



Board of County Commissioners
Board Work Session
Monday, April 22, 2024
10:00 AM to 12:00 PM
3000 Pacific Avenue SE, Room 110

For public virtual attendance, you may follow along on the [Thurston County YouTube Channel](#).

AGENDA

- I. **2024 State of the Water and Sewer Utilities – *Informational***
- II. **Update on Stormwater Utility Comprehensive Study – *Informational***
- III. **Commissioner Items – *Discussion***

Disability Accommodations: Room 110 is equipped with an assistive listening system and is wheelchair accessible. To request disability accommodations, call the Reasonable Accommodation Coordinator at least 3 days prior to the meeting at 360-786-5440. Persons with speech or hearing disabilities may call via Washington Relay at 711 or 800-833-6388.



Board of County Commissioners Briefing Presentation Form

Title

State of the Water and Sewer Utilities

Date

April 22, 2024

Board Meeting

AM Board Work Session

Office/Department

Public Works

Staff Contact

Jennifer D. Walker, Public Works Director (x2271)
Tim Wilson, Water Resources Manager (x5831)
Karen Weiss, Assistant Public Works Director (x2327)
Joe Plahuta, Senior Water Resources Engineer (x2968)
Kevin Patching, Utility Operations Supervisor (x2288)
Aaron Tormanen, W.R. Utility Planner (x2078)

Attachments

- PowerPoint Presentation

Type

- ☒ Informational
☐ Follow up/Continued work session
☐ Discussion before decision

Board decisions will not be made during work sessions.

Primary Objective

Staff will provide an update on the state of the Thurston County Water and Sewer Utilities, including Grand Mound, Tamoshan, Boston Harbor, and Olympic View.

Staff Recommendation

This is an informational briefing only.

Background

Thurston County owns and operates three water and sewer utilities in the Grand Mound, Tamoshan, and Boston Harbor communities and a Septic Tank Effluent Pumping (STEP) system with a community drain field in Olympic View. The utilities serve approximately 850 customers and provide essential public health and safety functions. Their operation is one of the few critical County functions that cannot be closed, turned off, or temporarily stopped even in the event of inclement weather, earthquake, or other natural or man-made disaster. The utilities are operated by an operational team of six, who are tasked with operating the systems 24/7/365.

Planning and engineering support for the utilities is supported by the Water Resources Technical Services Group, and financial management and billing is supported by the Business Services Division of Public Works.

Significant organizational and project related improvements have been completed in recent years, are currently in process, or are planned for the near future.

Staff will brief the BoCC on improvements planned, in-process or completed, and discuss opportunities and challenges for the water and sewer systems.

Budget Impacts/Requests

No financial impact currently. Briefing is informational only.

Others Affected

Ratepayers of the water and sewer utilities.
The Thurston County development community.

Timeline/Next Steps

No board direction is requested at this time.



State of the Water and Sewer Utilities

Public Works

April 22, 2024

Board Work Session

Agenda

- Mission and Success Metrics
- Locations and Customer Information
- Positioning for Success
- Challenges and Opportunities
- Positioning for Continued Success
- Upcoming Touch Points with BoCC
- Questions



Mission of Water and Sewer Utilities

To serve the highest quality drinking water, provide exceptional customer service, and exceed the wastewater collection and treatment requirements while protecting the environment and people we serve.

(Mission Statement from Operations Team Planning Session)



