notices

All notices required to be given by either Party to the other Party under this Agreement shall be in writing and shall be delivered either in person, by United States mail, by nationally recognized overnight courier or by electronic mail (email) to the applicable Administrator or the Administrator's designee. Notice delivered in person shall be deemed given when accepted by the recipient. Notice by United States mail shall be deemed given three (3) days after the date the same is deposited in the United States mail, postage prepaid, and addressed to the Administrator, or their designee, at the addresses set forth in Section 1.9 of this Agreement. Notice delivered by overnight mail shall be deemed given as of the day after mailing. Notice delivered by email shall be deemed given as of the date and time received by the recipient.

8.05 Fair Meaning

The terms of this Agreement shall be given their fair meaning and shall not be construed in favor of or against either Party hereto because of authorship. This Agreement shall be deemed to have been drafted by all Parties.

8.06 Severability

(a) If a court of competent jurisdiction holds any part, term or provision of this Agreement to be illegal, or invalid in whole or in part, the validity of the remaining provisions shall not be affected, and the Parties' rights and obligations shall be construed and enforced as if the Agreement did not contain the particular provision held to be invalid.

(b) If any provision of this Agreement is in direct conflict with any statutory provision of the State of Washington, that provision which may conflict shall be deemed inoperative and null and void insofar as it may conflict and shall be deemed modified to conform to such statutory provision.

8.07 Governing Law and Venue

This Agreement shall be governed by, and interpreted according to, the laws of the State of Washington (without regard to any conflicts of law principles applied in that State), with venue for any disputes in Snohomish County, Washington; provided that venue for any matter that is within the jurisdiction of the Federal Court shall be in the United States District Court for the Western District of Washington at Seattle, Washington. Each Party hereby irrevocably waives, to the fullest extent it may effectively do so, the defense of an inconvenient forum to the maintenance of proceedings in such courts.

8.08 Force Majeure

If a Party is delayed or hindered in, or prevented from performance required under this Agreement (other than any delay or failure relating to payment of money, including, without limitation, the Annual Fees and all reimbursable costs and expenses described elsewhere in this Agreement) by reason of earthquake, landslide, strike, lockout, labor trouble, failure of power, riot, insurrection, war, pandemic, acts of God or other reason of like nature not the fault of such Party, such Party is excused from such performance for the period of delay. The period for the performance of any such act shall then be extended for the period of such delay.

8.09 Waiver of Jury Trial

The Licensor and Licensee each hereby waive any right to a trial by jury in any litigation arising out of this Agreement or out of the Licensee's use of space on the Licensor's poles.

8.10 Department of Revenue

In the event the Department of Revenue of the State of Washington shall require the Licensor to provide certain information concerning Licensee, Licensee agrees to cooperate with and assist Licensor in providing information, data, or such other matters as may be required by said Department of Revenue. Licensee specifically agrees to provide Licensor with appropriate data as determined or required by the State Department of Revenue concerning its pole attachments in each taxing district and such other data as may hereafter be required by said Department of Revenue.

8.11 Section Heading

The section headings used in this Agreement are merely for ease of reference by the Parties. The section headings are not intended to restrict or limit the applicability of the language within any specific section. In the event of a conflict between the text of a section and the section heading, the text shall control.

8.12 Survival

All provisions of this Agreement which may reasonably be interpreted or construed as surviving the completion, termination or cancellation of this Agreement shall survive the completion, termination or cancellation of this Agreement.

8.13 Authority to bind Parties and enter into Agreement

The undersigned represent that they have full authority to enter into this Agreement and to bind the Parties for and on behalf of the legal entities set forth below.

8.14 Counterparts

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same Agreement.

LICENSOR:

PUBLIC UTILITY DISTRICT NO. 1
OF SNOHOMISH COUNTY

By: _____
Guy Payne
Assistant General Manager

Date: _____

LICENSEE:

CITY OF MARYSVILLE

By: _____

Name: Jon Nehring

Title: Mayor

Date: _____

Index #6

CITY OF MARYSVILLE AGENDA BILL

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: 02/08/2021

AGENDA ITEM:	
Watershed Restoration and Enhancement Plan - WRIA 7 – Snohomish Watershed	
PREPARED BY:	**DIRECTOR APPROVAL:**
Matthew Eyer Storm/Sewer Supervisor	MC for KN
DEPARTMENT:	
Public Works	
ATTACHMENTS:	
Watershed Restoration and Enhancement Plan – for WRIA 7 – Snohomish Watershed	
BUDGET CODE:	**AMOUNT:**
NA	NA

SUMMARY:

In January 2018, the Washington State Legislature passed the Streamflow Restoration law (RCW 90.94). The law clarifies how local governments issue building permits for homes intending to use a permit-exempt well for their domestic water supply and requires local watershed planning in 15 water resource inventory areas (WRIAs), including the Snohomish River area (WRIA 7). The law directs the Department of Ecology to lead Watershed Restoration and Enhancement Committees to develop Watershed Restoration and Enhancement Plans (watershed plans). Watershed plans must estimate the potential consumptive impacts of new permit-exempt domestic groundwater withdrawals on instream flows over 20 years (2018-2038), identify projects and actions to offset those impacts, and provide a net ecological benefit to the WRIA. The Department of Ecology (Ecology) established the Snohomish (WRIA 7) Watershed Restoration and Enhancement Committee in October 2018. Matthew Eyer represented the City of Marysville on this Committee. The WRIA 7 Committee met for over 2 years to develop the attached watershed plan.

This matter and document was brought to the Public Works Committee in December 2020. The final step to approve this document is for the Council to authorize the Committee representative to vote to approve this final plan. If any Committee represented entity does not approve this plan it will be rejected and a new plan will be developed by Washington State Department of Ecology through the Rule Making process.

RECOMMENDED ACTION:
Staff recommends that Council approve the attached WRIA 7 Watershed plan by authorizing the City of Marysville WRIA 7 Watershed Restoration and Enhancement Committee representative to vote to approve this plan.

RECOMMENDED MOTION:
I move to authorize the WRIA 7 Watershed Restoration and Enhancement Committee representative to vote to approve the final version attached of the WRIA 7 Watershed Plan.

Watershed Restoration and Enhancement Plan - WRIA 7 – Snohomish Watershed

Final Draft Plan
January 2021

DEPARTMENT OF ECOLOGY
State of Washington

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Acronyms

Acronym	Definition
AE	Application Efficiency
AFY	Acre-Feet per Year
CFS	Cubic Feet per Second
CU	Consumptive Use
CUF	Consumptive Use Factor
GPD	Gallons per Day
GIS	Geographic Information System
IR	Irrigation Requirements
LID	Low Impact Development
LIO	Local Integrating Organization
MAR	Managed Aquifer Recharge
NEB	Net Ecological Benefit
PE	Permit-Exempt
RCW	Revised Code of Washington
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WRE	Watershed Restoration and Enhancement
WRIA	Water Resource Inventory Area
WWT	Washington Water Trust

Acknowledgements

This watershed plan was written in collaboration with Department of Ecology, the WRIA 7 Committee, and the technical consultants. We express our sincere gratitude to those that supported the development of the plan and supplemental materials.

WRIA 7 Committee Members –Primary Representatives and Alternates

Mike Wolanek, City of Arlington

Josh Grandlienard, City of Arlington

Marc Hayes, City of Arlington

Sam Kollar, City of Carnation

Bob Jean, City of Carnation

Amanda Smeller^, City of Carnation

Tim Woolett^, City of Carnation

Michael Remington, City of Duvall

Jennifer Knaplund, City of Duvall

Jim Miller, City of Everett

Souheil Nasr, City of Everett

Richard Norris, City of Gold Bar

Denise Beaston, City of Gold Bar

Bill Clem, City of Gold Bar

Kim Peterson, Town of Index

Norm Johnson, Town of Index

Jenny Johnson, Town of Index

David Leviton, City of Lake Stevens

Jon Stevens, City of Lake Stevens

Leah Everett^, City of Lake Stevens

Russel Wright, City of Lake Stevens

Josh Machen, City of Lake Stevens

Matthew Eyer, City of Marysville

Karen Latimer, City of Marysville

Kari Chennault, City of Marysville

Megan Darrow, City of Monroe

Jordan Ottow, City of Monroe

Ben Swanson, City of Monroe

Deborah Knight, City of Monroe

Jamie Burrell, City of North Bend

Glen Pickus, City of Snohomish

Brooke Eidem, City of Snohomish

Steve Nelson, City of Snoqualmie

Andy Dunn, City of Snoqualmie

Dan Malhum, City of Snoqualmie

Denise Di Santo, King County

Janne Kaje, King County

Joan Lee, King County

Eric Ferguson, King County

Joe Hovenkotter, King County

Bobbi Lindemulder, Snohomish Conservation District

Kristin Marshall, Snohomish Conservation District

Terri Strandberg, Snohomish County

Ann Bylin, Snohomish County

Jacqueline Reid^, Snohomish County

Ikuno Masterson^, Snohomish County

Brant Wood, Snohomish PUD

Keith Binkley, Snohomish PUD

Matt Baerwalde, Snoqualmie Indian Tribe

Ann House, Snoqualmie Indian Tribe

Julie Lewis^, Snoqualmie Indian Tribe

Cynthia Krass, Snoqualmie Valley Watershed Improvement District

Erin Ericson, Snoqualmie Valley Watershed Improvement District

Daryl Williams, Tulalip Tribes

Kurt Nelson, Tulalip Tribes

Anne Savery, Tulalip Tribes

Kirk Lakey, Washington Department of Fish and Wildlife

Jaime Bails^, Washington Department of Fish and Wildlife

Lyndsey Desmul, Washington Department of Fish and Wildlife

Kevin Lee, Washington Department of Fish and Wildlife

Tristan Weiss, Washington Department of Fish and Wildlife

Megan Kernan, Washington Department of Fish and Wildlife

Dylan Sluder, Master Builders Association of King and Snohomish Counties

Mike Pattison, Master Builders Association of King and Snohomish Counties

Ingria Jones, Washington Department of Ecology

Stephanie Potts, Washington Department of Ecology

Emily Dick, Washington Water Trust

Will Stelle, Washington Water Trust

Susan Adams^, Washington Water Trust

Elissa Ostergaard, Snoqualmie Watershed Forum (ex officio)

Cory Zyla, Snoqualmie Watershed Forum (ex officio)

Perry Falcone, Snoqualmie Watershed Forum (ex officio)

Beth LeDoux, Snoqualmie Watershed Forum (ex officio)

Paul Faulds, City of Seattle (ex officio)

Elizabeth Ablow, City of Seattle (ex officio)

Morgan Ruff, Snohomish Basin Salmon Recovery Forum (ex officio)

Gretchen Glaub, Snohomish Basin Salmon Recovery Forum (ex officio)

Technical Consultant Team

Bridget August, GeoEngineers

Jonathan Rudders, GeoEngineers

Michael August, GeoEngineers

Cynthia Carlstad, Northwest Hydraulic Consultants

Patty Dillon, Northwest Hydraulic Consultants

GeoEngineers and NHC Support Staff

Washington Water Trust Staff

Facilitation Team

Susan O'Neil, ESA Consulting

Susan Gulick, Sound Resolutions

Ruth Bell, Cascadia Consulting

Gretchen Muller, Cascadia Consulting

Angela Pietschmann, Cascadia Consulting

Cascadia Consulting Support Staff

Department of Ecology Staff

Ingria Jones, Chair

Stacy Vynne McKinstry, Alternate chair

John Covert, Lead Technical Support

Paulina Levy, Committee and Plan Development Support

Ria Berns, Northwest Region Water Resources Section Manager

Bennett Weinstein, Streamflow Restoration Section Manager

Streamflow Restoration Section Technical and Support staff

Northwest Region Water Resources Section Technical and Support staff

Mugdha Flores, Streamflow Restoration Communications Consultant

Thank you to the committee members that participated in the technical workgroup, project subgroup, and other workgroups.

Thank you to King County and Snohomish County staff for providing resources and presentations to support the permit-exempt well projection.

Thank you to Janne Kaje from King County for the cover photo.

^No longer at entity

Executive Summary

In January 2018, the Washington State Legislature passed the Streamflow Restoration law (RCW 90.94). The law clarifies how local governments issue building permits for homes intending to use a permit-exempt (PE) well for their domestic water supply and requires local watershed planning in 15 water resource inventory areas (WRIAs), including the Snohomish (WRIA 7).

The law directs the Department of Ecology to lead Watershed Restoration and Enhancement Committees to develop Watershed Restoration and Enhancement Plans (watershed plans). Watershed plans must estimate the potential consumptive impacts of new permit-exempt domestic groundwater withdrawals on instream flows over 20 years (2018-2038), identify projects and actions to offset those impacts, and provide a net ecological benefit (NEB) to the WRIA. This Watershed Restoration and Enhancement Plan meets the requirements of the law.

The Department of Ecology (Ecology) established the Snohomish (WRIA 7) Watershed Restoration and Enhancement Committee (Committee) in October 2018 and invited tribal governments, county governments, city governments, Department of Fish and Wildlife, the largest non-municipal water purveyor, and interest groups. The WRIA 7 Committee met for over two years to develop a watershed plan.

Ecology also issued Final Guidance on Determining Net Ecological Benefit (Final NEB Guidance) (Ecology 2019) to ensure consistency, conformity with state law, and transparency in implementing RCW 90.94. The Final NEB Guidance describes the minimum planning requirements: include clear and Systematic Logic, delineate Subbasins, estimate new consumptive water use, evaluate impacts of new consumptive water use, and describe and evaluate projects and actions for their offset potential.

The WRIA 7 Committee divided the watershed into 16 subbasins, as shown in Figure ES.1. The Committee projects that a total of 3,389 new PE wells will be installed within WRIA 7 during the 20-year planning horizon. The Committee used this 20-year PE well projection to estimate 797.4 acre-feet per year (AFY) (1.1 cubic feet per second) of new consumptive water use in WRIA 7 that this watershed plan must address and offset.

The watershed plan includes six water rights acquisitions projects, two lake level management projects, one streamflow augmentation project, one managed aquifer recharge project, and one surface water storage project to offset consumptive use. If implemented, these 11 water offset projects will provide an estimated offset of 1,373.4 AFY.

A total of 27 habitat projects are included in the plan. Ecological benefits associated with these projects vary and include floodplain restoration, wetland reconnection, availability of off-channel habitat for juvenile salmonids, reduction of peak flow during storm events, increase in groundwater levels and baseflow, and increase in channel complexity. The ecological and streamflow benefits from the project portfolio in this plan contribute to achieving NEB.

The WRIA 7 Committee also included what they have termed “policy and regulatory recommendations” in the plan to show support for programs, policies, and regulatory actions that would contribute to the goal of streamflow restoration.

The Committee recommended adaptive management measures in the plan for the purpose of addressing uncertainty in plan implementation. Adaptive management measures include funding for adaptive management, additional funding for project implementation, adding projects to the plan, implementing a process and program for tracking PE wells and project implementation, continuing monitoring of streamflow and groundwater levels, continuing studies that improve understanding of WRIA 7 hydrology, and monitoring projects for effectiveness. These measures, in addition to the project portfolio described above, provide reasonable assurance that the plan will adequately offset new consumptive use from PE wells anticipated during the planning horizon.

Based on the information and analyses summarized in this plan, the WRIA 7 Committee finds that this plan, if implemented, can achieve NEB, as required by RCW 90.94.030 and defined by the Final NEB Guidance (Ecology 2019).

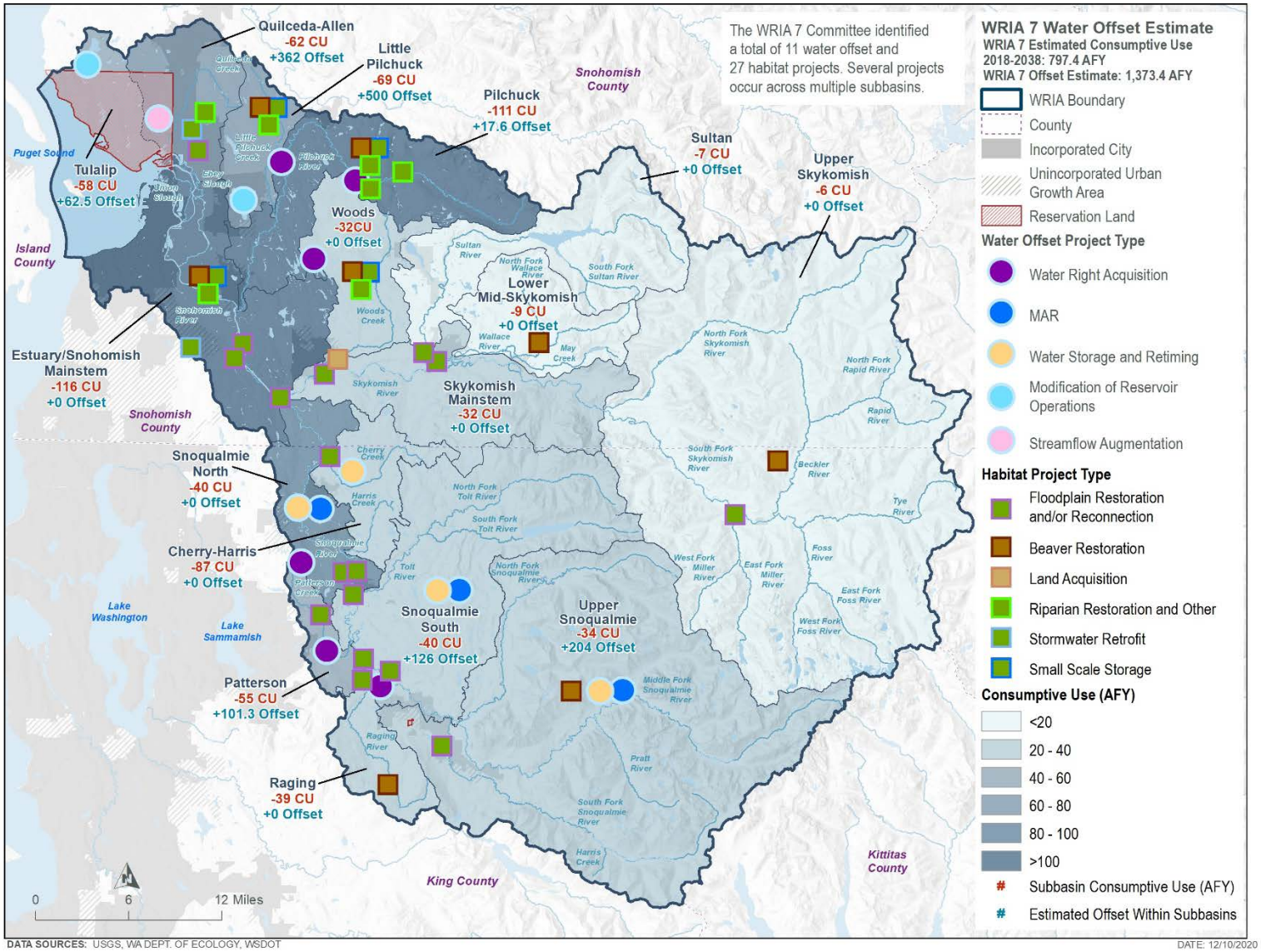

Figure E S1: WRIA 7 Estimated Consumptive Use and Projects by Subbasin

Chapter One: Plan Overview

1.1 Plan Purpose and Structure

The purpose of the Water Resource Inventory Area (WRIA) 7 Watershed Restoration and Enhancement Plan (watershed plan) is to offset the impacts of new domestic permit-exempt (PE) wells to streamflows. The watershed restoration and enhancement plan is one requirement of RCW 90.94.030. The law clarifies how local jurisdictions issue building permits for homes that use a permit-exempt well for a water source.

Watershed plans must identify projects to offset the projected consumptive impacts of new permit-exempt domestic groundwater withdrawals on instream flows over 20 years (2018-2038) and provide a net ecological benefit (NEB) to the WRIA. The WRIA 7 watershed plan considers priorities for salmon recovery and watershed recovery, while ensuring it meets the intent of the law.

Pumping from wells can reduce groundwater discharge to springs and streams by capturing water that would otherwise have discharged naturally, reducing flows (Barlow and Leake 2012). Consumptive water use (that portion not returned to the aquifer) reduces streamflow, both seasonally and as average annual recharge. A well pumping from an aquifer connected to a surface water body can either reduce the quantity of water discharging to the river or increase the quantity of water leaking out of the river (Barlow and Leake 2012). Projects that offset consumptive use associated with PE domestic water use help minimize future impacts to instream flows and restore streamflow.

[COMMENT: Language to be included if the Committee approved the plan: This watershed plan is narrow in scope and is not intended to address all water uses or related issues within the watershed. Competing water uses in the Snohomish Basin, including municipal, agricultural, and instream uses face challenges meeting their needs. Municipalities and agricultural users face challenges securing water supply and instream flows are frequently not met in the watershed. The WRIA 7 Watershed Restoration and Enhancement Committee (Committee) has successfully developed this watershed plan to address new domestic permit-exempt wells over the 20-year planning horizon. However, approval of this watershed plan by the Committee does not signal that all water supply challenges in WRIA 7 are resolved. This plan does not address supply issues facing municipalities and agriculture, and it does not ensure minimum instream flows are met. This plan also does not address new domestic permit-exempt wells beyond January 18, 2038. The Committee believes that, were a similar planning approach adopted in the future to address new domestic permit-exempt wells, it may be increasingly difficult to identify water offsets.

While this plan does not resolve all water needs in WRIA 7, successful completion of the watershed plan by the Committee represents a noteworthy achievement regarding a technically and politically complex issue. This Committee's achievement could indicate that more comprehensive, improved coordination of water resources for both instream and out of

stream uses—and resultant improvements in overall watershed health in WRIA 7—are also achievable.

This watershed plan consists of seven chapters:

- Plan overview.
- Overview of the watershed's salmon and limiting factors, hydrology, hydrogeology, and streamflow;
- Summary of the subbasins,
- Permit-exempt well projections and consumptive use estimates;
- Description of the recommended projects and actions identified to offset the future permit-exempt domestic water use in WRIA 7;
- Explanation of recommended policy, adaptive management and implementation measures; and
- Evaluation and consideration of the net ecological benefits.

1.1.1 Legal and Regulatory Background for the WRIA 7 Watershed Restoration and Enhancement Plan

In January 2018, the Washington State Legislature passed Engrossed Substitute Senate Bill (ESSB) 6091 (session law 2018 c 1). This law was enacted in response to the State Supreme Court's 2016 decision in Whatcom County vs. Hirst, Futurewise, et al. (commonly referred to as the "Hirst decision"). As it relates to this Committee's work, the law, now primarily codified as RCW 90.94, clarifies how local governments can issue building permits for homes intending to use a permit-exempt well for their domestic water supply. The law also requires local watershed planning in 15 WRIAs, including WRIA 7.

1.1.2 Domestic Permit-Exempt Wells

This watershed restoration and enhancement plan, the law that calls for it, and the Hirst decision are all concerned with the effects of new domestic permit-exempt water use on streamflows. Several laws pertain to the management of groundwater permit-exempt wells in WRIA 7 and are summarized in brief here for the purpose of providing context for the WRIA 7 watershed plan.

First and foremost, RCW 90.44.050, commonly referred to as "the Groundwater Permit Exemption," establishes that certain small withdrawals of groundwater are exempt from the state's water right permitting requirements, including small indoor and outdoor water use associated with homes. It is important to note that although these withdrawals do not require a state water right permit, the water right is still legally established by the beneficial use.

Even though a water right permit is not required for small domestic uses under RCW 90.44.050, there is still regulatory oversight, including from local jurisdictions. Specifically, in order for an applicant to receive a building permit from their local government for a new home, the applicant must satisfy the provisions of RCW 19.27.097 for what constitutes evidence of an adequate water supply.

RCW 90.94.030 adds to the management regime for new homes using domestic permit-exempt well withdrawals in WRIA 7 and elsewhere. For example, local governments must, among other responsibilities relating to new permit-exempt domestic wells, collect a $500 fee for each building permit and record withdrawal restrictions on the title of the affected properties. Additionally, this law restricts new permit-exempt domestic withdrawals in WRIA 7 to a maximum annual average of up to 950 gallons per days per connection, subject to the five thousand gallons per day and ½-acre outdoor irrigation of non-commercial lawn/garden limits established in RCW 90.44.050.

Ecology has published its interpretation and implementation of RCW 19.27.097 and RCW 90.94 in Water Resources POL 2094 (Ecology 2019a). The WRIA 7 Committee directs readers to those laws and policy for comprehensive details and agency interpretations.

1.1.3 RCW 90.94.030 Planning Requirements

While supplementing the local building permit requirements, RCW 90.94.030(3) goes on to establish the planning criteria for WRIA 7. In doing so, it sets the minimum standard of Ecology's collaboration with the WRIA 7 Committee in the preparation of this watershed plan. In practice, the process of plan development was one of integration, collectively shared work, and a striving for consensus described in the Committee's adopted operating principles, which are further discussed below and in Appendix D – Operating Principles.

In addition to these procedural requirements, the law and consequently this watershed plan, is concerned with the identification of projects and actions intended to offset the anticipated impacts from new permit-exempt domestic groundwater withdrawals over the next 20 years and provide a net ecological benefit. In establishing the primary purpose of this watershed plan, RCW 90.94.030 (3) also details both the required and recommended plan elements.

Regarding the WRIA 7 Committee's approach to selecting projects and actions, the law also speaks to "high and lower priority projects." The Committee understands that, as provided in the Final Guidance on Determining Net Ecological Benefit (Ecology 2019), "use of these terms is not the sole critical factor in determining whether a plan achieves a NEB… and that plan development should be focused on developing projects that provide the most benefits… regardless of how they align with [these] labels" (page 12). It is the perspective of the Committee that this locally approved plan satisfies the requirements of RCW 90.94.030.

1.2 Requirements of the Watershed Restoration and Enhancement Plan

RCW 90.94.030 of the Streamflow Restoration law directs Ecology to establish a Watershed Restoration and Enhancement Committee in the Snohomish watershed and develop a watershed restoration and enhancement plan (watershed plan) in collaboration with the WRIA 7 Committee. Ecology determined that the intent was best served through collective development of the watershed plan, using an open and transparent setting and process that builds on local needs.

At a minimum, the watershed plan must include projects and actions necessary to offset projected consumptive impacts of new permit-exempt domestic groundwater withdrawals on streamflows and provide a net ecological benefit (NEB) to the WRIA.

Ecology issued the "Streamflow Restoration Policy and Interpretive Statement" (POL 2094) and "Final Guidance on Determining Net Ecological Benefit" (GUID 2094) in July 2019 to ensure consistency, conformity with state law, and transparency in implementing chapter 90.94 RCW. The "Final Guidance on Determining Net Ecological Benefit" (hereafter referred to as Final NEB Guidance) establishes Ecology's interpretation of the term "net ecological benefit." It also informs planning groups on the standards Ecology will apply when reviewing a watershed plan completed under RCW 90.94.020 or RCW 90.94.030. The minimum planning requirements identified in the Final NEB Guidance include the following (pages 7-8):

1. Clear and Systematic Logic. Watershed plans must be prepared with implementation in mind.
2. Delineate Subbasins. [The Committee] must divide the WRIA into suitably sized subbasins to allow meaningful analysis of the relationship between new consumptive use and offsets.
3. Estimate New Consumptive Water Uses. Watershed plans much include a new consumptive water use estimate for each subbasin, and the technical basis for such estimate.
4. Evaluate Impacts from New Consumptive Water use. Watershed plans must consider both the estimated quantity of new consumptive water use from new domestic permit-exempt wells initiated within the planning horizon and how those impacts will be distributed.
5. Describe and Evaluate Projects and Actions for their Offset Potential. Watershed plans must, at a minimum, identify projects and actions intended to offset impacts associated with new consumptive water use.

The law requires that all members of the WRIA 7 Committee approve the plan prior to submission to Ecology for review. Ecology must then determine that the plan's recommended streamflow restoration projects and actions will result in a NEB to instream resources within the WRIA after accounting for projected use of new permit-exempt domestic wells over the 20-year period of 2018-2038.

1.3 Overview of the WRIA 7 Committee

1.3.1 Formation

The Streamflow Restoration law instructed Ecology to chair the WRIA 7 Committee and invite representatives from the following entities in the watershed to participate:

- Each federally recognized tribal government with reservation land or usual and accustomed harvest area within the WRIA.
- Each county government within the WRIA.

- Each city government within the WRIA.
- Washington State Department of Fish and Wildlife.
- The largest publicly owned water purveyor providing water within the WRIA that is not a municipality.
- The largest irrigation district within the WRIA.

Ecology sent invitation letters to each of the entities named in the law in September 2018.

The law also required Ecology to invite local organizations representing agricultural interests, environmental interests, and the residential construction industry. Businesses, environmental groups, agricultural organizations, conservation districts, and local governments nominated interest group representatives. Local governments on the WRIA 7 Committee voted on the nominees in order to select local organizations to represent agricultural interests, environmental interests, and the residential construction industry. Ecology invited the selected entities to participate on the Committee.

The WRIA 7 Committee members are included in Table 1.1. This list includes all of the members identified by the Legislature that agreed to participate on the Committee.[1]

Table 1.1: WRIA 7 Committee Participating Entities

Entity Name	**Representing**
City of Arlington	City government
City of Carnation	City government
City of Duvall	City government
City of Everett	City government
City of Gold Bar	City government
City of Lake Stevens	City government
City of Marysville	City government
City of Monroe	City government
City of North Bend	City government
City of Snohomish	City government
City of Snoqualmie	City government
King County	County government
Snohomish County	County government
Washington Water Trust	Environmental interest group
Snohomish Conservation District	Agricultural interest group
Snoqualmie Valley Watershed Improvement District	Irrigation district
Master Builders Association of King and Snohomish Counties	Residential construction industry
Town of Index	City government

[1]The law did not require invited entities to participate, and some chose not to participate on the Committee. Listed entities committed to participate in the process and designated representatives and alternates.

Entity Name	Representing
Washington State Department of Ecology	State agency
Washington Department of Fish and Wildlife	State agency
Tulalip Tribes	Tribal government
Snoqualmie Indian Tribe	Tribal government
Snohomish PUD	Water utility

Roster with names and alternates is available in Appendix C – Committee Roster.

The WRIA 7 Committee also invited the Snohomish Basin Salmon Recovery Forum, the Snoqualmie Watershed Forum, and the City of Seattle to participate as "ex-officio" members. Although not identified in the law, the ex-officio members provide valuable information and perspective as subject matter experts. The ex-officio members are active but non-voting participants of the WRIA 7 Committee.

1.3.2 Committee Structure and Decision Making

The WRIA 7 Committee held its first meeting in October 2018. Between October 2018 and January 2021 [UDATE LAST MEETING DATE, IF NEEDED], the Committee held [ADD NUMBER] meetings open to the public. The Committee typically met once a month, and as needed to meet deadlines.

The Committee spent two and a half years planning, which consisted of training, research, and developing plan components. Committee members had varying degrees of understanding concerning hydrogeology, water law, salmon recovery, and residential development. Ecology technical staff, WRIA 7 Committee members, and partners presented on topics to provide context for components of the plan.

In addition to playing the role of WRIA 7 Committee chair, Ecology staff provided administrative support and technical assistance, and contracted with consultants to provide facilitation and technical support for the Committee. The facilitator supported the Committee's discussions and decision-making and coordinated recommendations for policy change and adaptive management. The technical consultants developed products that informed Committee decisions and development of the plan. Examples include working with counties on growth projections, calculating consumptive use, preparing maps and other tools to support decisions, and researching project ideas. The technical consultants also developed all of the technical memorandums referenced throughout this plan.

The WRIA 7 Committee established two workgroups to support planning and to complete specific tasks. The Technical Workgroup focused on developing growth projections, subbasin delineations, and consumptive use estimates. The Project Subgroup focused on developing and prioritizing projects for the plan and also supported coordination with salmon recovery planning. The workgroups were open to all Committee members as well as non-Committee members that brought additional capacity or expertise to support the Committee. The workgroups made no binding decisions but presented information to the Committee as either

recommendations or findings. The WRIA 7 Committee acted on workgroup recommendations, as it deemed appropriate.

During the initial WRIA 7 Committee meetings, members developed and agreed to operating principles, which are included in Appendix D – Operating Principles. The operating principles established processes and procedures for meetings, voting, and communication, while outlining participation expectations, the structure of the WRIA 7 Committee, and other needs in order to support the WRIA 7 Committee in reaching agreement on a final plan.

By statutory design, this planning process brought a diversity of perspectives to the table. Therefore, it was important for the Committee to establish a clear decision-making process. The Committee strived for consensus, and when consensus could not be reached, the chair and facilitator documented agreement and dissenting opinions. The authorizing legislation requires that the final plan be approved by all members of the Committee prior to Ecology's review (RCW 90.94.030[3] "...all members of a watershed restoration and enhancement Committee must approve the plan prior to adoption"). As such, consensus during the foundational votes or decisions about plan development served as the best indicators of the Committee's progress toward an approved plan.

The WRIA 7 operating principles recognize that consensus can be difficult to achieve—and in some cases, decisions need be made quickly to stay on track to meet the watershed plan deadline. The operating principles allow for decisions leading up to the plan (e.g., growth scenarios, inclusion of individual projects, etc.) to be approved by a two-thirds majority of the Committee members in attendance.

Once planning was underway, the WRIA 7 Committee and facilitator limited the number of formal decisions held in order to prioritize reaching consensus on foundational components of the watershed plan. Consensus was reached on all interim decisions. The chair and facilitator documented agreement and dissenting opinions, as outlined in the Committee's operating principles. The Committee did not make any decisions by two-thirds majority.

The WRIA 7 Committee reviewed components of the watershed plan and the draft plan as a whole and on an iterative basis. [COMMENT: The following is language to include if the Committee votes to approve the final plan]: After reaching initial agreement on the final watershed plan, Committee members circulated the plan for broader local review and approval by the entities they represent. The WRIA 7 Committee reached final agreement on the Watershed Restoration and Enhancement Plan on [THIS DATE] 2021.

Chapter Two: Watershed Overview

2.1 Brief Introduction to WRIA 7

Water Resource Inventory Area (WRIA) 7 (the Snohomish River Watershed) is one of the 62 designated major watersheds in Washington State, formed as a result of the Water Resources Act of 1971. The Snohomish River Watershed is approximately 1,856 square miles in area and includes all the lands drained by the Snohomish, Snoqualmie, and Skykomish Rivers, including marine nearshore areas that drain directly to Puget Sound and Quilceda Creek on the Tulalip Plateau.

Approximately half of the watershed is located within King County and the other half is located within Snohomish County. It is the second largest watershed (behind the Skagit River watershed) that drains to Puget Sound (Snohomish County 2005). WRIA 7 is bounded on the north by WRIA 4 (Upper Skagit) and WRIA 5 (Stillaguamish), on the west by Puget Sound, on the south by WRIA 8 (Cedar-Sammamish), and on the east by WRIA 39 (Upper Yakima) and WRIA 45 (Wenatchee) (Ecology 2020).

The Snohomish River has two main tributaries: the Snoqualmie and the Skykomish Rivers. The Snoqualmie River originates in the western Cascade Range near Snoqualmie Pass and flows in a generally northwest direction for approximately 45 miles before combining with the Skykomish River near the City of Monroe. The Skykomish River originates in the western Cascade Range near Stevens Pass and flows in a generally westward direction for approximately 29 miles before its confluence with the Snoqualmie River. The Snohomish River originates at the confluence of the Snoqualmie and Skykomish Rivers and flows northwest for approximately 20 miles before discharging to Possession Sound just north of the City of Everett (Earth Point 2020). Major tributaries within the system include the Tolt River, the Sultan River, and the Pilchuck River (Ecology 1995).

The watershed also contains the Tolt Reservoir and Spada Lake, which are operated for municipal water supply by the Cities of Seattle and Everett, respectively. The Snohomish Public Utility District (PUD) generates hydropower with water from the Spada Lake that flows through a pipeline to a powerhouse on the Sultan River (Snohomish County PUD 2020). The City of Seattle generates hydropower with water from the Tolt Reservoir, conveying it through a penstock approximately six miles downstream of the Tolt Dam to a powerhouse on the South Fork Tolt River (Seattle City Light 2020). The lower portion of the watershed contains Lake Stevens and Lake Goodwin. Numerous smaller lakes, ponds, and wetlands are present throughout the watershed.

2.1.1 Land Use in WRIA 7

The Snohomish watershed supports a variety of stakeholders vying for limited surface water and groundwater supplies. The stakeholders include:

- Industrial and commercial facilities

- Agriculture
- Municipal water supply
- PE well water supply
- Minimum instream flows associated with aquatic habitat and fish requirements

Out of stream uses compete with instream water needs, including providing water for salmon and other aquatic resources. There is not sufficient water available to meet all of these uses year-round in the basin. The Instream Resources Protection Program for the Snohomish River Basin (WAC 173-507) has established minimum instream flows and closed specific watershed streams to appropriation, as described in Section 2.3.3 of this plan. The instream flow rule was adopted in 1979 and is junior to many water rights in WRIA 7. Minimum instream flows in WRIA 7 are frequently not met for portions of the year.

