Shelter Bay Water System

Town Hall Meeting

John Koch, PE, BCEE, CDT

January 2018
History of Water Systems

• Shelter Bay Water System plans of 1979, 1999 and 2010 did not consider or evaluate any water sources other than La Conner.

• Tribal system has governance like any other utility system.
  – System supplies water to both Tribal members an non-members.
  – Utility was created under Title 11 of the Tribal Code
  – Utility is governed by the Utility Commission composed of Tribal and non-Tribal members
  – Cost of water to all users is the same as SITC does not nor can they set variable rates Tribal/non-Tribal rates.
    • Tribal members may however, receive grantsloan from other Tribal sources to offset utility costs.

• Claire Oliver’s Study of the Swinomish Utility Authority (SUA) concluded it was a well-run and maintained system.

• Water quality will be the same from either La Conner or the Tribal system.
  – Source water is from City of Anacortes
  – Switching sources is NOT like what happened to the City of Flint, Michigan

• Shelter Bay’s Capital Reserves Studies of 2011 - 2015 adapted by SB:
  – Recognizes the need for fire flow in the community
  – Capital reserve assessments are being collected based on providing fire flow
Where Do We Get Our Water?

• What is the instrument that provides SB with water
  – 2011 Agreement with the Town of La Conner
• La Conner gets their water from City of Anacortes with an inter-tie located at Young Rd and La Conner-Whitney Road.
• City of Anacortes has a 42 million gallon per day plant on the Skagit River located behind Blade Chevrolet in Mount Vernon
• SUA receives their water from City of Anacortes with an inter-tie on Reservation Road and Hwy 20.
Anacortes Water Treatment Plant
In Mount Vernon
How Does The Area Get Its Water?

Anacortes 42 MGD Water Plant

SITC Water Tank

La Conner Water Tank
La Conner Inter-tie With Shelter Bay

40+ Year Old Coated Steel Water Pipe Under Channel
La Conner – Shelter Bay Water

Channel Crossing

La Conner Water Tower
Agreement With La Conner

• Agreement does **not** address SB’s need for **fire flow**, nor shall La Conner be held liable for any shortfall in this regard
• Capital improvement assessments from La Conner are variable. Currently SB’s responsibility is at 43.7% based on the last 3 years of usage
• La Conner can limit SB’s water use if the total use of the La Conner system approaches La Conner’s water supply system capacity
• La Conner may replace existing facilities, and may require a cost sharing commitment from SB prior to proceeding with said improvements.
Agreement With La Conner (continued)

• Term of agreement with La Conner is in perpetuity (FOREVER)

• La Conner shall make available for inspection all records pertaining to the water system.

• It is agreed that, if SB develops needs for water over and above the ability of La Conner to supply, then SB shall have the right to seek other sources of water.
Anacortes Charges to La Conner and SUA

ORDINANCE NO. 2951

AN ORDINANCE AMENDING CHAPTER 13.32 OF THE ANACORTES MUNICIPAL CODE TO UPDATE THE WHOLESALE AND INDUSTRIAL CONTRACT RATE SCHEDULE

WHEREAS, The City of Anacortes Water Utility has entered into long-term supply contracts with six wholesale and industrial customers. Those contracts, and contract terms, are identified as follows: City of Oak Harbor (December 31, 2025); Town of La Conner (December 31, 2025); Skagit PUD (December 31, 2025); Swinomish Utility Authority (December 31, 2025); Tesoro Petroleum Companies, Inc. (Teso Northwest Company Refinery - December 31, 2025); and, Shell Oil Products US (Shell Puget Sound Refinery - December 31, 2025).

B. Town of La Conner.

1. Water charges for the period beginning June 5th, 2015:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>$12,534/month</td>
</tr>
<tr>
<td>Fixed Operating Cost (estimate)</td>
<td>$6,901/month</td>
</tr>
<tr>
<td>Variable Operating Cost (estimate)</td>
<td>$.00166/per cubic foot</td>
</tr>
</tbody>
</table>

The Same Unit Cost for Each Gallon of Water Used By Costumers

D. Swinomish Utility Authority.

1. Water charges for the period beginning June 5th, 2015:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>$4,178/month</td>
</tr>
<tr>
<td>Fixed Operating Cost (estimate)</td>
<td>$2,254/month</td>
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<tr>
<td>Variable Operating Cost (estimate)</td>
<td>$.00166/per cubic foot</td>
</tr>
</tbody>
</table>
Water Rate Comparisons