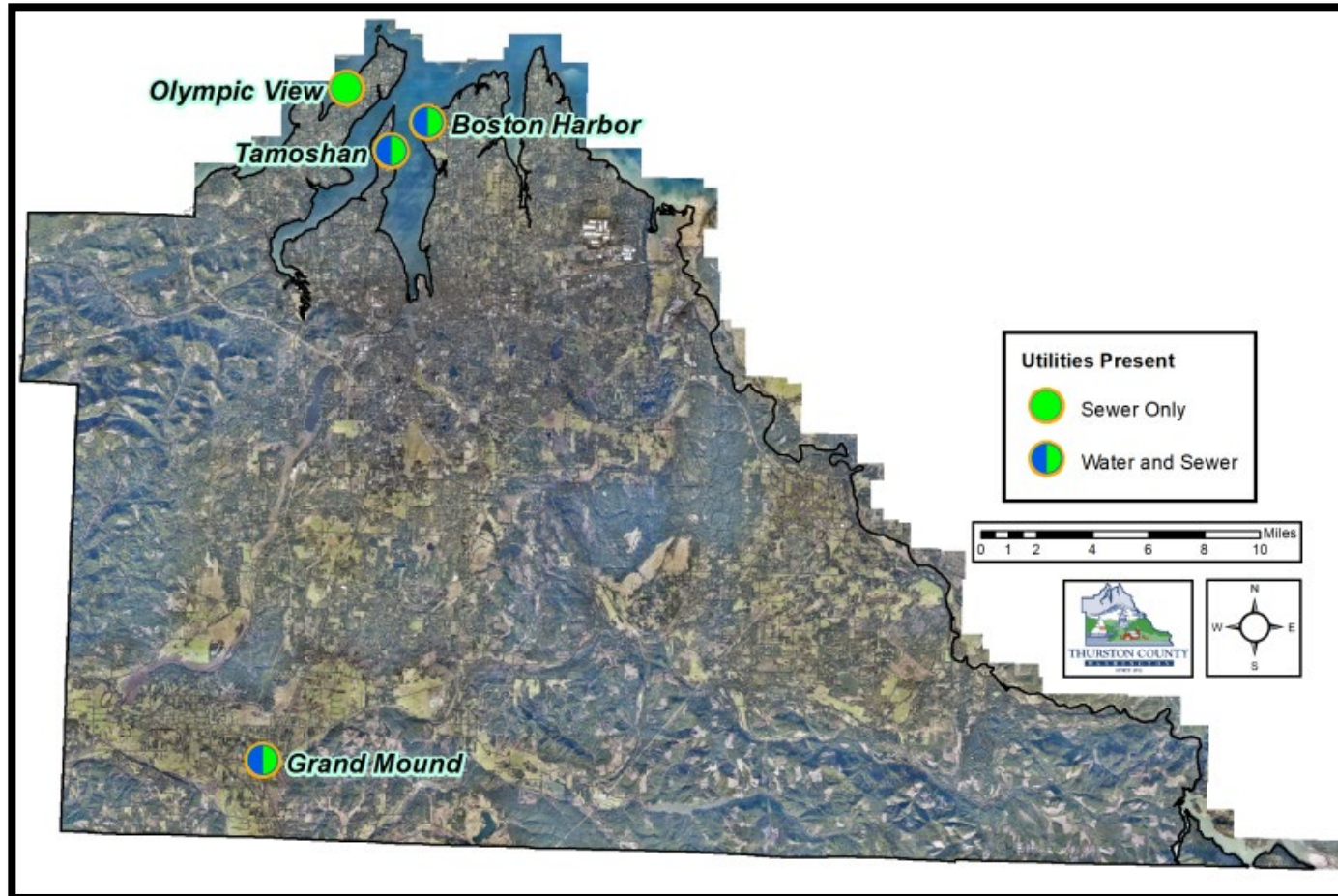
Key Success Metrics

- 114.15 Million* Gallons of Potable Water Delivered
- 81.21 Million* Gallons of Wastewater Treated
- 3 Water Treatment Facilities and 4 Wastewater Treatment Facilities Operated 24/7/365

*2023 Totals



Thurston County's Water and Sewer Utilities



Grand Mound Water and Sewer Utilities

Year Acquired	1999
# Service Connections	425 (90 Commercial)
Water Main	17 Miles
Sewer Main	15.2 Miles
Wastewater Treatment	Oxidation Ditch
Outfall	Chehalis River



Boston Harbor Water and Sewer Utilities

Year Acquired	1990
# Service Connections	280
Water Main	10 Miles
Sewer Main	7.6 Miles
Wastewater Treatment	STEP System to Sequencing Batch Reactor
Outfall	Budd Inlet



Tamoshan Water and Sewer Utilities

Year Acquired	Early 1980's
# Service Connections	115 Including Beverly Beach
Water Main	3.5 Miles
Sewer Main	4.2 Miles
Wastewater Treatment	Sequencing Batch Reactor
Outfall	Budd Inlet



Olympic View Sewer Utility

Year Acquired	1988
# Service Connections	28
Water Main	N/A
Sewer Main	1.2 Miles
Wastewater Treatment	Large On-Site Septic System (LOSS)
Outfall	Groundwater



Positioning for Success

Administrative Improvements

- Utility Consolidation (Completed 2023)
 - Consolidated several utility funds into four
 - Created operational and administrative efficiencies
 - Reduced rate volatility for customer base
 - Created more equitable rate payer representation
- Water and Sewer Code Update (Completed 2020)
- Water and Sewer Development Standards Update (Completed 2020)