The eastern or upland portion of the watershed generally consists of commercial forest land and public forest land associated with the Mt. Baker-Snoqualmie National Forest. Land uses shift to rural developments and small urban centers in the foothills of the Cascade Mountains. Agricultural development is widespread within the lower portion of the Skykomish River valley and the Snoqualmie and Snohomish River valleys. Extending from the City of Snohomish, the western portion of WRIA 7 is urbanizing and characterized by a combination of residential, industrial, commercial, transportation, communication, and utility land covers (See Figure 2.1). The most populated cities in the watershed are all within Snohomish County, including Everett, Marysville, Lake Stevens, Arlington, and Monroe (OFM 2020). The terminus of the watershed is located north of the urbanized and highly industrialized Port of Everett where the Snohomish River discharges to Possession Sound.

Many aquifers in WRIA 7 are connected to surface water. Groundwater pumping may diminish surface water flows by capturing water that would otherwise have discharged to springs and streams. Consumptive water use (that portion not returned to the aquifer) reduces streamflow, both seasonally and as average annual recharge. A well drawing from an aquifer connected to a surface water body either directly or through an overlying aquifer can either reduce the quantity of water discharging to the river or increase the quantity of water leaking out of the river (Ecology 1995). This watershed plan addresses impacts on groundwater discharge to streams due to withdrawals from permit-exempt (PE) wells for domestic use. Projects to offset consumptive use associated with PE domestic water use have become a focus to minimize future impacts to instream flows and restore streamflow.

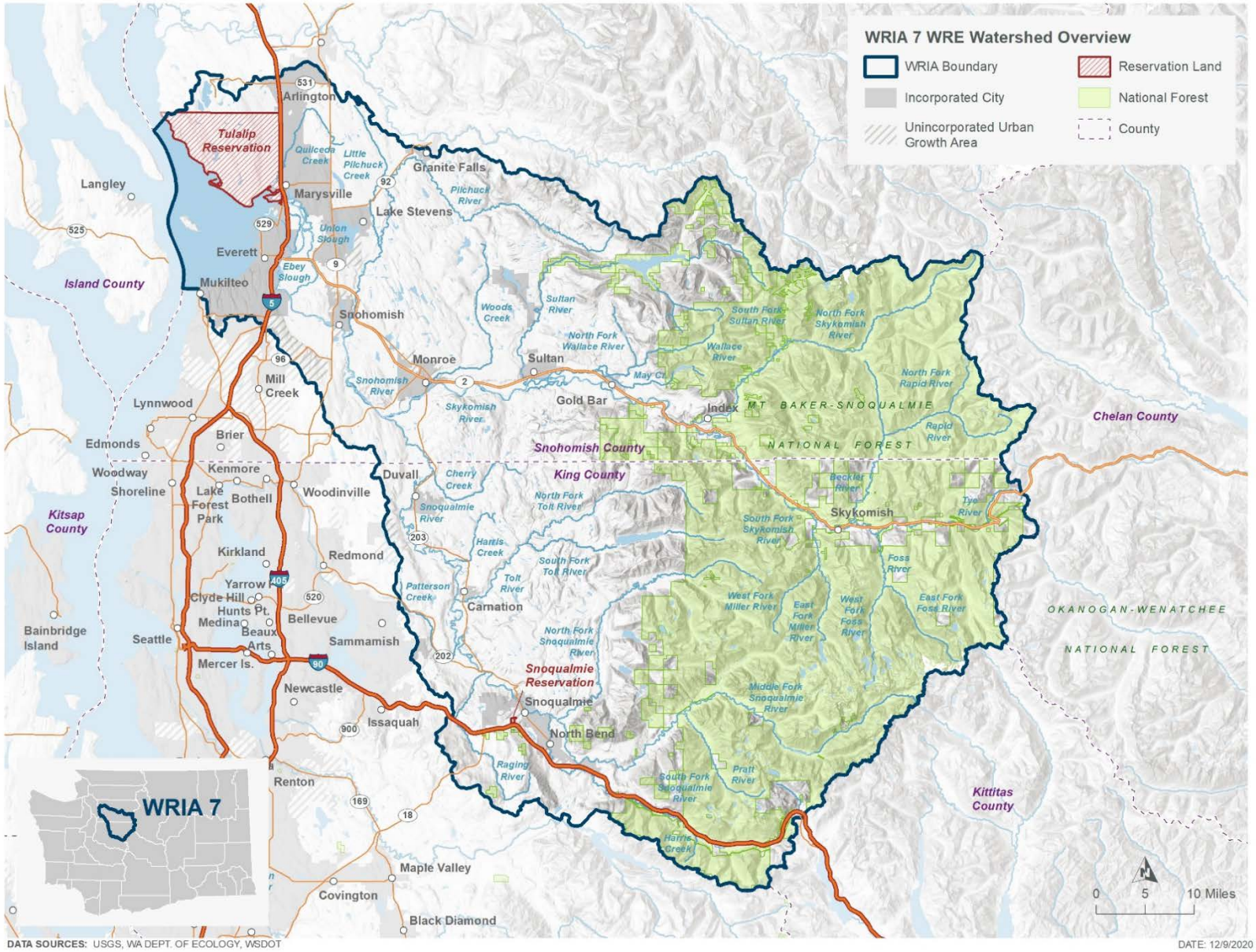

Figure 2.1: WRIA 7 Watershed Overview

2.1.2 Tribal Reservations and Usual and Accustomed Fishing Areas

Indian people have always relied on the natural resources of this land. Their personal, cultural, and spiritual survival depends on the ability to fish, hunt, and gather the bountiful natural resources that once blessed this country (NWIFC 2014). Salmon are one of those resources that is critical to the cultural, spiritual and economic wellbeing of tribes. Tribes depend upon salmon that originate from the waters found in the Snohomish River and its tributaries.

Both the Snoqualmie Indian Tribe (Snoqualmie Tribe) and Tulalip Tribes of Washington (Tulalip Tribes) have reservation lands in WRIA 7. The Snoqualmie Tribe reservation is located in the upper Snoqualmie Valley near Snoqualmie Falls and the Tulalip Tribes reservation is located on the Tulalip Plateau, north of the Snohomish River.

2.1.3 Salmonids in WRIA 7

Salmon Presence (Fish Population and Life Histories)

The Snohomish River Watershed has anadromous salmonid runs that include five Pacific salmon species that migrate in and out of the Snohomish watershed from Puget Sound (SWIFD 2020):

- Chinook (Oncorhynchus tshawytscha)
- Coho (Oncorhynchus kisutch)
- Chum (Oncorhynchus keta)
- Sockeye (Oncorhynchus nerka)
- Pink salmon (Oncorhynchus gorbuscha)

Steelhead trout (Oncorhynchus mykiss), coastal cutthroat trout (Oncorhynchus clarki clarki), rainbow trout (Oncorhynchus mykiss), and bull trout (Salvelinus confluentus) also inhabit the watershed. There are two distinct Chinook salmon populations: the Skykomish population and the Snoqualmie population and both populations are thought to be at less than 10 percent of historic levels. There are four bull trout populations and five steelhead populations (Snohomish County 2019). WDFW also plants hatchery-produced Kokanee (Onchorynchus nerka), resident Sockeye, in Lake Stevens.

Three species are currently protected under the Endangered Species Act (ESA): Chinook salmon, steelhead, and bull trout. Coho salmon are listed as a species of concern. Table 2.1 lists the species present in the Snohomish watershed and their regulatory status. Further detail is provided below:

- The Puget Sound evolutionarily significant unit (ESU) of Chinook salmon was designated as threatened under the ESA on May 24, 1999 (64 FR 14308-14328). Critical habitat for Chinook salmon was designated in 2005 and includes select marine nearshore and freshwater habitats within WRIA 7 (70 FR 37159-37204).
- The Puget Sound distinct population segment (DPS) of steelhead trout was designated as threatened under ESA on May 11, 2007 (72 FR 26722-26735). Designated critical habitat (DCH) for Puget Sound steelhead was finalized in 2016 and includes freshwater

tributaries to and estuarine habitat in Puget Sound, Washington (81 FR 9251-9325) including select areas within WRIA 7.

- The Coastal-Puget Sound Distinct Population Segment (DPS) of Bull Trout was designated as threatened under ESA on December 1, 1999 (64 FR 58910-58933). Critical habitat has been designated for Bull Trout and includes both select freshwater and saltwater aquatic habitat within WRIA 7 (75 FR 63898-64070).

Table 2.1: Salmonids Present Within the Snohomish Watershed

Common Name	**Scientific Name**	**Evolutionary Significant Unit**	**Designated Critical Habitat**	**Regulatory Agency Status**
Chinook Salmon	*Oncorhynchus tshawytscha*	Puget Sound Chinook	Yes	NMFS/Threatened/ 1999
Chum Salmon	*Oncoryhnchus keta*	Puget Sound Chum	No	No listing
Coho Salmon	*Oncorhynchus kisutch*	Puget Sound/Strait of Georgia Coho	No	NMFS/Species of Concern/1997
Pink Salmon	*Oncorhynchus gorbuscha*	No listing	No listing	No listing
Sockeye Salmon	*Oncorhynchus nerka*	No listing	No listing	No listing
Steelhead Trout	*Oncorhynchus mykiss*	Puget Sound Steelhead	Yes	NMFS/Threatened/ 2007
Bull Trout	*Salvelinus confluentus*	Puget Sound Dolly Varden/Bull Trout	Yes	USFWS/Threatened/ 1999
Coastal Cutthroat Trout	*Oncorhynchus clarkii clarkii*	No listing	No listing	No listing

Table 2.2 below lists the run timing and life stages of anadromous salmon and trout present throughout the watershed. Table 2.2's species list was derived from data downloaded from the Statewide Washington Integrated Fish Distribution database. Watershed specific data concerning salmonid life history and timing was summarized from the 2002 Washington State Conservation Commission Salmonid Habitat Limiting Factors Analysis (Haring 2002).

Table 2.2: Salmonid Life History Patterns within the Snohomish Watershed

Species	Freshwater Life Phase	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Subbasin Presence
Sockeye[1]	Upstream migration						■	■	■	■	■			-Estuary/Snohomish Mainstem -Pilchuck -Quilceda-Allen
	Spawning									■	■	■	■	
	Fry emergence	■	■	■	■	■	■							
	Juvenile rearing	■	■	■	■	■	■	■	■	■	■	■	■	
	Smolt outmigration				■	■	■	■						
Chinook (fall)[2]	Upstream migration								■	■	■			-Cherry Harris -Estuary/Snohomish Mainstem -Lower mid-Skykomish -Patterson -Pilchuck -Quilceda-Allen -Raging -Skykomish Mainstem -Snoqualmie North -Snoqualmie South -Sultan -Upper Skykomish -Woods
	Spawning									■	■	■	■	
	Incubation	■	■	■	■	■					■	■	■	
	Juvenile rearing	■	■	■	■	■	■	■	■	■	■	■	■	
	Juvenile outmigration	■	■	■	■	■	■	■	■					
Chinook (summer)[2]	Upstream migration								■	■				-Estuary/Snohomish Mainstem -Lower mid-Skykomish -Pilchuck -Quilceda-Allen -Skykomish Mainstem -Sultan -Woods
	Spawning									■	■			
	Incubation	■	■	■	■	■					■	■	■	
	Juvenile rearing	■	■	■	■	■	■	■	■	■	■	■	■	
	Juvenile outmigration	■	■	■	■	■	■	■	■					
Coho	Upstream migration									■	■			-Cherry Harris -Estuary/Snohomish Mainstem -Little Pilchuck -Lower mid-Skykomish -Patterson
	Spawning	■	■								■	■	■	

Species	Freshwater Life Phase	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Subbasin Presence
	Incubation[3]	■	■	■	■	■						■	■	-Pilchuck -Quilceda-Allen -Raging
	Juvenile rearing	■	■	■	■	■	■	■	■	■	■	■	■	-Skykomish Mainstem -Snoqualmie North -Snoqualmie South
	Smolt outmigration[3]			■	■	■	■	■						-Sultan -Tulalip -Upper Skykomish -Woods
Chum	Upstream migration										■	■	■	-Cherry Harris -Estuary/Snohomish Mainstem
	Spawning											■	■	-Lower mid-Skykomish -Patterson -Pilchuck
	Fry emergence			■	■	■								-Quilceda-Allen -Raging
	Juvenile rearing				■	■	■							-Skykomish Mainstem -Snoqualmie North -Snoqualmie South
	Juvenile outmigration				■	■	■							-Sultan -Upper Skykomish -Woods
Pink (odd)	Upstream migration								■	■				-Cherry Harris -Estuary/Snohomish Mainstem
	Spawning									■	■			-Lower mid-Skykomish -Patterson -Pilchuck
	Fry emergence		■	■	■	■								-Quilceda-Allen -Raging
	Juvenile rearing		■	■	■	■	■							-Skykomish Mainstem -Snoqualmie North -Snoqualmie South
	Juvenile outmigration			■	■	■	■							-Sultan -Upper Skykomish -Woods

Species	Freshwater Life Phase	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Subbasin Presence
Pink (even)	Upstream migration								■	■	■			-Skykomish Mainstem
	Spawning									■	■			
	Fry emergence		■	■	■	■	■	■						
	Juvenile rearing		■	■	■	■	■	■						
	Juvenile outmigration			■	■	■	■	■	■					
Bull Trout	Upstream migration[4]							■	■	■	■	■		-Cherry Harris -Estuary/Snohomish Mainstem -Little Pilchuck -Lower mid-Skykomish
	Spawning								■	■	■	■	■	-Patterson -Pilchuck -Quilceda-Allen -Raging -Skykomish Mainstem
	Incubation[4]	■	■	■	■	■	■	■	■	■	■	■	■	-Snoqualmie North -Snoqualmie South -Sultan -Upper Skykomish -Woods
Coastal Cutthroat Trout[5]	Upstream migration	■	■	■	■	■	■	■	■	■	■	■	■	-Cherry Harris -Estuary/Snohomish Mainstem -Little Pilchuck
	Spawning	■	■	■	■	■	■	■					■	-Lower mid-Skykomish -Patterson -Pilchuck
	Incubation		■	■	■	■	■	■	■					-Quilceda-Allen -Raging
	Juvenile rearing	■	■	■	■	■	■	■	■	■	■	■	■	-Skykomish Mainstem -Snoqualmie South -Sultan
	Smolt outmigration				■	■	■	■						-Tulalip -Upper Skykomish -Upper Snoqualmie -Woods

Species	Freshwater Life Phase	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Subbasin Presence
Steelhead Trout (winter)	Upstream migration	■	■	■	■	■	■	■				■	■	-Cherry Harris -Estuary/Snohomish Mainstem -Little Pilchuck -Lower mid-Skykomish -Patterson -Pilchuck -Quilceda-Allen -Raging -Skykomish Mainstem -Snoqualmie North -Snoqualmie South -Sultan -Upper Skykomish -Woods
	Spawning			■	■	■	■							
	Incubation[6]				■	■	■	■						
	Juvenile rearing	■	■	■	■	■	■	■	■	■	■	■	■	
	Smolt outmigration[6]			■	■	■	■							
Steelhead Trout (summer)	Upstream migration					■	■	■	■	■	■			-Cherry Harris -Estuary/Snohomish Mainstem -Little Pilchuck -Lower mid-Skykomish -Patterson -Pilchuck -Quilceda-Allen -Raging -Skykomish Mainstem -Snoqualmie North -Snoqualmie South -Sultan -Upper Skykomish -Woods
	Spawning			■	■	■	■							
	Incubation[6]				■	■	■	■						
	Juvenile rearing	■	■	■	■	■	■	■	■	■	■	■	■	
	Smolt outmigration[6]			■	■	■	■							
Rainbow Trout[7]	Spawning				■	■	■							-Lower mid-Skykomish -Pilchuck -Skykomish Mainstem -Snoqualmie South -Sultan -Tulalip -Upper Skykomish -Upper Snoqualmie
	Incubation				■	■	■	■						

NOTES:

1. Observed sockeye are likely stray adults per the habitat limiting factors report. Information on sockeye life history specifically within the Snohomish watershed is either unavailable or extremely limited. Sockeye life history patterns for the Puget Sound Region were used within this report (Gustafson et al. 1997).

2. Snohomish watershed has individuals that rear within the basin for a full year (Haring 2002)

3. Information on Coho incubation and outmigration timing specifically within the Snohomish watershed is unavailable. Coho incubation and outmigration timing for the adjacent WRIA 8 Region were used within this report (Kerwin 2001)

4. Information on bull trout incubation and migration timing specifically within the Snohomish watershed is either unavailable or extremely limited. Bull trout life history patterns for the Puget Sound Region were used within this report (King County 2000).

5. Information on coastal cutthroat trout life history specifically within the Snohomish watershed is either unavailable or extremely limited. Coastal cutthroat trout life history patterns for the Puget Sound Region were used within this report (Johnson et al. 1999).

6. Information on steelhead incubation and migration timing specifically within the Snohomish watershed is unavailable. Steelhead incubation and out-migration timing for the Puget Sound Region were used within this report (Blanton et al. 2011).

7. Information on rainbow trout life history specifically with the Snohomish watershed is unavailable. Rainbow trout life history patterns for the Puget Sound Region were used within this report (Blanton et al. 2011).

Limiting Factors for Salmon

Streams in WRIA 7 provide spawning and rearing habitat for salmon species unless they are blocked to migration. Salmon bearing streams throughout the Snohomish basin that provide spawning and rearing habitat for salmonids often experience low streamflows during critical migration and spawning times. In addition, levees, dams and other flood control measures have further limited habitat along primary watershed rivers and tributaries. The quality and quantity of spawning and rearing habitat, water quality, including water temperature, adult fish passage barriers, low streamflows, hatchery management, and harvest all affect local salmon populations (Snohomish County 2005). Species interactions like predation may also have significant effects on salmonid populations, and help shape the Pacific Northwest aquatic and upland landscapes (Cederholm et al. 2000).

Habitat conditions within WRIA 7 were abstracted from the 2002 Washington State Conservation Commission Salmonid Habitat Limiting Factors Analysis (Haring 2002). WRIA 7 includes approximately 25 miles of marine shorelines and 720 miles of streams that support anadromous salmon and trout populations. Stream systems within WRIA 7 range from pristine to highly degraded aquatic habitat. The watershed is characterized by a wide range of activities and impacts including residential development, commercial forestry, agriculture, wilderness, and urbanization. The Salmonid Habitat Limiting Factors Analysis (Haring 2002) identifies the following habitat limiting factors within WRIA 7:

- Fish habitat access
- Floodplain modifications
- Channel conditions
- Substrate conditions
- Riparian conditions
- Water quality
- Water quantity
- Lakes
- Biological processes

The Snohomish River Basin Salmon Conservation Plan (Snohomish County 2005) also identifies rearing habitat as a limiting factor for Chinook juveniles.

2.2 Watershed Planning in WRIA 7

Citizens and local, state, federal, and tribal governments have collaborated on watershed and water resource management issues in WRIA 7 for decades. Section 2.2.1 provides a brief summary of broad watershed planning efforts as they relate to the past, present, and future water availability in the Snohomish Watershed.

2.2.1 Other Planning Efforts in WRIA 7

The history of collaborative planning and shared priorities has supported the success of watershed plan development in WRIA 7. This watershed plan builds on many past efforts to further develop comprehensive plans for the entire watershed.

For example, the **Snohomish-Stillaguamish Local Integrating Organization (LIO)** developed an ecosystem recovery plan as part of the Action Agenda for Puget Sound Recovery. The ecosystem recovery planning process is community based, with engagement from local, state and federal agencies. The approach is holistic—addressing needs from salmon and orca recovery, to stormwater runoff, to farmland and forest conservation. The Snohomish-Stillaguamish LIO has engaged the community in a collaborative planning process to help understand ecosystem recovery priorities and support the health and sustainability of the watershed.

In the Snohomish watershed, **Snohomish County** performs the administrative process and lead functions of the lead entity. The **Snohomish Basin Salmon Recovery Forum (Snohomish Forum)** leads the overall salmon recovery efforts in WRIA 7, including habitat protection and restoration. The Snohomish Forum works in partnership with the co-managers (Washington Department of Fish and Wildlife and Tulalip Tribes) in harvest and hatchery management. The Snohomish Forum acts under a board of directors type model, where the Technical and Policy Development Committees vet and bring forward options for decision-making.

In 2005, the Snohomish Forum developed the *Snohomish River Basin Salmon Conservation Plan* (Salmon Plan) (Snohomish County 2005). The Snohomish Basin Salmon Recovery Forum also developed the *Snohomish Basin Protection Plan* in 2015 to identify protection strategies that prevent the degradation of hydrologic processes that support salmon or salmon habitat. Appendix B of the Protection Plan is an adopted addendum to the 2005 Salmon Plan (Snohomish Basin Salmon Recovery Forum 2015). The Snohomish Forum is currently planning a chapter update to the Salmon Plan.

The **Snoqualmie Watershed Forum** also coordinates among stakeholders and tribes to support implementation of the Salmon Plan. The Snoqualmie Watershed Forum was formed in 1998 and is a partnership between the Snoqualmie Tribe, the Tulalip Tribes, King County, the Cities of Duvall, Carnation, North Bend, and Snoqualmie, and the Town of Skykomish. These entities have an interlocal agreement to work together on watershed issues and coordinate implementation of water resource and habitat projects in the Snoqualmie and South Fork Skykomish watersheds (King County 2020).

Puget Sound Partnership (the Partnership) is the state agency leading the region's collective effort to restore and protect Puget Sound. In 2018, the Partnership issued its *State of the Salmon in Watersheds* report. The PSP identified three key findings from its report:

- Puget Sound is home to 59 populations of Chinook salmon, steelhead, and bull trout—all ESA-listed, most of which continue to decline.
- Our greatest challenge is balancing the needs of the more than 4 million people living in the Puget Sound region, while also protecting critical salmon habitat.

- While always learning, we know what needs to be done to recover our salmon as well as ensure a thriving and sustainable Puget Sound environment. The investment so far has been a fraction of what is needed to reach recovery goals (PSP 2018).

The *Snohomish River Basin Salmon Conservation Plan Status and Trends Report* (2019 Status and Trends Report) provides additional information about the status on implementation of the Snohomish River Basin Salmon Conservation Plan (Snohomish County 2019).

There are several collaborative processes in WRIA 7 working to balance the needs of agriculture, streamflow, and communities. Among these are the Sustainable Lands Strategy in Snohomish County, the Snoqualmie Fish Farm Flood Advisory Committee, and the Agriculture Resilience Plan developed by the Snohomish Conservation District.

- **Sustainable Lands Strategy (SLS):** The SLS was convened in 2010 by Snohomish County, Tulalip and Stillaguamish Tribes, state and federal agencies, and agricultural and environmental stakeholders to improve coordination and generate progress for fish, farm, and flood management interests. Snohomish County is the facilitator of the SLS and provides forum where agencies and stakeholders can bring technical information, design support, and other resources to coordinate priorities and implement projects. SLS' mission is to generate net gains in agricultural, tribal culture, and ecological productivity (Snohomish County 2020).

- **Fish Farm Flood (FFF):** The 2012 King County Comprehensive Plan directed the Department of Natural Resources and Parks to create a collaborative, grass-roots effort to determine how to move forward toward achieving the goals of these sometimes competing priorities. In 2017, the FFF Advisory Committee transmitted a set of recommended actions to the County Executive and Council and the FFF Implementation Oversight Committee (IOC) was created to ensure balanced implementation of those actions. The FFF recommendations are intended to assist the Executive and Council to advance and balance three important county goals of restoring habitat to aid salmon recovery, supporting farmers and preserving farmland, and reducing flood risk for farmers and other Snoqualmie Valley residents (King County 2019).

- **Agriculture Resilience Plan:** Snohomish Conservation District, in collaboration with farmers representing various types, sizes, and locations of farms in Snohomish County to develop the Agriculture Resilience Plan, finished at the end of 2019. The Agriculture Resilience Plan was developed to help farmers in Snohomish County plan for future changes and risk, and build a resilient agricultural community into the future through a combination of information gathering and sharing, creation of online planning tools, project scoping and design, project implementation, and farmland protection. It identifies priority needs for farmers in Snohomish County and actions to address those needs (SCD 2019).

Coordinated Water System Plans (CWSPs) are mandated by the Public Water System Coordination Act of 1977. King County passed ordinances ratifying four CWSPs (East King

County, Skyway, South King County, and Vashon). Water purveyors within northern and eastern Snohomish County updated their CWSP in 2010. These plans ensure that water system service areas are consistent with local growth management plans and development policies. The location of new homes in relation to and within designated retail water system service areas and related policies determine if connection to a water system is available, or the new homes will need to rely on an alternative water source, most likely a new permit-exempt domestic well. Within their designated retail service area(s), water purveyors are given first right of refusal for new connections. The purveyor may decline to provide service if water cannot be made available in a 'reasonable and timely' manner. However, it can be the case that a new permit-exempt well is drilled without making any inquiries with the county or with the local water system.

2.2.2 Coordination with Existing Plans

Throughout the development of this watershed plan, Ecology streamflow restoration staff have engaged with staff from the Snohomish-Stillaguamish LIO, the Snohomish Forum, the Snoqualmie Watershed Forum, and the Partnership, providing briefings on the Streamflow Restoration law, scope of the watershed plan, and plan development status updates. Throughout the planning process, the WRIA 7 Committee coordinated closely with the Snohomish Forum and the Snoqualmie Watershed Forum. Both entities actively participated in the WRIA 7 Committee as ex-officio members and identified opportunities to align the Committee's project list with the Salmon Plan and the *Snohomish Basin Protection Plan*.

Snohomish and King County planning staff helped ensure consistency with Comprehensive Plans. County Comprehensive Plans set policy for development, housing, public services and facilities, and environmentally sensitive areas, among other topics. The Comprehensive Plans identify Snohomish and King Counties' urban growth areas, set forth standards for urban and rural development, and provide the basis for zoning districts.

2.3 Description of the Watershed – Geology, Hydrogeology, Hydrology, and Streamflow

2.3.1 Geologic Setting

Understanding the geologic setting of WRIA 7 facilitates characterization of surface and groundwater flow through the watershed. The relationships between surface water flow and deeper groundwater are important to understanding how to manage surface water resources and can be helpful in identifying strategies to offset the impacts of pumping from PE wells.

Within WRIA 7, bedrock forms mountain ranges and uplands and generally consists of igneous and sedimentary rocks. Within drainages and lowland areas, bedrock is overlain by glacial and alluvial sediments. A minimum of four major glaciations covered the lower portion of the watershed during the Pleistocene Epoch (about 11,700 years to 2.5 MA), the most recent occurrence being the Vashon Stade of the Frasier Glaciation (Jones 1952). The advance and retreat of the Vashon ice sheet shaped the present topography and drainage network in WRIA

7. These processes resulted in glacially-derived ridges and lakes linked by drainage channels (Booth and Goldstein 1994).

Pleistocene-age glacial and interglacial processes resulted in the deposition of a complex assemblage of sedimentary deposits in lowland areas. These glacial deposits consist of glacial till, recessional and advance outwash, and glaciolacustrine deposits. Glacial till deposits generally consist of dense, silty sand with gravel and silt lenses. Outwash deposits generally consist of sand and gravel with locally abundant wood debris and peat. Glaciolacustrine deposits generally consist of silt and clay. This sequence of glacial deposits exceeds 1,500 feet in thickness within the lower portions of the watershed (Vaccaro, Hansen, and Jones 1998).

Recent alluvial deposits are generally associated with channel and overbank deposits from the modern Snoqualmie, Skykomish, and Snohomish Rivers and their tributaries. These sediments generally consist of stratified silt, sand, gravel, with minor clay (DNR 2020).

2.3.2 Hydrogeologic Setting

Groundwater within WRIA 7 primarily occurs within: (1) relatively coarse-grained glacial and alluvial aquifers overlying bedrock; and (2) primary and secondary porosity within bedrock aquifers. The U.S. Geological Survey (USGS) identified six hydrogeologic units within the sequence of Puget Sound glacial and alluvial sediments in WRIA 7. The hydrogeologic units typically alternate between aquifer units and semi-confining to confining layers (aquitards which lack sufficiently permeability to form aquifers) (Vaccaro, Hansen, and Jones 1998).

Within the upper portion of the watershed, glacial and alluvial sediments occur within the Snohomish River and Skykomish River valleys and drainages associated with area tributaries (DNR 2020). Glacial and alluvial sediments are widespread within the lower portion of the watershed.

Glacial and alluvial aquifers are generally unconfined (under water-table conditions) except where overlain by low permeability confining layers (generally till or glaciolacustrine deposits) (Vaccaro, Hansen, and Jones 1998). Transmissivity (a hydraulic property related to the rate of groundwater flow through an aquifer) and storativity (a hydraulic property related to the ability of an aquifer to store/release water) of these aquifers vary significantly with depositional environment and are generally the highest in outwash sands and gravels and lowest in fine-grained alluvial deposits (Vaccaro, Hansen, and Jones 1998). Glacial and alluvial aquifers are characterized by a shallow depth to the groundwater table and, where applicable, a direct hydraulic connection with adjacent surface water (Vaccaro, Hansen, and Jones 1998).

Bedrock aquifers underly the entire watershed. However, within the lower portions of the watershed, glacial and alluvial sediments are frequently hundreds of feet thick and bedrock aquifers are seldom targeted by water supply wells. Thickness of the glacial and alluvial hydrogeologic units described above are generally thin to the east within WRIA 7. Much of the watershed southeast of Monroe is underlain by relatively shallow and frequently outcropping

bedrock. Therefore, bedrock aquifers increase in importance, from a water supply perspective, within the upper portions of the watershed.

Bedrock aquifers are of relatively low transmissivity and storativity. Wells completed within bedrock aquifers typically do not have high enough capacities for municipal use. However, they can be valuable aquifers for residential water uses, and in specific areas are an important target aquifer for PE wells.

Recharge to glacial, alluvial, and bedrock aquifers within WRIA 7 is primarily associated with precipitation, applied irrigation, septic systems, leakage from surface water within losing reaches (where streamflow infiltrates to groundwater), and through leakage from adjacent aquifers. Watershed aquifers discharge to water supply wells, adjacent aquifers, gaining reaches of streams, and Puget Sound. Summer base flows in WRIA 7 rivers and tributaries are sustained by groundwater (baseflow) on most of the lower-elevation tributaries.

Regionally, groundwater flow direction within watershed aquifers largely parallels the westerly slope of the Cascade Range, although groundwater flow in shallow aquifers is generally influenced by surface topography and streamflow within the watershed and is directed to the northwest. This groundwater flow paradigm is complicated throughout the watershed by aquifer boundaries, aquifer heterogeneities, topography, the influence of gaining and losing stream reaches, well pumping, and other factors.

2.3.3 Hydrology and Streamflow

Most WRIA 7 rivers and tributaries are located in a snowmelt transition region where the rivers are fed by both snowmelt and rainfall; however, a few streams in the lower portions of the watershed are predominantly rain-fed. Within low elevation portions of the watershed, mean annual precipitation ranges from about 30 to 40 inches per year. Mean annual precipitation increases with topographic elevation and can exceed 120 inches within the Cascade Range (Western Regional Climate Center 2020). Most precipitation occurs during the late fall and winter. Precipitation is lowest during the summer when water demands are highest. During these low-flow periods, streamflow is highly dependent upon groundwater inflow (baseflow).

Anticipated future climate impacts within the watershed include rising temperatures, changes in precipitation, and continued loss of snow and glacial volumes in the Cascade Range. Earlier spring snowmelt, lower snowpack, increased evaporative losses, and warmer and drier summer conditions will intensify summer drought conditions and low flow issues in WRIA 7. These climate impacts are expected to drive changes in seasonal streamflows, increasing winter flooding, while intensifying summer low flow conditions:

- **Skykomish River:** Climate modeling predicts average minimum flows to be 18 percent lower (range: -22 to -8 percent) by the 2080s for a moderate warming scenario, relative to 1970 to 1999 (Mauger et al. 2015).

- **Snohomish River**: Climate modeling predicts average minimum flows to be 26 percent lower (range: -33 to -17 percent) by the 2080s for a moderate warming scenario, relative to 1970 to 1999 (Mauger et al. 2015).
- **Snoqualmie River**: Climate modeling predicts that mean monthly mainstem streamflow during summer months can be expected to decrease by as much one-half to two-thirds in the future as compared to historic period (Historical period: 1993–2005. Future period: 2087–2099) under RCP8.5, a moderate warming scenario (Yan et al. forthcoming).

Streamflow conditions within primary WRIA 7 rivers are summarized by the following 90% exceedance flows, which can be used to represent base flows (USGS 2020):

- USGS stream gage 12150800 (Snohomish River near Monroe): 90% exceedance flows in the second half of August are approximately 1,422 cfs for the period of record from 1964 - 2016.
- USGS stream gage 12149000 (Snoqualmie River near Carnation): 90% exceedance flows in the second half of August are approximately 532 cfs for the period of record from 1930 – 2016.
- USGS stream gage 12134500 (Skykomish River near Gold Bar): 90% exceedance flows in the second half of August are approximately 561 cfs for the period of record from 1929 – 2018.

These amounts are typically below the instream flows established in WAC-173-507 for the same time period at their respective gages.

Several factors contribute to streamflow: snowpack and rate of melt, rainfall, surface water runoff, and groundwater discharge. In addition to environmental factors, surface water withdrawals and groundwater pumping from wells in hydraulic continuity with surface water affect streamflow. Water use from new PE domestic wells represents only a very small portion of all water use and factors affecting streamflow in the watershed.

Rules associated with the Instream Resources Protection Program (IRPP) for the Snohomish River Basin are promulgated in WAC 173-507. The intent of the regulation is to protect streams within the watershed to protect flow levels and minimize impacts resulting from future water appropriations.

WAC 173-507-020 sets minimum instream flows within reaches for 11 stream management units. Minimum instream flows within the following 11 stream management units vary as a function of basin size:

- South Fork Skykomish
- Skykomish
- North Fork Snoqualmie
- Snoqualmie
- Tolt

- Pilchuck
- Snohomish Rivers

WAC 173-507-030 sets low flow limitations on 21 other streams within the watershed. Streams subject to low flow limitations include:

- Evans Creek
- Foye Creek
- French Creek
- Langlois Creek
- Tate Creek
- Tulalip Creek
- Wood Creek
- Woods Creek
- Unnamed streams tributary to Pilchuck River, Cherry Creek, McCoy Creek, Snoqualmie River, and an unnamed lake tributary to Horseshoe Lake

WAC 173-507-030 also closes eight streams and their tributaries to further appropriation of surface water. Streams closed to further appropriation of surface water include:

- Griffin Creek
- Harris Creek
- Little Pilchuck Creek
- May Creek
- Patterson Creek
- Quilceda Creek
- Raging River
- An unnamed stream tributary to Pilchuck River (Bodell Creek)

WAC 173-507-040 specifies that future permitting actions relating to groundwater withdrawals shall fully consider the natural interrelationship between surface and groundwaters to assure compliance with the meaning and intent of the IRPP.

Chapter Three: Subbasin Delineation

3.1 Introduction

Water Resource Inventory Areas (WRIAs) are large watershed areas formalized under the Washington Administrative Code for the purpose of administrative management and planning. WRIAs encompass multiple landscapes, hydrogeologic regimes, levels of development, and variable natural resources.

To allow meaningful analysis of the relationship between new consumptive use and offsets per Ecology's Final NEB Guidance,[2] the WRIA 7 Committee divided WRIA 7 into suitably sized subbasins. These delineations were helpful in describing the location and timing of projected new consumptive water use, the location and timing of impacts to instream resources, and the necessary scope, scale, and anticipated benefits of projects. In some instances, subbasins may not correspond with hydrologic or geologic basin delineations (e.g., watershed divides) (Ecology 2019).

3.2 Approach to Develop Subbasins

Consistent with the Final NEB Guidance, which defines subbasins as geographic subareas within a WRIA, equivalent to the words "same basin or tributary" as used in RCW 90.94.020(4)(b) and RCW 90.94.030 (3)(b), the WRIA 7 Committee divided WRIA 7 into 16 subbasins for purposes of assessing consumptive use and project offsets.[3] The Committee based subbasin delineations on existing subwatershed units and the interim growth projections Snohomish County and King County developed. The Committee then applied the following guiding principles to delineate subbasins:

- Use U.S. Geological Survey (USGS) hydrologic unit code subwatershed (HUC-12) boundaries in the Snohomish County portion of the watershed (USGS 2013, 2016);
- Use King County drainage basin boundaries in the King County portion of the watershed (King County 2018);
- Combine HUC-12s and King County drainage basins with lower projected growth of new homes using permit-exempt (PE) wells;

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[2] "Planning groups must divide the WRIA into suitably sized subbasins to allow meaningful analysis of the relationship between new consumptive use and offsets. Subbasins will help the planning groups understand and describe location and timing of projected new consumptive water use, location, and timing of impacts to instream resources, and the necessary scope, scale, and anticipated benefits of projects. Planning at the subbasin scale will also allow planning groups to consider specific reaches in terms of documented presence (e.g., spawning and rearing) of salmonid species listed under the federal Endangered Species Act." (Ecology 2019).