Rates are as of October 2017.
Applicable taxes not included in totals.
Assumes 600 cu. ft. consumption
33% Water portion of SBC Capital Assessment = $20.00

<table>
<thead>
<tr>
<th>Water Utility Charges</th>
<th>Shelter Bay</th>
<th>La Conner</th>
<th>Swinomish</th>
<th>Anacortes</th>
<th>Mt Vernon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>17.00</td>
<td>27.18</td>
<td>23.00</td>
<td>16.51</td>
<td>24.75</td>
</tr>
<tr>
<td>Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed Cost</td>
<td>$ 37.00</td>
<td>$ 27.18</td>
<td>$ 23.00</td>
<td>$ 16.51</td>
<td>$ 24.75</td>
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<tr>
<td>Consumption Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Cubic Ft)</td>
<td>0.0190</td>
<td>0.0385</td>
<td>0.0300</td>
<td>0.0184</td>
<td>0.0351</td>
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<tr>
<td>Assumed Consumption</td>
<td>600</td>
<td>11.40</td>
<td>23.10</td>
<td>18.00</td>
<td>11.04</td>
</tr>
<tr>
<td>(Cubic Ft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cost of Water</td>
<td>$ 48.40</td>
<td>$ 50.28</td>
<td>$ 41.00</td>
<td>$ 27.55</td>
<td>$ 45.81</td>
</tr>
</tbody>
</table>
Evaluation for Water Capital Improvement Plan

1.1 Scope

January, 2010

The Shelter Bay Community authorized this report on September 1, 2009. The scope of this report is to prepare recommendations and cost estimates that will assist Shelter Bay in developing a responsible Water Capital Improvement Program. The focus of this report will be to evaluate the improvements necessary to provide fire flow protection and increase the level of service available at the higher elevation lots. The report will prepare planning level cost estimates for system
Water Supply in Shelter Bay
Are These Fire Hydrants?

No! They are flushing connects for periodic water main maintenance. If a fire truck was connected to these 2-inch standpipes, there is a very high potential that the water main would collapse and there would be a catastrophic water main failure.
Fire Hydrants in Shelter Bay

This is one of only 5 fire hydrant in SB

- During the recent marina fire drill, the flow from the hydrant could not keep up with the fire engine pumper.
Fire Potential is a Reality on Fidalgo Island Almost Every Summer and Fall
Fire Flow Requirements

• As established by the Washington Administrative Code (WAC)
  – Where local (Shelter Bay or the Fire District) standards are not adopted under WAC 248-57-900, Residential flow is 500 gallons per minute at 30 minutes
  – Maximum spacing for fire hydrants is 900 feet per WAC 246-293-650
Tinder Dry Underbrush and Trees In Shelter Bay And On Tribal Land
Recent Washington State Fires

Graham Fire
Yes, they do happen in Western Washington too!

Cougar Creek Fire – Yakima Nation
Requirement of Master Lease Agreement

• Article 10 of the Master Lease requires SB to maintain the water, sewer, and roads in a state of repair.
• Negotiations on the new lease has a provision whereby the Tribe may assume operation and maintenance of the water and sewer system.
Availability of Fire Flow
Where is There Available Fire Flow?
SUA Inter-tie with Anacortes
# Title 11 – Utilities

## Chapter 3 – Reservation Utility Improvement Districts

### Subchapter I – Establishment
- 11-03.010 Authorizations
- 11-03.020 Formation
- 11-03.030 Hearing
- 11-03.040 Resolution Ordering Improvement
- 11-03.050 Notice of Filing Roll
- 11-03.060 Hearing to Contest Assessment
- 11-03.070 Alteration of Boundary Lines
- 11-03.080 Final Roll
- 11-03.090 Segregation of Special Assessment
- 11-03.100 Assessments
- 11-03.110 Installment Payments
- 11-03.120 Payment, Interest, and Penalties
- 11-03.130 Payment Within Thirty Days
- 11-03.140 Prepayment
- 11-03.150 Assessment Lien

### Subchapter II – Foreclosure Procedure
- 11-03.160 Conditions Precedent to Foreclosure
- 11-03.170 Foreclosure of Entire Assessment
- 11-03.180 Commencement of Action
- 11-03.190 Form of Summons
- 11-03.200 Parties and Property
- 11-03.210 Pleadings and Evidence
- 11-03.220 Trial
- 11-03.230 Judgment
- 11-03.240 Sale
- 11-03.250 Right of Redemption
Southern Extremities of SUA Water System

Main Reservoir
Overflow Elevation: 323'