Positioning for Success

Planning Improvements

- Utility Consolidation Feasibility Study (Completed 2020)
- Revenue Requirement and Rate Design Study (Completed 2022)
- Grand Mound General Sewer and Wastewater Facility Plan (Completed 2023)
- General Facility Charge (GFC) Study (Completed 2024)
- Water System Plan Updates (Expected Completion - Fall 2024)
 - Satellite Management Agency (SMA) Plan/Part A Water System Plan
 - Grand Mound Water System Part B
 - Boston Harbor Water System Part B



Positioning for Success

Infrastructure Improvements and Capital Investment

- Asset Management Program (Ongoing)
- Grand Mound Reservoir (Completed 2019)
- Upgraded Boston Harbor Wastewater Treatment Plant Electrical Control System (2020)
- Boston Harbor Generator Replacement (2023)
- Multiple safety improvements at water/sewer facilities (2022/2023)
- Tamoshan New Well (2024)
- Grand Mound Wastewater Treatment Plant Improvements (2026)



2024-2029 Water and Sewer Utilities Projects

REVENUES FOR PROJECTS				2024	2025	2026	2027	2028	2029	6-Yr. Total
Fund Source										
Water & Sewer Utility Rates				\$1,151,000	\$1,248,740	\$2,675,000	\$1,540,000	\$1,544,000	\$700,000	\$8,858,740
Real Estate Excise Tax				\$1,279,000	\$650,000	\$1,000,000	\$0	\$0	\$0	\$2,929,000
American Rescue Plan Act Grant				\$2,490,000	\$2,490,000	\$0	\$0	\$0	\$0	\$4,980,000
Operating Transfer										\$0
TOTALS				\$4,920,000	\$4,388,740	\$3,675,000	\$1,540,000	\$1,544,000	\$700,000	\$16,767,740
EXPENDITURES FOR PROJECTS										
Project Name	Project Number	Fund Source	Urban Growth Area	2024	2025	2026	2027	2028	2029	6-Yr. Total
SCADA Control System Evaluation/Upgrades	94214	WSUR	Rural Thurston County	\$5,000						\$5,000
Tamoshan Water Treatment Unit Process Assessment/Upgrade	94314	REET	Rural Thurston County	\$5,000						\$5,000
Tamoshan Water & Sewer Main Replacements	A053A/A0511A	ARPA	Rural Thurston County	\$1,065,000	\$1,065,000					\$2,130,000
Tamoshan 2024-2025 Water Infrastructure Improvement Program	94309	WSUR	Rural Thurston County	\$30,000	\$135,000					\$165,000
Tamoshan 2026-2029 Water Infrastructure Improvement Program		WSUR	Rural Thurston County			\$190,000	\$190,000	\$129,000	\$190,000	\$699,000
Tamoshan 2024-2025 Sewer Infrastructure Improvement Program	94311	WSUR	Rural Thurston County	\$110,000	\$180,000					\$290,000
Tamoshan 2026-2029 Sewer Infrastructure Improvement Program		WSUR	Rural Thurston County			\$120,000	\$120,000	\$135,000	\$120,000	\$495,000
Boston Harbor Water Main Replacements & I/I Reduction	A053B/A0511B	ARPA	Rural Thurston County	\$1,425,000	\$1,425,000					\$2,850,000
Boston Harbor 2024-2025 Water Infrastructure Improvement Program	94072	WSUR	Rural Thurston County	\$85,000	\$50,000					\$135,000
Boston Harbor 2026-2029 Water Infrastructure Improvement Program		WSUR	Rural Thurston County			\$50,000	\$50,000	\$55,000	\$50,000	\$205,000
Boston Harbor 2024-2025 Sewer Infrastructure Improvement Program	94070	WSUR	Rural Thurston County	\$30,000	\$70,000					\$100,000
Boston Harbor 2026-2029 Sewer Infrastructure Improvement Program		WSUR	Rural Thurston County			\$130,000	\$130,000	\$85,000	\$130,000	\$475,000
Olympic View 2024-2025 Sewer Infrastructure Improvement Program	94412	WSUR	Rural Thurston County	\$10,000						\$10,000
Olympic View 2026-2029 Sewer Infrastructure Improvement Program		WSUR	Rural Thurston County					\$5,000		\$5,000
Grand Mound Clarifier No. 2 Rebuild and Recoating	94054	WSUR	Grand Mound	\$5,000	\$118,740					\$123,740
Grand Mound Wastewater Treatment Plant Expansion for Class A Reclamation	94023	REET	Grand Mound	\$500,000	\$150,000					\$650,000
Grand Mound New Water Sources	94038	WSUR	Grand Mound		\$50,000	\$200,000	\$840,000	\$839,000		\$1,929,000
Grand Mound Wastewater Treatment Plant Phase 1 Improvements	94524	REET/WSUR	Grand Mound	\$1,300,000	\$775,000	\$2,775,000				\$4,850,000
Grand Mound 2024-2025 Water Infrastructure Improvement Program	94519	WSUR	Grand Mound	\$50,000	\$50,000					\$100,000
Grand Mound 2026-2029 Water Infrastructure Improvement Program		WSUR	Grand Mound			\$110,000	\$110,000	\$76,000	\$110,000	\$406,000
Grand Mound 2024-2025 Sewer Infrastructure Improvement Program	94517	WSUR	Grand Mound	\$300,000	\$320,000					\$620,000
Grand Mound 2026-2029 Sewer Infrastructure Improvement Program		WSUR	Grand Mound			\$100,000	\$100,000	\$220,000	\$100,000	\$520,000
TOTALS				\$4,920,000	\$4,388,740	\$3,675,000	\$1,540,000	\$1,544,000	\$700,000	\$16,767,740