[3] Consistent with Final NEB Guidance that defines subbasins as a geographic subarea within a WRIA. A subbasin is equivalent to the words "same basin or tributary" as used in RCW 90.94.020(4)(b) and RCW 90.94.030 (3)(b).

- Keep distinct subbasins for HUC-12s and King County drainage basins with higher projected growth of new homes using PE wells;
- Align subbasins as closely as possible with Protection Planning Units identified in the Snohomish Basin Protection Plan (Snohomish Basin Salmon Recovery Forum 2015);
- Consider important salmon habitat and potential location of offset projects and actions;
- Consider streams with known low flow issues; and
- Consider streams with year-round closures.[4]

Section 3.3 describes how the Committee divided WRIA 17 into 16 subbasins. Appendix E – Subbasin Delineation Memo provides a more detailed description of the subbasin delineation. This technical memo also describes a few other adjustments the WRIA 7 Committee made to align the subbasins with relevant planning boundaries.

3.3 WRIA 7 Subbasins

Table 3.1 summarizes the WRIA 7 subbasin delineations shown in Figure 3.1.

Table 3.1: WRIA 7 Subbasins

Subbasin Name	Primary Rivers and Tributaries	County
Tulalip *	Streams draining directly to Puget Sound, including Tulalip Creek	Snohomish County
Quilceda-Allen †	Allen Creek and Quilceda Creek	Snohomish County
Estuary/Snohomish Mainstem *	Snohomish River, Evans Creek, French Creek, and streams draining directly to Puget Sound between the City of Mukilteo and the City of Everett	Snohomish County
Little Pilchuck †	Little Pilchuck Creek	Snohomish County
Pilchuck *	Upper and Lower Pilchuck River	Snohomish County
Woods *	Woods Creek	Snohomish County
Sultan	Upper, Middle and Lower Sultan River	Snohomish County
Lower Mid-Skykomish †	Wallace River and Olney Creek	Snohomish County
Skykomish Mainstem *	Skykomish River	Snohomish and King Counties
Upper Skykomish *	South Fork and North Fork Skykomish River tributaries, including Foss River, Miller River, Tye River, South Fork Skykomish	Snohomish and King Counties

[4] Streams closed year-round to further consumptive appropriation as identified in WAC 173-507-030 (2).

Subbasin Name	Primary Rivers and Tributaries	County
	River, Beckler River, Rapid River, Upper Beckler River, Lower South Fork Skykomish River, Lower North Fork Skykomish River, Middle North Fork Skykomish River, and Upper North Fork Skykomish River	
Cherry-Harris *,†	Cherry Creek and Harris Creek	Snohomish and King Counties
Snoqualmie North *	Northern half of the Snoqualmie River Mainstem drainage basin, Tuck Creek, Cathcart drainages, and Ames Lake	Snohomish and King Counties
Snoqualmie South *,†	South Fork Tolt, North Fork Tolt, and Lower Tolt River tributaries, Tokul Creek, Griffin Creek, and the southern half of the Snoqualmie River Mainstem drainage basin	Snohomish and King Counties
Patterson †	Patterson Creek	King County
Raging †	Raging River	King County
Upper Snoqualmie *	North, Middle, and South Fork Snoqualmie River	King County

Note: * designates subbasins containing streams with known low flow issues (i.e., contains streams with minimum instream flows and/or low flow limitations set by state rule); † designates subbasins containing streams with year round closures set by state rule.

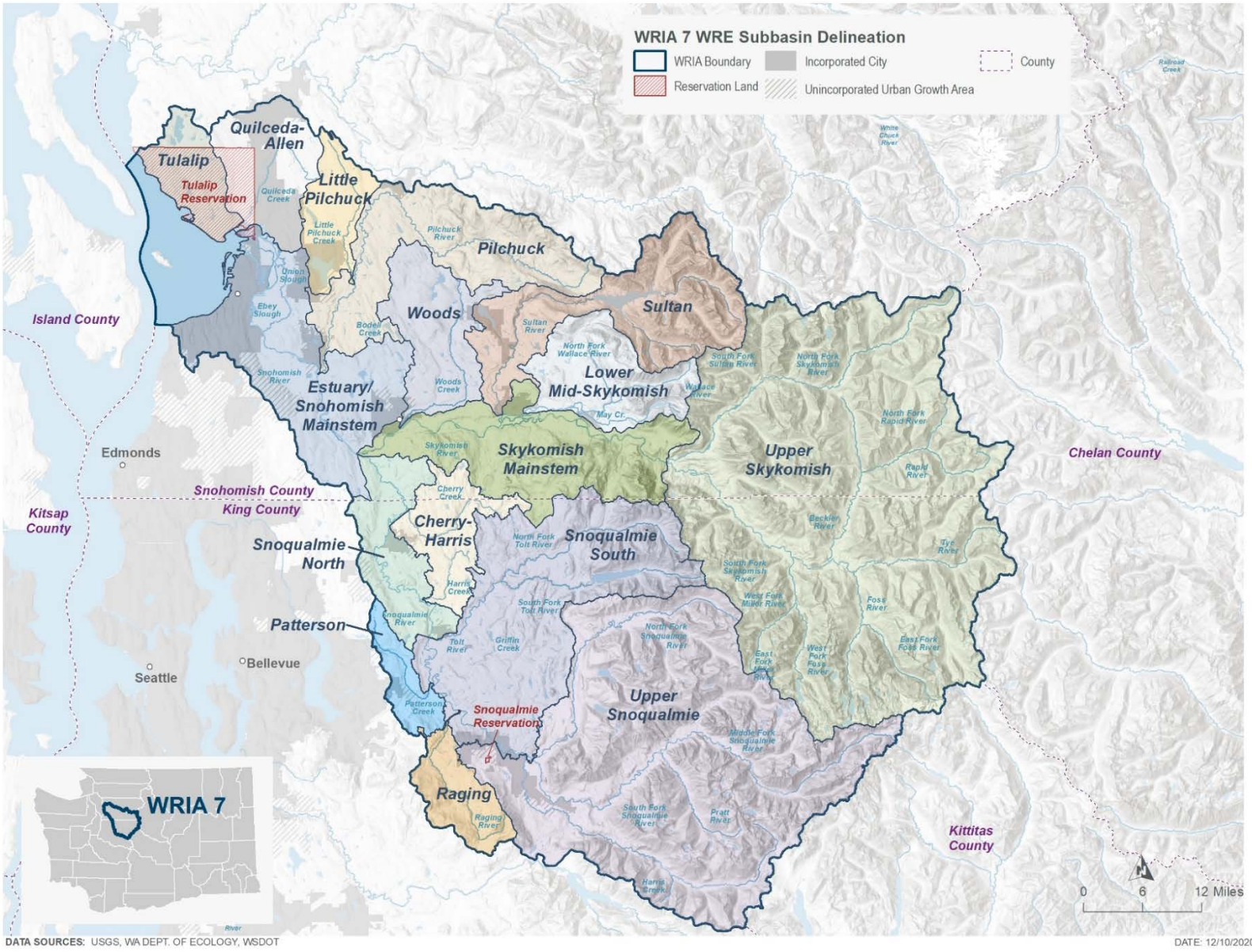

Figure 3.1: WRIA 7 Subbasin Delineation

Chapter Four: New Consumptive Water Use Impacts

4.1 Introduction to Consumptive Use

The Streamflow Restoration law requires watershed plans to include "estimates of the cumulative consumptive water use impacts over the subsequent 20 years, including withdrawals exempt from permitting under RCW 90.44.050" (RCW 90.94.030(3)(e)). The Final NEB Guidance states that, "watershed plans must include a new consumptive water use estimate for each subbasin, and the technical basis for such estimate" (pg. 7). This chapter provides the WRIA 7 Committee's projections of new domestic permit exempt (PE) well connections (hereafter referred to as PE wells) and their associated consumptive use for the 20-year planning horizon. [5] This chapter summarizes information from the technical memos (Appendices F and G) prepared for, and reviewed by, the WRIA 7 Committee.

4.2 Projection of Permit-Exempt Well Connections (2018 – 2038)

The WRIA 7 Committee projects 3,389 new PE wells over the planning horizon. Most of these wells are likely to be installed in the following subbasins: Tulalip, Quilceda-Allen, Estuary/Snohomish Mainstem, and Snoqualmie North.

The Committee developed a method to (1) project the number of new PE wells over the planning horizon in WRIA 7; and (2) estimate new consumptive water use. This method, referred to as the PE well projection method, is based on recommendations from Appendix A of Ecology's Final NEB Guidance (Ecology 2019). The following sections provide the 20-year projections of new PE wells for each subbasin within WRIA 7, the methods used to develop the projections (PE well projection method), and uncertainties associated with the projections.

4.2.1 Permit-Exempt Well Connections Projection by Subbasin

This watershed plan compiles the Snohomish County and King County PE well projection data at both the WRIA scale and by subbasin. Table 4.1 and Figure 4.1 show projections for new PE wells in WRIA 7 by subbasin.

[5] New consumptive water use in this document is from projected new homes connected to PE domestic wells associated with building permits issued during the planning horizon. Generally, new homes will be associated with wells drilled during the planning horizon. However, new uses could occur where new homes are added to existing wells serving group systems under RCW 90.44.050. In this document the well use discussed refers to both these types of new well use. PE wells may be used to supply houses, and in some cases other Equivalent Residential Units (ERUs) such as small apartments. For the purposes of this document, the terms "house" or "home" refer to any PE domestic groundwater use, including other ERUs.

Table 4.1: Number of PE Wells Projected between 2018 and 2038 for the WRIA 7 Subbasins

Subbasins	King County	Snohomish County	UGAs	Total PE Wells per Subbasin
Tulalip	--	468	0	468
Quilceda-Allen	--	330	8	338
Estuary/Snohomish Mainstem	--	322	9	331
Little Pilchuck	--	289	5	294
Pilchuck	--	278	2	280
Woods	--	224	0	224
Sultan	--	53	2	55
Lower Mid-Skykomish	--	60	0	60
Skykomish Mainstem	0	183	2	185
Upper Skykomish	48	53	2	103
Cherry-Harris	200	11	3	214
Snoqualmie North	240	98	0	338
Snoqualmie South	169	0	0	169
Patterson	104	--	0	104
Raging	73	--	2	75
Upper Snoqualmie	146	--	5	151
Totals	**980**	**2,369**	**40**	**3,389**

The total projection for WRIA 7 is 3,389 new PE wells. King County projects approximately 980 new PE wells over the planning horizon within WRIA 7 portions of unincorporated King County. Snohomish County projects approximately 2,369 new PE wells over the planning horizon within WRIA 7 portions of unincorporated Snohomish County (including a projection of 35 PE wells on tribal owned lands provided by Tulalip Tribes). The King and Snohomish County methods do not account for potential PE wells in cities or Urban Growth Areas (UGAs) so the WRIA 7 Committee completed an analysis of potential new PE wells within the UGAs and projected 40 new PE wells (UGA Well Log Spot Check).

4.2.2 Methodology

The WRIA 7 Committee gave deference to each County in identifying the most appropriate method for projecting PE wells within their jurisdiction. The WRIA 7 PE well projection method used King and Snohomish Counties' historical building data to predict potential PE well growth, assuming the rate and general location of past growth will continue over the 20-year planning

horizon. Using past building permits to predict future growth is one of Ecology's recommended methods (Ecology 2019).

Due to data availability, which differed for the two counties, King and Snohomish County used different methods to estimate the number of homes that would be served by community water systems and municipalities and remove those from the PE well growth estimates. Snohomish County considered distance to existing water lines, whereas King County considered historical rates of connection to water service within water service area boundaries.[6] King and Snohomish Counties completed their analyses in-house and the methods are described in detail in Appendix F – PE Well Projections Memo.

King County completed a PE Well Potential Assessment which identified potential parcels where development could occur within rural King County. Snohomish County completed a similar assessment which they have referred to as a Rural Capacity Analysis. The PE Well Potential Assessment and Rural Capacity Analysis results were used to assess whether a subbasin (as identified by the Committee) has the capacity to accommodate the number of PE wells projected over the 20-year planning horizon.

The WRIA 7 Committee evaluated potential PE wells within UGAs using data from Ecology's Well Report Viewer database. All methods are summarized in the sections below. The WRIA 7 Growth Projections Technical Memorandum provides a more detailed description of the analysis and methods used by both counties (Appendix F –PE Well Projections Memo).

King County Permit-Exempt Well Projection Methodology

King County used historical residential building permit and parcel data from 2000 through 2017 to project the number of new PE wells for the planning horizon in unincorporated King County (referred to as the past trends analysis). This data set considers economic and building trends over an 18-year period and the method assumes that past trends will continue.

King County followed the steps below to estimate the number of new PE wells over the planning horizon:

1. Gathered historical building permit and parcel data (2000–2017) for new residential structures.[7]
2. Assessed the total number of permits and average number of permits per year for WRIA 7.

[6] Water service area boundaries include areas currently served by existing water lines and may also include areas not yet served by water lines. King County used historic rates of connection to water service to predict future rates of connection because King County does not have county-wide information on the location of water lines.

[7] King County selected the time period 2000-2017 based on data availability. The building permit data for 2000-2017 includes both periods of high growth and periods of low growth. After comparing the permit data to the Vision 2040 regional plan and population data, King County is confident in using the average over this time period to project into the future.

3. Linked building permit and parcel data to determine water source for each building permit/parcel and separate into public, private, and other water source categories. Consider a building permit with water source listed as "private" as a PE well.
4. Calculated the number and percentage of building permits for each type of water source (public, private, or other) inside and outside water services areas, by subbasin and for the WRIA overall.

Using the King County past trends analysis, the WRIA 7 Committee followed the steps below to develop PE well projections by subbasin:

1. Calculated the projected number of PE wells per year for each subbasin by multiplying the average number of building permits per year by the percentage of building permits per subbasin, and percentage of building permits using a private water source (well) per subbasin.
2. Multiplied the projected number of PE wells per year per subbasin by 20 to calculate the total of PE wells projected over the 20-year planning horizon for each subbasin.
3. Added 6% to 20-year PE well projection per subbasin to account for gaps in the building permit and parcel data (6% error is based on the percentage of building permits with "other" as the water source).
4. Tabulated the total PE wells projected over the 20-year planning horizon, including the 6% error, for each subbasin and sum to get the total of PE wells projected over the 20-year planning horizon in rural unincorporated King County.

Snohomish County Permit-Exempt Well Projection Methodology

Snohomish County developed three PE well projection scenarios based on development trends and population projections, described in Appendix F – PE Well Projections Memo. The WRIA 7 Committee chose to use the scenario that reviewed past development trends within WRIA 7 to estimate the number and location of potential new homes over the planning horizon (referred to as the past trends analysis). Snohomish County's past trends analysis methodology differed from King County's.

Snohomish County used a Geographic Information System (GIS) model to identify areas where homes are likely to connect to water service, based on proximity to existing water distribution lines (referred to as public water service areas). Areas that were not proximal to existing water distribution lines were assumed to be served by a PE well (referred to as PE well areas).[8] Snohomish County used this spatial model, in combination with analysis of year-built data from 2008-2018 for recently built single-family residences, to develop PE well projections. The method assumes that past trends will continue, that existing water lines are representative of future

[8] PE well areas are more than 100' from a water main for homes that are not part of a subdivision and more than ¼ mile from a water main for homes that are part of a subdivision. See Snohomish County Growth Projections and Rural Capacity Analysis Methods in Appendix F for additional information.

water lines, and that homes built proximal to existing water lines will connect to public water service, not PE wells.

Snohomish County followed the steps below to estimate the number of new PE wells over the planning horizon:

1. Gathered year-built data for single-family residences (i.e., housing units or "HU"s) built between 2008–2018.
2. Assigned HUs to "public water service areas" or "PE well areas" based on the distance to existing water mains. Assume HUs in "PE well areas" will use a PE well for the water source.
3. Estimated the number of HUs per subbasin for each type of water source (public water service or PE well) and calculate the percentage of HUs per subbasin for each type of water source.
4. Calculated the average number of HUs per year (2008-2018) and multiply by 20 to calculate the estimated total of HUs projected over the 20-year planning horizon for rural unincorporated Snohomish County.
5. Applied HU projections to WRIA 7 subbasins based on the past percentage of growth per subbasin and past percentage of HU for each type of water source per subbasin.
6. Tabulated the total PE wells projected over the 20-year planning horizon for each subbasin and sum to get the total of PE wells projected over the 20-year planning horizon in rural unincorporated Snohomish County.

Urban Growth Area Permit-Exempt Well Projection Methodology

The King County and Snohomish County PE well projection methods do not account for potential PE wells within cities or UGAs. However, early in the PE well projection planning process, the WRIA 7 Committee recommended looking at the potential for PE well growth within the incorporated and unincorporated UGAs using data from Ecology's Well Report Viewer database (referred to as the UGA well log spot check).

The general method included using Ecology's Well Report Viewer database (1998–2018) to query water wells with characteristics of a domestic well[9] within UGAs. The Committee randomly reviewed a subset of the water well reports and calculated the number and percentage of each type of well (domestic, irrigation, other and incorrect) located within the UGAs. They then multiplied the percentage of wells identified as domestic (assumed to be PE wells) by the total number of wells located within UGAs to estimate the number of PE wells installed over the past 20-year period. The Committee also cross-checked the physical address of the wells with the UGA boundaries to determine which subbasin the domestic wells were

[9] Ecology's complete Well Report Viewer database was filtered for water wells 6 to 8 inches in diameter and greater than 30 feet deep, which are typical dimensions and depths for domestic wells. Ecology does not have the ability to filter for permit-exempt domestic wells.

located in. The Committee used the total number of domestic wells per subbasin over the past 20 years to project the number of PE wells located within the UGAs over the planning horizon for each WRIA 7 subbasin. A more detailed methodology is included in Appendix F – PE Well Projections Memo.

King County Permit-Exempt Well Potential Assessment

King County assessed parcels available for future residential development in unincorporated King County (referred to as the PE well potential assessment).

King County used screening criteria to identify parcels with potential for future residential development by subbasin. The total number of parcels and dwelling units[10] (DUs) per subbasin were determined and labeled as inside or outside the water district service boundaries. King County then projected the water source for each parcel (public water or PE well) based on historic rates of connection to water service because the County does not have county-wide information on the location of water lines. The WRIA 7 Committee compared the 20-year PE well projection to the PE well potential assessment. In areas where the number of projected PE wells exceeded the potential parcels available, the Committee reallocated those PE wells to the nearest subbasin with parcel capacity and similar growth patterns. The Committee reallocated 22 projected PE wells from the Upper Snoqualmie subbasin to the Snoqualmie South subbasin in the King County portion of WRIA 7. A more detailed methodology and list of assumptions is included in Appendix F – PE Well Projections Memo.

Snohomish County Rural Capacity Analysis

In 2011, Snohomish County completed a Rural Capacity Analysis and assigned future residential development capacity to each parcel in the rural area. Snohomish County updated their 2011 analysis to determine capacity to accommodate the 20-year PE well projection at the WRIA and subbasin level.

Snohomish County used screening criteria to identify parcels with potential for future residential development by subbasin. For each parcel, Snohomish County calculated residential development capacity based on development status, parcel size, density, and other attributes. The County assigned parcels to “public water service areas” or “PE well areas” per the past trends analysis method and aggregated the residential development capacity by subbasin and water source. Snohomish County compared the 20-year PE well projection with the rural capacity analysis and calculated the shortfall or surplus of available parcels to be sourced by PE wells. Snohomish County did not identify any areas where the number of projected PE wells exceeded the potential parcels available. A more detailed methodology and list of assumptions is included in Appendix F – PE Well Projections Memo.

[10] A dwelling unit is a rough estimate of subdivision potential based on parcel size and zoning (e.g. a 22-acre parcel zoned RA-5 is assumed to have 4 dwelling units).

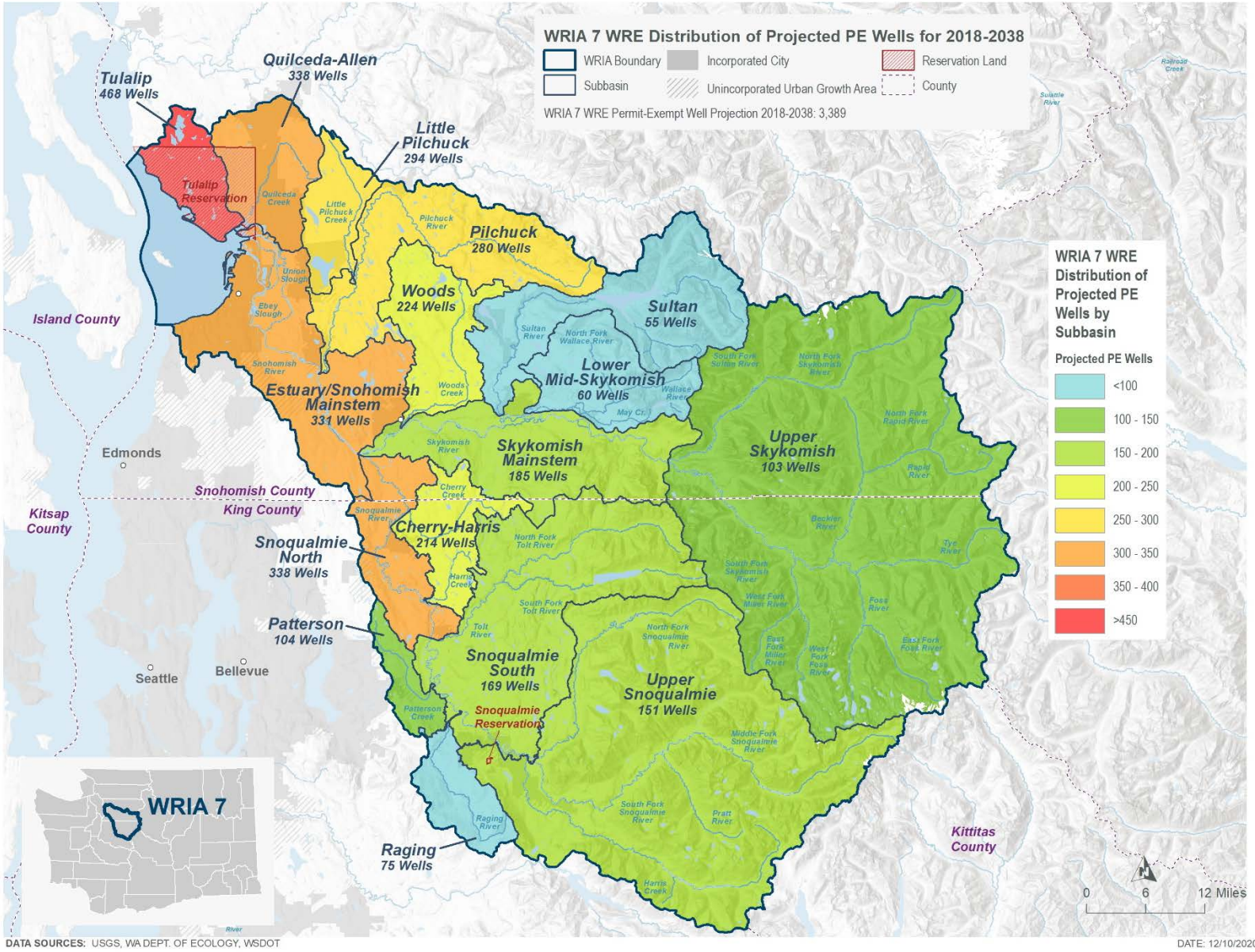

Figure 4.1: WRIA 7 Distribution of Projected PE Wells for 2018 – 2038

4.3 Impacts of New Consumptive Water Use

The WRIA 7 Committee used the 20-year projection of new PE wells for WRIA 7 (3,389) to estimate the consumptive water use that this watershed plan must address and offset. The Committee estimates 797.4 acre-feet per year (AFY) (1.10 cubic feet per second) of new consumptive water use in WRIA 7.

This section provides an overview of the methods the Committee used to estimate new consumptive water use (consumptive use) and an overview of the anticipated impacts of new consumptive use in WRIA 7 over the planning horizon. The WRIA 7 Consumptive Use Estimates Technical Memorandum provides a more detailed description of the analysis and alternative scenarios considered (Appendix G – Consumptive Use Memo).

4.3.1 Methods to Estimate Indoor and Outdoor Consumptive Water Use

Indoor water use patterns differ from outdoor water use. Indoor use is generally constant throughout the year, while outdoor use occurs primarily in the summer months. The portion of water that is consumptive varies for indoor and outdoor water use. Appendix A of the Final NEB Guidance describes a method (referred to as the Irrigated Area Method) which assumes average indoor use per person per day and reviews aerial imagery to provide a basis to estimate irrigated area of outdoor lawn and garden areas. The Irrigated Area Method accounts for indoor and outdoor consumptive use variances by using separate approaches to estimate indoor and outdoor consumptive use.

To develop the consumptive use estimate, the WRIA 7 Committee used the Irrigated Area Method and relied on assumptions for indoor use and outdoor use from Appendix A of the Final NEB Guidance (Ecology 2019). This chapter provides a summary of the technical memo which is available in Appendix G – Consumptive Use Memo.

Consistent with the Final NEB Guidance (Appendix B, pg. 25), for the purposes of calculating an estimate of consumptive use, the Committee assumed impacts from consumptive use on surface water are steady-state, meaning impacts to the stream from pumping do not change over time. This assumption is based on the wide distribution of future well locations and depths across varying hydrogeological conditions, and because empirical data to support the assumption is not locally available. The Committee discussed that assuming steady-state may underestimate the estimated consumptive use impact during the base flow season, but agreed the methods in the NEB Guidance were sufficiently protective of the resource.

The WRIA 7 Committee considered other methods for estimating consumptive use, including (1) assuming one home with the legal maximum 0.5-acre irrigated lawn area per PE well and (2) the legal withdrawal limit of 950 gallons of water per day.[11] While the Committee assumed that

[11] Legal withdrawal limits from PE wells in WRIA 7 are defined in RCW: “an applicant may obtain approval for a withdrawal exempt from permitting under RCW 90.44.050 for domestic use only, with a maximum annual average withdrawal of nine hundred fifty gallons per day per connection” RCW 90.94.030(4)(a)(vi)(B)

neither method is likely to provide an accurate depiction of future water use in the watershed, the scenarios were used as points of comparison to what was projected as described above. The results are provided in the technical memo in Appendix G – Consumptive Use Memo.

New Indoor Consumptive Water Use

Indoor water use refers to the water that households use in kitchens, bathrooms, and laundry (USGS, 2012). The WRIA 7 Committee used the Irrigated Area Method and Ecology's recommended assumptions for indoor daily water use per person, local data to estimate the average number of people per household, and applied Ecology's recommended consumptive use factor to estimate new indoor consumptive water use (Ecology 2019). The assumptions the WRIA 7 Committee used to estimate household consumptive indoor water use are:

- 60 gallons per day (gpd) per person.
- 2.73 and 2.75 persons per household assumed for rural portions of King and Snohomish County, respectively. For areas spanning both counties, a weighted value was estimated based on the number of projected PE wells in each County.
- 10% of indoor use is consumptively used (or a consumptive use factor (CUF) of 0.10), based on the assumption that homes on PE wells are served by onsite sewage systems. Onsite sewage systems return most wastewater back to the immediate water environment; a fraction of that water is lost to the atmosphere through evaporation in the drainfield.

The equation used to estimate household consumptive indoor water use is:

60 gpd x 2.73 to 2.75 people per house x 365 days x .10 CUF

This results in an annual aggregated average of 0.0184 AF[12] (0.000025 cfs[13]) indoor consumptive water use per day per well.

New Outdoor Consumptive Water Use

Most outdoor water is used to irrigate lawns, gardens, and landscaping. To a lesser extent, households use outdoor water for car and pet washing, exterior home maintenance, pools, and other water-based activities. Water from outdoor use does not enter onsite sewage systems; instead, it typically infiltrates into the ground or is lost to the atmosphere through evapotranspiration (Ecology 2019).

The Committee used aerial imagery to measure the irrigated areas of 393 randomly selected parcels in the 16 WRIA 7 subbasins to develop an average outdoor irrigated area per subbasin.

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[12] Acre-foot is a unit of volume for water equal to (1) a sheet of water one acre in area and one foot in depth and (2) 325,851 gallons of water. 1 acre-foot per year is equal to 893 gallons per day.

[13] Cubic feet per second (CFS) is a rate of the flow in streams and rivers. It is equal to a volume of water one foot high and one foot wide flowing a distance of one foot in one second. 1 cubic foot per second is equal to 646,317 gallons per day.

The Committee selected these parcels based on recent (2006-2017) building permits for new single-family residential homes not served by public water. Nearly 1,600 permits in WRIA 7 met this criteria. The Committee targeted a minimum 20-parcel sample per subbasin as a statistically representative sample size to ensure the sample mean is representative of the WRIA. The average irrigated area for the 393 randomly selected parcels, when aggregated across the 16 subbasins, was 0.20 acres per parcel.

The WRIA 7 Committee used the following assumptions, as recommended in Appendix A of the NEB Guidance, to estimate outdoor consumptive water use:

- The amount of water needed to maintain a lawn varies by subbasin due to varying temperature and precipitation across the watershed. The Committee used Washington Irrigation Guide (WAIG) (NRCS-USDA 1997) stations in Everett, Monroe, and Snoqualmie Falls to develop a weighted average crop irrigation requirement (IR) for turf grass in each subbasin (the WRIA average IR is 10.66 inches). This value represents the amount of water needed to maintain a green lawn.
- The irrigation application efficiency (AE) used for WRIA 7 was the Ecology-recommended value of 75%. This increases the amount of water used to meet the crop's irrigation requirement.
- Consumptive use factor (CUF) of 0.8, reflecting 80% consumption for outdoor use. This means 20% of outdoor water is returned to the immediate water environment.
- Outdoor irrigated area per subbasin based on the irrigated footprint analysis: 0.20 acres per PE well.

  10.66 IR (inches) ÷ 12 (inches per foot) ÷ 0.75 AE x 0.20 (acres) x 0.80 CUF

First, water loss is accounted for by multiplying the crop irrigation requirement by the application efficiency. Next, the total water depth used to maintain turf is multiplied by the area which is irrigated. Finally, the volume of water is multiplied by 80 percent to produce the outdoor consumptive water use. To convert the equation from inches to acre-feet, divide the result by 12.

The outdoor consumptive use varies by subbasin due to different irrigation requirements across the watershed. The WRIA's average annual consumptive water use per PE well is 0.24 AFY (0.000331 cfs). This is an average for the year; however, the Committee expects that more water use will occur in the summer than in the other months.

4.4 Summary of WRIA 7 Consumptive Use Estimate

The total consumptive use estimate for WRIA 7 is 797.4 AFY (1.10 cfs). The total consumptive use estimate for WRIA 7 is the number of PE wells projected by subbasin (see section 4.2) multiplied by the total indoor and outdoor consumptive use per PE well.

Table 4.2 summarizes the estimated indoor and outdoor consumptive use by subbasin, per the irrigated area method. The highest consumptive use is expected to occur in the subbasin with the

largest irrigated area per PE well and the most anticipated new PE wells, as presented in Figure 4.2.

Table 4.2: Estimated Indoor and Outdoor Consumptive Use by Subbasin

Subbasin	Projected PE wells	Average lawn size (acres)	Indoor CU per well (AFY)	Outdoor CU per well (AFY)	Total CU/year per well (AFY)	Total CU 2018-2038 (AFY)
Tulalip	468	0.09	0.0185	0.11	0.12	58.1
Quilceda-Allen	338	0.15	0.0185	0.17	0.18	62.1
Estuary/Snohomish Mainstem	331	0.29	0.0185	0.33	0.35	115.8
Little Pilchuck	294	0.2	0.0185	0.22	0.24	69.5
Pilchuck	280	0.37	0.0185	0.38	0.40	111.0
Woods	224	0.12	0.0185	0.12	0.14	31.5
Sultan	55	0.11	0.0185	0.10	0.12	6.5
Lower Mid-Skykomish	60	0.14	0.0185	0.13	0.15	8.8
Skykomish Mainstem	185	0.16	0.0185	0.16	0.17	32.1
Upper Skykomish	103	0.05	0.0184	0.04	0.06	6.0
Cherry-Harris	214	0.16	0.0184	0.17	0.19	40.4
Snoqualmie North	338	0.21	0.0184	0.24	0.26	87.4
Snoqualmie South	169	0.21	0.0183	0.22	0.24	40.3
Patterson	104	0.41	0.0183	0.51	0.53	55.0
Raging	75	0.43	0.0183	0.50	0.52	38.8
Upper Snoqualmie	151	0.23	0.0183	0.21	0.23	34.2
WRIA 7 Aggregated	**3,389**	**0.20**	**0.00184**	**0.22**	**0.24**	**797.4**

Note: Values in table have been rounded.

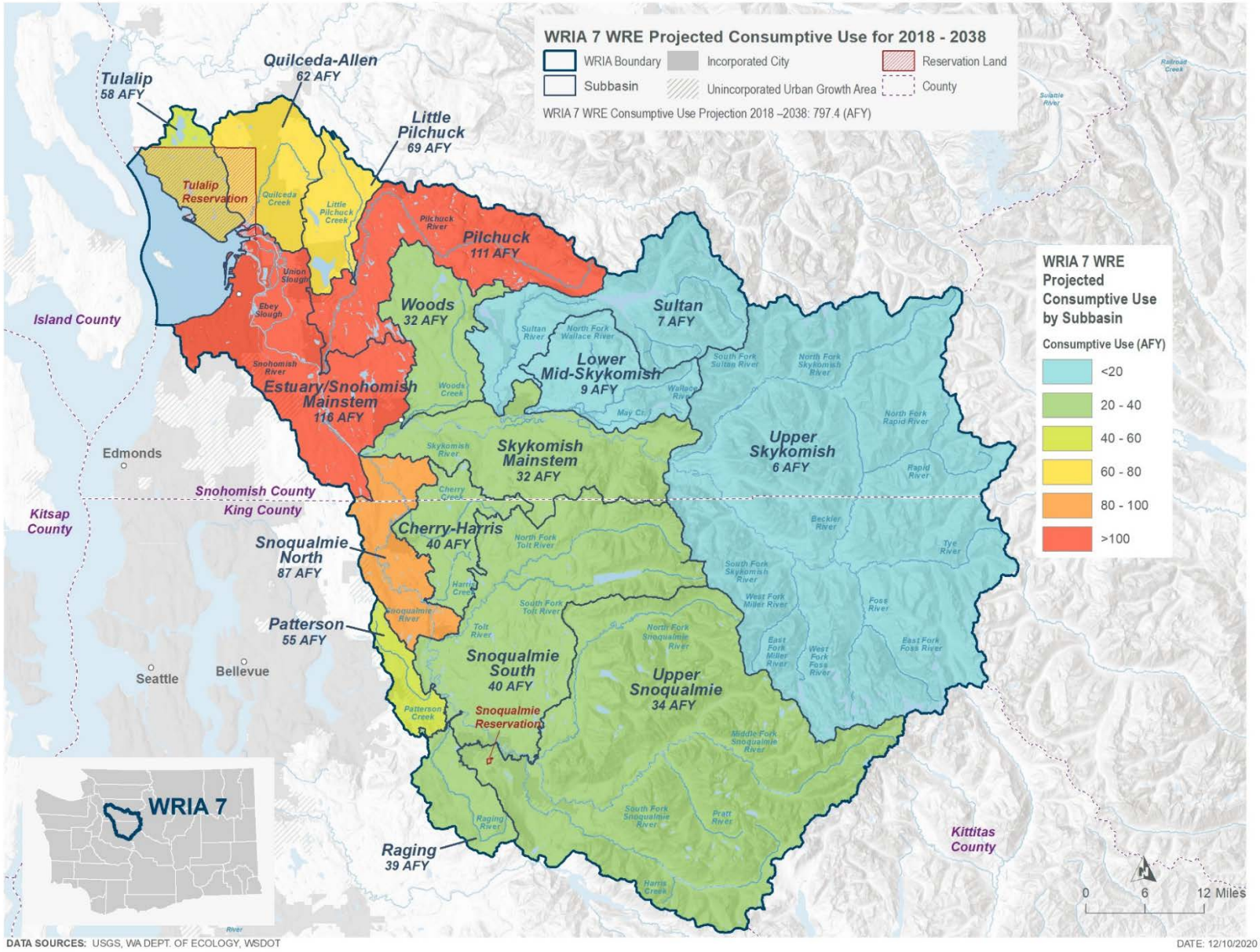


Figure 4.2: WRIA 7 Projected Consumptive Use for 2018 - 2038

4.5 Summary of Uncertainties

The WRIA 7 Committee identified a number of uncertainties in the methods described in Section 4.2 for projecting new PE wells. The Committee recognized uncertainties as inherent to the planning process and addressed them where feasible. The uncertainties are shared here to provide transparency in the planning process and deliberations of the Committee, and to provide context for monitoring and adaptive management.

