



Lake Whatcom Water and Sewer District

North Shore Water Systems Consolidation Feasibility Study



Melanie Mankamy, PE
Senior Project Manager

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WHY ARE WE HERE?

- Washington State Department of Health is encouraging consolidation of smaller water systems with larger water systems by offering the following:
 - Grants (up to \$30,000) for Consolidation Feasibility Studies
 - Loans with up to 50% principal forgiveness (depending on availability of funds)
- Lake Whatcom Water and Sewer District applied for and received a Consolidation grant to study the feasibility of combining its Eagleridge and Agate Heights water systems, and potentially incorporate other Group A and Group B systems, and individual residences.



BENEFITS OF PUBLIC WATER

- Consistent supply of clean, potable water
- Regulation and oversight of water quality by State
- Sufficient quantity and storage of water for fire protection – potential for reduction in insurance rates
- Professionally maintained and operated by certified staff
 - ✓ Record keeping and reporting
 - ✓ Water sampling
 - ✓ Notifications
- Long term capital planning and reserves for emergencies and upgrades
- Water source for developing property impacted by “Hirst Decision”



BACKGROUND

- Lake Whatcom Water and Sewer District operates two Group A water systems on the North Shore:
 - Eagleridge Water System – water source is City of Bellingham; 70 connections; capacity = 85
 - Agate Heights Water System – water source is a District-owned well; 39 connections (44 ERUs); capacity = 48 connections (54 ERUs)