Legend:

WSUR - Water & Sewer Utility Rates
REET-Real Estate Excise Tax Second Quarter Funds
ARPA - American Rescue Plan Act Grant

Bold Font = Project Budget Approved
Note: Totals do not include 2023 year-end project carryover funding



Boston Harbor ARPA Project

Water and Sewer System Improvements

- Replacing around 6,000 feet of old water main
 - Will replace older and smaller diameter water lines in the distribution system
- Rehabilitating the STEP tanks throughout the system
 - Will improve condition and serviceability of existing STEP tanks
 - Will help reduce infiltration & inflow into the sewer system
- Advertise for bids – Summer 2024
- Construction to be completed in 2025-2026
- Community Open House
 - Monday April 22nd 5:30-6:30pm at Boston Harbor Elementary School



Tamoshan ARPA Project

Water and Sewer System Improvements

- Replacing old water service connections and water mains
 - Will reduce emergency repairs and leakage, and improve drinking water quality
 - Will replace existing asbestos-cement water main
- Rehabilitating sewer mains, manholes, and side sewers
 - Will rehabilitate old sewer infrastructure
 - Will help reduce infiltration & inflow into the sewer system
- Advertise for bids – Summer 2024
- Construction to be completed in 2025-2026
- Community Open House
 - Tuesday April 23rd 5:30-6:30pm at Thurgood Marshall Middle School



Ongoing Challenges

- New regulatory requirements (ex. nutrient removal)
- Source water quality issues
- Aging infrastructure (\$16.8 million investment planned for 2024-2029 CIP)
- General Facility Charges (GFCs) not aligned with future capital investment needs



Opportunities

- Consolidation of multiple rate structures and funds has addressed rate volatility, provided administrative efficiencies and better served our customers
- American Rescue Plan Act Funding allocated by BoCC will update a significant amount of aging infrastructure in Boston Harbor and Tamoshan communities
- Updated/current water system plans will make us eligible to apply for more grants and loans
- New source well in Tamoshan (2024) likely to address water quality issues
- Grand Mound General Sewer and Wastewater Facility Plan will provide a roadmap for successfully planning for future growth
- Acquisition of water rights may replace need to produce Class A Reclaimed Water



Thurston County Water and Sewer Utilities Positioned for Continued Success

State of Thurston County's Water and Sewer Utilities....

- Significant administrative, financial, planning, organizational and operational improvements and investment in infrastructure have occurred in recent years
- Many of these efforts and improvements are continuing, which will improve the strength of the utilities
- The BoCC has been a champion for improving our utilities
- Continued support and engagement will set our utilities up for long term resiliency, financial stability and excellent customer service



Upcoming Touch Points with BoCC

- Work Session on GFCs – June
- Request to advertise ARPA projects – June
- Adoption of Updated Water System Plans – (Expected in Fall)

Questions?



Board of County Commissioners Briefing Presentation Form

Title

Update on Stormwater Utility Comprehensive Study

Date

4/22/2024

Board Meeting

AM Board Work Session

Office/Department

Public Works

Staff Contact

Tim Wilson, Water Resources Manager (x5831)
Shannon Peterson, Utility Planner (x2069)

Attachments

- Thurston County Storm and Surface Water Utility Comprehensive Study Update PowerPoint

Type

- ☒ Informational
- ☐ Follow up/Continued work session
- ☐ Discussion before decision

Board decisions will not be made during work sessions.