Historical data on the number and location of PE wells within WRIA 7 was unavailable to inform PE well projections. As a result, the Committee relied on building permit data, and agreed on assumptions about the water source, in order to estimate the numbers of past and future PE wells. Snohomish County projections assume that single-family homes built within 100 feet of an existing distribution line will connect to public water service (proposed county code) and subdivisions within ¼ mile of an existing distribution line will connect to public water service (existing county code requirements). Uncertainty as to whether the proposed county code will pass remains. These assumptions were not ground-truthed and may have yielded imprecise and/or inaccurate results.

Another example of uncertainty is that the counties projected new PE wells within unincorporated areas and omitted PE wells installed within city limits, including PE wells installed for lawn watering purposes. Although most cities require new homes to connect to water systems, some allow exceptions if a connection is not available in a timely and reasonable manner (for instance, if a home is more than 200 feet from a water line). The WRIA 7 Committee attempted to address this uncertainty by including a projection for new PE wells within the UGAs that was based on PE well construction rates derived from available data for the period from 1998 to 2018.

Both counties relied on historical data, assuming these trends will continue into the future. However, future building trends may not mirror historical building trends as water service areas and water lines are expected to continue to grow and expand at an unknown rate and in unknown conditions. Water line data was not readily available in King County, so the WRIA 7 Committee was unable to compare actual water lines with the historical data to see if and how the water service has expanded.

The ability of water purveyors to serve new customers in the future is an additional element of uncertainty in this plan. In many cases, it is extremely challenging for water purveyors to change their existing water rights or acquire new water rights to meet the needs of new customers year-round. When this occurs, new PE wells may be constructed instead of homes connecting to public water. One example of this is the Seven Lakes Water Association in the Tulalip and Quilceda subbasins. The Committee realized that it generally favors the avoidance of PE well impacts by facilitating connections to publicly owned and regulated water utilities (see policy recommendation in Chapter 6). In searching for a resolution to this conflict, the Committee recognized that the conflict originated between laws at the statute level, and were beyond the scope and authority of the Committee to correct it. Accordingly, the Committee resigned the

notion of a legislative fix, and sought to craft a sound and implementable plan that successfully fulfills all objectives the Legislature assigned to the Committee.

Counties and cities generally enact policies intended to direct growth to urban areas (with access to public water service) to preserve rural and resource lands and protect critical areas; however, private property rights continue to allow landowners to build homes in rural areas. Additionally, uncertain economic and social factors—including the COVID-19 pandemic and associated increasing ability to telework, as well as climate migration—will affect the Committee's predictions in unknown ways and may result in greater rural growth than predicted based on past trends.

RCW 90.94 requires counties to collect fees for new homes that rely on PE wells and provide a report and portion of those fees to Ecology. King and Snohomish Counties shared information on the fees collected since those requirements went into effect in January of 2018; the number of new wells reported by King and Snohomish Counties average 46 new PE wells per year compared to 169 PE wells per year projected by the WRIA 7 Committee. King County reported 20 building permits with PE wells identified as the water source within the WRIA 7 portion of unincorporated King County between January 2018 and June 2020. Snohomish County reported 94 building permits with PE wells identified as the water source within the WRIA 7 portion of unincorporated Snohomish County between January 2018 and June 2020.

The methods described in section 4.3.1 contain a number of uncertainties and limitations. Measurement of consumptive water use in any setting is difficult, and it is virtually impossible for residential groundwater use, which must account for both indoor and outdoor use. PE wells are generally unmetered,[14] so supply to each home is usually unknown, let alone the amount that is consumed versus infiltrated to the groundwater system. Therefore, the WRIA 7 Committee was limited to estimating consumptive use based on projections of future growth, local patterns and trends in water use, and generally accepted and reasonable assumptions.

The WRIA 7 Committee discussed these uncertainties and limitations and recognized that water use ranges across the watershed and among individual PE well owners. The Committee assumed that the estimates produced by the methods described above resulted in a reasonable projected consumptive water use for the WRIA.

The outdoor consumptive use calculation contains a high level of uncertainty. In aerial photos used to calculate average irrigated area, many parcels did not demonstrate a clear-cut distinction between irrigated and non-irrigated lawns and other landscaped areas. It appears that many homeowners may irrigate enough to keep lawns alive, but not lush (or comparable to commercial turf grass/golf course green). The WRIA 7 Committee attempted to address uncertainty and ensured consistency by applying conservative methods that err on the side of a higher irrigated area and having one GIS analyst evaluate all of the selected parcels in the

[14] The Committee has included a policy recommendation in Chapter 6, which recommends implementation of a voluntary metering pilot program. Such a program would allow for monitoring a subset of PE wells to increase understanding of actual water use.

WRIA. Assumptions for the aerial imagery analysis are described in detail in Appendix G – Consumptive Use Memo.

Other factors of uncertainty in the outdoor consumptive use calculation are the assumptions about irrigation amounts and irrigation efficiencies. The calculation assumes that homeowners water their lawns and gardens at the rate needed for commercial turf grass (e.g., watering at rates that meet crop irrigation requirements per the WAIG). The irrigated area analysis demonstrated that many homeowners may irrigate their lawns enough to keep the grass alive through the dry summers, but not at the levels that commercial turf grass requires.

The method also assumes that residential pop-up sprinkler systems irrigate the lawns with an efficiency of 75%. In reality, households apply water to their lawns and gardens in many different ways, some more or less efficient than pop-up sprinklers. The Committee discussed these uncertainties and scenarios and recognized that there is a range of water use across the watershed and individual PE well owners.

The consumptive use estimate assumes that current rural residential landscaping practices and outdoor water use will continue over the 20-year planning horizon. Because of uncertainty inherent in estimating growth patterns, domestic PE well pumping rates, and potential changes in outdoor watering practices (potentially related to climate change), the WRIA 7 Committee determined that the conservative assumptions used to estimate consumptive use based on the Irrigated Area Method, and assumptions for outdoor water use in particular, are justified.

To further address uncertainty and establish a point of comparison, the Committee developed two additional consumptive use scenarios. One additional scenario assumed one home with the legal maximum 0.5-acre irrigated lawn area per PE well and the second additional scenario assumed each PE well withdrew the legal limit of 950 gallons per day. The Committee also compared the Irrigated Area method to local water purveyor data, taking into consideration several assumptions: customers connected to public water supply are incentivized to conserve water, in order to reduce their water bill, and purveyor data represents total water use (not consumptive use) and does not separate indoor and outdoor water use to account for different consumptive use factors, and water purveyors serve areas that are more dense and urban, with smaller lots and smaller irrigated footprints, on average, than rural areas where most new PE wells are expected to be constructed. These analyses can be found in Appendix G – Consumptive Use Memo.

The WRIA 7 Committee also included plan implementation and adaptive management recommendations to address uncertainties related to the consumptive use estimate and project implementation (see Chapter Six).

Chapter Five: Projects and Actions

5.1 Approach to Identify and Select Projects

Watershed plans must identify projects that offset the potential impacts future permit-exempt (PE) wells will have on streamflows and provide a net ecological benefit (NEB) to the WRIA. This chapter provides recommendations from the WRIA 7 Committee for projects and actions to offset consumptive use and meet NEB. This chapter categorizes projects as either a "water offset" or "habitat" projects:

- **Water offset projects** have a quantified streamflow benefit and are projected to contribute to offsetting consumptive use.
- **Habitat projects** are projected to contribute to achieving NEB by focusing on actions that improve the ecosystem function and resilience of aquatic systems, support the recovery of threatened or endangered salmonids, and protect instream resources including important native aquatic species. Habitat projects may also result in an increase in streamflow, but the water offset benefits for these projects is difficult to quantify with a high degree of certainty. After much discussion about the potential water offset benefits of habitat project types, the Committee did not rely on habitat projects to contribute toward offsetting consumptive use, however recognized they can still contribute significantly to NEB and therefore should be included in the plan.

The WRIA 7 Committee identified priorities for project types and locations to guide decisions on which projects to include in the plan. The Committee prioritized water right acquisition opportunities in the following subbasins with higher projected PE wells, higher projected consumptive use, and greater potential for water right acquisition: Pilchuck (focus on lower Pilchuck), Patterson, Quilceda-Allen, Little Pilchuck, and Raging. The Committee prioritized:

- Projects with streamflow benefits (including habitat projects with unquantified streamflow benefits).
- Projects that provide streamflow benefit during the critical flow period.
- Projects expected to have near-term and reliable benefits.

The Committee categorized habitat projects as follows:

- Beaver reintroduction/beaver dam analogs (BDAs) [high priority]
- Floodplain reconnection [high priority]
- Forest or upland protection/management [high priority]
- Riparian enhancement [medium priority]
- Estuary restoration [low priority; not included in plan]
- Fish passage [low priority; not included in plan]

The Committee considered *Snohomish Basin Salmon Recovery Plan* (Salmon Plan) and *Snohomish Basin Protection Plan* (Protection Plan) priority project types when identifying

habitat projects for inclusion in the watershed plan. To consider salmon recovery priorities, the Snoqualmie Watershed Forum reviewed priority project types in the Salmon Plan and Protection Plan, as well as Tulalip Tribes' beaver relocation priority areas to identify how these priorities overlap with WRIA 7 Committee subbasins. The Committee considered priority project types for each subbasin when selecting habitat projects for inclusion in the Plan—focusing on floodplain projects in headwater subbasins that provide downstream benefits.

To identify the projects summarized in this chapter, the WRIA 7 Committee assembled a project inventory to capture and track all project ideas throughout the planning process. The project inventory consisted of hundreds of previously proposed projects as well as new project concepts and ideas, including project lists developed by the Snohomish Basin Salmon Recovery Forum (Snohomish Forum) and the Snoqualmie Watershed Forum and their partners, and the 2018 WRIA 7 Near-Term Actions related to habitat.

Technical consultants supported the Committee's development of projects described in this chapter by researching project concepts, analyzing estimated water offset for projects, contacting project sponsors, and developing project descriptions. Initially, Washington Water Trust identified projects with potential streamflow benefit from the WRIA 7 salmon recovery lead entity four-year work plans, habitat restoration plans, streamflow restoration grant applications, and other ongoing planning efforts. The WRIA 7 Committee and the Snohomish Forum also distributed a "Call for Projects" to request information on water offset and habitat projects at all stages of development from Committee members and partners in WRIA 7.

The Committee assigned projects in the inventory to a project type, consistent with the three project type examples listed in the Final NEB Guidance (Ecology 2019). These project types included: (a) water right acquisition offset projects; (b) non-acquisition water offset projects[15]; and (c) habitat and other related projects. As described above, the Committee categorized habitat and other related projects into sub-categories to assist with project prioritization.

Non-acquisition water offset projects were underrepresented within the WRIA 7 project inventory, which consisted largely of habitat and other related projects. The Committee discussed actions identified in the Protection Plan, but determined that these actions did not provide sufficient certainty and long-term reliability to include as water offset projects.

Development of new non-acquisition water offset projects with quantifiable streamflow benefits became necessary in order for the plan to achieve the consumptive use offset. These projects are largely centered on changes in how and when water is diverted, withdrawn, conveyed, or used to benefit streamflow and instream resources. Examples include streamflow augmentation and managed aquifer recharge projects.

Some Committee members maintained a distinction between water right acquisition projects in the plan and non-acquisition water offset projects, such that they believed non-acquisition offset projects do not provide the same value as acquisition projects, since they typically re-

[15] Non-acquisition water offset projects will typically involve retiming high flow season surface waters. Examples include managed aquifer recharge, streamflow augmentation, off-channel storage, and source switches.

time flows within the basin, rather than preserving streamflow or actually reducing consumptive use. This was addressed in the plan through the adoption of the NEB standard in Chapter Seven.

Non-acquisition water offset project development consisted of three main phases:

1. Initial identification through brainstorming sessions during project subgroup and Committee meetings.
2. Prioritization and further analysis.
3. Development of project descriptions for projects included in the plan.

Project progression from one phase to the next occurred after the Committee agreed to move the project to the next phase.

Section 5.2.1 describes the acquisition and non-acquisition water offset projects that the Committee selected for the plan.

Ecology contracted with Washington Water Trust (WWT) to identify opportunities for water right acquisition water offset projects within WRIA 7. In coordination with the WRIA 7 Committee, WWT developed a water right selection criterion based on the unique local nature of water rights and water use in WRIA 7. The water rights assessment consisted of four categories of potential projects: irrigation water rights in priority subbasins, irrigation water rights near existing reclaimed water infrastructure, water rights in the Trust Water Rights Program as a temporary donation, and specific water right acquisition opportunities identified by the Committee.

WWT developed 15 water right acquisition project opportunity profiles for Committee consideration. The water rights acquisitions projects that the Committee selected for the plan are described in Section 5.2.1. The Committee's analysis to identify potential water right acquisitions in the priority subbasins yielded a strikingly low number of potential water acquisition projects. There are multiple demands for water in the basin and instream flows are not met year-round in portions of the basin, especially during low flow periods.

The Committee developed the list of habitat projects by reviewing projects recommended by Committee members and projects identified by project subgroup members based on priorities for project types and locations, as described above. Committee members, project subgroup members, and other experts participated in a series of meetings to discuss priority habitat projects by subbasin. Project subgroup members completed a survey to review and rank the habitat projects identified during these meetings to finalize the habitat project list.

Water offset and habitat projects that the Committee selected to offset consumptive use and achieve NEB are summarized in Section 5.2.1 and 5.2.2. Detailed project descriptions and project profiles are included in Appendix H – Projects. In addition to the water offset and habitat projects listed below, Section 5.2.3 describes the types of projects that the Committee supports for further development and implementation in the future.

5.2 Projects and Actions

The projects outlined in Table 5.1 have water offset and/or ecological benefits; the WRIA 7 Committee identified these projects as contributing toward offsetting consumptive use and achieving NEB. The WRIA 7 Committee recommends implementation of all projects included in this chapter.

5.2.1 Water Offset Projects

Table 5.1 provides a summary of the 11 water offset projects identified by the WRIA 7 Committee to offset consumptive use and contribute toward NEB. The total offset potential of these 11 projects for WRIA 7 is 1,373.4 acre-feet per year (AFY). Offset benefits are anticipated in the subbasins listed in Table 5.1 as well as downstream of the respective project locations. The watershed map in Figure 5.1 shows the location of the water offset projects listed in Table 5.1, while the watershed map in Figure 5.2 shows the location of the habitat projects listed in Table 5.2.

The Committee recommends that managed aquifer recharge (MAR) projects that collect high flow water shall be done using buried horizontal water perforated culvert intake structure designed to avoid instream structures.

For the water right acquisition projects included in this watershed plan, the Committee supports the acquisition of the valid quantity of water. However, to estimate the offset potential for each water right acquisition project, the Committee used the estimate generated by WWT for the consumptively used portion of the water right. The estimated return flow portion of the water right is not counted as an offset as that portion of water returns to groundwater.

Before water rights are acquired and put into Ecology's Trust Water Rights Program, Ecology will conduct a full extent and validity analysis to determine the actual quantity of water available for acquisition and the consumptive use component. Since this analysis generally happens after the water right holder has agreed to sell, the Committee relied on the WWT evaluations to estimate the offset volumes listed in Table 5.1. Planning level cost estimates provided in Table 7 for water offset projects included in the plan may not reflect real costs. See Section 5.3.2 for more detail on cost estimates.

A summary description for each project is provided below. More detailed water offset project descriptions are provided in Appendix H – Projects.

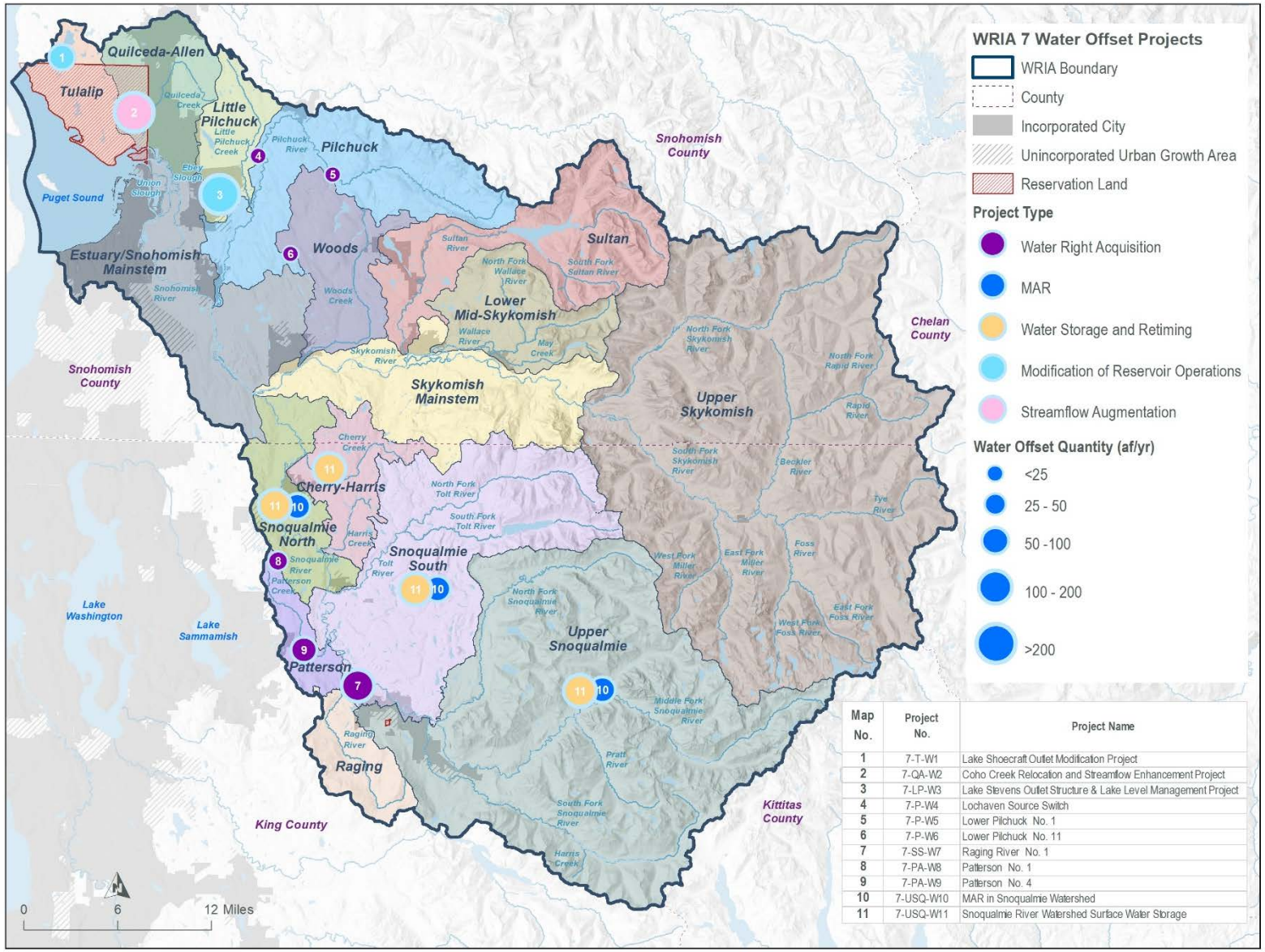
Table 5.1: WRIA 7 Water Offset Projects[16]

Project Number	Project Name	Project type	Subbasin(s)	Water Offset (AFY)	Project Sponsor	Estimated project cost
7-T-W1	Lake Shoecraft Outlet Modification Project	Modification of reservoir operations	Tulalip	62.5	Tulalip Tribes and WDFW	Design, permitting and construction = $175,000 (Feasibility funding secured) O&M = $7,000/year
Tulalip Subbasin Subtotal				**62.5**		
7-QA-W2	Coho Creek Relocation and Streamflow Enhancement Project	Streamflow augmentation and floodplain restoration	Quilceda-Allen	362	Tulalip Tribes	Design, permitting, and construction = $950,000 (Feasibility funding secured) O&M = $10,000/year
Quilceda-Allen Subbasin Subtotal				**362**		
7-LP-W3	Lake Stevens Outlet Structure & Lake Level Management Project	Water storage and retiming	Little Pilchuck	500	City of Lake Stevens	Design, permitting and construction = $1.4 million O&M = $7,000/year
Little Pilchuck Subbasin Subtotal				**500**		
7-P-W4	Lochaven Source Switch	Water right acquisition	Pilchuck	12.7	Snohomish PUD	Water right purchase = $108,000 Water system transfer and upgrades = $400,000 to $1.6 million

[16] All project cost estimates are planning level cost estimates and may not reflect real costs.

Project Number	Project Name	Project type	Subbasin(s)	Water Offset (AFY)	Project Sponsor	Estimated project cost
7-P-W5	Lower Pilchuck No. 1	Water right acquisition	Pilchuck	2.8	Snohomish PUD	Water right purchase = $14,000
7-P-W6	Lower Pilchuck No. 11	Water right acquisition	Pilchuck	2.1	Washington Water Trust	Water right purchase = $5,000
Pilchuck Subbasin Subtotal				**17.6**		
7-SS-W7	Raging River No. 1	Water right acquisition	Snoqualmie South	126	Washington Water Trust	Water right purchase = $324,000
Snoqualmie South Subbasin Subtotal				**126**		
7-PA-W8	Patterson No. 1	Water right acquisition	Patterson	29.7	Washington Water Trust	Water right purchase = $72,000
7-PA-W9	Patterson No. 4	Water right acquisition	Patterson	71.6	Washington Water Trust	Water right purchase = $184,000
Patterson Subbasin Subtotal				**101.3**		

Project Number	Project Name	Project type	Subbasin(s)	Water Offset (AFY)	Project Sponsor	Estimated project cost
7-USQ-W10	MAR in Snoqualmie Watershed; Potential Sites: North Bend, Three Forks, NF 5700	Water storage and retiming – MAR	Upper Snoqualmie, Snoqualmie North, Snoqualmie South	100	Washington Water Trust	Feasibility, design, permitting and construction = $1.1 million O&M = $10,000/year
7- USQ-W11	Snoqualmie River Watershed Surface Water Storage	Water storage and retiming	Upper Snoqualmie; Snoqualmie South, Cherry/Harris, Snoqualmie North	104-3,311	SVWID	Feasibility, design, permitting and construction = $3.5 million to $112 million (Site identification and initial feasibility funding secured)
Upper Snoqualmie Subbasin Subtotal				**204**		
WRIA 7 Total Water Offset (Cumulative from Above)				**1,373.4**		
WRIA 7 Consumptive Use Estimate				**797.4**		



Map No.	Project No.	Project Name
1	7-T-W1	Lake Shoecraft Outlet Modification Project
2	7-QA-W2	Coho Creek Relocation and Streamflow Enhancement Project
3	7-LP-W3	Lake Stevens Outlet Structure & Lake Level Management Project
4	7-P-W4	Lochaven Source Switch
5	7-P-W5	Lower Pilchuck No. 1
6	7-P-W6	Lower Pilchuck No. 11
7	7-SS-W7	Raging River No. 1
8	7-PA-W8	Patterson No. 1
9	7-PA-W9	Patterson No. 4
10	7-USQ-W10	MAR in Snoqualmie Watershed
11	7-USQ-W11	Snoqualmie River Watershed Surface Water Storage

Figure 5.1: WRIA 7 Water Offset Projects

Tulalip Subbasin

Project Name: Lake Shoecraft Outlet Modification Project [7-T-W1]

Project Description: Lake Shoecraft is a 133-acre lake located in the Tulalip Plateau west of Arlington. The lake outlet is currently controlled by a weir with removable stop logs (eight-inch height per log). Boards are removed in the winter to pass higher flows and prevent flooding and installed in the summer to increase storage and maintain lake levels.

The Lake Shoecraft Outlet Modification project proposes replacing the existing stop log control structure with an adjustable slide-gate weir to add more flexibility in outlet control. This modification would benefit the downstream Bernie Kai-Kai Gobin Hatchery by targeting higher releases to align with hatchery needs, which vary year over year. Spring and summer releases could be more tightly controlled to maintain higher lake levels and allow more consistent streamflow releases through the summer.

Although a feasibility analysis has not yet been conducted for this project, initial calculations indicate the Lake Shoecraft project could provide a 62.5 AFY increase in summer storage. Additional information is included in the project description in Appendix H – Projects.

Quilceda-Allen Subbasin

Project Name: Coho Creek Relocation and Streamflow Enhancement Project [7-QA-W2]

Project Description: This project includes restoration of fish habitat within Coho Creek, a Type 3 tributary to Quilceda Creek, located on the Tulalip Reservation. Tulalip Tribes proposes this work to relocate and restore stream habitat conditions within Coho Creek and to augment summer low flows using effluent from a Membrane Bioreactor (MBR) Wastewater Treatment Plant adjacent to Coho Creek.

In 1999, a culvert that blocked fish passage just below the project area was replaced, improving fish access to over two miles of ditch and stream channels. This current project proposes restoring a ditched section of the stream system with a natural channel configuration and reusing water from the Tribe's MBR plant to increase Coho and Chum salmon production within the stream system.

This project will include restoration of up to 1,300 feet of Coho Creek. In addition to channel restoration, this project will augment flows year-round, including during the summer low flow period, by an estimated 0.5 cubic feet per second (cfs) for a total of 362 AFY. Additional information is included in the project description in Appendix H – Projects.

Little Pilchuck Subbasin

Project Name: Lake Stevens Outlet Structure & Lake Level Management [7-LP-W3]

Project Description: This project would replace an outdated weir structure in the Lake Stevens outlet channel that manages the elevation in Lake Stevens to maximize flood storage availability

in the winter and maintain summer flows in the channel while keeping lake elevations high for summer recreation. The replacement weir would allow for more precise management of lake levels, resulting in increased lake levels and increased streamflow coming out of the lake during the summer and early fall months into Catherine Creek.

Based on preliminary modeling, modification of the weir structure and operations could increase summer (July through October) lake levels by nearly half a foot. This would provide approximately 500 AFY of additional summer storage and increased streamflow releases for the 1,000-acre lake. Additional information is included in the project profile in Appendix H – Projects.

Pilchuck Subbasin

Project Name: Lochaven Source Switch [7-P-W4]

Project Description: The Lochaven Estates Community (Lochaven) is located approximately two miles northeast of the City of Lake Stevens. The 83-home community is situated between State Route 92 (Granite Falls Highway) and the Pilchuck River. Lochaven's water source is a shallow (23 feet deep) dug groundwater production well. The shallow completion depth suggests hydraulic connection with the Pilchuck River is possible.

This project would involve retirement of the water right associated with the Lochaven Water System as a basis for increasing flows within the Pilchuck River and downstream areas. Water supply for this community would be transitioned to the Snohomish Public Utility District (PUD) system and Lochaven's existing water right would be protected instream through Ecology's Trust Water Rights Program. The Lochaven water right certificate authorizes year-round use of up to 42 AFY for community domestic supply. The Committee estimated the water offset based on the estimated consumptively used portion of Lochaven's water right. The estimated project offset to the Pilchuck River is 12.7 AFY.

Snohomish PUD and Lochaven Water System representatives have discussed the source switch, and the Lochaven Water System supports further conversations about making the water rights available for transfer into the Trust Water Rights Program for permanent streamflow benefit. Additional information is included in the project profile in Appendix H – Projects.

Project Name: Lower Pilchuck No. 1 [7-P-W5]

Project Description: The Lower Pilchuck No. 1 water right acquisition project proposes acquiring one groundwater right in the Pilchuck subbasin for an estimated 2.8 AFY of consumptively used water. The water right certificate authorizes year-round use of up to 5.4 AFY for multiple domestic supply. This water right previously supplied water to nine homes until the domestic water needs covered under this water right were transferred to Snohomish PUD in 2011. Snohomish PUD has temporarily donated the water right to the Trust Water Rights Program, which expires in 2023.

The Lower Pilchuck 1 water right has a priority date of 11/14/1991, which is junior to the establishment of the Snohomish Basin Instream Resources Protection Program (Instream Flow

Rule) in 1979. However, this water right does not have instream flow provisions included in the ROE. WWT identified that the water rights appear to have been put to continuous beneficial use. The consumptive use estimate is 2.8 AFY. WWT has had initial phone conversations with the water right holder. Snohomish PUD has expressed interest in selling if offered fair market value and transaction costs were covered.

Project Name: Lower Pilchuck No. 11 [7-P-W6]

Project Description: The Lower Pilchuck No. 11 water right acquisition project proposes acquiring one groundwater right in the Pilchuck subbasin for an estimated 2.1 AFY of consumptively used water. The water right certificate authorizes year-round use of up to 2.6 AFY for irrigation.

The land, and underlying water right, was previously used for a golf course which closed in 2013. The parcels that comprise the property have been under the same family ownership since 1946. Since the golf course closed, Ecology has received metering records that indicate water use on the property has continued although the purpose is unknown.

WWT estimated consumptive water use based on consumptive use derived from aerial imagery estimates of the size of irrigated area and assumed water application efficiency and return flow. The total consumptive use estimate is 2.1 AFY. An extent and validity determination by Ecology would be required to determine the actual quantity available for acquisition.

The Lower Pilchuck 11 water right has a priority date of 7/23/1947, which is senior to the establishment of the Snohomish Basin Instream Resources Protection Program (Instream Flow Rule) in 1979. This water right does not have instream flow provisions included in the ROE.

Snoqualmie South Subbasin

Project Name: Raging River No. 1 [7-SS-W7]

Project Description: The Raging River No. 1 water right acquisition project proposes acquiring two water rights in the Raging River subbasin for up to 126 AFY of consumptively used water. While the water rights are located in the Raging River subbasin, the Committee anticipates the offset will occur primarily in the Snoqualmie South subbasin and lists the project in Snoqualmie South.

The water right certificate authorizes up to 60 AFY for irrigation during irrigation season. The water right claim listed year-round use of up to 60 AFY for domestic, commercial-campground, and stock water uses. The land, and underlying water rights, were previously used to support irrigation, domestic supply, commercial-campground, and stock watering. According to online sources, the campground has been recently closed.

The Raging River 1 water rights have listed priority dates of 1/1/1910 (claimed) and 1/22/1992 (certificated) which are respectively senior and junior to the establishment of the Snohomish Basin Instream Resources Protection Program (Instream Flow Rule) in 1979. The certificate related to Raging River 1 does have instream flow provisions included in the ROE.

WWT estimated consumptive water use based on consumptive use derived from aerial imagery estimates of the size of irrigated area and assumed water application efficiency and return flow. The total consumptive use estimate is 126 AFY. An extent and validity determination by Ecology would be required to determine the actual quantity available for acquisition.

Patterson Subbasin

Project Name: Patterson No. 1 [7-PA-W8]

Project Description: The Patterson No. 1 water right acquisition project proposes acquiring two groundwater rights (one certificate and one claim) in the Patterson subbasin for an estimated 29.7 AFY of consumptively used water. The water right certificate authorizes year-round use of up to 64 AFY for fish propagation. The water right claim authorizes use of up to 110 AFY for domestic, stock, and irrigation uses. The land, and underlying water rights, were previously used to support fish propagation, domestic water supply, stock watering, and irrigation.

The Patterson 1 water right has priority dates of 4/6/1942 (claimed) and 5/11/1964 (certificated), which are both senior to the establishment of the Snohomish Basin Instream Resources Protection Program (Instream Flow Rule) in 1979. This water right certificate does not have instream flow provisions included in the ROE.

WWT estimated consumptive water use based on consumptive use derived from aerial imagery estimates of the size of irrigated area and assumed water application efficiency and return flow. The total consumptive use estimate is 29.7 AFY. An extent and validity determination by Ecology would be required to determine the actual quantity available for acquisition.

Project Name: Patterson No. 4 [7-PA-W9]

Project Description: The Patterson No. 4 water right acquisition project proposes acquiring three groundwater rights in the Patterson subbasin for an estimated 71.6 AFY of consumptively used water. The water right certificates authorize up to 86.8 AFY for irrigation during irrigation season. The land, and underlying water rights, were previously used to support a farm and then later a golf course.

The Patterson 4 water rights have priority dates of 11/8/1946, 7/14/1939, and 7/31/1939—all senior to the establishment of the Snohomish Basin Instream Resources Protection Program (Instream Flow Rule) in 1979. These water rights do not have instream flow provisions included in their ROEs.

WWT estimated consumptive water use based on consumptive use derived from aerial imagery estimates of the size of irrigated area and assumed water application efficiency and return flow. The total consumptive use estimate is 71.6 AFY. An extent and validity determination by Ecology would be required to determine the actual quantity available for acquisition.

Upper Snoqualmie Subbasin

Project Name: Snoqualmie River Watershed Surface Water Storage Project [7-US-10]

Project Description: The Snoqualmie Valley Watershed Improvement District (SVWID) proposes developing surface water storage projects in the Upper Snoqualmie, Snoqualmie South, Cherry-Harris and/or Snoqualmie North Subbasins. The SVWID has completed a comprehensive storage study to assess the potential for a wide range of surface water storage projects, including small to large storage opportunities, throughout the watershed.

The screening analysis identified and evaluated 20 potential water storage projects which range in capacity from 22 to 3,311 AFY. The sites include off-channel storage reservoirs, on-channel storage reservoirs, and projects that would result in raising the level of an existing lake to create additional storage capacity. Water would be released during critical low-flow periods to sustain streamflows in critical reaches of the Snoqualmie River and its tributaries and offset future domestic water uses.

For the purpose of streamflow restoration planning, this project is defined as one or more surface water storage reservoirs that will collectively result in the potential to store and release at least 104 AFY, which is the median capacity of the 20 storage projects identified to date, and up to 3,311 AFY, which is the estimated maximum storage capacity of the largest project identified. The Committee estimates 104 AFY of water offset, assuming at least one of these projects will be constructed in WRIA 7. Additional analysis of the most highly ranked sites is planned, including landowner outreach and more detailed analysis of hydrology and capacity. Additional information on the 20 potential storage sites is included in the project description in Appendix H – Projects.

Project Name: Snoqualmie Watershed MAR [7-US-11]

Project Description: WWT proposes pursuing feasibility studies and construction of one or more MAR facilities in the Snoqualmie Watershed. The Snoqualmie Watershed MAR project concept includes diverting surface water annually from the Snoqualmie River or tributary in the Snoqualmie North, Snoqualmie South or Upper Snoqualmie subbasins. Water would be diverted annually between approximately November and May when water may be available to divert without causing significant ecological harm.

Diverted water would be conveyed through a collector well adjacent to the river (e.g., Ranney Collector well) or through an instream surface water intake and piped to a constructed MAR facility. This diverted surface water infiltrates into the shallow aquifer, is transported down-gradient, and ultimately discharges back to surface water as re-timed groundwater baseflow. The goal of the project is to increase baseflow to the Snoqualmie River or tributaries nearest to the project location by recharging the aquifer adjacent to the river and providing additional groundwater discharge to the river through MAR. Any new diversion of surface water will be junior to the instream flow rule.

The Committee identified four potential sites for a future MAR facility and recognizes there may be additional potential sites that have not yet been identified. Additional feasibility studies are required to verify site feasibility and the amount and timing of streamflow benefits. The project should be specifically designed to enhance streamflows and to avoid negative impacts to ecological functions and/or critical habitat needed to sustain threatened or endangered salmonids. The project should not be located in an area that impacts floodplain connectivity and river migration processes.

Future work to score, rank, and prioritize sites for implementation will carry forward through an engagement process with tribes and stakeholders, including agricultural interests. MAR sites should avoid or minimize loss of agricultural soils within the zoned Agricultural Production District (APD), regardless of current property ownership.

The Committee analyzed the timing of streamflow augmentation for the potential MAR sites and developed the 100 AFY offset estimate based on the anticipated “non-diversion” streamflow augmentation quantities projected for the low flow period from July through September for the potential sites, assuming two sites are developed and the estimated streamflow augmentation aligns with the Committee’s analysis.

Additional information on these potential sites is included in the Three Forks MAR, Middle Fork MAR, North Bend MAR, and NF-5700 MAR project descriptions in Appendix H – Projects.

5.2.2 Habitat Projects

The Committee identified the 27 habitat projects summarized in Table 5.2 to provide ecological benefits to WRIA 7. This list also includes projects that and are expected to have ecological benefits from improvements to stormwater management and infiltration.

Several habitat projects identified by the WRIA 7 Committee are located in the Snoqualmie Agricultural Production District (Snoqualmie APD). King County, and other partners in the watershed, are signatory to the Fish, Farm, & Flood Agreement, which identifies recommendations to assist the King County Executive and Council to advance and balance three important county goals at a watershed scale: restoring habitat to aid salmon recovery, supporting farmers and preserving farmland, and reducing flood risk for farmers and other Snoqualmie Valley residents. The WRIA 7 Committee encourages coordination with the Fish Farm, & Flood Advisory Committee for King County projects, or other sponsors' projects identified in this plan and located in the Snoqualmie APD.