Indian Road Reservoir

Shorewood PRV

Westshore PRV

Snee Oosh Road

Village PRV

188 Zone

Shelter Bay Intertie

SB Reservoir

Pull and Be Damned Road

Pull and Be Damned PRV
Potential Location of Intertie
Interties with SUA Water System

A Proposed Intertie Location

Indian Road Reservoir + New 350,000 Gallon Reservoir

New Intertie Line to Shelter Bay

A Proposed Intertie Location

SB Reservoir

Shelter Bay Intertie

188 Zone

210 Zone

Main Reservoir Overflow Elevation: 323'
Location for Shelter Bay Intertie

Indian Road

Stillaguamish PL

Snohomish Drive

Moko PL

8" Water

New Water Main
Existing 6” & 8” Water Mains

Legend:
- 2” Water
- 4” Water
- 6” Water
- 8” Water
- 10” Water

Potential Tie-in
Intertie Points

Indian Road

Snohomish Drive
Benefits – Town of La Conner

Benefits to La Conner:
1. Spread Capital costs over a greater number of connections.
2. Continued revenue from largest wholesale customer.
Benefits - Swinomish Utility Authority

1. Provide storage capacity for system FIRE FLOW to meet standard of 3,000 gpm for 3 hours.
2. Enhance capability to increase commercial and industrial business base with a more reliable and robust water supply system.
3. Increase reliability of domestic water supply during extended power outages.
4. Enhancement of water distribution system.
5. Potential of tripling SITC water connections, increasing revenue base.
6. Consolidating local water system assets.
7. Potential for obtaining matching grants or low interest loans with influx of SB monies.
8. Earthquake resistant storage which does not exist with current SITC reservoir.
9. Enhance communication and cooperation between Tribe and SB.
Benefits – Shelter Bay

1. Would provide for more than a day's worth of water storage during power outage in the local area or even a outage or mechanical/transmission issue at the Anacortes water plant located in Mount Vernon.

2. Fire flow capacity will be provided in new storage tank. Distribution lines with in confines of SB would still need to be increased in size.

3. Potential to reduce power consumption and mechanical maintenance with fewer rotating pieces of equipment as most if not all system pressure could be provided by new storage tank level.

4. Enhance level of communication and cooperation between SITC and SB.

5. Fire Flow would be immediately available to Shelter Bay with the addition of fire hydrants on the 6” and 8” lines near the intertie point.
6. SB water pumps can be abandoned (except maybe Eagle’s Nest). Entire system would not be impacted by PSE power outages.

7. SB would have the pressure and guaranteed source of water for fire flow.

8. Based on preliminary cost of water from SITC compared to La Conner, usage charges would be less.

9. Based on engineering study, costs to connect to SITC may be less than the improvements La Conner will be making to their system.

10. SB will still be responsible for the 40 year old pipe under the Swinomish Channel that is not included in any costs from La Conner.

11. Sales Tax on capital improvements will not be imposed, a savings of almost 9% to SB.
Issues for Shelter Bay with SUA Water

• SUA is unknown entity compared to La Conner
• At this time, how will the capital improvements be financed is a question mark.
  – La Conner’s proposed improvements would be financed by municipal bonds and reflected in SB monthly rates payable over the bond period including interest on the bonds.
  – Preliminary discussions with the SITC is the Tribe is willing to consider financing the improvements.
• Water is Fluoridated – La Conner’s is not
If Fluoridated Water is a Concern – Simple and Effective Means to Remove It

KEY FEATURES
• USE OF RESINTECH® PREMIUM HIGH CAPACITY SIR-900 MEDIA
• EFFECTIVE OVER A WIDE pH RANGES
• SUPERIOR PHYSICAL STABILITY AND LOWER PRESSURE DROP

FLUORIDE REMOVAL CARTRIDGES
Fluoride removal is achieved by utilizing the advanced media technology of ResinTech® SIR-900 media. AF Series cartridges remove Fluoride by a chemical reaction with the media. ResinTech® SIR-900 is a synthetic aluminum oxide that is specially processed to have minimum fines and other foreign matter. It has minimal shrinkage/swelling and low-pressure loss. The product is physically stable and can be used over a wide pH range.