Primary Objective

Staff will brief the Board on the status of the Thurston County Storm and Surface Water Utility Comprehensive Study.

Staff Recommendation

This is an informational briefing only.

Background

The Board of County Commissioners authorized the issuance of a Request for Proposal in August of 2022 for services associated with preparing a comprehensive stormwater study for the Storm and Surface Water Utility. The study intended to provide a comprehensive assessment and make recommendations for the management of the Storm and Surface Water Utility to provide an equitable program across unincorporated Thurston County, meet applicable regulatory requirements, and meet strategic objectives of the County where there may be no regulatory requirements.

Budget Impacts/Requests

The study was included in the 2022 budget and is funded through the Storm and Surface Water Utility. There is no funding from the County's General Fund.

Others Affected

- Storm and Surface Water Utility rate payers within unincorporated Thurston County.

- Thurston County departments and staff responsible for activities required by the County's Western Washington Phase II Municipal Stormwater Permit, as well as county departments and personnel involved with the Storm and Surface Water Utility's operations.

Timeline/Next Steps

The existing contract will be amended to extend the end date of the study to December 31, 2024. Staff will provide a follow-up briefing to present the findings and recommendations of the study.



Thurston County Storm and Surface Water Utility Comprehensive Study Update

Public Works

April 22, 2024

Board Work Session

Agenda

- Background
- Scope of the Study
- Tasks
- Progress
- Next steps



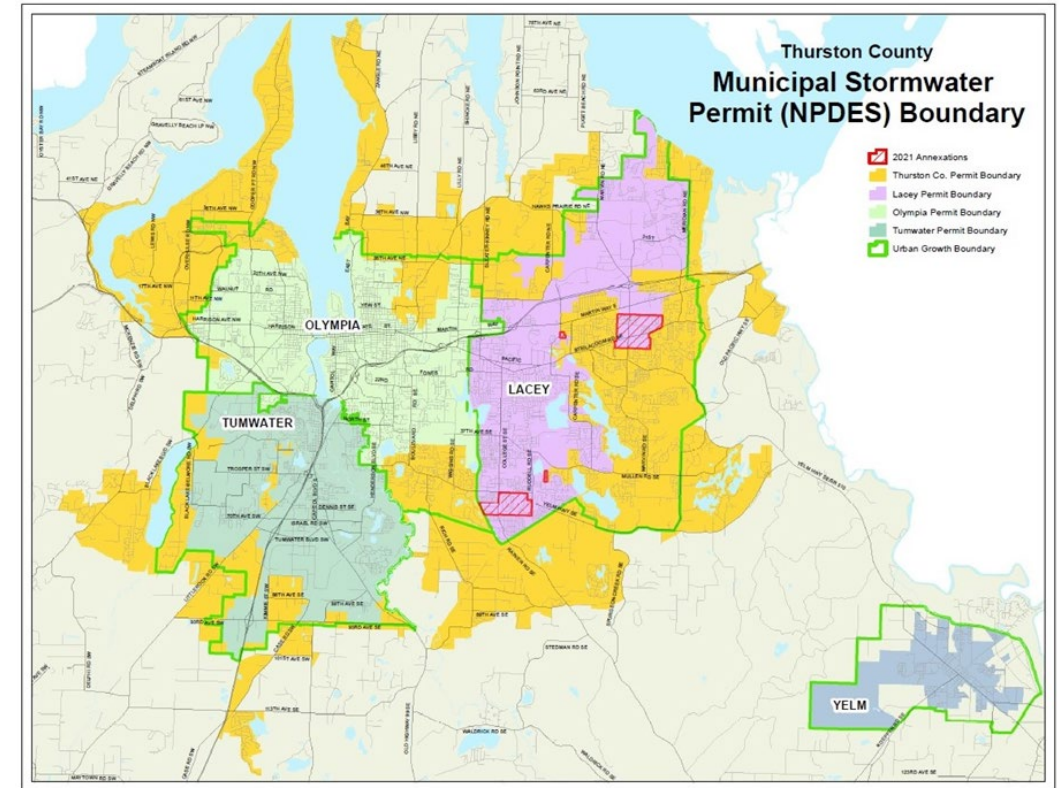
Background – Storm and Surface Water Utility

- Created in 1985
- Rates were established in 1989
- Mitigate risks:
 - To property damage and traffic hazards associated with flooding
 - For water quality degradation



Municipal Stormwater Permit

- 2007 – First issuance by Department of Ecology
- Unincorporated urban areas and urban growth areas for Lacey, Olympia, and Tumwater (yellow shading)
- Authorizes stormwater discharges to waters of the State from the County's stormwater system
- Minor geographic footprint within the County