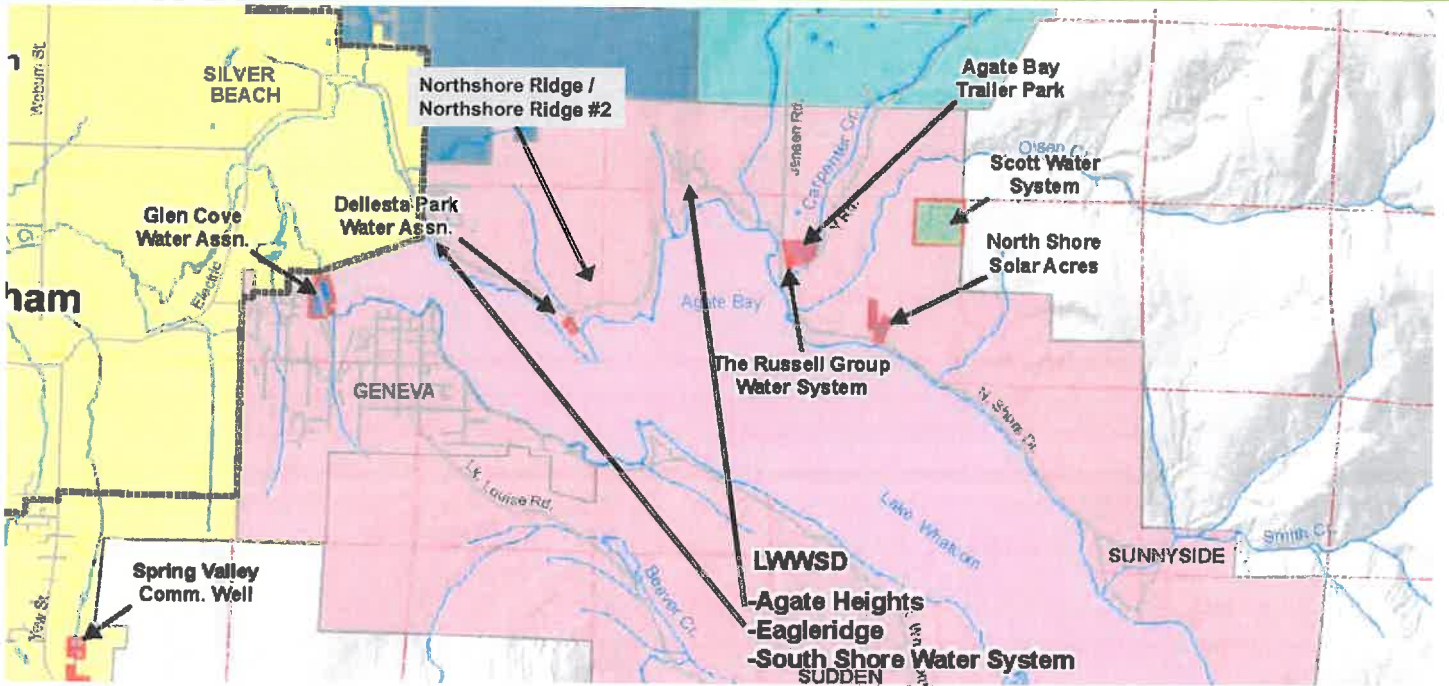


BACKGROUND

- There are two Group A and four Group B water systems inside the District's North Shore service area and adjacent to proposed project:
 - Agate Bay Trailer Park Water System – Group A, well source, 25 connections
 - Russell Group (restaurant) – Group A, well source, one connection
 - Dellesta Park – Group B, well source, 5 connections (capacity=7)
 - North Shore Solar Acres – Group B, well source, 6 connections
 - Northshore Ridge – Group B, well source, 4 connections
 - Northshore Ridge #2 – Group B, well source, 3 connections



BACKGROUND

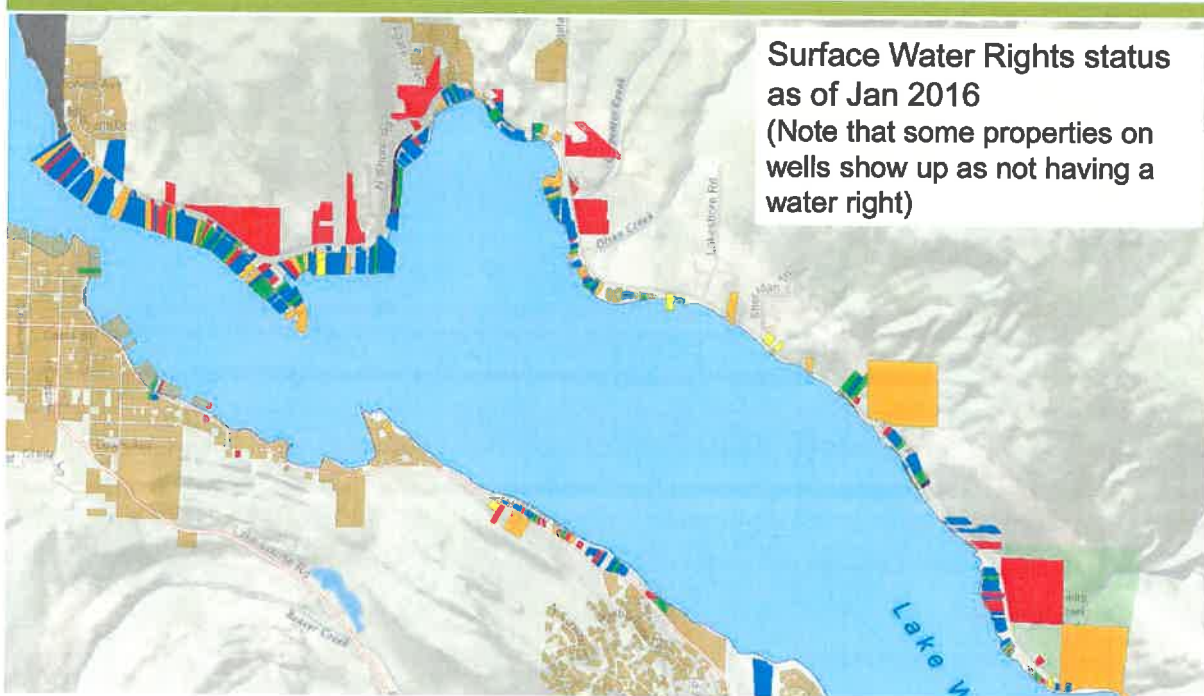


 **BACKGROUND**

Other Water Users:

- There are approximately 330 existing residences within about 1,000 feet of Lake Whatcom
 - Estimated residences on surface water = 250
 - Estimated residences on individual wells = 80
- We have estimated that there are only 60 additional potential connections from new residential development

 **BACKGROUND**



Surface Water Rights status as of Jan 2016
 (Note that some properties on wells show up as not having a water right)

Developed Parcels and Water Right Documents Near Lake Whatcom

Draft 1/28/2016

-  Improved Parcel with a Certificate Permit or Change Permit (171 parcels)
-  Improved Parcel with an Application (32 Parcels)
-  Improved Parcel with an Appurtenant Certificate Permit or Change Permit, but they have Additional Water Right (18 parcels)
-  Improved Parcel with C&M (117 parcels) 20 of these parcels also have application
-  Improved Parcel, no state Right Document Found (10 parcels)
-  Unimproved Parcel with an Application (6 Parcels)
-  Parcels with Water Service from Lake Whatcom Water and Sewer District
-  Incorporated City of Bellingham

1:45,000



While examining developed parcels around Lake Whatcom, Ecology found 161 parcels by permit exempt wells. These parcels are not shown on this map.