APPLICATIONS
DRINKING WATER -
Consumers, who are concerned about fluoride in the municipal water supply for health reasons and require its removal, can benefit by the use of a fluoride removal cartridge at the Point of Use (POU).
Probable Cost Impacts

• Precision of Cost Accuracy is totally dependent on the level of development of construction plans
  – Planning Level Cost estimate accuracy vary from -50% to +100%. La Conner is at this stage of the project.
  – Preliminary Feasibility Cost estimates vary from -30% to +50%. Shelter Bay with the intertie is at this stage of the project.
• Stay with La Conner the range is $1,156,00 to $4,624,000 to get to SB’s front door.
• Switch to SUA the range is $2,190,300 to $4,693,500 to tie into the middle of the SB system.
Decision is Boiled Down to One Question

Based on our Capital Reserve Study and the assessments collected to date based on that study:

• Does the community want to have the capability of providing fire flow pursuant to the WAC?

  YES or NO?

✓ If Yes, the most cost effective choice is to go with SUA

✓ If NO,
  ➢ There is no turning back to go with the Tribe at a later date as the $$$ will be invested in the La Conner System
  ➢ If fire flow is deemed necessary in the future, the cost to provide fire flow is equal to or greater than the investment just to stay with La Conner or go to SUA
  ➢ The community as a whole opens themselves up to potential legal action if there is a fire with a loss of life and/or property and no fire flow.
No Fire Flow Desired?

- Stay with La Conner and join in the cost of needed water system improvements and pipeline replacement project.

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Utility bills headed for high water mark
Sandy Stokes

La Conner’s Town Council will be faced with an agonizing task in the near future: they must ask their constituents to pay more for utilities. Residents should brace themselves and perhaps start budgeting for a sticker shock that could hit with the April water bills. The town’s water mains and sewer lines are starting to fall apart, and the costs to maintain them have outpaced the yearly rise in utility bills. On top of that, the price charged by the town’s water supplier, the city of Anacortes, has been rising yearly. Presently, a La Conner home that uses 500 cubic feet of water per month pays $100.14 for water, sewage and the town’s drainage utility. Rate increases recommended by the town’s engineer to pay for the needed infrastructure could push that monthly bill to around $115.
Estimated Timeline for La Conner Option

Schedule for Water From La Conner

- La Conner Declares Emergency
- Town Hall Meeting
- SB Board Authorizes Negotiations with LaConner For Emergency Project
- Draft Agreement with La Conner
- Final Plans and Specifications with Probable Cost of Construction Provided to SB by La Conner
- Advertisement of Phased Project for Construction
- Completion of Phase Construction for Water Line Replacement in LaConner
- SB Replacement of Water Line Under Channel
Next Steps
Then Next Steps Are:

• Request Proposal from CHS Engineering to confirm assumptions that SUA intertie can provide fire flow to all of Shelter Bay.

• Begin the Draft of a Memorandum of Understanding (MOU) with SUA and the Tribal Senate
  – Engineering design cost will be borne by Shelter Bay
  – Construction cost will be financed through rate structure
<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town Hall Meeting</td>
<td>Wed 1/31/18</td>
</tr>
<tr>
<td>SB Board Authorizes Negotiations with SITC</td>
<td>Wed 2/21/18</td>
</tr>
<tr>
<td>Board Authorizes CHS to Confirm Assumptions</td>
<td>Wed 4/18/18</td>
</tr>
<tr>
<td>Draft MOU with SITC</td>
<td>Wed 6/13/18</td>
</tr>
<tr>
<td>Board /Community Approval of Draft MOU</td>
<td>Wed 9/5/18</td>
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<tr>
<td>Negotiate final MOU with Tribal Senate</td>
<td>Thu 10/4/18</td>
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<tr>
<td>Board Authorizes RFP for Design of Intertie</td>
<td>Thu 3/21/19</td>
</tr>
<tr>
<td>Facilities Committee and SITC Issue RFP and Negotiate Contact with Select Engineer</td>
<td>Thu 4/18/19</td>
</tr>
<tr>
<td>Board Approval of Engineering Contract</td>
<td>Thu 8/8/19</td>
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<tr>
<td>Finalize MOU between SITC and Shelter Bay</td>
<td>Thu 6/11/20</td>
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<tr>
<td>Board and SITC authorize Advertisement of Project for Construction Contractor Bid</td>
<td>Thu 9/3/20</td>
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<td>Issuance of Advertisement for Bids and Selection of Lowest Responsive/Responsible Contractor</td>
<td>Thu 10/29/20</td>
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<td>SITC and SB authorize Award of Construction Contract</td>
<td>Thu 12/24/20</td>
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<tr>
<td>Start Construction</td>
<td>Thu 2/18/21</td>
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<tr>
<td>Final Intertie with SITC</td>
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