Scope of the Study

- Provide a thorough review of the program and related activities from an outside perspective
- Set goals and levels of service
- Provide recommendations for improvement and enhancement



Tasks

- Task 1 – Stormwater Management Program
- Task 2 – Capital Improvements Program
- Task 3 – Stormwater System Assessment
- Task 4 – Asset Management
- Task 5 – Financial Analysis
- Task 6 – Prepare Comprehensive Study
- Task 7 – Public Outreach and Stakeholder Involvement



Task 1 – Stormwater Management Program

- SSWU service level framework
- Stormwater management program assessment
- Equity evaluation



Task 2 – Capital Improvement Program

- Recommendations or revisions to the existing program

STORMWATER UTILITY - CAPITAL PROJECT RATING FORM									
SUMMARY	PROJECT: WSDOT US 101 Schneider Creek Biofiltration Swales and Vegetated Filter Strip								
	THIS FORM SHOULD BE USED WITH IN CONJUNCTION WITH THE THURSTON COUNTY STORMWATER UTILITY CAPITAL PROJECT RATING FORM INSTRUCTIONS AND WORKSHEETS DOCUMENT TO SCORE PROJECTS FOR PLACEMENT ON THE CAPITAL FACILITIES PLAN.					Location: US101 between mileposts 359.4 to 359.8, in the median between northbound and southbound lanes, outside shoulder of southbound lane, and outside shoulder		PROJECT DESCRIPTION	
	Date:					1 = BEST; 5=WORST LOCATION		Retrofit of the highway median and outside shoulder of southbound lane with compost-amended biofiltration swales, with outlet structure to Schneider Creek. Also retrofit outside shoulder of northbound lane with vegetated filter strips. Will treat approximately 4 acres of high-traffic roadway that will be conveyed to an outlet structure with energy	
	LOCATION RATING (1-5): 2- 1 = BEST; 5=WORST LOCATION					FEASIBILITY RATING (1-5): 1 1=HIGHEST; 5=LOWEST FEASIBILITY		PROJECT SCORE (0-100): 27.9 100 = HIGHEST	
ESTIMATED PROJECT COST: \$618,000					NOTE: GREEN BOX = DATA INPUT X PINK BOX=CALCULATED VALUE X.X				
Note: Skip Location Rating for High Priority Projects. See Step 3.									
STEP 1	PROJECT LOCATION RATING (1 TO 5)					Best Worst		RANK	
	LOCATION CRITERIA - RATE CRITERIA 1 TO 5					1 2 3 4 5		RANK	
	L1.1 Urban Fringe Project							x	
	L1.2 In Priority Watershed or Tributary to Sensitive Ecosystem or Protected Area.							x	
	L2.1 High Quality or Fish Bearing Receiving Water (Per WQ Stds/WDFW)							x	
	L2.2 Discharge to TMDL or 303(d) Listed Water or Shellfish Impact Area					x			
	L2.3 B-IBI Data Available Downstream							x	
	L3.1 Site Tributary to Small Stream. (Based on bank full width & shoreline criteria --, i.e., <20cfs)								
	L3.2 Proximity to Waterbody (Direct discharge = 1 --> remote=5)					x			
	L3.3 Location Along Stream (headwater=1 --> middle reach=3 --> mouth=5)							x	
	L4.1 Well Head Protection (Mapped WHPA, Proximity to Well, Protected WS-MGSA) - blank if no infiltration							x	
	L4.2 Observed Erosion or Flooding Problems Downstream							x	
	L4.3 High ADT Roadway or High Use Site					x			
	L5 Number of Projects Previously Completed in Vicinity (Balance projects throughout county)							x	
						2-		Give Project a Score of 1 to 5 based on best overall judgment of all factors. Ranks 1 & 2 Move to Feasibility	
PROJECTS RATED HIGH (1, 2, 3?) FOR LOCATION MOVE TO STEP 2 - FEASIBILITY RATING									
STEP 2	PREPARE FEASIBILITY ANALYSIS PRIOR TO RANKING PROJECT FOR FEASIBILITY								
	PROJECT FEASIBILITY RATING (1 TO 5)					Best Worst		RANK	
	FEASIBILITY CRITERIA - RATE CRITERIA 1 TO 5					1 2 3 4 5		RANK	
	F1.1 Ease of Permitting & Number of Environmental Permits							x	
	F1.2 Potential Utility or Site Constraints					x			
	F2.1 Parcel Ownership (Thurston County =1 --> multiple private owners =5)					x			
	F2.2 Access for Construction and Maintenance					x			
	F3.1 Adjacent Landowner & Community Acceptance/Cooperation							x	
	F3.2 # of Parcels Involved					x			
	F4.1 Project Impact on Site Uses & Operations					x			
	F4.2 Sufficiency of Space Given Setback Requirements, etc.							x	
	F5.1 Existing Grading and Drainage Patterns Allow Gravity Flow					x			
	F5.2 Drainage Infrastructure Can be Reasonably Modified					x			
	F5.3 Level of Existing Treatment & Flow Control for Stormwater (none=1 --> mostly meets current stds = 5)					x			
						1		Give Project a Score of 1 to 5 based on best overall judgment of all factors. Ranks 1 & 2 Move to Project Scoring	