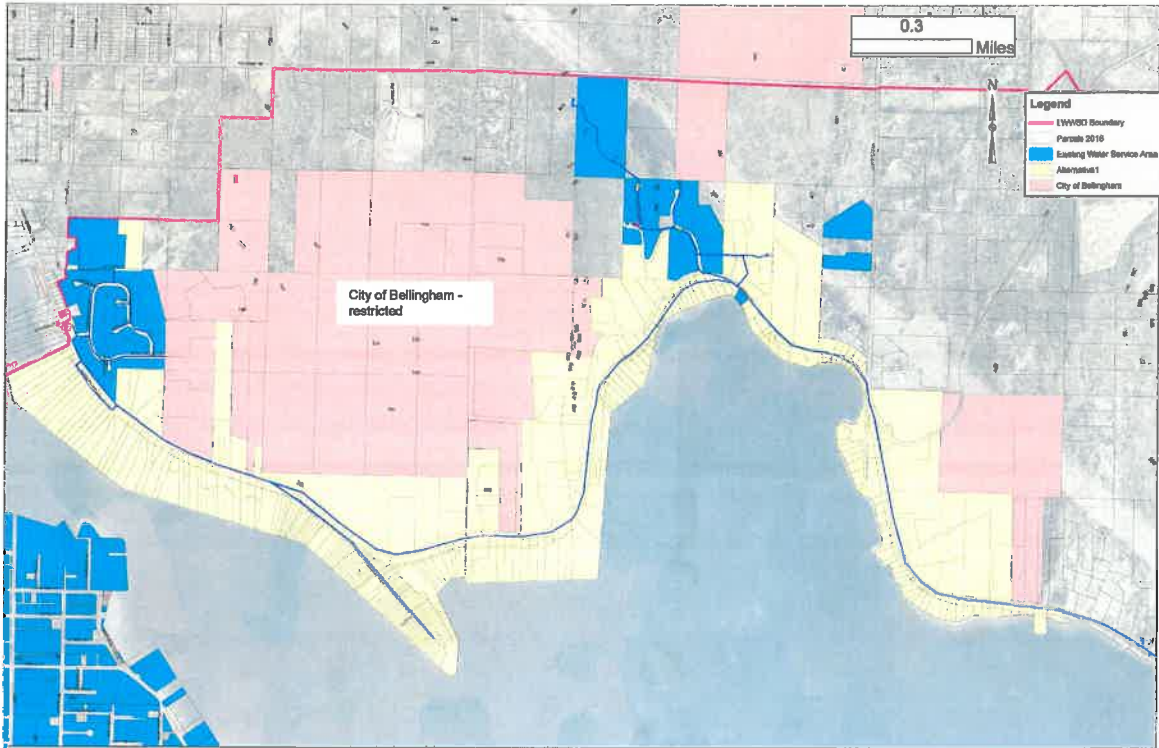




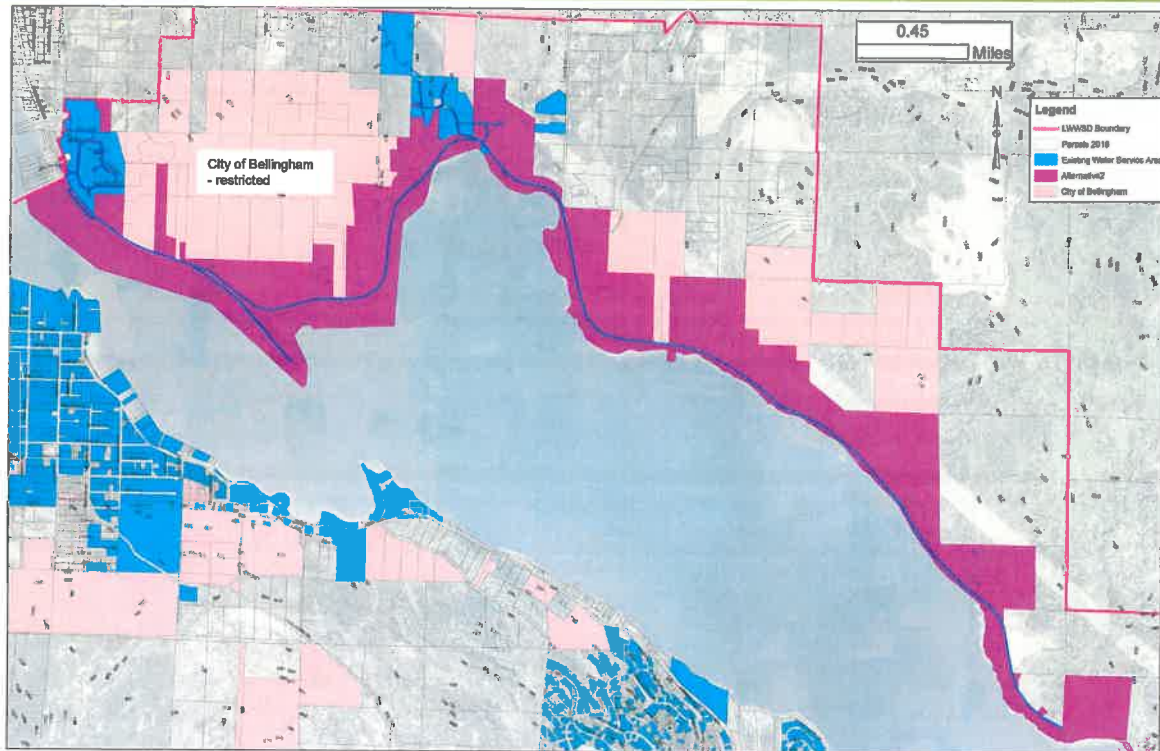
FEASIBILITY STUDY APPROACH

- Several Alternatives were developed with District staff input:
 - Alternative 1 – Match District sewer service area
 - Alternative 2 – Extend water to east end of Northshore Road
 - Alternative 3 – Extend only to Group A systems at Y Road
- The number of potential water connections for each Alternative was assessed (existing water users, sewer-only customers; consolidated lots).
- System components for each Alternative were sized based on capacity requirements and hydraulic model results.