To ensure that all instream and floodplain management habitat projects meet hydrological performance standards, a Beaver Management Plan should be included, when appropriate. A Beaver Management Plan should identify key flood levels (long- and short-term allowable flooding elevations and onsite/offsite key protected infrastructure flood level elevations) and standards for when, where, and what methods of beaver deterrence should be used, comply with state and county requirements.

In areas where multiple projects are proposed, the benefit of funding multiple projects to maximize biological benefit should be addressed. Although many of these projects have potential streamflow benefits, the Committee has elected not to quantify water offsets from habitat projects. More detailed habitat project descriptions are provided in Appendix H – Projects.

Table 5.2: WRIA 7 Habitat Projects

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-QA-H1	Jones Creek Relocation and Wetland Enhancement	Channel creation, installation of LWD and riparian reforestation, and wetland depression restoration	Quilceda-Allen	Fish refuge, higher quality fish and macroinvertebrate habitat, more resilient channel to handle effects of urbanization, increase hyporheic interaction	City of Marysville, Sound Salmon Solutions, and Adopt-A-Stream Foundation	$769,044
7-QA-H2	Marysville Stormwater Retrofits (Quilceda Stormwater Project)	Green stormwater infrastructure, retrofits of stormwater ponds, rainfall capture, & outreach and education	Quilceda-Allen	Enhanced infiltration will return stormwater runoff to the ground, improve water quality, and increase groundwater discharge to streams	Snohomish Conservation District	$426,000
7-QA-H3	Quilceda 8 Restoration & Potential Water Right Acquisition	Property acquisition	Quilceda-Allen	Acquisition will facilitate future restoration actions	Tulalip Tribes	Unknown

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-ES-H4	Silver Firs Stormwater Pond Retrofits (Little Bear Stormwater)	Expand existing stormwater ponds by deepening and increasing pond infiltration capacity	Estuary/Snohomish Mainstem	Enhanced infiltration will return stormwater runoff to the ground, improve water quality, and increase groundwater discharge to streams	Snohomish County	Design and Construction = $1.4 million for CIP Sites 10 and 16 (Feasibility funding secured)
7-ES-H5	Thomas' Eddy Hydraulic Reconnection	Levee and revetment removal, floodplain restoration and riparian planting	Estuary/Snohomish Mainstem	Off-channel habitat for salmon and improvement of floodplain connection and riverine processes	Snohomish County	Design, permitting, & construction = $3.5 million
7-P-H6	Snohomish Floodplain Acquisitions Phase 1 (Lund Acquisition)	Acquisition of up to 57 acres and 1.43 miles of riparian and floodplain property adjacent to the Pilchuck River	Pilchuck	Acquisition will facilitate future restoration actions	Tulalip Tribes	Acquisition = $900,000 Restoration = $300,000

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-P-H7	Pilchuck River Armoring Removal	Removal or "softening" of approximately 2,000 linear feet of bank armoring within the Middle Pilchuck subbasin	Pilchuck	Armoring removal will improve floodplain/riparian function, in-stream habitat, and water quality for adult and juvenile salmon	Tulalip Tribes	Planning = $200,000 Restoration = $500,000
7-P-H8	Living with Beavers Program	Outreach to educate landowners and encourage them to allow beavers to remain on the landscape.	Multiple (Pilchuck, Woods, Estuary/Snohomish Mainstem, Little Pilchuck)	Increased water storage, groundwater recharge, summer flows and climate change resiliency; decreased surface water temperatures	Snohomish Conservation District	Implementation: $100,296 (secured)
7-P-H9	Small Farm Storage Initiative	Capture and store stormwater runoff in manufactured landscapes, wetlands, or other storage features	Multiple (Pilchuck, Woods, Estuary/Snohomish Mainstem, Little Pilchuck)	Decrease flashy runoff events, provide seasonal habitat for amphibians, birds and insects, enhance infiltration, and recharge streams	Snohomish Conservation District	Construction = $20,000 per lined ¼-acre pond ($120,640 secured)

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-P-H10	Wetland Restoration	Complete eighteen acres of wetland restoration planting on degraded wetlands on privately owned land with the goal of improving water storage and groundwater recharge	Multiple (Pilchuck, Woods, Estuary/Snohomish Mainstem, Little Pilchuck)	Improved surface water storage, increased groundwater recharge, summer streamflows, and resilience to climate change; decreased surface water runoff	Snohomish Conservation District	Planning, design, and construction: $220,240 (secured)
7-W-H11	Woods Creek Riparian Restoration Partnership	Plant native trees and shrubs 45 acres of riparian forest along the mainstem of Woods Creek and correct between 3 and 5 fish passage barriers to improve juvenile and adult access to spawning and rearing habitat	Woods	Increased shade, decreased water temperatures, improved habitat for juvenile salmonids	Snohomish Conservation District	$650,000 (secured through DOE/NOAA and SRFB). Planting, LWD installation, & Barrier Removal = $950,000

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-S-H12	Expansion of Sultan River Side Channel Network (Sultan River Floodplain Activation)	Expansion of an existing side channel network to provide structural complexity and hydraulic diversity in the main channel	Sultan	Increased diversity in spawning habitat important for building resiliency in existing and future salmonid populations	Snohomish PUD	Design, permitting and construction = $1.1 million Maintenance and monitoring for first 5 years = $10,000/year
7-SM-H13	Haskel Slough Connectivity	Modifying the inlet dike to enhance juvenile salmon rearing and flood refuge in Haskel Slough	Skykomish Mainstem	Floodplain water storage, increase salmonid rearing habitat, and provide flood refuge habitat in a key area of the Snohomish River Basin	Tulalip Tribes	Outreach/preliminary-final designs: $400,000 Planning costs Implementation cost = $3 million

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-SM-H14	East Monroe Heritage Site Acquisition	Land acquisition along the main stem of the Skykomish River to preserve as an open space and use the site for flood water storage and displacement	Skykomish Mainstem	Acquisition of the property would sustain critical surface water and groundwater networks from being endangered or depleted. This project also protects off-channel habitats not currently protected	City of Monroe	Acquisition of 5 parcels = $3 million
7-SM-H15	Shinglebolt Slough	Reconnect the eastern, filled upstream section of Shingle Bolt Slough, remove riprap and berm along Skykomish River and create side channel habitat accessible during spring out-migration flows, install log wood jams and riparian vegetation	Skykomish Mainstem	Increase flood storage more frequently across 15 acres of floodplain. Floodplain side channels and ponded off-channel habitat areas will provide rearing habitat for salmon	Snohomish County	Design and Construction = $3,234,544 O&M = $250,000

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-SM-H16	Snohomish Confluence Project + Left Bank Floodplain reconnection at RM 1.5	Planning and property acquisition request to restore and enhance floodplain connection, abandoned side channels and connections to Riley Slough just upstream of junction of Skykomish and Snoqualmie Rivers	Skykomish Mainstem	Future opportunity to increase rearing and spawning habitat for salmon	Tulalip Tribes	Design, permit and construct = $900,000

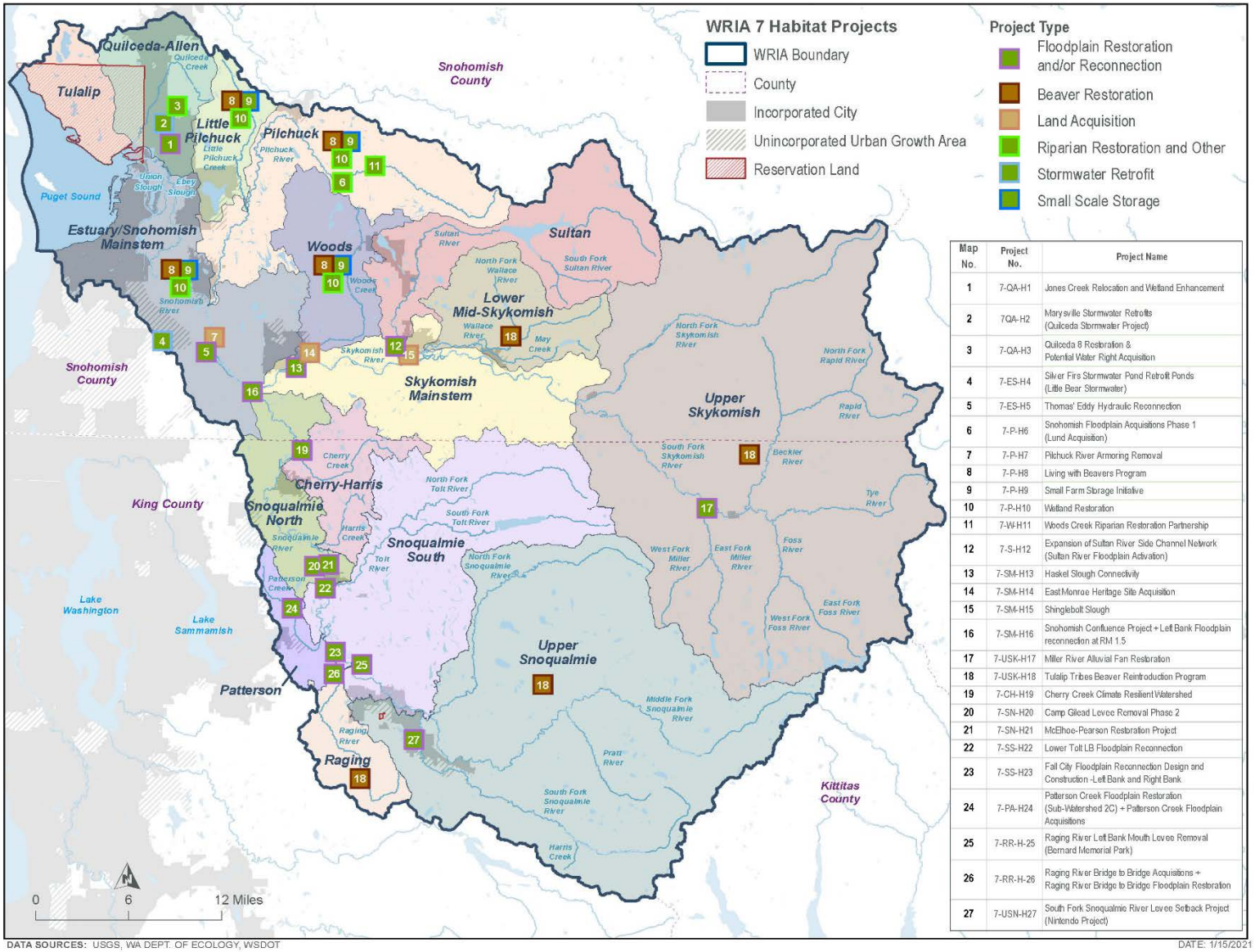
Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-USK-H17	Miller River Alluvial Fan Restoration	Riprap removal, floodplain reconnection, side channel reactivation	Upper Skykomish	Additional annual storage through floodplain reconnection, improve overall watershed hydrology which will restore habitat forming hydrologic processes for salmon downstream	King County	Three phases of design and construction = $4.6 million Fourth phase (revetment removal, revetment setback and side channel reactivation) = $2.6 million in construction costs
7-USK-H18	Tulalip Tribes Beaver Reintroduction Program	Protect hydrologic processes and function through relocation of beavers to improve fish rearing habitat and freshwater storage	Multiple (Lower Mid-Skykomish, Upper Skykomish, Raging, Upper Snoqualmie	Increase instream and riparian habitat, improve stream temperature, reduce bank erosion, improve bank and floodplain connectivity	Tulalip Tribes	$80,000 annually (secured through 2021)

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-CH-H19	Cherry Creek Climate Resilient Watershed	Suite of actions in Cherry Valley including removal of bank armoring, riparian restoration, levee improvements and levee setbacks, culvert replacements, LWD placement, side channel excavation, and small-scale storage sites.	Cherry-Harris	Floodplain reconnection, restoration of riparian areas.	Snoqualmie Valley Watershed Improvement District	Total cost unknown (Feasibility and design funding secured for small-scale storage)
7-SN-H20	Camp Gilead Levee Removal Phase 2	Levee removal on the left bank of the Snoqualmie River to reconnect floodplain habitat.	Snoqualmie North	Floodplain reconnection, restoration of riparian areas and providing additional rearing and spawning habitat.	King County	Design, permit, construct and monitor = $1.5 million

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-SN-H21	McElhoe-Pearson Restoration Project	Removal of the McElhoe Pearson levee or creation of a flow through channel to improve habitat connectivity.	Snoqualmie North	Floodplain reconnection, restoration of riparian areas and providing additional rearing and spawning habitat.	King County	$918,000
7-SS-H22	Lower Tolt LB Floodplain Reconnection (SR 203 to Confluence)	Feasibility study to determine options for fully or partially removing existing levee/revetment to improve floodplain connection.	Snoqualmie South	Future restoration actions will provide salmon access to off channel habitat.	Snoqualmie Tribe	Feasibility = $250,000
7-SS-H23	Fall City Floodplain Reconnection Design and Construction – Left Bank and Right Bank	Project includes 2 adjacent floodplain reconnection projects: Barfuse Project and Hafner Project.	Snoqualmie South	Floodplain restoration will improve juvenile rearing and adult spawning habitat.	King County	$15,250,000 ($550,000 secured)

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-PA-H24	Patterson Creek Floodplain Restoration (Sub-Watershed 2C) + Patterson Creek Floodplain Acquisitions	Property acquisition to perform floodplain restoration through riparian restoration and channel complexity.	Patterson	Floodplain restoration will improve juvenile rearing and adult spawning habitat.	King County Department of Natural Resources	Acquire parcels and perform restoration actions = $1,625,000
7-RR-H-25	Raging River Left Bank Mouth Levee Removal (Bernard Memorial Park)	Levee removal at Bernard Memorial Park and reconnect 6 acres of floodplain habitat.	Raging	Floodplain restoration will improve juvenile rearing and adult spawning habitat.	Mountains to Sound Greenway Trust	Design, permitting, and construction = $3.5 million
7-RR-H-26	Raging River Bridge to Bridge Acquisitions + Raging River Bridge to Bridge Floodplain Restoration	Property acquisitions for future floodplain restoration projects. Proposed restoration actions include removal and setback of levee along right bank of Raging River.	Raging	Floodplain restoration will improve juvenile rearing and adult spawning habitat.	King County Department of Natural Resources	$15.5 million

Project Number	Project Name	Project Description	Subbasin(s)	Anticipated Ecological Benefits	Project Sponsor	Estimated Cost
7-USN-H27	South Fork Snoqualmie River Levee Setback Project (Nintendo Project)	Levee setback and creation of floodplain and riparian habitat.	Upper Snoqualmie	Improve watershed hydrology to benefit downstream water quality, summer flows, water temperature, etc.	City of North Bend	$8.6 million



Map No.	Project No.	Project Name
1	7-QA-H1	Jones Creek Relocation and Wetland Enhancement
2	7QA-H2	Marysville Stormwater Retrofits (Quilceda Stormwater Project)
3	7-QA-H3	Quilceda 8 Restoration & Potential Water Right Acquisition
4	7-ES-H4	Silver Firs Stormwater Pond Retrofit Ponds (Little Bear Stormwater)
5	7-ES-H5	Thomas' Eddy Hydraulic Reconnection
6	7-P-H6	Snohomish Floodplain Acquisitions Phase 1 (Lund Acquisition)
7	7-P-H7	Pilchuck River Armoring Removal
8	7-P-H8	Living with Beavers Program
9	7-P-H9	Small Farm Storage Initiative
10	7-P-H10	Wetland Restoration
11	7-W-H11	Woods Creek Riparian Restoration Partnership
12	7-S-H12	Expansion of Sultan River Side Channel Network (Sultan River Floodplain Activation)
13	7-SM-H13	Haskel Slough Connectivity
14	7-SM-H14	East Monroe Heritage Site Acquisition
15	7-SM-H15	Shinglebolt Slough
16	7-SM-H16	Snohomish Confluence Project + Left Bank Floodplain reconnection at RM 1.5
17	7-USK-H17	Miller River Alluvial Fan Restoration
18	7-USK-H18	Tulalip Tribes Beaver Reintroduction Program
19	7-CH-H19	Cherry Creek Climate Resilient Watershed
20	7-SN-H20	Camp Gilead Levee Removal Phase 2
21	7-SN-H21	McElhoe-Pearson Restoration Project
22	7-SS-H22	Lower Tolt LB Floodplain Reconnection
23	7-SS-H23	Fall City Floodplain Reconnection Design and Construction -Left Bank and Right Bank
24	7-PA-H24	Patterson Creek Floodplain Restoration (Sub-Watershed 2C) + Patterson Creek Floodplain Acquisitions
25	7-RR-H-25	Raging River Left Bank Mouth Levee Removal (Bernard Memorial Park)
26	7-RR-H-26	Raging River Bridge to Bridge Acquisitions + Raging River Bridge to Bridge Floodplain Restoration
27	7-USN-H27	South Fork Snoqualmie River Levee Setback Project (Nintendo Project)

Figure 5.2: WRIA 7 Habitat Projects

5.2.3 Prospective Projects and Actions

In addition to the projects described in this chapter, the WRIA 7 Committee supports projects and actions that achieve the following goals:

- **Acquisitions of water rights to increase streamflow and offset the impacts of PE wells**. Water rights should be permanently and legally held by Ecology in the Trust Water Rights Program to ensure that the benefits to instream resources are permanent. The WRIA 7 Committee acknowledges that all water rights transactions rely on willing sellers and willing buyers. The Committee supports retirement of agricultural/irrigation water rights for the benefit of instream flows that do not currently or potentially serve agricultural lands of long-term commercial significance consistent with the Growth Management Act (GMA) (Snoqualmie APD in King County and prioritized agricultural lands in Snohomish County). The Committee supports the acquisition of municipal and industrial water rights to increase streamflows and offset the impacts of PE wells where the current withdrawal impacts surface water or groundwater in direct hydraulic continuity to surface water. Prior to purchase, a water purveyor with a more efficient distribution system (with limited to no impact to streams that frequently experience critical low flows) would be identified.
- **Projects or programs that support improved lake level management to reduce flood risk and increase streamflow during low flow periods**. Projects would improve existing lake outlet structures and management of existing outlet structures to benefit instream resources.
- **Projects shown to have direct improvements to benefit streamflow above and beyond existing requirements.** For example, develop new stormwater infiltration facilities, upgrade existing stormwater retention facilities to provide infiltration, remove impervious surfaces (de-pave projects), and encourage rainwater catchment and storage to help manage runoff from impervious surfaces. The Committee also supports the expansion of voluntary programs that provide rebates or incentives to cover most or all of the cost of installing cisterns and rain gardens at private residences. Cisterns can benefit water quality by helping to control stormwater and reduce sewer overflow events during high flows.
- **MAR projects that offset the impacts of PE wells and improve streamflow during critical low flow periods**. The Committee supports managed aquifer recharge projects when (1) feasibility studies ensure site conditions and project benefits are understood with best available information prior to construction and (2) projects will not preclude or counteract ecological process-based stream restoration and floodplain connection efforts, or cause other unintended negative ecological consequences, at the expense of re-timing streamflows.
- **Projects or programs that support connections of existing homes on PE wells to public water systems, without impacting critical areas or indirectly encouraging development outside of UGAs**. Projects could provide financial incentives for homes using PE wells to connect to public water service and decommission the well and/or provide financial support for water purveyors to extend water distribution systems further into their

individual service areas, particularly where PE wells are concentrated or rapid rural growth is anticipated. The purveyor will need to demonstrate how they plan to connect PE well users to the extended line. The purveyor will need to forgo the consolidation of the groundwater right(s) exempt from the permit requirement under RCW 90.44.050 (the groundwater right associated with the formerly exempt well) through the RCW 90.44.105 process.

- **Projects or programs that provide outreach and incentives to rural landowners with PE wells to lower indoor and outdoor water use through water conservation best practices, and comply with drought and other water use restrictions**. Programs would encourage the following types of water conservation strategies and best practices: natural lawn care; irrigation efficiency; rainwater catchment and storage; drought resistant and native landscaping; smaller lawn sizes; forest, meadow, and wetland conservation; indoor water conservation; and voluntary metering. Conservation and water use efficiency projects that involve water rights that are intended to provide water offset for the purposes of this plan should permanently convey the saved water to Ecology to be held in the Trust Water Rights Program for instream flow purposes. The Committee encourages these projects or programs to monitor effectiveness in reducing water use.
- **Studies, monitoring, and long-term forest management projects that improve the ability of forests to benefit streamflow** by protecting and improving hydrological processes, including reducing runoff and improving the retention of snow on the landscape. As an example, the Committee supports the Snoqualmie Indian Tribe's study to model the interaction of riparian management strategies and climate projections on Snoqualmie River hydrology and water temperature, including modeling the ability of canopy gaps to affect snow recruitment and storage (extend the melt-off period later in the season) in the Snoqualmie watershed. The Committee supports forest management projects that manage for tree stand age and extended harvest rotation to improve streamflow during low flow periods. The U.S. Environmental Protection Agency's (EPA) Visualizing Ecosystem Land Management Assessments (VELMA) modeling tool may help identify targeted forest management practices to improve streamflow.
- **Projects that beneficially switch the source of withdrawal from surface to groundwater, or other beneficial source exchanges such as a source switch to recycled water**. The benefits of a source exchange project may depend on the connection between the sources, benefits to instream resources (e.g., a surface to groundwater source switch may have negative impacts on fish if the groundwater derived base flow provides flow and or temperature refuge in streams with high water temperature issues). Source switches should consider the potential consequences of unsustainable withdrawals from the affected aquifer. Additionally, the impacts to streamflow (particularly baseflow) would need to be assessed. Specifically, source switches should take into consideration that existing recycled water facilities in WRIA 7, discharging to the river and other uses, do not represent a new source of water.

- **Projects that provide streamflow and habitat benefits by returning stream habitat to a more natural state**, such as through levee setback or removal, river-floodplain restoration, instream habitat restoration, and beaver restoration.

5.3 Project Implementation Summary

5.3.1 Summary of Projects and Benefits

Per RCW 90.94.030(3), this watershed plan must include actions necessary to offset potential impacts to instream flows associated with new PE well water use and result in a NEB to instream resources within the WRIA.

As specified in Chapter Four, the Committee estimated 797.4 acre-feet per year (AFY) of consumptive use from new PE wells over the planning horizon. The projects included in Table 5.1 provide an estimated offset of 1,373.4 AFY and exceed the consumptive use estimate.

The Committee identified a total of 27 habitat projects, included in Table 5.2. Ecological benefits associated with these projects are myriad and include floodplain restoration, wetland reconnection, availability of off-channel habitat for juvenile salmonids, reduction of peak flow during storm events, increase in groundwater levels and baseflow, and increase in channel complexity. These habitat projects will contribute to addressing limiting factors for salmonids in WRIA 7 by returning floodplain, riparian, and wetland areas to a more natural state. Floodplain reconnection and beaver restoration projects will also contribute to restoring hydrologic processes.

While many of these projects have potential streamflow benefits, water offset from habitat projects are not accounted for in this plan. The ecological and streamflow benefits from habitat projects are supplemental to the quantified water offsets.

As stated in Chapter Six, the WRIA 7 Committee encourages monitoring projects to improve understanding of outcomes. Specifically, the Committee encourages project sponsors to monitor (1) water offset projects to ensure they provide anticipated offset benefits and (2) habitat projects to ensure they achieve anticipated ecological benefits and to improve understanding of their streamflow benefits.

5.3.2 Cost Estimate for Offsetting New Domestic Water Use Over 20 Year Planning Horizon

Per RCW 90.94.030(3)(d), this watershed plan must include an evaluation or estimation of the cost of offsetting new domestic water uses over the subsequent 20 years. To satisfy this requirement, the Committee developed planning-level cost estimates for each of the water offset projects listed in Table 5.1. The Committee also included costs estimates for habitat projects in Table 5.2 when that information was readily available.

Cost estimates for water offset projects included in the plan are planning level only:

- The cost estimate for the Snoqualmie Watershed MAR project is based on estimated cost per acre-foot and the Committee's offset estimate of 100 AFY. Cost may vary for each of the potential MAR sites and will depend on the number of MAR projects developed.
- Cost estimates for water right acquisitions are also based on estimated cost per acre-foot and the Committee's offset estimate (irrigation water rights) or authorized volume (municipal water rights). Costs range widely for water right acquisitions; these estimates may not reflect actual costs. For all water right acquisitions, an extent and validity determination will need to be completed to establish how much water can be permanently protected before transferring the water right into Ecology's trust water resources program. Costs for these water right acquisitions will be negotiated between the willing seller and the willing buyer.

For water offset projects, Ecology used costs from recently completed water right acquisitions or recent grant applications for similar projects types that have come through the streamflow restoration grants program as a funding template. Project costs for other water offset project types will be further developed once the project sponsors begin to seek funding and prepare grant applications. The estimated cost for implementing individual water offset projects range from $5,000 for the Lower Pilchuck No. 11 water right acquisition project to $3.5 million for the SVWID surface water storage project. The total estimated cost for implementing the water offset projects listed and described in this chapter is approximately $9 million.

Most of the cost estimates for habitat projects included in the plan were developed by the project sponsor as they have previously sought funding for their respective projects. The estimated cost for implementing individual habitat projects range from $20,000 (per lined storage pond) for the Snohomish Conservation District Small Farm Storage Initiative project to $15.5 million for the Raging River Bridge to Bridge Acquisitions + Raging River Bridge to Bridge Floodplain Restoration project.

5.3.3 Certainty of Implementation

Certainty of implementation depends on many factors, including identification and support of project sponsors, readiness to proceed/implement the project, and identification of potential barriers to completion. Each of the WRIA 7 water offset projects listed in Table 5.1 have project sponsors who are ready to proceed with project development. The City of Lake Stevens is pursuing the Lake Stevens outlet structure and lake level management project and has already conducted preliminary engineering studies. Tulalip Tribes is sponsoring the Coho Creek streamflow enhancement project and has been restoring Coho Creek flows and habitat since 2001. The SVWID is sponsoring the Snoqualmie Valley storage project, funded in part by a 2019 Ecology grant. WWT is sponsoring the MAR and water right acquisition projects to pursue implementation. This increases certainty of implementation of these projects.

One of the largest barriers or challenges to implementation is funding. Willingness of landowners to sell existing water rights is one very uncertain component of this plan. Other significant potential barriers include land ownership and willingness to sell or allow development of project footprints, technical feasibility (e.g. amenable soil characteristics for MAR or water storage

projects), and legal feasibility (e.g., ability to acquire new water rights for MAR and water storage; land use permitting to construct in floodplains, wetlands, or other critical areas).

Many of the projects identified by the Committee have not yet secured landowner approval. While landowner acknowledgement and approval is not required for projects to be included in this watershed plan, some projects will need landowner approval prior to construction.

In some circumstances, there are inherent uncertainties in protecting offset water once it has been secured for streamflow enhancement purposes, partially given that WRIA 7 remains un-adjudicated. Although there is uncertainty, the types of water offset projects proposed in this plan have been successfully implemented within Washington State and the technology to implement these types of projects is established. Purchasing existing water rights for incorporation into the Trust Water Rights Program has been occurring throughout the state since the early 1990s.

The WRIA 7 Committee recommends projects that infiltrate water (e.g., MAR projects and stormwater projects) include estimated operations and maintenance costs in applications for streamflow restoration funding.

All 27 of the habitat projects listed in this watershed plan have project sponsors who have developed their respective projects over the years and are dedicated to seeing these projects implemented to improve the instream resources of the salmonid species in their project areas. The habitat projects listed in this plan are similar to projects being implemented throughout the state to help restore and enhance instream resources within their respective watersheds. Having sponsors who will advocate for these projects helps provide reasonable assurance that this plan can be implemented.

It is important for the water offset benefits implemented under this watershed plan to last as long as the new consumptive uses. The water offset projects identified in this plan should provide offset benefits well into the future. Once lake outlet structures are replaced and lake management operational procedures are implemented, those offset benefits will persist. The source water for the Coho Creek enhancement project will be generated indefinitely as it comes from regional growth served by a reclaimed water facility. Once water rights are transferred into the Trust Water Rights Program, those benefits will persist in perpetuity. Water storage and retiming projects are expected to provide long-term benefits. This gives the Committee reasonable assurances that the water offset benefits will persist for as long as the new uses.

The WRIA 7 Committee developed adaptive management recommendations in Chapter Six of this plan to increase reasonable assurance that the projects and actions in the plan will be implemented.

Chapter Six: Policy, Implementation, and Adaptive Management Recommendations

6.1 Policy Recommendations

The Streamflow Restoration law lists optional elements Committees may consider including in the watershed plan to manage water resources for the WRIA or a portion of the WRIA (RCW 90.94.030(3)(f)).

The WRIA 7 Committee included what they have termed "policy and regulatory recommendations" in this watershed plan to show support for programs, policies, and regulatory actions that would contribute to the goal of streamflow restoration. When similar concepts arose from multiple Watershed Restoration and Enhancement Committees, the WRIA 7 Committee coordinated with those other Committees to put forward common language for inclusion in the watershed plans, as appropriate. Coordination also occurred for jurisdictions that cross multiple watersheds. All projects and actions the Committee intended to count toward the required consumptive use offset or Net Ecological Benefit (NEB) are included in Chapter Five: Projects and Actions.[17]

As required by the Final NEB Guidance, the Committee prepared the watershed plan with implementation in mind. However, as articulated in the Streamflow Restoration Policy and Interpretive Statement (POL 2094), "RCW 90.94.020 and 90.94.030 do not create an obligation on any party to ensure that plans, or projects and actions in those plans or associated with rulemaking, are implemented."

The Committee initially identified a list of potential policy and regulatory recommendations. After iterative rounds of discussion, the Committee narrowed the recommendations in this section to those that both supported the goal of streamflow restoration and had full support from the Committee. Committee members identified as the implementing entity for each recommendation are committed to investigating the feasibility of the recommendation. The identification and listing of these policy and regulatory recommendations is directly from the WRIA 7 Committee members and is not endorsed or opposed by Ecology.

The WRIA 7 Committee supports the following recommendations:

[17] "New regulations or amendments to existing regulations adopted after January 19, 2018, enacted to contribute to the restoration or enhancement of streamflows may count towards the required consumptive use offset and/or providing NEB." Streamflow Restoration Policy and Interpretive Statement, POL-2094

6.1.1 Well Reporting Upgrades

Proposed implementing entity: Ecology

Recommendation:

Change the Ecology well tracking system in the following ways, in order to efficiently and transparently track the number and location of permit-exempt wells in use:

- Implement a web-based well report form that mimics the current well report forms, and that uploads directly to Ecology's database with Ecology verification;
- Require coordinates (latitude and longitude) of wells on well report forms, and implement an intuitive web tool for well drillers which automatically provides the Public Lands Survey (PLS) location and coordinates for a new well;
- Identify permit-exempt wells on well report forms; and
- Provide Well ID Tag numbers to older wells, and associate well decommissioning, replacement, or other well activities with the Well ID Tag.

Purpose:

Directly and efficiently address identified shortcomings in Ecology's existing well tracking database and reporting protocols. Accurate tracking of the locations and features of PE wells will support the WRIA 7 Committee's desire to engage in monitoring and adaptive management after adoption of the watershed plan.

Funding Sources:

Leverage existing resources and efforts currently underway through the Ecology Well Construction Technical Advisory Group (TAG) and other departmental means. Additional funding from the Washington State Legislature or existing local permitting fees to increase capacity for Ecology to verify well reports may aid in implementing this recommendation in a timely manner.

Additional information or resources: Well Report Location Accuracy Study; Mason County Well Report Location Accuracy Study[18]

6.1.2 Encourage Conservation Through Connections to Public Water

Proposed implementing entities: County and city planning departments; public utilities and other water purveyors; Ecology; Department of Health.

Recommendation:

[18] Supplemental resources are available online: https://www.ezview.wa.gov/Portals/_1962/images/WREC/WRIA07/Final%20Plan/Policy%20Supplemental%20Materials.pdf

- Adopt and implement consistent and coordinated policies that reduce dependence on water use from PE wells and promote timely and reasonable connections to municipal and regional water supplies.
- Water purveyors and county/city land use planners explore opportunities to extend water distribution systems further into their individual service areas, particularly where rapid rural growth is anticipated.
- Develop cost-benefit analysis and environmental and fiscal implications to (1) fund programs to support connections to public water systems and (2) gain political support.

Purpose:

Reduce uncertainty about future streamflow and aquifer impacts from PE wells. Encourage state/local policies and funding to support streamflow objectives within the watershed plan. Demonstrate the WRIA 7 Committee's endorsement of encouraging conservation through promoting connections to public water systems, provided that all provisions of GMA continue to be followed.

Funding Sources:

Existing fees collected through local permitting processes; pass-through fees associated with well maintenance services collected by service providers; state or local rate increases or taxes.

Additional information or resources: Average Water Use Data[19]

On average, public water users consume less per capita than WRIA 7 PE well estimates.

6.1.3 Development and Use of Reclaimed Water to Address the Impact of PE Wells

Proposed implementing entities: Washington State Legislature; Ecology.

Recommendation:

Enact and promulgate state laws, rules, and regulations that encourage the development and use of reclaimed water, for the purpose of:

- Offsetting the impact of or providing an alternative to PE wells using reclaimed water;
- Facilitating enhanced reclaimed water treatment to enable its use for streamflow restoration projects;
- Facilitating the development of streamflow restoration projects that use appropriately treated reclaimed water;

[19] Supplemental resources are available online: https://www.ezview.wa.gov/Portals/_1962/images/WREC/WRIA07/Final%20Plan/Policy%20Supplemental%20Materials.pdf

- Encouraging developers to integrate rainwater and/or reclaimed water into their projects for the purpose of avoiding or limiting use of a PE well;
- Encouraging partnership with the local water purveyors, where appropriate.

Purpose:

Offset water that would otherwise be diverted from the finite supply in rivers and streams due to PE wells. Reduce the amount of treated wastewater discharged into receiving water bodies. Create water supply options as an alternative to or to offset PE wells, while enhancing resiliency against drought and climate change.

Funding Sources:

If Ecology does not have capacity to support the work to integrate this proposal into the RCW and WAC with existing staffing and resources, the WRIA 7 Committee recommends the Washington State Legislature provide funding for this purpose.

6.1.4 Voluntary Domestic PE Well Metering Program

Proposed implementing entities: Ecology; King County; King and/or Snohomish Conservation Districts.

Recommendation:

Pilot a voluntary five-year program in one or more WRIA 7 subbasins to meter domestic PE wells (indoor and outdoor residential use). Supplement the voluntary metering program with a robust education and community engagement program about water consumption and conservation.

Purpose:

Increase confidence in assumptions regarding the average individual PE well water use to inform the adaptive management process and future water management and planning efforts. Data could inform (1) growth policies and patterns, (2) where to target incentives and education/outreach programs, and (3) where to place resources across subbasins to help improve streamflow, water levels, and temperature.

Funding Sources:

General operation or appropriated funds from (1) the state, (2) counties, and/or (3) conservation districts related to water, habitat restoration (salmon recovery), or housing. Environmental grants.

6.1.5 Water Conservation Education & Incentives Program

Proposed implementing entities: Ecology and counties; with support from conservation districts and non-governmental organizations.

Recommendation:

Ecology partners with counties and conservation districts to develop and implement outreach and incentives programs that encourage rural landowners with domestic PE wells to (1) reduce

their indoor and outdoor water use through water conservation best practices; and (2) comply with drought and other water use restrictions.

Purpose:

Raise awareness of the impacts domestic PE well water usage has on (1) groundwater levels and (2) the connection to streams and rivers. Supplement water offset and restoration projects, especially in subbasins critical for fish and where water offsets were difficult to find.

Funding Sources:

Potential funding sources could include new funding from Washington State Legislature; grants (e.g., Ecology's Streamflow Restoration Grant Program); allocation of Ecology resources; existing fees associated with new domestic PE wells; contributions from local governments and tribes; and/or part of county or conservation district ongoing education, outreach, and incentive programs.

6.1.6 Statewide Mandatory Water Conservation Measures in Unincorporated Areas of the State During Drought

Proposed implementing entities: Washington State Legislature, Ecology.

Recommendation:

Consider implementing mandatory water conservation measures for PE well users in unincorporated areas of the state during drought conditions, as defined by WAC 173-166. Measures would focus on limiting outdoor water use, with exemptions for growing food, watering stock, or for those participating in a Fire Adapted Community program.

The Washington State Legislature could require Ecology or counties to implement water conservation policies. Ecology could write a rule to require water conservation measures. County councils could pass legislation encouraging or requiring water conservation to the extent such mandates are lawful and enforceable or implementable.

Purpose:

Reduce water usage from PE well users during drought. Reduce impacts on streamflows from PE well users and contribute to net ecological benefit. Increase climate change resilience.

Funding Sources:

Potential funding sources could include new funding from Washington State Legislature; allocation of existing Ecology resources; and/or existing fees associated with new domestic PE wells.