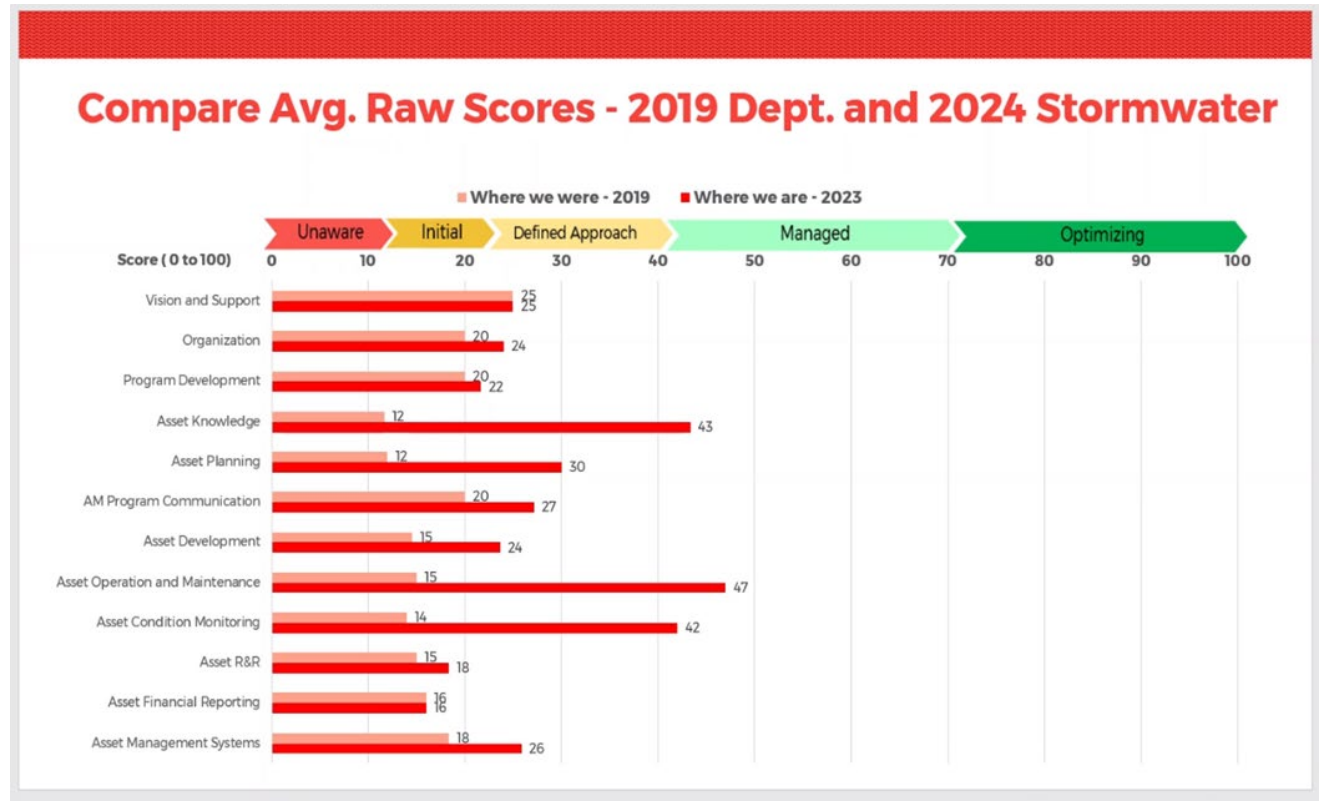
Task 3 – Stormwater System Assessment

- Infrastructure rehabilitation/replacement program assessment
- Preparing for climate change to minimize impacts and recommend future design considerations
- Inspection and maintenance program evaluation