 **ALTERNATIVE 1 – MATCH THE EXISTING DISTRICT SEWER SERVICE AREA**

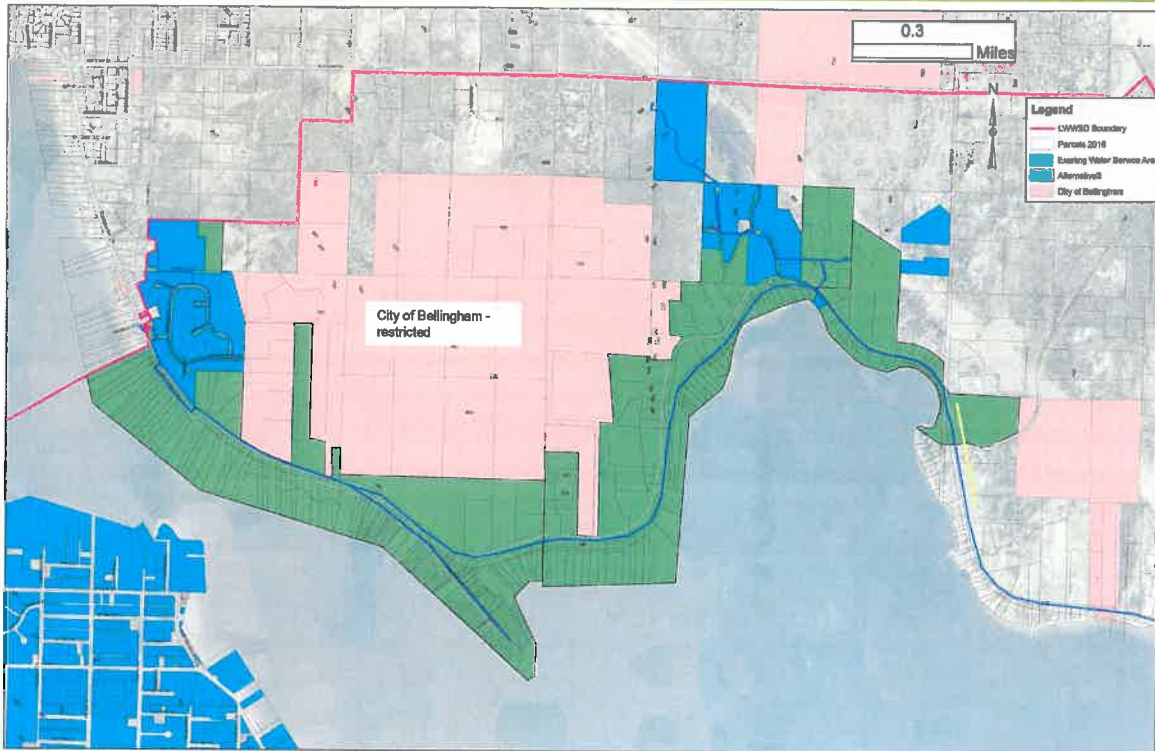


 **ALTERNATIVE 2 – EXTEND FROM EAGLERIDGE TO EAST END OF NORTHSORE RD**





ALTERNATIVE 3 – EXTEND FROM EAGLERIDGE TO Y ROAD





DESCRIPTION OF ALTERNATIVES

	Alternative #1	Alternative #2	Alternative #3
Connect and extend water mains	Match the existing District sewer service area	Extend from Eagleridge to east end of Northshore Road	Extend from Eagleridge to the east only to Y Road
Upgrade the Water Treatment Plant and transmission pumping capacity	190 gpm	280 gpm	190 gpm
Additional storage capacity	185,000 gallons	333,000 gallons	185,000 gallons
New fire hydrants	39	58	33
Incorporate existing District water system connections	120	120	120
Future connection capacity	405	530	355
Estimated Project Cost	\$7.5M - \$8M	\$10M - \$11M	\$6.5M - \$7.1M



FINANCING OPTIONS FOR DISTRICT

- Drinking Water State Revolving Fund Consolidation Loan – 1.5%; 24 years
 - Potential for 50% principal forgiveness (if funds are available)
- Public Works Trust Fund Loan – 1-2%; 20 years
- Revenue Bond – 2.73%; 20 years (as of 4/20/17; AA Bond Rating)
- USDA-Rural Development – 3.25% (as of 7/1/17); up to 40 years
 - Funding source of last resort



COST SHARING OPTIONS

- Utility Local Improvement District (ULID)
 - Value of assessment must be no more than the increased property value after the improvement
 - Payback term can be up to 20 years
 - All properties benefitting from the improvement contribute
- “Special Benefit Area” fee collected upon connection
 - Possibly offer discount for those connecting during project construction
 - Pay over time with security interest recorded against property
- Surcharge on water bill to collect funds over time



COST SHARING ANALYSIS

	Cost Share per Connection	
	Lump Sum Fee (range)	Annualized Fee (based on 20-year Bond repayment)
50% Participation	\$48,000 - \$56,500	\$3,146 - \$3,704
75% Participation	\$33,500 - \$39,200	\$2,196 - \$2,570
90% Participation	\$28,500 - \$33,300	\$1,868 - \$2,183

Cost share range is based on the Alternative Project Costs divided by the projected number of participants for each Alternative.



EXAMPLE RATES AND CHARGES

- Example Bi-monthly water charges:
 - Base Rate = \$62.31/two months
 - Water Usage over 600 cubic feet (CF) = \$8.85/100 CF
 - Bi-monthly Base + average usage = \$171.43
(\$85.72/month; based on average of Agate Height water system customers)



SUMMARY AND CONCLUSIONS

- Consolidating and expanding the District's North Shore water systems will be a substantial undertaking
 - Offers "economies of scale" for District operations
 - Needs a minimum number of new customers to be financially feasible:
 - ✓ Minimum 75% participation for Bond-funded Project
 - ✓ Minimum 50% participation *IF* District secures a DWSRF Consolidation Loan with 50% principal forgiveness

Questions?

Comments?