Additional Information or Resources:

https://www.nfpa.org/-/media/Files/Public-Education/Resources/Safety-tip-sheets/WildfireRiskReductionSafetyTips.pdf

6.2 Implementation and Adaptive Management Recommendations

The Committee supports an adaptive management process for implementing the WRIA 7 watershed plan. Adaptive management is defined in the NEB Guidance as "an interactive and systematic decision-making process that aims to reduce uncertainty over time and help meet project, action, and plan performance goals by learning from the implementation and outcomes of projects and actions," (Ecology 2009). The WRIA 7 Committee believes that adaptive management requires the ability to make adjustments, if needed.

Adaptive management will help address uncertainty and increase assurance of achieving plan objectives by identifying and integrating additional information, data, and research—including related climate change impacts on hydrology—that may assist with future design and implementation of projects. It will also support the improved coordination of water resources noted in Section 1.1. To the extent possible, each of the recommendations put forth by the Committee includes a funding mechanism. Some of the adaptive management recommendations included in this section are policy recommendations that the WRIA 7 Committee believes will specifically support adaptive management of the watershed plan.

6.2.1 Existing Challenges

The Committee Identified the following challenges:

- Our global climate is changing. While the effects of climate change over the 20-year life of this watershed plan cannot be precisely known, shifts in climatic conditions will influence the hydrologic regime in the watershed and will impact instream flows. Rainfall, snowmelt, and evapotranspiration have been identified as the primary mechanisms driving changes in groundwater storage. These mechanisms will be affected by a changing climate. Air and water temperatures will increase and summer streamflows will be reduced. Groundwater pumping and indirect effects of irrigation and land use changes associated with new PE wells will impact groundwater resources and the availability for future water supply and instream flows. The Committee recognizes that there is no statutory mechanism to ensure that the goals of this plan, to offset PE wells and achieve NEB, will be met under future climatic conditions.
- Projects identified in this plan are expected to increase groundwater storage and augment instream flows as they are implemented and provide aquatic habitat benefits. However, without significant investment in further detailed feasibility studies and identification of project sponsors, many projects remain highly conceptual.
- There is some uncertainty that offset and habitat projects will continue to function as designed, and generate streamflow benefit to offset PE well consumptive use and NEB under a changing climate.
- The adaptive management provisions of this plan should assist with identifying the importance of monitoring and assessing the validity of the estimated offset projections as the plan is implemented to determine whether projects are functioning as

designed—and as hydrologic conditions change over time, allow for course corrections where needed. However, current policy does not allow for projects to be added after the plan is finalized and approved, nor is it clear who "owns" the implementation and adaptive management of the plan. It is also unclear who pays for or ensures that projects are implemented if projects are not funded through the competitive funding source allocated by the State.

- The Committee identified uncertainties associated with the PE well projection. One of these uncertainties is that the methods used to generate the PE well projections assumes that in the 2018-2038 period, growth and irrigation practices will mirror past trends and practices. New PE wells and irrigation patterns require monitoring to determine whether the number of new PE wells and associated consumptive use exceeds the volume that was forecast for purposes of this plan.
- The Committee identified lack of (1) clear implementation obligations or responsibilities applicable to plan participants or other state or local authorities, (2) integration of plan commitments to existing systems governing land and water uses, and (3) adequate funding as additional challenges that may increase uncertainty in plan outcomes.
- This watershed plan is narrow in scope and is not intended to address all water uses or related issues within the watershed. This plan does not address potential impacts to streamflow and habitat as a result of watershed activities beyond new PE wells. For example, this plan does not address potential impacts to streamflow from new permitted withdrawals of surface and groundwater and this plan does not address the needs of all current and future water users in the watershed.
- The Committee has engaged in collective learning about water resources through this planning effort. This collective knowledge could be applied through a broader regional water supply planning effort. If a more comprehensive approach is developed to improve coordination of water resources for both instream and out of stream uses that result in improvements in WRIA 7 watershed health, the Committee will support development of a similarly collaborative and comprehensive planning process. It is expected that the planning process would need to expand to include representatives of all relevant entities in order to address all water resource needs, ensure sustained cooperation, and ultimately improved streamflow.

To address some of the above challenges, the WRIA 7 Committee recommends the following implementation, monitoring, and adaptive management strategies, and proposes an implementing entity, roles and responsibilities, funding mechanisms, and resulting actions for each.

6.2.2 Implementation Recommendations[20]

[20] These recommendations are provided by the WRIA 7 Committee for Ecology's consideration in developing an efficient and effective implementation and adaptive management program.

The WRIA 7 Committee developed the following implementation recommendations to address some of the challenges identified above. The recommendations in this section have the full support of the Committee. Committee members who have been designated as implementing entities have committed to investigating the feasibility of the recommendation. The WRIA 7 Committee supports:

Funding for Adaptive Management

The Committee recommends that the Legislature provide funding and a structure to monitor plan implementation (including tracking of new PE wells and project implementation by subbasin) and develop a process to adaptively manage implementation if offsets and NEB are not being met as envisioned by this watershed plan. The legislature should also provide funding to support the participation of entities on the Committee, a needed.

Additional Funding for Project Implementation

The Committee recommends that Ecology:

- Track Streamflow Restoration Grant Program funds requested against available capital funding, by WRIA and across the state;
- Revises grant guidance to prioritize projects in approved watershed plans; and/or
- Requests additional funds from the Legislature, if needed, to fully implement the offset and NEB projects identified in each watershed plan or rulemaking process under RCW 90.94.020 and RCW 90.94.030.

Adding Projects to the Plan

The Committee recommends that the Legislature allow Ecology to accept, review, and approve the addition of projects to this watershed plan, such as the prospective projects and actions identified in Chapter Five which may be further developed during the 20-year planning horizon. As described in Section 6.2.3, Ecology should consider the Committee's recommendations to adjust projects and actions.

The Committee supports continued coordination with salmon recovery efforts across the basin as adaptive management is implemented and new projects are added. In keeping with the Committee's commitment to strive for offset projects in all subbasins with consumptive use impacts, the Committee recommends that new projects may be considered for addition to this plan. If habitat projects emerge in the Tulalip subbasin that are appropriate and consistent with the type and nature of projects already on the project list, the Committee recommends these be considered for addition to this watershed plan.

If water offset projects emerge in subbasins that do not currently have water offsets and these projects are appropriate and consistent with the type and nature of projects already on the project list, the Committee recommends these be considered for addition to this watershed plan. If any of the 38 projects identified in this plan are not able to be implemented due to feasibility

limitations or other reasons, the Committee intends to adaptively manage the project list to identify replacement projects with similar benefits.

If any of the 38 projects identified in this plan are not able to be implemented due to feasibility limitations or other reasons, the Committee intends to adaptively manage the project list to identify replacement projects with similar benefits.

Implement a Process and Program for Tracking PE Wells and Project Implementation

The Committee has identified the need to track streamflow restoration projects and new domestic PE wells in order to:

- Improve the capacity to conduct implementation monitoring of streamflow restoration projects and actions.
- Develop grant funding opportunities and track associated costs.
- Provide a template for adaptively managing emergent streamflow restoration needs.

The Committee recommends piloting the Salmon Recovery Portal (https://srp.rco.wa.gov/about), managed by the Recreation and Conservation Office (RCO), for satisfying these needs. The implementation of project tracking through a pilot program using the Salmon Recovery Portal will be coordinated by the Washington Department of Fish & Wildlife (WDFW) in collaboration with Ecology, and RCO. To improve harmonization of streamflow restoration with ongoing salmon recovery efforts, local salmon recovery Lead Entity (LE) Coordinators shall be consulted prior to initial data uploads. While input and oversight is welcomed, no commitment of additional work is required from LE Coordinators. University of Washington (UW) data stewards will be employed to conduct data entry, quality assurance, and quality control (see supplemental document: project tracking). The Committee recommends that tracking and reporting be completed by Ecology and WDFW biennially.

Additional Information or Resources: WDFW Proposed Project Tracking Supplement[21]

Continue Monitoring of Streamflow and Groundwater Levels

This watershed plan is one of many water resource management efforts underway in WRIA 7. Understanding the status and trends of streamflows in the basin will assist with adaptively managing this plan. The Committee understands that neither the impact of individual projects nor new PE wells would be tracked through monitoring streamflow or groundwater levels, but the Committee believes that monitoring assists with an overall understanding of the hydrology in the basin.

[21] Supplemental resources are available online: https://www.ezview.wa.gov/Portals/_1962/images/WREC/WRIA07/Final%20Plan/Policy%20Supplemental%20Materials.pdf

As such, the Committee recommends that agencies with current or planned gauging stations and groundwater monitoring programs continue funding and/or seek supplemental funding sources to ensure that monitoring continues and the data is publicly available. This group includes counties, Ecology, USGS, and other relevant entities. The Committee would support the development of a shared clearinghouse so that external reports, data, and links to hydrological and hydrogeological data are easier to find and use. The development of widespread groundwater elevation tracking across the WRIA would help monitor trends.

Additional Information or Resources: Existing Streamflow and Groundwater Monitoring[22]

Continue Studies that Improve Understanding of WRIA 7 Hydrology

The Committee supports the continuation or initiation of research, models, and additional datasets that provide regional, basin-wide, and site-specific information to better understand the hydrology of WRIA 7 and inform the adaptive management of this plan. Examples could include the recent Snoqualmie Indian Tribe's forest gap study, UW Climate Impacts Group Research, Snoqualmie Indian Tribe/EPA VELMA modeling, National Marine Fisheries Service/National Oceanic and Atmospheric Administration monitoring and hydrology-fish life cycle modeling, King County water quality monitoring, and others).

Monitor Projects for Effectiveness

The Committee recommends that Ecology require effectiveness monitoring for projects funded by the Streamflow Restoration Grant Program to ensure that projects continue to function as designed and generate streamflow benefit to offset PE well consumptive use under a changing climate. The Committee also supports project sponsors using best available science to monitor project effectiveness and incorporating monitoring into the cost and implementation of offset projects.

Through development of the project list, the Committee discussed streamflow benefits from habitat projects, such as levee setbacks and floodplain reconnection projects. Due to uncertainty, the Committee did not count the water offset from these projects, although the Committee believes these projects can provide streamflow benefit. The Committee supports monitoring habitat projects to better understand their streamflow benefits. Monitoring pre- and post-project groundwater levels, streamflow, conducting aquifer testing (transmissivity, hydraulic conductivity, and storage properties), groundwater/surface water modeling, and completing performance monitoring can help improve understanding of streamflow benefits from habitat projects.

[22] Supplemental resources are available online: https://www.ezview.wa.gov/Portals/_1962/images/WREC/WRIA07/Final%20Plan/Policy%20Supplemental%20Materials.pdf

Table 6.1: Recommended Implementation Actions

Action	Responsible Entity/Frequency	Funding Considerations
Track building permits issued with PE wells, implemented projects and a summary of each by subbasin	Counties/annually WDFW, Ecology /biennially	The number of building permits and associated fees are transmitted to Ecology annually. No additional funding is needed. County costs funded by existing fees for new PE wells[23] ECY and WDFW may need additional funding to maintain the Salmon Recovery Portal and report to Committee
Monitor streamflow and groundwater levels	Various (USGS, Ecology, Counties, etc.)	External entities fund and implement these programs. Committee support may be helpful in communicating the importance and ensuring continuation of these efforts.
Continue studies that improve understanding of WRIA 7 hydrology	Various (University of Washington, Counties, Tribes, NGOs, etc.)	These studies will require additional and new funding outside the Streamflow Grant process. Committee support may be helpful in securing outside funds.
Monitor projects to determine effectiveness of streamflow benefits	Project sponsors	Most projects in Chapter Five do not include effectiveness monitoring details or associated costs. As projects are proposed, sponsors should build effectiveness monitoring into the design and budget requests of projects – particularly for certain offset projects, such as MAR or new reservoir creation that have not been implemented in WRIA 7 for streamflow benefits in the past.

6.2.3 Adaptive Management Recommendations[24]

Reconvening the WRIA 7 Committee

[23] RCW 90.94.030 (4)(a)(A) requires that, "an applicant shall pay a fee of five hundred dollars to the permitting authority," and RCW 90.94.030(4)(a)(iv) requires that local jurisdictions "Annually transmit to the department three hundred fifty dollars of each fee collected under this subsection."

[24] These recommendations are provided by the WRIA 7 Committee for Ecology's consideration in developing an efficient and effective implementation and adaptive management program.

The WRIA 7 Committee recommends that Ecology reconvene the Committee under the following circumstances:

- April 2026, 2032, and 2038;
- If after 2026, at the time of developing the biennial report (see watershed plan implementation reports below), Ecology identifies that the adopted goals of the watershed plan are not on track to be met in the plan's 20-year timeframe;
- If after 2026, a Committee member identifies, after reviewing the watershed plan implementation report described below, that the adopted goals of this watershed plan are not on track to be met in this plan's 20-year timeframe.

Ecology should invite all members of the WRIA 7 Committee, including ex-officio members, to reconvene. The WRIA 7 Committee as a whole will reconvene if at least one entity representing each of the following groups agrees to participate:

- Snoqualmie Indian Tribe
- Tulalip Tribes of Washington
- Each county within the WRIA
- A city government within the WRIA
- Washington State Department of Fish and Wildlife
- Washington State Department of Ecology
- The largest publicly owned water purveyor that is not a municipality
- An organization representing agricultural interests
- An organization representing environmental interests
- An organization representing the residential construction industry
- The largest irrigation district within the WRIA

If no representative is available from the same government or organization that participated in the WRIA 7 Committee at the time of plan approval, the Committee member may propose an alternate entity to represent the same interest on the Committee. At the time that Ecology reconvenes the Committee, the Committee may choose to reconvene a workgroup to report back recommendations to the full Committee. A subgroup of Committee members may convene, but representation from all of the following groups is needed to represent the entire Committee.

Watershed Plan Implementation Reports

The WRIA 7 Committee recommends that Ecology consider the following process for reporting on the status of the watershed plan.

The Committee recommends Ecology issue watershed plan implementation reports biennially (every two years) detailing the successes, challenges, and gaps related to implementation of the watershed plan. Each report should cover the two-year period occurring immediately prior to the

year of issuance, as well as cumulative reporting from any previous reporting periods. The first report should be issued two years after the plan is adopted by Ecology and include:

- Information on whether the watershed plan is on track to achieve the expected NEB and water offsets.
- Streamflow conditions, including identifying subbasins with known impacts that have not yet implemented water offset or habitat projects.
- Number and location (by subbasin) of new PE wells and projects.
- Information on any discretionary programs that were implemented. For example, water conservation education and outreach, incentives for public water service connections, voluntary PE well metering, and legislative updates.

If a project sponsor identifies that proposed water offset from the project are not able to be met after studying feasibility of the project, the Committee recommends that they report this to Ecology. The report should be sent to all members of the WRIA 7 Committee, King and Snohomish County Councils, all local jurisdictions within the watershed, and any additional stakeholders identified at the time of reporting. All Committee members should have 45 days to review the report and submit comments to Ecology. Following the 45-day Committee comment period, Ecology should issue its responses and findings to the Committee. Ecology should attempt to address comments received from the WRIA 7 Committee.

During any comment period after 2026, any member of the WRIA 7 Committee may request that Ecology reconvene the Committee to review recommendations to adjust the projects and actions. Following the issuance of Ecology's responses to Committee comments, the Committee should have an additional 14 days to offer additional comments to Ecology. At the end of the full 60-day Committee comment period, if any adjustments or amendments to the plan are recommended, they shall be at the sole discretion of Ecology. Ecology should issue its final findings within 30 days from the close of the full 60 day Committee comment period. Ecology will have sole discretion to make the amendments.

If Ecology reconvenes the Committee during the comment period for the watershed plan implementation report, amendments to the plan may be delayed to allow for additional Committee discussion. At the time of reconvening, the WRIA 7 Committee may develop recommendations to Ecology to adjust the projects and actions. Ecology should review and consider recommendations developed by the Committee. Ecology should develop and send a report to all members of the Committee with Ecology’s response to the Committee’s recommendations following the review and comment process described in watershed plan implementation reports above.

The WRIA 7 Committee also anticipates discussing:

- Status of policy recommendations;
- Status of requests to the legislature;

- Cumulative number of PE wells in relation to the status of projects implemented in WRIA 7 (the Committee understands that this plan must offset consumptive use and meet NEB at the WRIA-scale; the purpose of evaluating at a subbasin scale is to identify whether the Committee recommends the addition of projects in any given subbasin);
- Expanding or focusing conservation and outreach programs in subbasins where no water offset projects have been identified or implemented;
- Contacting project sponsors to encourage project development and implementation in subbasins with the most need;
- Seeking outside funding for project implementation;
- Drafting letters of support for Streamflow Grant proposals;
- Identifying additional offset projects for Streamflow grant program;
- Suggesting revisions to Stream Restoration Grant Guidance.

Reporting on Streamflow Restoration Grant Program

The Committee recommends that Ecology develop a report of projects that applied for streamflow restoration funding, noting which projects are included in this watershed plan, within two weeks of the close of each grant application period and distribute the report to the WRIA 7 Committee. The Committee also recommends that Ecology develops a report of projects that did and did not receive funding within two weeks of contacting applicants with funding offers. The report should be cumulative, including summary information from previous streamflow restoration grant rounds.

Committee members can request additional information from Ecology, if the report does not provide sufficient detail to enable the Committee to understand implementation progress as it is occurring.

Table 6.2: Recommended Adaptive Management Process

Action	**Entity or Entities Responsible**	**Committee Role**	**Funding Considerations**
Develop and distribute watershed plan implementation report, including any recommended adjustments to projects and actions.	Ecology	Review report	Ecology may need additional funding to support development of the report.
Support reconvening of the WRIA 7 Committee in 2026, 2032, 2038, and as requested by Committee at other dates, if needed.	Ecology	Committee reviews report, status of PE wells, status of projects; presentations on projects, effectiveness monitoring, new science, and research in basin; develop recommendations for projects in response.	Ecology staff time will be required. Ecology may need additional support from RCO, WDFW and project sponsors to develop summary report and distribute or convene a meeting if the Committee deems it necessary. Ecology may need additional funding to support reconvening.

Chapter Seven: Net Ecological Benefit

7.1 Introduction to NEB

Watershed Restoration and Enhancement Plans (watershed plans) must identify projects and actions to offset the potential consumptive impacts of new permit-exempt (PE) domestic groundwater withdrawals on instream flows over 20 years (2018-2038), and provide a net ecological benefit (NEB) to the WRIA.

The Final NEB Guidance establishes Ecology's interpretation of the term "net ecological benefit" as "the outcome that is anticipated to occur through implementation of projects and actions in a [watershed] plan to yield offsets that exceed impacts within: a) the planning horizon; and, b) the relevant WRIA boundary" (Ecology 2019).

The Final NEB Guidance sets Ecology's expectation for the NEB evaluation:

- "Planning groups are expected to include a clearly and systematically articulated NEB evaluation in the watershed plan" (Ecology 2019).
- "A watershed plan that includes a NEB evaluation based on this [Final NEB] guidance significantly contributes to the reasonable assurances that the offsets and NEB within the plan will occur. Ecology will review any such [watershed] plan with considerable deference in light of the knowledge, insights, and expertise of the partners and stakeholders who influenced the preparation of their [watershed] plan. Ecology will make the NEB determination as part of this review" (Ecology 2019).

The WRIA 7 Committee completed a NEB evaluation for this watershed plan; the results of that evaluation are included in this chapter.

7.2 Offsets

The Committee projects a total of 3,389 new PE wells will be installed within WRIA 7 during the planning horizon. The Committee used this 20-year PE well projection to estimate 797.4 acre-feet per year (AFY) of new consumptive water use in WRIA 7 (described in Chapter Four).

The WRIA 7 Committee projects a total water offset of 1,373.4 AFY from 11 water offset projects (described in Chapter Five and listed in Table 7.1 below). While this portfolio of projects exceeds the consumptive use estimate by 576 AFY, the project benefits described are anticipated benefits, as none of these projects have been implemented.

The Committee has struggled with the uncertainties inherent in a planning process tasked with estimating future conditions and developing a portfolio of projects to offset those future impacts. Absent an integrated and robust adaptive management program that can monitor progress and make course corrections as conditions change, the Committee found it challenging to anticipate all potential contingencies at the front end of a 20-year planning horizon. At the time of plan drafting and adoption, it is unknown whether the legislature and Ecology will fund and

implement robust adaptive management that will address Committee members' current and future concerns.

Furthermore, despite an exhaustive search, sufficient water right acquisition projects to fully offset consumptive use were not able to be identified, and the remaining deficit was filled with non-acquisition water offset projects including flow re-timing projects. This was a concern for some Committee members, who pointed out that re-timing projects do not fully protect or replace consumptively used water in the same manner that water right acquisitions do.[25] Additionally, Committee members identified considerable uncertainty relating to whether identified water rights holders will be willing sellers, noted that some subbasins have offset deficits as related to projects identified in the plan, and that in order to achieve NEB, the Committee would also like the plan to compensate for impacts ancillary to those of new PE wells. For these reasons, the Committee felt that it was important to look at the water offset projects and habitat projects portfolio as presented in this plan as a whole when evaluating whether the plan achieves a NEB. The Committee's approach has been to develop a list of potential offset projects that exceeds the anticipated impacts by a margin large enough to give reasonable assurance that this plan will be successful as events unfold over the planning timeline. The WRIA 7 Committee determined that this water offset project portfolio, if implemented, can succeed in offsetting consumptive use impacts at the WRIA scale.

[25] RCW 90.94.30 (3)(a) clarifies that re-timing project can provide water offset: "…plan recommendations may include, but are not limited to, acquiring senior water rights, water conservation, water reuse, stream gaging, groundwater monitoring, and developing natural and constructed infrastructure, which includes but is not limited to such projects as floodplain restoration, off-channel storage, and aquifer recharge. Qualifying projects must be specifically designed to enhance streamflows and not result in negative impacts to ecological functions or critical habitat," (RCW 90.94.030 (3)(a)).

Table 7.1: Summary of WRIA 7 Water Offset Projects

Project Number	Project Name	Project Short Description	Subbasin	Timing of benefits[1,2]	Estimated Offset Benefits (AFY)
7-T-W1	Lake Shoecraft Outlet Modification Project	Replacement of the existing stop log control structure with an adjustable slide-gate weir to allow more consistent streamflow releases during summer	Tulalip	Low flow period	62.5
7-QA-W2	Coho Creek Relocation and Streamflow Enhancement Project	Restoration of stream habitat conditions within Coho Creek and augmentation of summer low flows using effluent from an MBR Wastewater Treatment Plant adjacent to Coho Creek	Quilceda-Allen	Year-round	362
7-LP-W3	Lake Stevens Outlet Structure & Lake Level Management Project	Replacement of an outdated weir structure in the Lake Stevens outlet channel that manages the elevation in Lake Stevens to maximize flood storage availability in the winter and maintain summer flows in the channel	Little Pilchuck	Low flow period	500
7-P-W4	Lochaven Source Switch	Retirement of the water right associated with the Lochaven Water System as a basis for increasing flows within the Pilchuck River and downstream areas	Pilchuck	Year-round	12.7
7-P-W5	Lower Pilchuck No. 1	Acquisition of one groundwater right previously used for domestic supply	Pilchuck	Year-round	2.8
7-P-W6	Lower Pilchuck No. 11	Acquisition of one groundwater right previously used for golf course irrigation	Pilchuck	Year-round	2.1
7-SS-W7	Raging River No. 1	Acquisition of two water rights used for irrigation, domestic supply, commercial-campground, and stock watering	Snoqualmie South	Irrigation season & Year-round	126
7-P-W8	Patterson No. 1	Acquisition of two groundwater rights previously used to support fish propagation, domestic supply, stock watering, and irrigation	Patterson	Year-round	29.7
7-P-W9	Patterson No. 4	Acquisition of three groundwater rights previously used to support a farm and, subsequently, a golf course	Patterson	Year-round	71.6

Project Number	Project Name	Project Short Description	Subbasin	Timing of benefits[1,2]	Estimated Offset Benefits (AFY)
7-USQ-W10	MAR in Snoqualmie Watershed; Potential Sites: North Bend, Three Forks, NF 5700	Diversion of streamflow from the Snoqualmie River or tributary for infiltration at a constructed MAR facility	Upper Snoqualmie, Snoqualmie South, Snoqualmie North	Low flow period	100
7- USQ-W11	Snoqualmie River Watershed Surface Water Storage	Diversion of streamflow from the Snoqualmie River or tributary for detention at a surface water storage reservoir for later release to the subject stream	Upper Snoqualmie; Snoqualmie South, Cherry/Harris	Low flow period	104-3,311 [3]
			Total		**1,373.4**

Note:

[1] The water right information gathered indicates the period of use associated with the water right. For water rights that rely on surface water, the timing of benefit is assumed to be the same as the period of use. For water rights that rely on groundwater, the timing of benefit is assumed to be year-round, due to the lag time between well pumping and streamflow impact. Irrigation season is typically April through October, but the specific period of use is different for each water right.

[2] Managed aquifer recharge (MAR) projects can provide streamflow augmentation year-round. Streamflow augmentation may continue to discharge to the river after each year's storage window closes because of the lag time of water moving through an aquifer and the distance of the flow path to the river. The temporal distribution and absolute value of groundwater discharge will be estimated during the feasibility study that has to be conducted before a MAR project can proceed to construction and operation.

[3] A range of 104 to 3,311 AFY is provided for this project in Chapter Five. The low end of the range (104 AFY) was used to develop the total estimated offset benefit.

Table 7.2 compares consumptive use and water offsets at the subbasin scale:

Estimated water offset exceeds the estimated consumptive use in a total of six subbasins (Tulalip, Quilceda-Allen, Little Pilchuck, Snoqualmie South, Patterson, and Upper Snoqualmie), ranging from 4.9 AFY in the Tulalip subbasin to 430.5 AFY in the Little Pilchuck subbasin. Estimated water offset is less than the estimated consumptive use in a total of ten subbasins (Estuary/Snohomish Mainstem, Pilchuck, Woods, Sultan, Lower Mid-Skykomish, Skykomish Mainstem, Upper Skykomish, Cherry-Harris, Snoqualmie North, and Raging), ranging from 6.0 AFY in the Upper Skykomish subbasin to 115.8 AFY in the Estuary/Snohomish Mainstem subbasin.

While the Estuary/Snohomish Mainstem subbasin has no offset projects within its boundary, it is located downstream of all the other subbasins in the WRIA (with the exception of Tulalip subbasin and Quilceda Creek subbasin) and flows in the mainstem will benefit from offset projects that occur higher in the watershed. Two of the water offset projects (MAR in Snoqualmie Watershed and Snoqualmie River Watershed Surface Water Storage) are mapped to the Upper Snoqualmie subbasin; however, there are potential MAR and surface water storage sites in several subbasins (see Table 5.1).

Table 7.2: Subbasin Water Offset Estimate Compared to Permit-Exempt Well Consumptive Use Estimate

Subbasin	Offset Project Totals (AFY)	Permit-Exempt Well Consumptive Use (AFY)[1]	Difference (AFY)[2]
Tulalip	62.5	58.1	+4.4
Quilceda-Allen	362	62.1	+299.9
Estuary/Snohomish Mainstem	0	115.8	-115.8
Little Pilchuck	500	69.5	+430.5
Pilchuck	17.6	111.0	-93.4
Woods	0	31.5	-31.5
Sultan	0	6.5	-6.5
Lower Mid-Skykomish	0	8.8	-8.8
Skykomish Mainstem	0	32.1	-32.1
Upper Skykomish	0	6.0	-6.0
Cherry-Harris	0	40.4	-40.4
Snoqualmie North	0	87.4	-87.4
Snoqualmie South	126	40.3	+85.7
Patterson	101.3	55.0	+46.3
Raging	0	38.8	-38.8
Upper Snoqualmie	204	34.2	+169.8
WRIA 7 Total	**1,373.4**	**797.4**	**+576**

Notes:

[1] Totals may differ due to rounding.

[2] Surplus water offset is designated by a positive value. A deficit in water offset is designated by a negative value.

In addition to the water offset projects discussed in section 7.2, a total of 27 habitat improvement projects are included in this plan, as summarized in Chapter Five and Table 5.2.

Habitat improvement actions associated with these projects include a combination of land acquisition, creek relocation, wetland enhancement, floodplain restoration, floodplain reconnection, aquatic habitat restoration, riparian vegetation plantings, levee and/or bank armoring removal, levee setback, large woody debris (LWD) installation, beaver management, beaver colonization, small-scale water storage, side channel reconnection/expansion, inlet dike modification, and stormwater management. Many of the habitat improvement projects include more than one of these elements.

As noted in Chapter Five, habitat projects may also result in an increase in streamflow; however, the water offset benefits for these projects is difficult to quantify with a high degree of certainty. The WRIA 7 Committee was also concerned that the timing and reliability of water offset benefits associated with habitat projects would not be comparable to other water offset project types. For these reasons, habitat projects were excluded from project water offset accounting.

7.3 Project Portfolio Benefits

The WRIA 7 Committee considers consumptive water use impacts from new PE wells to be one of several potential impacts to surface water resulting from rural development associated with new PE wells. Other potential impacts include increased impervious surfaces that can result in surface water runoff and water quality impacts. While the primary purpose of this plan is not aimed at addressing these other impacts, the project portfolio provides ecological benefits that partially offset them.

The Committee developed a portfolio of water offset and habitat projects with benefits distributed across the WRIA. Table 7.3 summarizes anticipated benefits from the project portfolio. See Figure 7.1 for a map of WRIA 7 offset projects by subbasin (Table 7.4 accompanies Figure 7.1). Spatial distribution of projects and the streams that benefit from them are summarized as follows:

- One project (7-T-W1) within the Tulalip subbasin, benefitting West Fork Tulalip Creek. This project also adds more flexibility in outlet control, which would benefit the downstream Bernie Kai-Kai Gobin Hatchery by allowing greater control of releases from the lake to align with hatchery needs.
- Four projects (7-QA-W2 and 7-QA-H1 through 7-QA-H3) within the Quilceda-Allen subbasin, benefitting Coho, Quilceda and/or Allen Creeks.
- Two projects (7-ES-H4 and 7-ES-H5) within the Estuary/Snohomish Mainstem subbasin, benefitting the Snohomish River.
- One project (7-LP-W3) within the Little Pilchuck subbasin, benefitting Catherine Creek.
- Five projects (7-P-W4 through 7-P-W6, 7-P-H6, and 7-P-H7) within the Pilchuck subbasin, benefitting Flowing Lake, Panther Lake, Dubuque Creek, and the Pilchuck River.

- Three projects (7-P-H8 through 7-P-H10) within the Pilchuck, Woods, Estuary/Snohomish Mainstem, and/or Little Pilchuck subbasins, benefitting various streams with the subbasins.
- One project (7-W-H11) within the Woods Subbasin, benefitting Woods Creek.
- One project (7-S-H12) within the Sultan Subbasin, benefitting the Sultan River.
- Four projects (7-SM-H13 through 7-SM-H16) within the Skykomish Mainstem subbasin, benefitting the Skykomish River and Riley Slough.
- One project (7-USK-H17) within the Upper Skykomish subbasin, benefitting the lower Miller River and South Fork Skykomish River.
- One project (7-USK-H18) within the Lower Mid-Skykomish, Upper Skykomish, Raging, and Upper Snoqualmie subbasins, benefitting various streams within the subbasins.
- One project (7-CH-H19) within the Cherry-Harris subbasin, benefitting Cherry Creek.
- Two projects (7-SN-H20 and 7-SN-H21) within the Snoqualmie North subbasin, benefitting the Snoqualmie River and Tolt River.
- Two projects (7-SS-W7 and 7-SS-H23) within the Snoqualmie South subbasin, benefitting the lower Raging River and/or the Snoqualmie River. An additional project (7-SS-H22) is a feasibility project with no direct benefits.
- Three projects (7-PA-W8, 7-PA-W9, and 7-PA-H24) within the Patterson subbasin, benefitting Patterson Creek.
- Two projects (7-RR-H25 and 7-RR-H26) within the Raging subbasin, benefitting the Raging River.
- One project (7-USN-H27) within the Upper Snoqualmie subbasin, benefitting the South Fork Snoqualmie River.
- One project (7-USQ-W10) within the Upper Snoqualmie, Snoqualmie South, or Snoqualmie North subbasin, benefitting one or more streams within the subbasins depending on project location.
- One project (7-USQ-W11) within the Upper Snoqualmie, Snoqualmie South, Snoqualmie North, or Cherry/Harris subbasins, benefitting one or more streams within the subbasins depending on project location.
- Four habitat projects will be implemented in multiple subbasins. These include:
    - Living with Beavers Program: Pilchuck, Woods, Estuary/Snohomish Mainstem, Little Pilchuck
    - Small Farm Storage Initiative: Pilchuck, Woods, Estuary/Snohomish Mainstem, Little Pilchuck
    - Wetland Restoration: Pilchuck, Woods, Estuary/Snohomish Mainstem, Little Pilchuck

- Tulalip Tribes Beaver Reintroduction Program: Lower Mid-Skykomish, Upper Skykomish, Raging, Upper Snoqualmie

For the project types planned in WRIA 7, benefits could include the following:

- **Lake Stevens and Lake Shoecraft outlet modification/lake level management projects**: Aquatic habitat improvements during key seasonal periods; flexibility in reservoir outlet control; flood control benefits; and/or improved coordination with downstream hatchery streamflow needs.
- **Coho Creek Relocation and Streamflow Enhancement Project**: Aquatic habitat improvements during key seasonal periods; stream habitat restoration; improved fish access; improved spawning and rearing habitat; and increased streamflow from reclaimed water provided for streamflow augmentation.
- **Water right acquisitions and Lochaven Source Switch Project**: Aquatic habitat improvements during key seasonal periods; reduction in groundwater withdrawals and associated benefit to aquifer resources; and/or increased groundwater availability to riparian and near-shore plants.
- **MAR project(s)**: Aquatic habitat improvements during key seasonal periods; increased groundwater recharge; reduction in summer/fall stream temperature; increased groundwater availability to riparian and near-shore plants; and/or flood control benefits.
- **Snoqualmie River Watershed Surface Water Storage Project(s)**: Aquatic habitat improvements during key seasonal periods and flood control benefits.
- **Habitat improvement projects**: Increased aquatic habitat diversity, restored native vegetation, improved sediment processes, improved spawning and rearing habitat, and water quality and water temperature benefits, among others.

Some of the habitat improvement project described herein, including floodplain reconnection projects, can increase groundwater storage within the shallow aquifer system and provide hydrologic benefits not only at the project location but also downstream of the project area. Future monitoring and detailed study of these projects will help the WRIA 7 Committee better understand the streamflow benefits associated with these projects.

