



Progress Report

Project: Lummi Island Scenic Estates Community Club

Wilson Project Number: 2022-120

Service Dates: Through 10/31/2023

SMALL WATER SYSTEM MANAGEMENT PLAN ASSISTANCE

Task 1. Create system map with service area boundary and retail service area identified:

- Previously Provided to LISECC staff for review and comment.

Task 2. Capital Improvement Projects - identify and provide budgetary project cost estimates:

- Waiting to make progress on this until we receive direction that LISECC wants to proceed with SWSMP in the near future.

Task 3. Provide SWSMP to County for local government consistency review:

- Task cannot be completed until all Wilson-assigned tasks and LISECC staff/board tasks related to SWSMP have been completed and draft SWSMP has been compiled.

Task 4. Asset management assistance:

- Task has not yet been initiated.

Task 5. Assist in compiling SWSMP:

- Task has not yet been initiated.

Task 6. Submit SWSMP to DOH for approval:

- Task has not yet been initiated.

Task 7. Respond to DOH comments on SWSMP:

- Task has not yet been initiated.

PRE-DESIGN: Complete

PRELIMINARY ENGINEERING REPORT

- Brian has access to RD Apply application and associated ePER, and is progressing with filling out relevant sections of the application.
- Project Report that will be submitted to DOH is in progress and will be provided to LISECC for review and comment in the near future. Want to get raw water pumping system design direction further developed before finalizing report.

ENVIRONMENTAL REPORT

- No work on this phase yet – will begin on this soon now that a recommended project alternative scope has been settled and the project extents are known and can be assessed with respect to environmental considerations. Additional survey will assist in this effort.

USDA-RD LOAN APPLICATION

- Brian, Melanie, Allison, and Jim met with USDA-RD representatives on 8/23 to discuss the project and logistics of loan application.
- Application is underway. Jim told USDA-RD we will likely be submitting application soon.

USDA-RD LOAN IMPLEMENTATION

Task 1. Coordinate Attorney review of construction contract:

- Will complete after loan application has been submitted and construction contract documents are complete and approved by DOH and LISECC board (final task of this contract).

TOPOGRAPHICAL SURVEY COORDINATION & BASE DRAWING

Task 1. Coordination with Jepson & Associates:

- Allison told Jepson that LISECC would like to proceed with the additional survey on 9/6/23. The additional survey is needed as a base map to create the 60% design plans. We have not received any update since then on if the survey has been scheduled or an expected deliverable date.

Task 2. Data Integration and Drafting to reference survey basemap:

- Provided Jepson & Associates on some feedback on existing survey that they confirmed they will incorporate in final survey product.

PERMITTING

- SEPA checklist draft has been completed. Needs some refining as design proceeds.
- **Updated 11/8:** Preapplication packet: Pre-app meeting where we discussed all WC permitting required for the project occurred on 10/3. Pre-app findings were provided by County on 10/25. Wilson reviewing findings.
- We will need additional survey as a basemap for design drawings before we can proceed with most of the detailed Whatcom County permits that will be required. Need to have certainty with regard to property and easement boundaries and need Dogwood Terrance roadway and existing utilities in basemap to work out all permitting logistics.
- Started coordination with Ecology regarding changes to backwash discharge and whether changes will be needed to backwash discharge permit.



PREPARE CONSTRUCTION DOCUMENTS

Task 1. Design - selecting and sizing equipment (pumping systems, membrane package plant, ancillary components):

- **Updated 11/8:** We have a working model of the equipment and piping inside the new water treatment plant building. Will continue to update and refine as design proceeds. The major recent modification is that we have determined that the building needs to be sized to allow for potential Granular Activated Carbon (GAC) treatment downstream of the membranes to reduce dissolved organic material that can be a disinfection by-product pre-cursor. This building expansion is being detailed (with associated costs), and needs to be discussed with LISECC at a forthcoming meeting after the additional cost has been estimated.
- With direction on duplex raw water pump system, fully redundant membrane skids, each 100 gpm, and Contact Time piping direction, we are proceeding with sizing these components.
 - In follow-up to the input from the Water Committee at meeting on August 10 questioning the need for fully redundant membrane skids, Allison informed Brian on 9/1 that at the August 20 board meeting, it was concluded that DOH will require 2 membrane treatment skids (full redundancy). That is allowing us to proceed with design.
 - New hang-up is BABA (build America, buy America) requirement associated with USDA-RD funding. WesTech said they cannot provide a BABA-compliant treatment system. Brian is now investigating whether other membrane treatment plant manufacturers can meet BABA.
 - Brian has reached out to all membrane manufacturers on the DOH pre-approved list as of 10/2. None have responded yet.
 - USDA-RD state engineer said she has not done a membrane treatment plant funding since BABA was implemented. She recognizes that we may need to apply for a waiver if no manufacturers can meet the requirements.
 - **Added 11/8:** Raw water pumping system design concept is under discussion. Two concepts that include suspending the new pumping system from the new dock were provided, and a third option with a stationary skid installed along the lake bottom with an elevated intake was provided. We are leaning toward the stationary skid concept, but this is another topic that requires further design, cost estimating, and discussion with LISECC in the near future.
- **Updated 11/8:** Organics treatment:
 - DOH questioned if Granular Activated Carbon (GAC) could be needed for organic Disinfection By-Product (DBP)-precursor removal.
 - Design team is coordinating with WesTech regarding expected DOC removal with coagulant. WesTech sent a proposal for jar/benchtop testing to determine expected % removal, but indicated that achieving the same % removal as the existing treatment plant is unlikely with coagulant and membranes alone. Cost is \$7500 plus freight costs.
 - Waiting to work out BABA issue, also see below item on existing DOC sampling, then will discuss with DOH and make decision on proceeding with proposal or not.
 - GAC would add significant expense to the project, both capital (need bigger building), and operational (GAC material replacement is frequent and relatively high cost).