Task 4 – Asset Management

- Asset management program technical memo



Source: WSP



Task 5 – Financial Analysis

- Financial policy framework
- Revenue requirements analysis and service level matrix

Task 6 – Prepare Comprehensive Study

- Annotated report outline
- Internal report review
- Public report review
- Final report



Task 7 – Public Outreach and Stakeholder Involvement

- Public participation plan
- Technical Advisory Group (TAG) involvement
- Public outreach involvement



Schedule

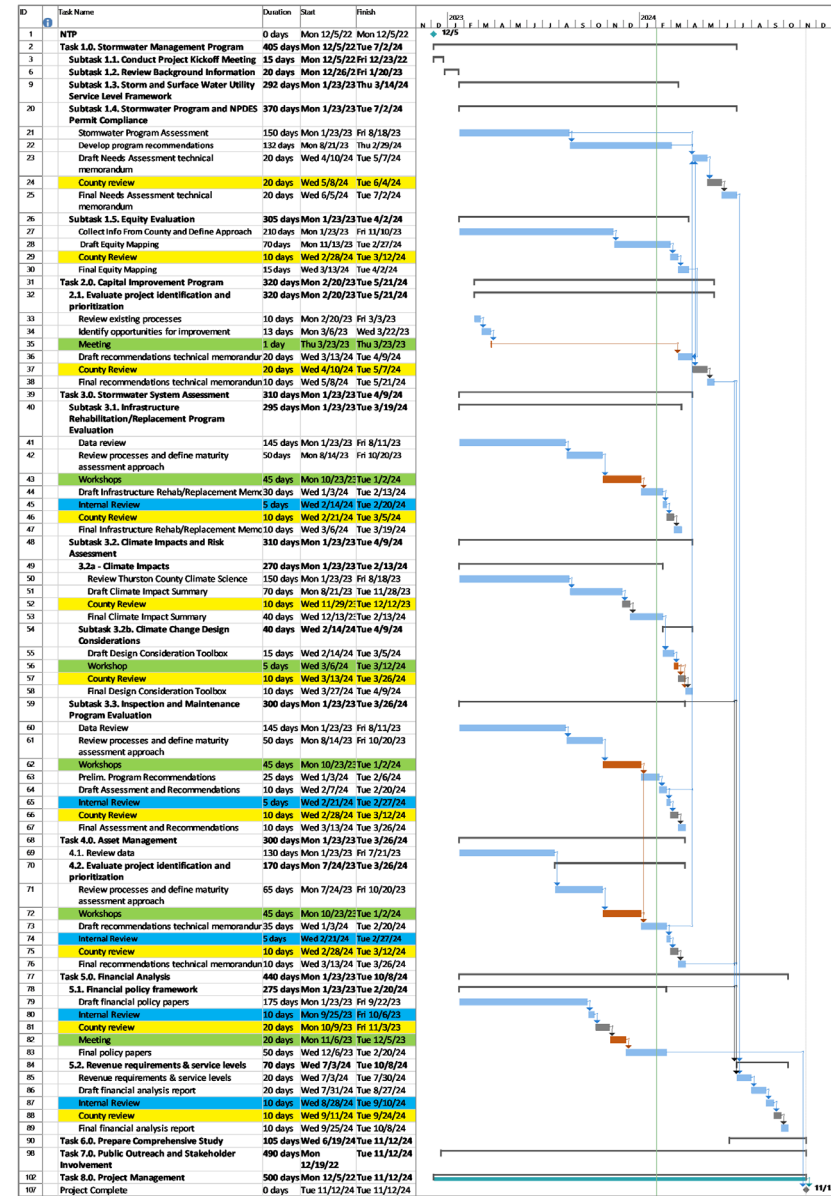
Task	Original Completion Date	Revised Completion Date
1 – Stormwater Management Program	August 2023	July 2024
2 – CIP	May 2023	May 2024
3 – System Assessment	May 2023	April 2024
4 – Asset Management	June 2023	March 2024
5 – Financial Analysis	December 2024	October 2024
6 – Prepare Study	April 2024	December 2024
7 – Public Outreach & Stakeholder Involvement	April 2024	December 2024
8 – Project management	April 2024	December 2024



Next Steps

- Contract amendment
- Schedule – increase period of performance to end of 2024
 - Extensions for levels of service
 - Extended project management/coordination timelines
 - Additional TAG meetings

Thurston County Stormwater Management Plan – Project Schedule



THURSTON COUNTY
WASHINGTON

SINCE 1852

Questions?