Table 7.3: Summary of WRIA 7 Offset Projects and Anticipated Benefits

Project Number	**Project Name**	**Project Short Description**	**River Reach Benefitted**	**Water Offset (AFY)[1]**	**Other Benefits with Quantifiable Metric** (e.g. structures per mile)	**Limiting Factor(s) Addressed**
7-T-W1	Lake Shoecraft Outlet Modification Project	Replacement of the existing stop log control structure with an adjustable slide-gate weir to allow more consistent streamflow releases during summer	West Fork Tulalip Creek	62.5	-Increased summer low flows (62.5 AFY)	
Tulalip Subbasin Water Offset Total:				62.5		
7-QA-W2	Coho Creek Relocation and Streamflow Enhancement Project	Restoration of up to 1,300 feet of Coho Creek. Augment streamflows in Coho Creek by 0.5 cfs year-round.	Coho Creek	362	-Streamflow augmentation (362 AFY) -33% increase in spawning numbers of Coho and chum within six years (% increase in population)	-Floodplain modifications -Channel conditions -Substrate conditions -Water quality -Water quantity -Rearing habitat
7-QA-H1	Jones Creek Relocation and Wetland Enhancement	Channel creation, installation of LWD and riparian reforestation, and wetland depression restoration	Jones Creek near the mouth of Snohomish River	-	-Increase in channel complexity (mapping) -Area of restored riparian buffer (3.6 acres) -Length of restored meandering channel (780 lineal feet) -Number of wetland surface infiltration ponds (4 ponds) -Number of off-channel rearing infiltration ponds (5 ponds) -LWD installation (65 structures)	-Fish habitat access -Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
7QA-H2	Marysville Stormwater Retrofits (Quilceda	Green stormwater infrastructure, retrofits of stormwater ponds, rainfall capture, & outreach and education.	Quilceda and Allen Creeks	-	-Number of stormwater pond retrofits (4 ponds) -Depave area (acres TBD) -Increased infiltration (AFY TBD) -Increase in recharge/ groundwater levels	-Water quality -Water quantity

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
	Stormwater Project)				(monitoring) -Streamflow maintenance (monitoring)	
7-QA-H3	Quilceda 8 Restoration & Potential Water Right Acquisition	Property and potential water right acquisition	Allen Creek on eastern border of the City of Marysville	-	-Property acquired (acres TBD) -Retirement of water right (16.8 AFY) -Area of restored riparian buffer (acres TBD)	-Floodplain modifications -Riparian conditions -Water quality -Water quantity
Quilceda-Allen Subbasin Water Offset Total				362		
7-ES-H4	Silver Firs Stormwater Pond Retrofit Ponds (Little Bear Stormwater)	Expand existing stormwater ponds by deepening and increasing pond infiltration capacity.	Snohomish River		-Number of stormwater pond retrofits (2 ponds) -Increased stormwater pond storage (3.09 AF) -Increased infiltration (27 AFY) -Increase in recharge/ groundwater levels (monitoring) -Streamflow maintenance (monitoring)	-Water quality -Water quantity
7-ES-H5	Thomas' Eddy Hydraulic Reconnection	Levee and revetment removal, floodplain restoration and riparian planting	Snohomish River at Bob Heirman Wildlife Park	-	-Levee/revetment removal length (1,400 lineal feet) -Floodplain reconnection (200 acres) -Increase in off-channel fish habitat access (1.5 miles) -Riparian planting (30 acres) -LWD, flood fence and beaver dam analog installation (number of structures TBD)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
Estuary/Snohomish Subbasin Water Offset Total				0		
7-LP-W3	Lake Stevens Outlet Structure & Lake Level Management Project	Replacement of an outdated weir structure in the Lake Stevens outlet channel that manages the elevation in Lake Stevens	Catherine Creek	500	-Extension of design life of outlet control structure (years) -Increased lake storage (500 AFY)	-Water quantity -Lakes

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
		to maximize flood storage availability in the winter and maintain summer flows in the channel				
Little Pilchuck Subbasin Water Offset Total				500		
7-P-W4	Lochaven Source Switch	Retirement of the water right associated with the Lochaven Water System as a basis for increasing flows within the Pilchuck River and downstream areas	Pilchuck River near River Mile 15	12.7	-Reduction in Lochaven groundwater withdrawal (annual average of 29 AFY)	-Water quantity
7-P-W5	Lower Pilchuck No. 1	Acquisition of one groundwater right previously used for domestic supply	Pilchuck River	2.8	-Reduction in groundwater withdrawal (up to 5.4 AFY)	-Water quantity
7-P-W6	Lower Pilchuck No. 11	Acquisition of one groundwater right previously used for golf course irrigation	Flowing Lake, Panther Creek , and Dubuque Creek	2.1	-Reduction in withdrawal from Flowing Lake (up to 2.6 AFY)	-Water quantity
7-P-H6	Snohomish Floodplain Acquisitions Phase 1 (Lund Acquisition)	Acquisition of up to 57 acres and 1.43 miles of riparian and floodplain property adjacent to the Pilchuck River.	Middle Pilchuck River	-	-Property acquired (57 acres) -Length of protected stream channel (1.43 miles)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
7-P-H7	Pilchuck River City of Pilchuck	Removal or “softening” of approximately 2,000	Middle Pilchuck River	-	-Bank armoring removal length (2,000 lineal feet)	-Floodplain modifications

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
	River Armoring Removal	linear feet of bank armoring within the Middle Pilchuck subbasin.			-Riparian enhancement length (2,000 lineal feet) -Removal of transmission main under Pilchuck River mainstem -Increased connectivity to onsite wetland and off-channel habitat (acres TBD) -LWD installation (number of structures TBD)	-Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
Pilchuck Subbasin Water Offset Total				17.6		
7-P-H8	Living with Beavers Program	Landowner education on the importance of beaver ponds, assistance with large tree protection, providing wetland plants, protecting culverts from damming activities, and where appropriate, installing pond-leveler devices.	TBD	-	-Site visits for technical assistance (30 visits) -Beaver management devices installed (10 devices)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
7-P-H9	Small Farm Water Storage Pilot	Capture and storage of stormwater runoff in manufactured landscapes, wetlands, or other storage features	TBD	-	-Increased storage (AFY TBD) -Streamflow maintenance (monitoring)	-Water quantity -Floodplain modifications
7-P-H10	Wetland Restoration	Restoration of 18 acres of degraded wetland	TBD	-	-Wetland restoration (18 acres)	-Wetland modifications -Riparian conditions -Water quality -Water quantity

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
Multiple Subbasins (Pilchuck, Woods, Estuary/Snohomish Mainstem, Little Pilchuck) Water Offset Total				0		
7-W-H11	Woods Creek Riparian Restoration Partnership	Plant native trees and shrubs 45 acres of riparian forest along the mainstem of Woods Creek and correct between 3 and 5 fish passage barriers to improve juvenile and adult access to spawning and rearing habitat	Woods Creek	-	-Riparian restoration (45 acres)	-Floodplain modifications -Riparian conditions -Water quality -Water quantity -Rearing habitat
Woods Subbasin Water Offset Total				0		
7-S-H12	Expansion of Sultan River Side Channel Network (Sultan River Floodplain Activation)	Expansion of an existing side channel network to provide structural complexity and hydraulic diversity in the main channel.	Sultan River	-	-Increase in flow delivery to floodplain (5 to 8 cfs) -Expansion in active and side channel areas (50,000 square feet) -LWD installation (6 structures)	-Floodplain modifications -Channel conditions -Substrate conditions -Water quality -Water quantity -Rearing habitat
Sultan Subbasin Water Offset Total				0		
7-SM-H13	Haskel Slough Connectivity	Modifying the inlet dike to enhance juvenile salmon rearing and flood refuge in Haskel Slough	Skykomish River near City of Monroe	-	-Modification of Haskel Slough inlet dike (as-built diagram) -Improved surface flow connectivity (monitoring)	-Floodplain modifications -Riparian conditions -Water quality -Water quantity -Rearing habitat
7-SM-H14	East Monroe Heritage Site Acquisition	Land acquisition along the main stem of the Skykomish River to preserve as an open	Skykomish River near City of Monroe	-	-Land acquisition (43 acres)	-Floodplain modifications -Riparian conditions -Water quality

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
		space and use the site for flood water storage and displacement.				-Rearing habitat
7-SM-H15	Shinglebolt Slough	Reconnect the eastern, filled upstream section of Shingle Bolt Slough. Remove riprap and berm along Skykomish River and create side channel habitat accessible during spring out-migration flows. Project will also install log wood jams and riparian vegetation.	Skykomish River at Shinglebolt Slough	-	-Excavation of remnant flood channel (12,500 cubic yards) -Removal of riprap and berm (600 to 900 lineal feet) -Increase in fish-accessible side channel (1,600 lineal feet) -Riparian restoration (20 acres) -LWD installation (16 structures)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
7-SM-H16	Snohomish Confluence Project + Left Bank Floodplain reconnection at RM 1.5	Planning and property acquisition request to restore and enhance floodplain connection, abandoned side channels and connections to Riley Slough just upstream of junction of Skykomish and Snoqualmie Rivers.	Riley Slough at and upstream of Skykomish/ Snoqualmie confluence	-	-Land acquisition (acres TBD) -Length of restored slough and side channel (5,000 lineal feet) -Reestablished connection between the Skykomish and Riley Slough (as -built diagram) -Riparian restoration (acres TBD) -Physical conditions of side channel and slough (monitoring)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
Skykomish Mainstem Subbasin Water Offset Total				0		
7-USK-H17	Miller River Alluvial Fan Restoration	Riprap removal, floodplain reconnection, side channel reactivation.	Lower Miller River and South Fork Skykomish River	-	-Riparian restoration (18.5 acres) -Floodplain reconnection (20 acres) -Reactivation of side channel (2,700 lineal feet) -Improved aquatic habitat complexity in main channel complex (250 lineal feet) -Riprap removal (lineal feet TBD)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
Upper Skykomish Subbasin Water Offset Total				0		
7-USK-H18	Tulalip Tribes Beaver Reintroduction Program	Protection of hydrologic processes and function in the Snohomish Watershed through the relocation of beavers from areas of human conflict to headwater tributaries for the improvement of fish rearing habitat and freshwater storage.	TBD	-	-Beaver relocation (number of animals TBD)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
Multiple (Lower Mid-Skykomish, Upper Skykomish, Raging, Upper Snoqualmie) Subbasins Water Offset Total				0		
7-CH-H19	Cherry Creek Climate Resilient Watershed	Suite of actions in Cherry Valley including removal of bank armoring, riparian restoration, levee improvements and levee setbacks, culvert replacements, LWD placement, side channel excavation, and small-scale storage sites.	Cherry Creek	-	-Floodplain restoration/protection (1,100 acres) -Floodplain reconnection (8 acres) -Stream restoration (lineal feet TBD) -Bank armoring removal (lineal feet TBD) -LWD installation (5 structures) -Riparian restoration (acres TBD) -Levee rebuilding (2,000 lineal feet) -Levee setback (lineal feet TBD) -Culvert replacement (2 culverts) -Water stored (37 AFY)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
Cherry-Harris Subbasin Water Offset Total				0		

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
7-SN-H20	Camp Gilead Levee Removal Phase 2	Levee removal on the left bank of the Snoqualmie River to reconnect floodplain habitat.	Snoqualmie River at Camp Gilead	-	-Levee/revetment removal (1,675 lineal feet) -Floodplain reconnection (acres TBD) -Riparian restoration (acres TBD)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
7-SN-H21	McElhoe-Pearson Restoration Project	Removal of the McElhoe Pearson levee or creation of a flow through channel to improve habitat connectivity.	Snoqualmie River	-	-Floodplain restoration (acres TBD) -Riparian restoration (lineal feet TBD)	-Floodplain modifications -Riparian conditions -Water quality -Water quantity -Rearing habitat
Snoqualmie North Water Offset Total				0		
7-SS-H22	Lower Tolt LB Floodplain Reconnection (SR 203 to Confluence)	Feasibility study to determine options for fully or partially removing existing levee/revetment to improve floodplain connection.	Lower Tolt River	-	-N/A – project is a feasibility study	-Floodplain modifications -Riparian conditions -Water quality -Water quantity -Rearing habitat
7-SS-H23	Fall City Floodplain Reconnection Design and Construction – Left Bank and Right Bank	Project includes 2 adjacent floodplain reconnection projects: Barfuse Project and Hafner Project.	Lower Snoqualmie River, River Mile 34.5	-	-Levee removal/setback (2,000 lineal feet) -Floodplain restoration (45 acres) -River edge restoration (2,600 lineal feet) -Floodplain reconnection (145 acres)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
Snoqualmie South Water Offset Total				0		

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
7-SS-W7	Raging River No. 1	Acquisition of two water rights used for irrigation, domestic supply, commercial-campground, and stock watering	Raging River and Snoqualmie River Confluence	126	-Reduction in groundwater withdrawal (up to 120 AFY)	-Water quantity
Snoqualmie South Subbasin Total				126		
7-PA-W8	Patterson No. 1	Acquisition of two groundwater rights previously used to support fish propagation, domestic supply, stock watering, and irrigation	Patterson Creek	29.7	-Reduction in groundwater withdrawal (up to 174 AFY)	-Water quantity
7-PA-W9	Patterson No. 4	Acquisition of three groundwater rights previously used to support a farm and, subsequently, a golf course	Patterson Creek	71.6	-Reduction in groundwater withdrawal (up to 155.8 AFY)	-Water quantity
7-PA-H24	Patterson Creek Floodplain Restoration (Sub-Watershed 2C) + Patterson Creek Floodplain Acquisitions	Property acquisition to perform floodplain restoration through riparian restoration and channel complexity.	Patterson Creek, River Mile 7	-	-Floodplain restoration (30 acres) -Land acquisition (18 acres) -Riparian restoration (24 acres)	-Floodplain modifications -Riparian conditions -Water quality -Water quantity -Rearing habitat
Patterson Subbasin Water Offset Total				101.3		
7-RR-H-25	Raging River Left Bank Mouth Levee Removal (Bernard Memorial Park)	Levee removal at Bernard Memorial Park and reconnect 6 acres of floodplain habitat.	Raging River at Bernard Memorial Park	-	-Levee removal (lineal feet TBD) -Floodplain restoration (acres TBD) -Riparian restoration (acres TBD)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
						-Water quality -Water quantity -Rearing habitat
7-RR-H-26	Raging River Bridge to Bridge Acquisitions + Raging River Bridge to Bridge Floodplain Restoration	Property acquisitions for future floodplain restoration projects. Proposed restoration actions include removal and setback of levee along right bank of Raging River.	Raging River, River Mile 2	-	-Levee removal/setback (4,000 lineal feet) -Floodplain reconnection (35 acres) -Riparian restoration (acres TBD)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
Raging River Subbasin Water Offset Total				0		
7-USN-H27	South Fork Snoqualmie River Levee Setback Project (Nintendo Project)	Levee setback and creation of floodplain and riparian habitat.	South Fork Snoqualmie River	-	-Levee removal/setback (2,500 lineal feet) -Floodplain reconnection (25 acres) -Riparian restoration (12 acres)	-Floodplain modifications -Channel conditions -Substrate conditions -Riparian conditions -Water quality -Water quantity -Rearing habitat
7-USQ-W10	MAR in Snoqualmie Watershed; Potential Sites: North Bend, Three Forks, NF 5700	Diversion of streamflow from the Snoqualmie River or tributary for infiltration at a constructed MAR facility	TBD	100	-Increased groundwater recharge (AFY TBD) -Increase in groundwater levels (monitoring) -Streamflow maintenance (monitoring)	-Water quality -Water quantity
7- USQ-W11	Snoqualmie River Watershed Surface Water Storage	Diversion of streamflow from the Snoqualmie River or tributary for detention at a surface water storage reservoir	TBD	104 - 3,311 [2]	-Water volume stored (AF TBD) -Increased groundwater recharge (AFY TBD)	-Water quantity

Project Number	Project Name	Project Short Description	River Reach Benefitted	Water Offset (AFY)[1]	Other Benefits with Quantifiable Metric (e.g. structures per mile)	Limiting Factor(s) Addressed
		for later release to the subject stream				
Upper Snoqualmie Subbasin Water Offset Total				204		

Notes:

[1]Totals may differ due to rounding.

[2] A range of 104 to 3,311 AFY is provided for this project in Chapter Five. The low end of the range (104 AFY) was used to develop the total estimated offset benefit.

7.4 Adaptive Management to Reduce Uncertainty

The WRIA 7 Committee identified a number of challenges related to plan implementation, described in Chapter Six. These challenges include the impact of climate change, uncertainty in consumptive use estimates, uncertainty in offsets associated with specific project types, project implementation challenges, narrowness in the scope of this watershed plan, and other factors. The Committee has included implementation recommendations in the plan to address uncertainty in plan implementation.

Implementation recommendations include increased legislative funding for plan implementation and funding for adaptive management, biennial reports from Ecology, a process for reconvening the Committee, funding tracking, provisions to allow Ecology to adjust the projects and actions in the plan after adoption, PE well tracking, continued monitoring of streamflow and groundwater levels, continued studies of WRIA 7 hydrology, and project effectiveness monitoring. These measures, in addition to the project portfolio and associated benefits described in Table 7.3, increase the resiliency of the plan and provide reasonable assurance that the plan can adequately offset new consumptive use from PE wells anticipated during the planning horizon.

7.5 NEB Evaluation Findings

The WRIA 7 watershed plan is intended to provide a path forward for offsetting an estimated 797.4 acre-feet per year (AFY) of new consumptive water use in WRIA 7. The plan primarily achieves this offset through a total of 11 water offset projects with a cumulative offset projection of 1,373.4 AFY. This projected total water offset is more than 150 percent of the projected consumptive use of 797.4 AFY and exceeds the consumptive use estimate by 576 AFY.

Within this plan, 11 water offset projects and 27 habitat improvement projects provide numerous benefits to aquatic and riparian habitat. While many of these habitat improvement projects have potential streamflow benefits, the WRIA 7 Committee chose to exclude any associated water offset from the plan's accounting as related to those habitat projects.

As noted above, the WRIA 7 Committee has recommended adaptive management measures to provide reasonable assurance that the plan will adequately address new consumptive use impacts anticipated during the planning horizon, despite inevitable challenges that will arise during project feasibility study, implementation, operation, and maintenance.

The WRIA 7 Committee considered the water offset projects and habitat projects portfolio as presented in this plan as a whole to evaluate whether the plan, when implemented as envisioned, provides a net ecological benefit to the WRIA. As discussed in Chapters 4 through 7 of this plan, the WRIA 7 Committee identified uncertainties throughout the planning process. Among these are uncertainties associated with estimating the number of new PE wells and associated consumptive use, changing climate, changing development patterns, project implementation, and available funding and support for adaptive management.

The WRIA 7 Committee searched exhaustively to identify potential water offset projects. Due to the existing strain on water resources within WRIA 7 (discussed in Chapter Two), water offset projects were difficult to identify. The water offset projects identified by the Committee are distributed across seven subbasins. Two of the water offset projects identified (Lake Stevens Outlet Structure & Lake Level Management Project and Coho Creek Relocation and Streamflow Enhancement Project) provide a large portion of the total estimated water offset, and relatively low in the WRIA, which means that there are large portions of the watershed that will not directly benefit from the water offset produced by those projects. If water offset projects implemented are concentrated in any one area of WRIA 7 and other projects identified are not able to be implemented, the Committee hopes that similar water offset projects could be identified and implemented through adaptive management in areas without water offset projects.

The habitat projects identified by the Committee provide benefits to 15 of the 16 subbasins. While the Committee was not able to identify any habitat projects in the Tulalip subbasin, the Committee believes that the projects and their benefits are adequately distributed across the WRIA. If any of the habitat projects are not able to be implemented, the WRIA 7 Committee hopes that similar projects with equivalent benefits could be identified and implemented in WRIA 7 through adaptive management.

The WRIA 7 Committee considers the 11 water offset projects as vital to address consumptive use. The project portfolio, including the water offset and habitat projects, is important to achieving NEB. The Committee determined that a more finely calibrated screening mechanism for directing implementation of the project list was not appropriate at this stage in the planning process due to time constraints and level of project development. While several projects have feasibility studies completed or underway, others have not. The Committee recognizes that projects may be ranked differently in the future once they have been further developed and did not want to presuppose ranking for more conceptual projects.

As project sponsors pursue project implementation, it is possible that some projects in this plan will not be constructed due to feasibility and design constraints or other factors. The Committee believes that the current project list is an ambitious project portfolio that, if adaptively managed, will compensate for the absence of tiering, prioritizing, or sequencing at this stage in the planning process.

All 38 of the projects in the Committee's project portfolio have project sponsors identified who are ready to proceed with feasibility (where not already completed), design, and implementation once funding is secured. As mentioned in Section 5.3.3, the types of water offset projects proposed in this plan have been successfully implemented within Washington State and the technology to implement these types of projects is established. The Committee believes that the ambitious project portfolio of 38 projects and the adaptive management plan described in Chapter Six provides reasonable assurance this plan's anticipated benefits will exceed consumptive use impacts over the planning horizon in the face of inherent uncertainties.

Through this planning process, the WRIA 7 Committee identified a suite of projects that provide water offset and ecological benefits to WRIA 7. Based on the information and analyses summarized in this plan and the assumption that this plan will be implemented, the WRIA 7 Committee finds that this plan can achieve a net ecological benefit in WRIA 7, as required by RCW 90.94.030 and defined by the Final NEB Guidance (Ecology 2019).

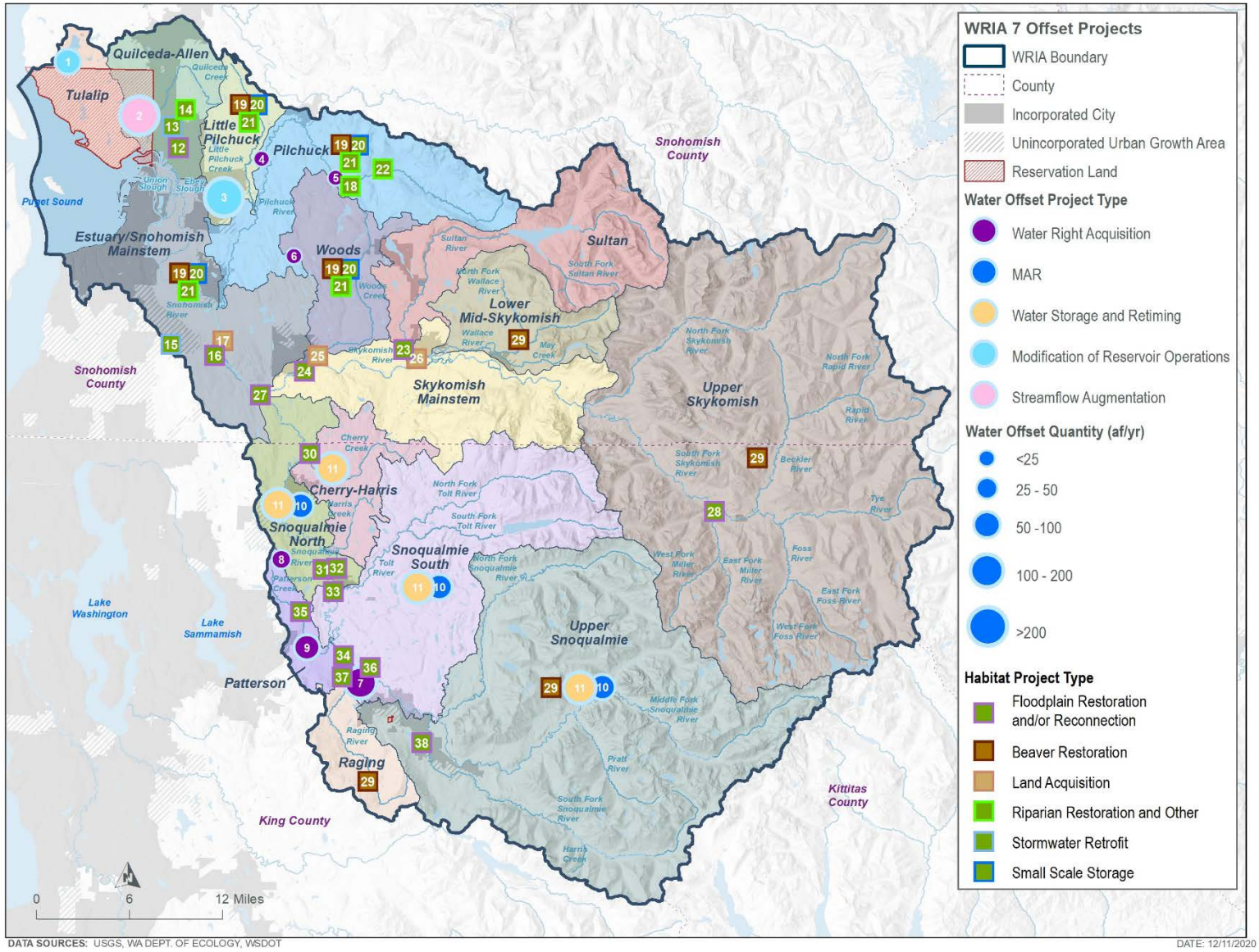


Figure 7.1: WRIA 7 Offset Projects

Table 7.4: Table to Accompany Figure 7.1: WRIA 7 Offset Projects

Map No.	Project No.	Project Name
1	7-T-W1	Lake Shoecraft Outlet Modification Project
2	7-QA-W2	Coho Creek Relocation and Streamflow Enhancement Project
3	7-LP-W3	Lake Stevens Outlet Structure & Lake Level Management Project
4	7-P-W4	Lochaven Source Switch
5	7-P-W5	Lower Pilchuck No. 1
6	7-P-W6	Lower Pilchuck No. 11
7	7-SS-W7	Raging River No. 1
8	7-PA-W8	Patterson No. 1
9	7-PA-W9	Patterson No. 4
10	7-USQ-W10	MAR in Snoqualmie Watershed
11	7-USQ-W11	Snoqualmie River Watershed Surface Water Storage
12	7-QA-H1	Jones Creek Relocation and Wetland Enhancement
13	7QA-H2	Marysville Stormwater Retrofits (Quilceda Stormwater Project)
14	7-QA-H3	Quilceda 8 Restoration & Potential Water Right Acquisition
15	7-ES-H4	Silver Firs Stormwater Pond Retrofit Ponds (Little Bear Stormwater)
16	7-ES-H5	Thomas' Eddy Hydraulic Reconnection
17	7-P-H6	Snohomish Floodplain Acquisitions Phase 1 (Lund Acquisition)
18	7-P-H7	Pilchuck River Armoring Removal
19	7-P-H8	Living with Beavers Program
20	7-P-H9	Small Farm Storage Initiative
21	7-P-H10	Wetland Restoration
22	7-W-H11	Woods Creek Riparian Restoration Partnership
23	7-S-H12	Expansion of Sultan River Side Channel Network (Sultan River Floodplain Activation)
24	7-SM-H13	Haskel Slough Connectivity

Map No.	Project No.	Project Name
25	7-SM-H14	East Monroe Heritage Site Acquisition
26	7-SM-H15	Shinglebolt Slough
27	7-SM-H16	Snohomish Confluence Project + Left Bank Floodplain reconnection at RM 1.5
28	7-USK-H17	Miller River Alluvial Fan Restoration
29	7-USK-H18	Tulalip Tribes Beaver Reintroduction Program
30	7-CH-H19	Cherry Creek Climate Resilient Watershed
31	7-SN-H20	Camp Gilead Levee Removal Phase 2
32	7-SN-H21	McElhoe-Pearson Restoration Project
33	7-SS-H22	Lower Tolt LB Floodplain Reconnection
34	7-SS-H23	Fall City Floodplain Reconnection Design and Construction -Left Bank and Right Bank
35	7-PA-H24	Patterson Creek Floodplain Restoration (Sub-Watershed 2C) + Patterson Creek Floodplain Acquisitions
36	7-RR-H-25	Raging River Left Bank Mouth Levee Removal (Bernard Memorial Park)
37	7-RR-H-26	Raging River Bridge to Bridge Acquisitions + Raging River Bridge to Bridge Floodplain Restoration
38	7-USN-H27	South Fork Snoqualmie River Levee Setback Project (Nintendo Project)

End of plan body

Appendices

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January 2021

Appendix A – References

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Appendix B – Glossary

Acre-feet (AF): A unit of volume equal to the volume of a sheet of water one acre in area and one foot in depth. (USGS)

Adaptive Management: An iterative and systematic decision-making process that aims to reduce uncertainty over time and help meet project, action, and plan performance goals by learning from the implementation and outcomes of projects and actions. (NEB)

Annual Average Withdrawal: RCW 90.94.030 (4)(a)(vi)(B) refers to the amount of water allowed for withdrawal per connection as the annual average withdrawal. As an example, a homeowner could withdraw 4,000 gallons on a summer day, so long as they did not do so often enough that their annual average exceeds the 950 gpd.

Beaver Dam Analogue (BDA): BDAs are man-made structures designed to mimic the form and function of a natural beaver dam. They can be used to increase the probability of successful beaver translocation and function as a simple, cost-effective, non-intrusive approach to stream restoration. (From Anabranch Solutions)

Critical Flow Period: The time period of low streamflow (generally described in bi-monthly or monthly time steps) that has the greatest likelihood to negatively impact the survival and recovery of threatened or endangered salmonids or other fish species targeted by the planning group. The planning group should discuss with Ecology, local tribal and WDFW biologists to determine the critical flow period in those reaches under the planning group's evaluation. (NEB)

Cubic feet per second (CFS): A rate of the flow in streams and rivers. It is equal to a volume of water one foot high and one foot wide flowing a distance of one foot in one second (about the size of one archive file box or a basketball). (USGS)

Domestic Use: In the context of Chapter 90.94 RCW, "domestic use" and the withdrawal limits from permit-exempt domestic wells include both indoor and outdoor household uses, and watering of a lawn and noncommercial garden. (NEB)

ESSB 6091: In January 2018, the Legislature passed Engrossed Substitute Senate Bill (ESSB) 6091 in response to the Hirst decision. In the Whatcom County vs. Hirst, Futurewise, et al. decision (often referred to as the "Hirst decision"), the court ruled that the county failed to comply with the Growth Management Act requirements to protect water resources. The ruling required the county to make an independent decision about legal water availability. ESSB 6091 addresses the court's decision by allowing landowners to obtain a building permit for a new home relying on a permit-exempt well. ESSB 6091 is codified as Chapter 90.94 RCW. (ECY)

Evolutionarily Significant Unit (ESU): A population of organisms that is considered distinct for purposes of conservation. For Puget Sound Chinook, the ESU includes naturally spawned Chinook salmon originating from rivers flowing into Puget Sound from the Elwha River (inclusive) eastward, including rivers in Hood Canal, South Sound, North Sound and the Strait of Georgia. Also, Chinook salmon from 26 artificial propagation programs. (NOAA)

Foster Pilots and Foster Task Force: To address the impacts of the 2015 Foster decision, Chapter 90.94 RCW established a Task Force on Water Resource Mitigation and authorized the Department of Ecology to issue permit decisions for up to five water mitigation pilot projects. These pilot projects will address issues such as the treatment of surface water and groundwater appropriations and include management strategies to monitor how these appropriations affect instream flows and fish habitats. The joint legislative Task Force will (1) review the treatment of surface water and groundwater appropriations as they relate to instream flows and fish habitat, (2) develop and recommend a mitigation sequencing process and scoring system to address such appropriations, and (3) review the Washington Supreme Court decision in Foster v. Department of Ecology. The Task Force is responsible for overseeing the five pilot projects. (ECY)

Four Year Work Plans: Four year plans are developed by salmon recovery lead entities in Puget Sound to describe each lead entity's accomplishments during the previous year, to identify the current status of recovery actions, any changes in recovery strategies, and to propose future actions anticipated over the next four years. Regional experts conduct technical and policy reviews of each watershed's four year work plan update to evaluate the consistency and appropriate sequencing of actions with the Puget Sound Salmon Recovery Plan. (Partnership)

Gallons per day (GPD): An expression of the average rate of domestic and commercial water use. 1 million gallons per day is equivalent to 1.547 cubic feet per second.

Group A public water systems: Group A water systems have 15 or more service connections or serve 25 or more people per day. Chapter 246-290 WAC (Group A Public Water Supplies), outlines the purpose, applicability, enforcement, and other policies related to Group A water systems. (WAC)

Group B public water systems: Group B public water systems serve fewer than 15 connections **and** fewer than 25 people per day. Chapter 246-291 WAC (Group B Public Water Systems), outlines the purpose, applicability, enforcement, and other policies related to Group B water systems.(WAC)

Growth Management Act (GMA): Passed by the Washington Legislature and enacted in 1990, this act guides planning for growth and development in Washington State. The act requires local governments in fast growing and densely populated counties to develop, adopt, and periodically update comprehensive plans.

Home: A general term referring to any house, household, or other Equivalent Residential Unit. (Policy and Interpretive Statement)

Hydrologic Unit Code (HUC): Hydrologic unit codes refer to the USGS's division and sub-division of the watersheds into successively smaller hydrologic units. The units are classified into four levels: regions, sub-regions, accounting units, and cataloging units, and are arranged within each other from the largest geographic area to the smallest. Each unit is classified by a unit code (HUC) composed of two to eight digits based on the four levels of the classification in the hydrologic unit system (two digit units are largest and eight digits are smallest). (USGS)

Impact: For the purpose of streamflow restoration planning, impact is the same as new consumptive water use (see definition below). As provided in Ecology WR POL 2094 "Though the statute requires the offset of 'consumptive impacts to instream flows associated with permit-exempt domestic water use' (RCW 90.94.020(4)(b)) and 90.94.030(3)(b)), watershed plans should address the consumptive use of new permit-exempt domestic well withdrawals. Ecology recommends consumptive use as a surrogate for consumptive impact to eliminate the need for detailed hydrogeologic modeling, which is costly and unlikely feasible to complete within the limited planning timeframes provided in chapter 90.94 RCW. " (NEB)

Instream Flows and Instream Flow Rule (IFR): Instream flows are a specific flow level measured at a specific location in a given stream. Seasonal changes cause natural stream flows to vary throughout the year, so instream flows usually vary from month to month rather that one flow rate year-round. State law requires that enough water in streams to protect and preserve instream resources and uses. The Department of Ecology sets flow levels in administrative rules. Once instream flow levels are established in a rule, they serve as a water right for the stream and the resources that depend on it. Instream flow rules do not affect pre-existing, or senior, water rights; rather, they protect the river from future withdrawals. Once an instream flow rule is established, the Department of Ecology may not issue water rights that would impair the instream flow level. (ECY)

Instream Resources Protection Program (IRPP): The IRPP was initiated by the Department of Ecology in September 1978 with the purpose of developing and adopting instream resource protection measures for Water Resource Inventory Areas (WRIAs) (see definition below) in Western Washington as authorized in the Water Resources Act of 1971 (RCW 90.54), and in accordance with the Water Resources Management Program (WAC 175-500).

Instream Resources: Fish and related aquatic resources. (NEB)

Large woody debris (LWD): LWD refers to the fallen trees, logs and stumps, root wads, and piles of branches along the edges of streams, rivers, lakes and Puget Sound. Wood helps stabilize shorelines and provides vital habitat for salmon and other aquatic life. Preserving the debris along shorelines is important for keeping aquatic ecosystems healthy and improving the survival of native salmon. (King County)

Lead Entities (LE): Lead Entities are local, citizen-based organizations in Puget Sound that coordinate salmon recovery strategies in their local watershed. Lead entities work with local and state agencies, tribes, citizens, and other community groups to adaptively manage their local salmon recovery chapters and ensure recovery actions are implemented. (Partnership)

Listed Species: Before a species can receive the protection provided by the Endangered Species Act (ESA), it must first be added to the federal lists of endangered and threatened wildlife and plants. The List of Endangered and Threatened Wildlife (50 CFR 17.11) and the List of Endangered and Threatened Plants (50 CFR 17.12) contain the names of all species that have been determined by the U.S. Fish and Wildlife Service (Service) or the National Marine Fisheries Service (for most marine life) to be in the greatest need of federal protection. A species is added to the list when it is determined to be endangered or threatened because of any of the following factors: the present or threatened destruction, modification, or curtailment of its

habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; the inadequacy of existing regulatory mechanisms; or other natural or manmade factors affecting its survival. (USFWS)

Local Integrating Organizations (LIO): Local Integrating Organizations are local forums in Puget Sound that collaboratively work to develop, coordinate, and implement strategies and actions that contribute to the protection and recovery of the local ecosystem. Funded and supported by the Puget Sound Partnership, the LIOs are recognized as the local expert bodies for ecosystem recovery in nine unique ecosystems across Puget Sound. (Partnership)

Low Impact Development (LID): Low Impact Development (LID) is a stormwater and land-use management strategy that tries to mimic natural hydrologic conditions by emphasizing techniques including conservation, use of on-site natural features, site planning, and distributed stormwater best management practices (BMPs) integrated into a project design. (ECY)

Managed Aquifer Recharge (MAR): Managed aquifer recharge projects involve the addition of water to an aquifer through infiltration basins, injection wells, or other methods. The stored water can then be used to benefit stream flows, especially during critical flow periods. (NEB)

National Pollutant Discharge Elimination System (NPDES): The NPDES permit program addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. Created by the Clean Water Act in 1972, the EPA authorizes state governments to perform many permitting, administrative, and enforcement aspects of the program. (EPA)

Net Ecological Benefit (NEB): Net Ecological Benefit is a term used in ESSB 6091 as a standard that watershed plans (see below for definition) must meet. The outcome that is anticipated to occur through implementation of projects and actions in a plan to yield offsets that exceed impacts within: a) the planning horizon; and, b) the relevant WRIA boundary. See *Final Guidance for Determining Net Ecological Benefit - Guid-2094 Water Resources Program Guidance.* (NEB)

Net Ecological Benefit Determination: Occurs solely upon Ecology's conclusion after its review of a watershed plan submitted to Ecology by appropriate procedures, that the plan does or does not achieves a NEB as defined in the Net Ecological Benefit guidance. The Director of Ecology will issue the results of that review and the NEB determination in the form of an order. (NEB)

Net Ecological Benefit Evaluation: A planning group's demonstration, using NEB Guidance and as reflected in their watershed plan, that their plan has or has not achieved a NEB. (NEB)

New Consumptive Water Use: The consumptive water use from the permit-exempt domestic groundwater withdrawals estimated to be initiated within the planning horizon. For the purpose of RCW 90.94, consumptive water use is considered water that is evaporated, transpired, consumed by humans, or otherwise removed from an immediate water environment due to the use of new permit-exempt domestic wells. (NEB)

Office of Financial Management (OFM): OFM is a Washington state agency that develops official state and local population estimates and projections for use in local growth management planning. (OFM)

Offset: The anticipated ability of a project or action to counterbalance some amount of the new consumptive water use over the planning horizon. Offsets need to continue beyond the planning horizon for as long as new well pumping continues. (NEB)

Permit exempt wells: The Groundwater Code (RCW 90.44), identified four "small withdrawals" of groundwater as exempt from the permitting process. Permit-exempt groundwater wells often provide water where a community supply is not available, serving single homes, small developments, irrigation of small lawns and gardens, industry, and stock watering.