- Nick also collected raw and filtered DOC samples from current filtration operations to quantify current organics removal. This will provide the baseline understanding of removal and associated DBP measurements and will help inform targets for organics removal in new water treatment plant. Initial lab results were provided on 10/6, but Nick pointed out that the results are from a time period of unusual operations with the media filter. Pre- and post- filter DOC will continue to be collected bi-weekly to further assess %DOC removal with existing filter.

Task 2. Geotechnical Report for Building Foundation Design:

- Geotechnical report is complete.

Task 3. Stormwater Memo documenting no need for Stormwater Report:

- **Updated 11/8:** Initial equipment layout models indicate that the building area may need to be increased from 20'x30' to approximately 24'x42', which will increase new impervious area to 2,108 square feet. This exceeds the 2,000 square foot threshold where stormwater design and permitting become more involved than currently scoped in design contract. Wilson is assessing what design considerations and costs may be associated with this.

Task 4. Construction Stormwater Pollution Prevention Plan:

- Will include in 60% design.

Task 5. 30% Plans and Construction Cost Estimate:

- 30% Design Plans and associated Construction Cost Estimate have been completed and provided to LISECC for review and comment. August 10 received feedback from water treatment committee. Currently incorporating that feedback.
 - Biggest focus is on preliminary design of raw water pumping system. Brian provided rough alternatives concepts and comparison to Nick/Allison on 10/2. Continuing to refine design concepts (as further discussed above).
 - Will provide detailed cost estimate of construction administration tasks and costs in the near future per request from 30% design meeting.

Task 6. 60% Plans and further progress of plans, estimate, and specifications: Progressing from 30% design to 60% design currently. Need additional survey for 60% design plans.

Electrical Engineering Design.

- Electrical engineer provided 30% design construction cost estimate and is working on plans that will be included in the 60% design set.

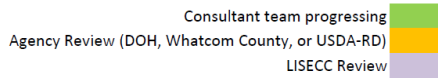
Structural Engineering.

- Initial discussions of building design.



OVERALL SCHEDULE STATUS:

PROPOSED LISECC WTP DESIGN PROJECT SCHEDULE																	
	2023										2024						
	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May
Geotechnical field work and report																	
Small Water System Management Plan																	
Pre-design memo																	
Preliminary Engineering Report																	
USDA-RD Loan Application																	
30% Design and conditional use permit																	
60% Plans/Specs/Estimate																	
90% Plans/Specs/Estimate																	
DOH Review of Construction Documents																	
100% Plans/Specs/Estimate																	



Note that schedule is showing we are behind on preliminary engineering report and loan application. We recognize this and will work to complete these items in a timely manner, but as design has progressed, we think that having the design and estimated construction costs better refined by being further along with design will be beneficial for the loan application (less uncertainty in costs). Applications are accepted on a rolling basis, so submitting this in ~December should be fine.

Also note that progress on 60% plans/specs/estimate is delayed based on supplementary survey information delay.

POTENTIAL ISSUES / CONCERNS:

- Need to confirm with land owner that everyone agrees about extents of easement and site access for proposed WTP facility. Allison has been having ongoing conversations with land owner, and can continue those conversations with preliminary building and access site plan. May need coordination with property owners of easement along Dogwood Terrace.
- Flagged potential concern about building footprint increasing and exceeding impervious area threshold where stormwater design would become more in-depth.
- Flagged concern about needing additional survey to complete 60% design plans.
- Flagged concern about potential GAC treatment.
- Flagged concern about membrane manufacturers being able to meet BABA requirements.