Permit-exempt uses: Groundwater permit exemptions allow four small uses of groundwater without a water right permit: domestic uses of less than 5,000 gallons per day, industrial uses of less than 5,000 gallons per day, irrigation of a lawn or non-commercial garden, a half-acre or less in size, or stock water. Although exempt groundwater withdrawals don't require a water right permit, they are always subject to state water law. (ECY)

Planning groups: A general term that refers to either initiating governments, in consultation with the planning unit, preparing a watershed plan update required by Chapter 90.94.020 RCW, or a watershed restoration and enhancement committee preparing a plan required by Chapter 90.94.030 RCW. (NEB)

Planning Horizon: The 20-year period beginning on January 19, 2018 and ending on January 18, 2038, over which new consumptive water use by permit-exempt domestic withdrawals within a WRIA must be addressed, based on the requirements set forth in Chapter 90.94 RCW. (NEB)

Projects and Actions: General terms describing any activities in watershed plans to offset impacts from new consumptive water use and/or contribute to NEB. (NEB)

Puget Sound Acquisition and Restoration (PSAR) fund: This fund supports projects that recover salmon and protect and recover salmon habitat in Puget Sound. The state legislature appropriates money for PSAR every 2 years in the Capital Budget. PSAR is co-managed by the Puget Sound Partnership and the Recreation and Conservation Office, and local entities identify and propose PSAR projects. (Partnership)

Puget Sound Partnership (Partnership): The Puget Sound Partnership is the state agency leading the region's collective effort to restore and protect Puget Sound and its watersheds. The organization brings together hundreds of partners to mobilize partner action around a common agenda, advance Sound investments, and advance priority actions by supporting partners. (Partnership)

Puget Sound Regional Council (PSRC): PSRC develops policies and coordinates decisions about regional growth, transportation and economic development planning within King, Pierce, Snohomish and Kitsap counties. (PSRC)

RCW 90.03 **(Water Code)**: This chapter outlines the role of the Department of Ecology in regulating and controlling the waters within the state. The code describes policies surrounding surface water and groundwater uses, the process of determining water rights, compliance measures and civil penalties, and various legal procedures.

RCW 90.44 **(Groundwater Regulations)**: RCW 90.44 details regulations and policies concerning groundwater use in Washington state, and declares that public groundwaters belong to the

public and are subject to appropriation for beneficial use under the terms of the chapter. The rights to appropriate surface waters of the state are not affected by the provisions of this chapter.

RCW 90.44.050**(Groundwater permit exemption)**: This code states that any withdrawal of public groundwaters after June 6, 1945 must have an associated water right from the Department of Ecology. However, any withdrawal of public groundwaters for stock-watering purposes, or for the watering of a lawn or of a noncommercial garden not exceeding one-half acre in area, or for single or group domestic uses in an amount not exceeding five thousand gallons a day, or for an industrial purpose in an amount not exceeding five thousand gallons a day, is exempt from the provisions of this section and does not need a water right.

RCW 90.82 **(Watershed Planning)**: Watershed Planning was passed in 1997 with the purpose of developing a more thorough and cooperative method of determining what the current water resource situation is in each water resource inventory area of the state and to provide local citizens with the maximum possible input concerning their goals and objectives for water resource management and development.

90.54 RCW **(Water Resources Act of 1971):** This act set the stage for the series of rules that set instream flow levels as water rights, as well as a compliance effort to protect those flows.

RCW 90.94 **(Streamflow Restoration)**: This chapter of the Revised Code of Washington codifies ESSB 6091, including watershed planning efforts, streamflow restoration funding program and the joint legislative task force on water resource mitigation and mitigation pilot projects (Foster task force and pilot projects).

Reasonable Assurance: Explicit statement(s) in a watershed plan that the plan's content is realistic regarding the outcomes anticipated by the plan, and that the plan content is supported with scientifically rigorous documentation of the methods, assumptions, data, and implementation considerations used by the planning group. (NEB)

Revised Code of Washington (RCW**)**: The revised code is a compilation of all permanent laws now in force for the state of Washington. The RCWs are organized by subject area into Titles, Chapters, and Sections.

Salmon Recovery Funding Board (SRFB): Pronounced "surf board", this state and federal board provides grants to protect and restore salmon habitat. Administered by a 10-member State Board that includes five governor-appointed citizens and five natural resource agency directors, the board brings together the experiences and viewpoints of citizens and the major state natural resource agencies. For watersheds planning under Section 203, the Department of Ecology will submit final draft WRE Plans not adopted by the prescribed deadline to SRFB for a technical review (RCO and Policy and Interpretive Statement).

Section 202 or Section 020: Refers to Section 202 of ESSB 6091 or Section 020 of RCW 90.94 respectively. The code provides policies and requirements for new domestic groundwater withdrawals exempt from permitting with a potential impact on a closed water body and potential impairment to an instream flow. This section includes WRIAs 1, 11, 22, 23, 49, 59 and

55, are required to update watershed plans completed under RCW 90.82 and to limit new permit-exempt withdrawals to 3000 gpd annual average.

Section 203 or Section 030: Refers to Section 203 of ESSB 6091 or Section 030 of RCW 90.94 respectively. The section details the role of WRE committees and WRE plans (see definitions below) in ensuring the protection and enhancement of instream resources and watershed functions. This section includes WRIAs 7, 8, 9, 10, 12, 13, 14 and 15. New permit-exempt withdrawals are limited to 950 gpd annual average.

SEPA and SEPA Review: SEPA is the State Environmental Policy Act. SEPA identifies and analyzes environmental impacts associated with governmental decisions. These decisions may be related to issuing permits for private projects, constructing public facilitates, or adopting regulations, policies, and plans. SEPA review is a process which helps agency decision-makers, applications, and the public understand how the entire proposal will affect the environment. These reviews are necessary prior to Ecology adopting a plan or plan update and may be completed by Ecology or by a local government. (Ecology)

Subbasins: A geographic subarea within a WRIA, equivalent to the words "same basin or tributary" as used in RCW 90.94.020(4)(b) and RCW 90.94.030 (3)(b). In some instances, subbasins may not correspond with hydrologic or geologic basin delineations (e.g. watershed divides). (NEB)

Trust Water Right Program: The program allows the Department of Ecology to hold water rights for future uses without the risk of relinquishment. Water rights held in trust contribute to streamflows and groundwater recharge, while retaining their original priority date. Ecology uses the Trust Water Right Program to manage acquisitions and accept temporary donations. The program provides flexibility to enhance flows, bank or temporarily donate water rights. (ECY)

Urban Growth Area (UGA): UGAs are unincorporated areas outside of city limits where urban growth is encouraged. Each city that is located in a GMA fully-planning county includes an urban growth area where the city can grow into through annexation. An urban growth area may include more than a single city. An urban growth area may include territory that is located outside of a city in some cases. Urban growth areas are under county jurisdiction until they are annexed or incorporated as a city. Zoning in UGAs generally reflect the city zoning, and public utilities and roads are generally built to city standards with the expectation that when annexed, the UGA will transition seamlessly into the urban fabric. Areas outside of the UGA are generally considered rural. UGA boundaries are reviewed and sometimes adjusted during periodic comprehensive plan updates. UGAs are further defined in RCW 36.70.

WAC 173-566 **(Streamflow Restoration Funding Rule)**: On June 25, 2019 the Department of Ecology adopted this rule for funding projects under RCW 90.94. This rule establishes processes and criteria for prioritizing and approving grants consistent with legislative intent, thus making Ecology's funding decision and contracting more transparent, consistent, and defensible.

Washington Administrative Code (WAC): The WAC contains the current and permanent rules and regulations of state agencies. It is arranged by agency and new editions are published every two years. (Washington State Legislature)

Washington Department of Ecology (DOE/ECY): The Washington State Department of Ecology is an environmental regulatory agency for the State of Washington. The department administers laws and regulations pertaining to the areas of water quality, water rights and water resources, shoreline management, toxics clean-up, nuclear and hazardous waste, and air quality.

Washington Department of Fish and Wildlife (WDFW): An agency dedicated to preserving, protecting, and perpetuating the state's fish, wildlife, and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities. Headquartered in Olympia, the department maintains six regional offices and manages dozens of wildlife areas around the state, offering fishing, hunting, wildlife viewing, and other recreational opportunities for the residents of Washington. With the tribes, WDFW is a co-manager of the state salmon fishery. (WDFW)

Washington Department of Natural Resources (WADNR or DNR): The department manages over 3,000,000 acres of forest, range, agricultural, and commercial lands in the U.S. state of Washington. The DNR also manages 2,600,000 acres of aquatic areas which include shorelines, tidelands, lands under Puget Sound and the coast, and navigable lakes and rivers. Part of the DNR's management responsibility includes monitoring of mining cleanup, environmental restoration, providing scientific information about earthquakes, landslides, and ecologically sensitive areas. (WADNR)

Water Resources (WR): The Water Resources program at Department of Ecology supports sustainable water resources management to meet the present and future water needs of people and the natural environment, in partnership with Washington communities. (ECY)

Water Resources Advisory Committee (WRAC): Established in 1996, the Water Resources Advisory Committee is a forum for issues related to water resource management in Washington State. This stakeholder group is comprised of 40 people representing state agencies, local governments, water utilities, tribes, environmental groups, consultants, law firms, and other water stakeholders. (ECY)

Watershed Plan: A general term that refers to either: a watershed plan update prepared by a WRIA's initiating governments, in collaboration with the WRIA's planning unit, per RCW 90.94.020; or a watershed restoration and enhancement plan prepared by a watershed restoration and enhancement committee, per RCW 90.94.030. This term does not refer to RCW 90.82.020(6). (NEB)

Watershed Restoration and Enhancement Plan (WRE Plan): The Watershed Restoration and Enhancement Plan is directed by Section 203 of ESSB 6091 and requires that by June 30, 2021, the Department of Ecology will prepare and adopt a watershed restoration and enhancement plan for WRIAs 7, 8, 9, 10, 12, 13, 14 and 15, in collaboration with the watershed restoration and enhancement committee. The plan should, at a minimum, offset the consumptive impact of new permit-exempt domestic water use, but may also include recommendations for projects and actions that will measure, protect, and enhance instream resources that support the recovery of threatened and endangered salmonids. Prior to adoption of an updated plan, Department of Ecology must determine that the actions in the plan will result in a "net

ecological benefit" to instream resources in the WRIA. The planning group may recommend out-of-kind projects to help achieve this standard.

WRIA: Water Resource Inventory Area. WRIAs are also called basins or watersheds. There are 62 across the state and each are assigned a number and name. They were defined in 1979 for the purpose of monitoring water availability. A complete map is available here: https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-availability/Watershed-look-up

Appendix C – Committee Roster

Entity Representing	Primary Representative	Alternates
Washington State Department of Ecology	Ingria Jones	Stacy Vynne McKinstry
Tulalip Tribes	Daryl Williams	Anne Savery
Snoqualmie Indian Tribe	Matt Baerwalde	Cindy Spiry
King County	Denise DiSanto	Janne Kaje
Snohomish County	Terri Strandberg	Ann Bylin
Snoqualmie Valley Watershed Improvement District	Cynthia Krass	Erin Ericson
Snohomish Public Utilities District	Brant Wood	Keith Binkley
Washington Department of Fish and Wildlife	Kirk Lakey	Lindsey Desmul
Washington Water Trust	Emily Dick	Will Stelle
Snohomish Conservation District	Bobbi Lindemulder	Kristin Marshall
Master Builders Association of King and Snohomish Counties	Dylan Sluder	Mike Pattison
City of Arlington	Mike Wolanek	Josh Grandlienard
City of Carnation	Sam Kollar	Bob Jean
City of Duvall	Michael Remington	Jennifer Knaplund
City of Everett	Jim Miller	Souheil Nasr
City of Gold Bar	Rich Norris	Denise Beaston
Town of Index	Kim Peterson	Norm Johnson
City of Lake Stevens	David Leviton	Jon Stevens
City of Marysville	Matthew Eyer	Karen Latimer
City of Monroe	Megan Darrow	Jordan Ottow
City of North Bend	Jaime Burrell	
City of Snohomish	Glen Pickus	Brooke Eidem
City of Snoqualmie	Steve Nelson	Andy Dunn
Snoqualmie Watershed Forum (ex officio)	Elissa Ostergaard	Cory Zyla
City of Seattle (ex officio)	Paul Faulds	Elizabeth Ablow
Snohomish Basin Salmon Recovery Forum (ex officio)	Morgan Ruff	Gretchen Glaub

Appendix D – Operating Principles

The approved and signed operating principles can be found online:

https://www.ezview.wa.gov/Portals/_1962/images/WREC/WRIA07/Final%20Plan/Appendix%20D-%20Approved%20and%20signed%20operating%20principles.pdf

Appendix E – Subbasin Delineation Memo

The subbasin delineation technical memo can be found online:

https://www.ezview.wa.gov/Portals/_1962/images/WREC/WRIA07/Final%20Plan/Appendix%20E-Subbasin%20Delineation%20Memo.pdf

Appendix F – Growth Projections Memo

The PE well projections technical memo can be found online:

https://www.ezview.wa.gov/Portals/_1962/images/WREC/WRIA07/Final%20Plan/Appendix%20F-PE%20Well%20Projections%20Memo.pdf

Appendix G – Consumptive Use Memo

The consumptive use technical memo can be found online:

https://www.ezview.wa.gov/Portals/_1962/images/WREC/WRIA07/Final%20Plan/Appendix%20G-Consumptive%20Use%20Estimates%20Memo.pdf

Appendix H – Projects

Project descriptions can be found online:
https://www.ezview.wa.gov/Portals/_1962/images/WREC/WRIA07/Final%20Plan/Appendix%20H-Project%20Descriptions.pdf

Index #7

CITY OF MARYSVILLE AGENDA BILL

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: 02/08/2021

AGENDA ITEM:	
MOU with Washington State Department of Health; WA-Violent Death Reporting System (WA_-VDRS)	
PREPARED BY:	**DIRECTOR APPROVAL:**
Cmdr. Mark Thomas	
DEPARTMENT:	
Police	
ATTACHMENTS:	
MOU between Washington State Department of Health and City of Marysville Police Department	
BUDGET CODE:	**AMOUNT:**
N/A – No associated cost	
SUMMARY:	

This Memorandum of Understanding is established between the Washington State Department of Health, DOH and the City of Marysville Police Department to provide the DOH access to the agency's incident report data on homicides, suicides, accidental firearm deaths, and deaths of undetermined intent for inclusion in the Washington Violent Death Reporting System (WA-VDRS). WA-VDRS is the state component of the Center for Disease Control and Prevention's (CDC) National Violent Death Reporting System (NVDRS).

The purpose of WA-VDRS and NVDRS is to collect data that helps public health and law enforcement officials understand the extent, cause and circumstances of violent deaths. This information will be used to develop, guide and evaluate violence prevention strategies. WA-VDRS collects information on violent deaths from three primary sources: death certificates, medical examiner/coroner (ME/C) records, and law enforcement reports.

The Washington State Legislature recognizes that violence in our society causes great concern for the immediate health and safety of our citizens and our social institutions. They find that a public health and public safety approach can be effective in addressing the problem of violence and authorize the DOH in 43.70.545 RCW to collect and report data relating to acts of violence that result in homicide and suicide.

RECOMMENDED ACTION:
Staff recommends that Council authorize the Mayor or sign and execute; The MOU between the Washington State Department of Health for the WA-VDRS.

RECOMMENDED MOTION:
I move to authorize the Mayor to sign and execute _____.

Contract # _____

Memorandum of Understanding

Between the

Washington State Department of Health (ORI WA034265Y)

And

City of Marysville Police Department

This Memorandum of Understanding (henceforth referred to as an "MOU") is established between the Washington State Department of Health (the department) and the City of Marysville Police Department (agency) to provide the department access to the agency's incident report data on homicides, suicides, accidental firearm deaths, and deaths of undetermined intent for inclusion in the Washington Violent Death Reporting System (WA-VDRS). WA-VDRS is the state component of the Center for Disease Control and Prevention's (CDC) National Violent Death Reporting System (NVDRS).

The purpose of WA-VDRS and NVDRS is to collect data that helps public health and law enforcement officials understand the extent, cause and circumstances of violent deaths. This information will be used to develop, guide and evaluate violence prevention strategies. WA-VDRS collects information on violent deaths from three primary sources: death certificates, medical examiner/coroner (ME/C) records, and law enforcement reports.

The Washington State Legislature recognizes that violence in our society causes great concern for the immediate health and safety of our citizens and our social institutions. They find that a public health and public safety approach can be effective in addressing the problem of violence and authorize the department in 43.70.545 RCW to collect and report data relating to acts of violence that result in homicide and suicide.

The period of performance is from date of execution with no end date. This MOU may be reviewed with thirty (30) days' notice by either party to assess processes and needed changes between the collaborating agencies. Either party with 30 days' notice to the other party may terminate this MOU.

A. The City of Marysville Police Department agrees to:

1. Coordinate with the department to establish a process to permit access to incident reports on homicides, suicides, deaths of undetermined intent and accidental firearm deaths investigated by the agency from **January 1, 2019 onwards.**

2. On a regular basis, provide copies of identified incident case reports by any of the following methods:

a. Upload copies of reports through the department's Secure File Transfer (SFT) system (preferred method)
b. Paper-based format submitted by mail
c. Another mutually agreed upon process – Through MIRS, Marysville Information Retrieval System, a secure link for Public Disclosures.

B. The Washington State Department of Health agrees to:

1. Abide by all applicable state laws and regulations pertaining to protection of confidential information. Data abstracted into the NVDRS will be stripped of personal identifiers.

2. At least annually, disseminate WA-VDRS data reports, fact sheets and publications to data suppliers, the public and organizations working to prevent violence.

This MOU is contingent on the receipt of continued funding from the CDC Cooperative Agreement for the National Violent Death Reporting System. In the event sufficient appropriations are not made to support the WA-VDRS, the MOU shall terminate without further obligations of the parties.

Signature and Title / Date	*Contract Officer / Date*
Marysville Police Department	Washington State Department of Health
Agency Name	*Agency Name*
1635 Grove St.	
Marysville, WA. 98270	
Mailing Address	*Mailing Address*
360-363-8300	
Phone	*Phone*
Erik Scairpon escairpon@marysvillewa.gov	
Email	*Email*

For any questions or concerns, please contact Brycen Huff, Lead Abstractor at 360.236.2832 or email brycen.huff@doh.wa.gov .

Please return signed original MOU to:
Brycen Huff, Department of Health
Office of Health & Safe Communities
Attn: WA-Violent Death Reporting System
PO BOX 47855
Olympia, WA 98504-7853

An executed copy of the MOU will be returned to you.

Index #8

CITY OF MARYSVILLE AGENDA BILL

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: February 8, 2021

AGENDA ITEM:	
Ordinance Amending Marysville Municipal Code Section 11.08.200 Regarding Truck Parking	
PREPARED BY:	**DIRECTOR APPROVAL:**
Jesse Hannahs, P.E. – Traffic Engineering Manager	JH for KN
DEPARTMENT:	
Public Works - Engineering	
ATTACHMENTS:	
Ordinance Amending Truck Parking Proposed Truck Route/Parking Map	
BUDGET CODE:	**AMOUNT:**
N/A	N/A

SUMMARY:
With the completion of the 1st ST Bypass project, truck parking upon 47th Ave NE needs to be modified as the 1st ST Bypass project construction effectively eliminated the ability of trucks to park on a portion of 47th Ave NE.

RECOMMENDED ACTION:
Staff recommends that Council adopt the Ordinance to amend Marysville Municipal Code Section 11.08.200 Regarding Truck Parking.

RECOMMENDED MOTION:
I move to approve Ordinance No. _____.

CITY OF MARYSVILLE
Marysville, Washington

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MARYSVILLE, WASHINGTON, AMENDING SECTION 11.08.200 OF THE MUNICIPAL CODE REGARDING TRUCK PARKING.

WHEREAS, the construction of the 1st Street bypass has affected the availability of truck parking on 47th Avenue NE; and

WHEREAS, the municipal code should be amended to reflect where trucks are authorized to park.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MARYSVILLE, WASHINGTON, DO ORDAIN AS FOLLOWS:

SECTION 1. Section 11.08.200 of the municipal code is amended as set forth in Exhibit A.

SECTION 2. Severability. If any section, subsection, sentence, clause, phrase or word of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality thereof shall not affect the validity or constitutionality of any other section, subsection, sentence, clause, phrase or word of this ordinance.

SECTION 3. Upon approval by the city attorney, the city clerk or the code reviser are authorized to make necessary corrections to this ordinance, including scrivener's errors or clerical mistakes; references to other local, state, or federal laws, rules, or regulations; or numbering or referencing of ordinances or their sections and subsections.

SECTION 4. Effective Date. This ordinance shall become effective five days after the date of its publication by summary.

PASSED by the City Council and APPROVED by the Mayor this _____ day of _____, 2021.

CITY OF MARYSVILLE

By_____
JON NEHRING, MAYOR

Attest:

By_____
_____, DEPUTY CITY CLERK

Approved as to form:

By_____
JON WALKER, CITY ATTORNEY

Date of publication:_____
Effective Date (5 days after publication):_____

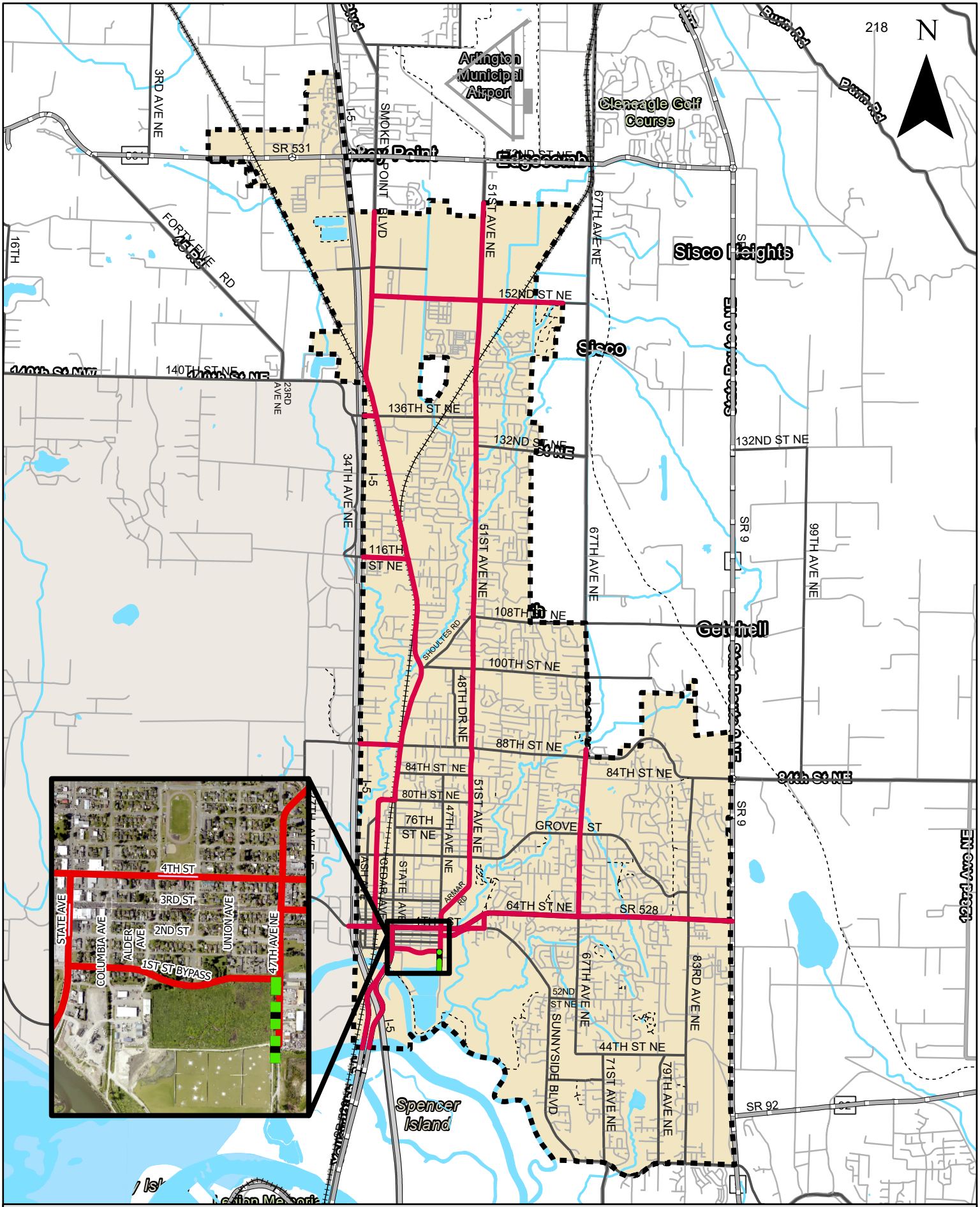
EXHIBIT A

11.08.200 Parking recreational vehicles and trucks.

(1) No person shall park or park and detach any recreational vehicle (as defined in MMC 7.05.050) upon any street or alley; provided, however, a recreational vehicle may park on a city street for a maximum period of 24 hours, provided said recreational vehicle does not violate any parking restrictions (such as posted time zones) and meets all other parking regulations. It shall be a parking violation to move or re-park a recreational vehicle within two blocks of any location where the recreational vehicle has previously parked in a residential zone for up to the 24-hour limit provided in this section.

(2) A tractor-trailer combination may be parked only on the following streets: 47th Avenue NE south of ~~2nd Street, excluding the area 350 feet south of the south pavement edge of 2nd Street~~the 1st Street Bypass. Unattached trailers and dollies of such combinations may be parked only where combinations are allowed to be parked. When parked, blocks must be placed under the trailer legs and the trailer must be marked with reflectorized devices that meet all industry standards. It is a violation to park in any other public rights-of-way.

(3) Trucks or tractor-trailer combinations may temporarily park within the untraveled portion of a city street or alley when property is actively being loaded or unloaded from such vehicle; or when the vehicle is a city vehicle or public utility vehicle providing a service to the public; or the vehicle is an emergency vehicle; or such vehicle is currently used at and is located at a specific location within a residential zone for the purpose of assisting in the providing of services such as construction, carpentry, plumbing or landscaping to such residence or location.



City of Marysville

Truck Routes and Truck Parking

Truck Routes

Truck Parking

Printed: January 2021

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Index #9

CITY OF MARYSVILLE AGENDA BILL

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: February 8, 2021

AGENDA ITEM:	
Ordinance Amending Marysville Municipal Code Section 11.62.020 Regarding Truck Routes	
PREPARED BY:	**DIRECTOR APPROVAL:**
Jesse Hannahs, P.E. – Traffic Engineering Manager	JH for KN
DEPARTMENT:	
Public Works - Engineering	
ATTACHMENTS:	
Ordinance Amending Truck Routes Proposed Truck Route/Parking Map	
BUDGET CODE:	**AMOUNT:**
N/A	N/A

SUMMARY:
With the completion of the 1st ST Bypass project, the truck route should be modified to include the 1st ST Bypass as a designated City Truck Route. Changes to the signing of the City streets will be included within the scope of the proposed truck route change.

RECOMMENDED ACTION:
Staff recommends that Council adopt the Ordinance to amend Marysville Municipal Code Section 11.62.020 Regarding Truck Routes.

RECOMMENDED MOTION:
I move to approve Ordinance No. _____.

CITY OF MARYSVILLE
Marysville, Washington

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MARYSVILLE, WASHINGTON, AMENDING SECTION 11.62.020 OF THE MUNICIPAL CODE REGARDING TRUCK ROUTES.

WHEREAS, the newly constructed 1st Street Bypass was designed for and is appropriate for truck traffic; and

WHEREAS, the municipal code should be amended to make the 1st Street Bypass a truck route.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MARYSVILLE, WASHINGTON, DO ORDAIN AS FOLLOWS:

SECTION 1. Section 11.62.020 of the municipal code is amended as set forth in Exhibit A.

SECTION 2. Severability. If any section, subsection, sentence, clause, phrase or word of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality thereof shall not affect the validity or constitutionality of any other section, subsection, sentence, clause, phrase or word of this ordinance.

SECTION 3. Upon approval by the city attorney, the city clerk or the code reviser are authorized to make necessary corrections to this ordinance, including scrivener's errors or clerical mistakes; references to other local, state, or federal laws, rules, or regulations; or numbering or referencing of ordinances or their sections and subsections.

SECTION 4. Effective Date. This ordinance shall become effective five days after the date of its publication by summary.

PASSED by the City Council and APPROVED by the Mayor this _____ day of _____, 2021.

CITY OF MARYSVILLE

By_____
JON NEHRING, MAYOR

Attest:

By_____
_____, DEPUTY CITY CLERK

Approved as to form:

By_____
JON WALKER, CITY ATTORNEY

Date of publication:_____
Effective Date (5 days after publication):_____

EXHIBIT A

11.62.020 Truck routes designated.

The city streets and avenues, or portions thereof, as designated below, shall constitute the exclusive truck routes in the city of Marysville:

(1) North-South Traffic.

Cedar Avenue from 4th Street (SR 528) to 80th Street N.E.;

Smokey Point Blvd./State Avenue from Grove Street to the northern city limits;

State Avenue from southern city limits to 4th Street (SR 528);

47th Avenue N.E. from ~~2nd Street~~the 1st Street Bypass to Armar Road;

Armar Road from 47th Avenue N.E. to 51st Avenue N.E.;

51st Avenue N.E. from Armar Road to northern city limits;

53rd Drive N.E. from 3rd Street to 4th Street;

67th Avenue N.E. from 64th Street N.E. (SR 528) to the northern city limits.

(2) East-West Traffic.

1st Street Bypass from State Avenue (SR 529) to 47th Avenue N.E.;

3rd Street from 47th Avenue N.E. to 53rd Drive N.E.;

4th Street/64th Avenue N.E. (SR 528) from I-5 interchange to the eastern city limits; provided, that there shall be no turns permitted to/from State Avenue north of 4th Street;

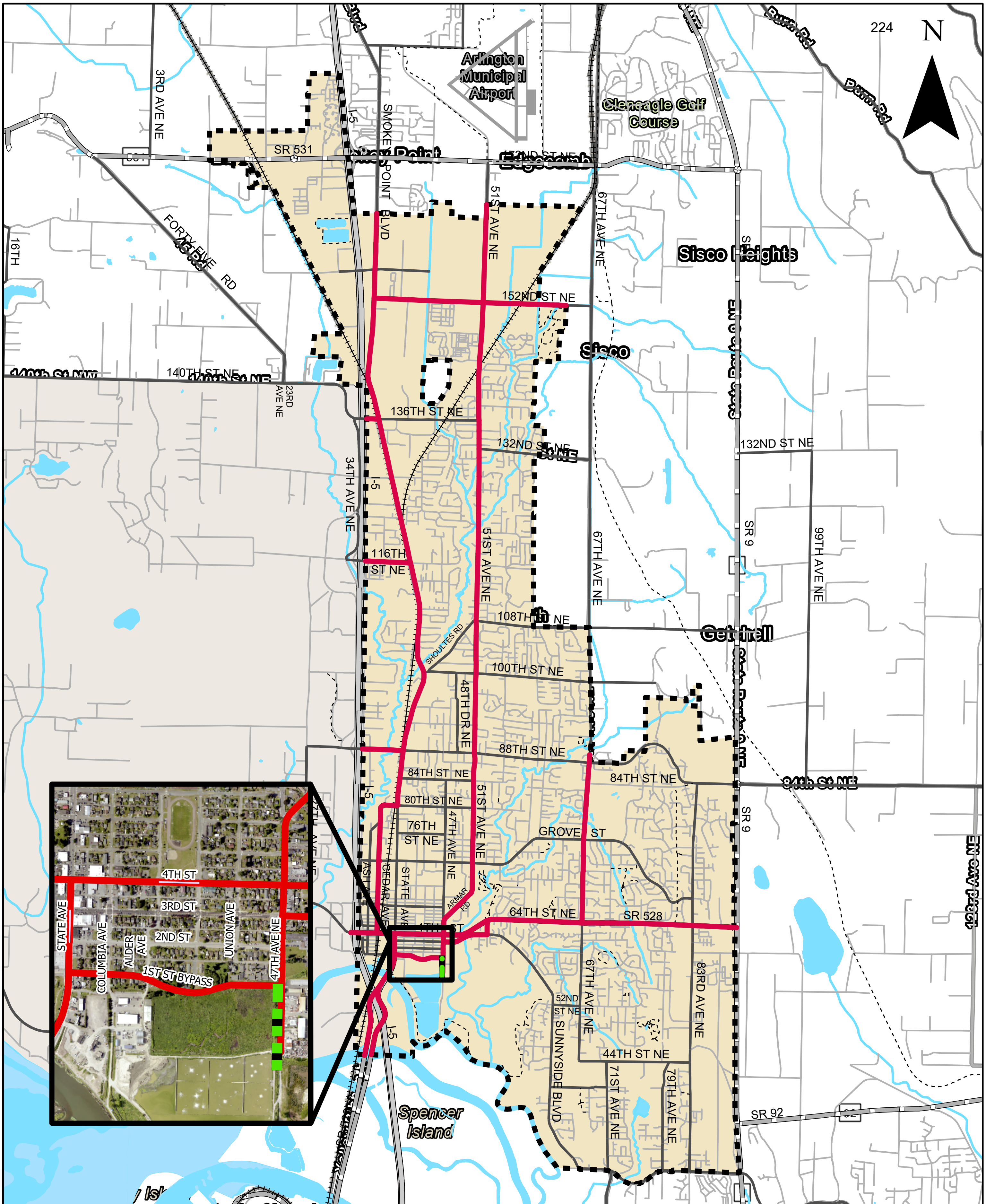
80th Street N.E. from Cedar Avenue to State Avenue;

88th Street N.E., from I-5 interchange to State Avenue;

116th Street N.E., from I-5 interchange to State Avenue;

136th Street N.E., from west city limits to Smokey Point Blvd./State Avenue;

152nd Street N.E. from Smokey Point Boulevard to east city limits.



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City of Marysville

Truck Routes and Truck Parking

Printed: January 2021

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Truck Routes

Truck Parking

Index #10

CITY OF MARYSVILLE AGENDA BILL

EXECUTIVE SUMMARY FOR ACTION

CITY COUNCIL MEETING DATE: 2/8/21

AGENDA ITEM:	
Budget Amendment-Wastewater Treatment Plant Operator	
PREPARED BY:	**DIRECTOR APPROVAL:**
Gloria Hirashima, Chief Administrative Officer Kevin Nielsen, Public Works Director	
DEPARTMENT:	
Executive	
ATTACHMENTS:	
BUDGET CODE:	**AMOUNT:**
	$121,101
SUMMARY:	

The Public Works Department requires an additional wastewater treatment plant (WWTP) operator for 2021. The City received notice that one of our WWTP operators will be activated for military service starting this month. We anticipate the position will be vacant for up to a year. Minimal operations require that we staff the position. The City has also had significant difficulty hiring qualified individuals for this key position, because of the certifications required to operate the plant. We will reevaluate the position in future years, but believe there will be sufficient work within the plant operation to maintain the additional position.

RECOMMENDED ACTION: Authorize budget amendment for additional Wastewater Treatment Plant Operator for 2021-2022 budget.

CITY OF MARYSVILLE
Marysville, Washington

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF MARYSVILLE AMENDING THE 2021-2022 BIENNIAL BUDGET AND PROVIDING FOR THE INCREASE OF CERTAIN EXPENDITURE ITEMS AS BUDGETED FOR IN ORDINANCE NO. 3160.

THE CITY COUNCIL OF THE CITY OF MARYSVILLE, WASHINGTON DO ORDAIN AS FOLLOWS:

Section 1. Since the adoption of the 2019-2020 budget by the City Council on November 26, 2018, it has been determined that the interests of the residents of the City of Marysville may best be served by the increase of certain expenditures in the 2021- 2022 budget. The following funds as referenced in Ordinance No. 3160 are hereby amended to read as follows:

Fund Title	Fund No.	Description	Current Budget	Amended Budget	Amount of Inc/(Dec)
Water/Sewer Utilities	401	Beginning Fund Balance	11,703,633	11,703,633	-
Water/Sewer Utilities	401	Revenue	29,505,285	29,505,285	-
Water/Sewer Utilities	401	Expenditures	31,200,133	31,321,234	121,101
Water/Sewer Utilities	401	Ending Fund Balance	10,008,785	9,887,684	(121,101)

Section 2. Except as provided herein, all other provisions of Ordinance No. 3160 shall remain in full force and effect, unchanged.

Section 3. Upon approval by the city attorney, the city clerk or the code reviser are authorized to make necessary corrections to this ordinance, including scrivener's errors or clerical mistakes; references to other local, state, or federal laws, rules, or regulations; or numbering or referencing of ordinances or their sections and subsections.

Section 4. Effective date. This ordinance shall become effective five days after the date of its publication by summary.

PASSED by the City Council and APPROVED by the Mayor this _____ day of _____, 2021.

CITY OF MARYSVILLE

By_____
MAYOR

ATTEST:

By_____

DEPUTY CITY CLERK

Approved as to form:

By_____
CITY ATTORNEY

Date of Publication: _____

Effective Date (5 days after publication): _____