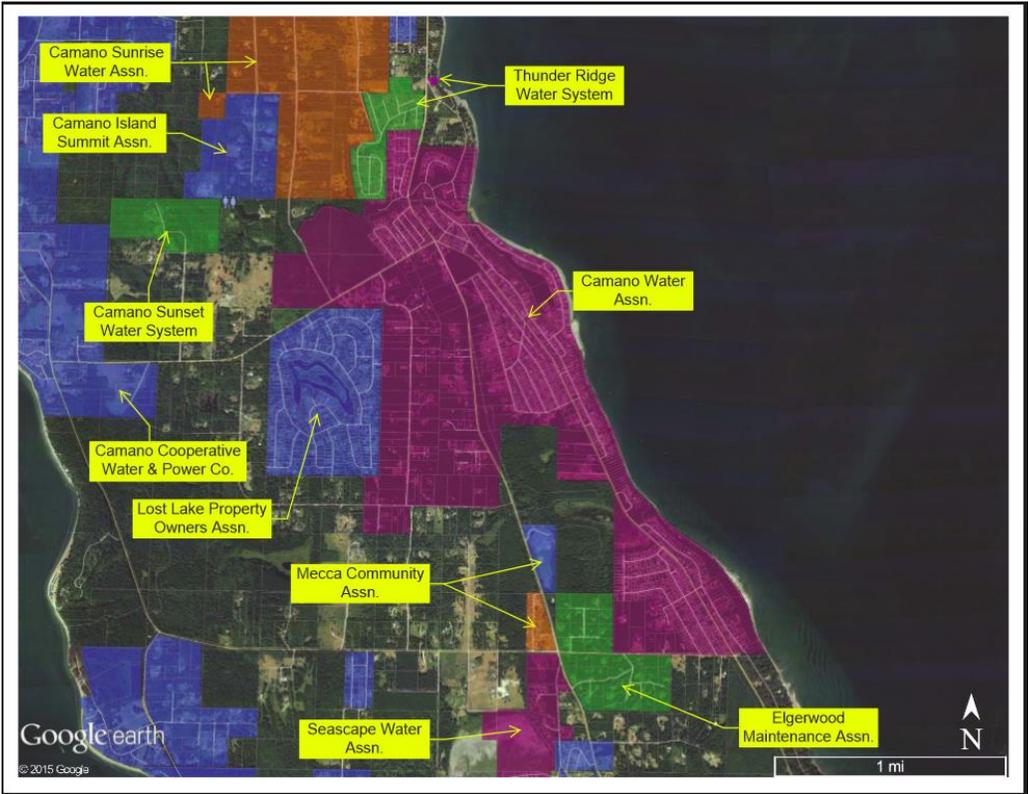


Water System Cooperation Opportunities Project Feasibility Study

October 18, 2016

- Camano Cooperative Water & Power Co.
- Camano Island Summit Association
- Camano Sunset Water System
- Camano Water Association
- Elgerwood Maintenance Association
- Mecca Community Association
- Seascape Water Association
- Thunder Ridge Water System



This project was funded by the
Washington State Department of Health
Consolidation Activities Grant program.

Executive summary

With the help of a grant from the Washington State Department of Health (DOH), the Water System Cooperation Opportunities Project ran from July 2015 through August 2016. The goal was to explore opportunities for cooperative efforts among several water systems on Camano Island. This feasibility study documents this exploration and the resulting recommendations.

This study looked to answer the question: “What types of cooperative working relationships among the many water systems on Camano Island might build capacity, prepare for water emergencies, and enhance operational efficiency so that a safe and abundant drinking water supply is ensured for Camano Island residents?”

The assumption was that the types of cooperation could include interties, emergency preparedness, resource sharing, and selective or complete water system consolidation.

Eight water systems on Camano Island participated in the feasibility study. They took part in several meetings, offered input, and shared information. A professional engineering firm worked with each water system, doing research and analysis to learn its water infrastructure, capacity, strengths, and weaknesses. This research resulted in a comprehensive capital facilities replacement plan for each system, which are included in Appendix C.

At the same time, other project team members coordinated the study and met with leaders of the participating water systems to facilitate the conversation about possibilities, communicate possible outcomes, learn more about their business operations, and to uncover potential obstacles to cooperative working relationships.

The results of the dialog, meetings, and research brought clarity to the benefits and challenges of various consolidation scenarios along with the impact of maintaining the status quo.

The study found that it would be beneficial for all water companies on Camano Island to join as a single entity. Water customers would indeed see improved efficiencies, resource sharing leading to lower capital improvement costs, and better emergency preparedness.

Roadblocks to cooperative efforts were found to be finances, reluctance on the part of specific water system leadership, and the county water system permitting process.

The findings of the study were rather different from what the researchers had originally envisioned. Although there are several alternatives, stakeholders concluded that the best scenario for a safe and abundant drinking water supply for Camano Island residents is to form a local structure such as a water district or public utility district for gradual water system consolidation while also working with Island County commissioners to improve the water permit process with developers. Each water system has its unique strengths and challenges, and the chosen solution should take these into account and be sensitive to preferences of the leaders. Implementing a plan gradually over a number of years — even decades — can be part of the plan.

The next step is to research the different water system structures, decide which one is most beneficial to the participating water systems and their customers, write a business plan for the new structure, and develop a project plan for implementation.

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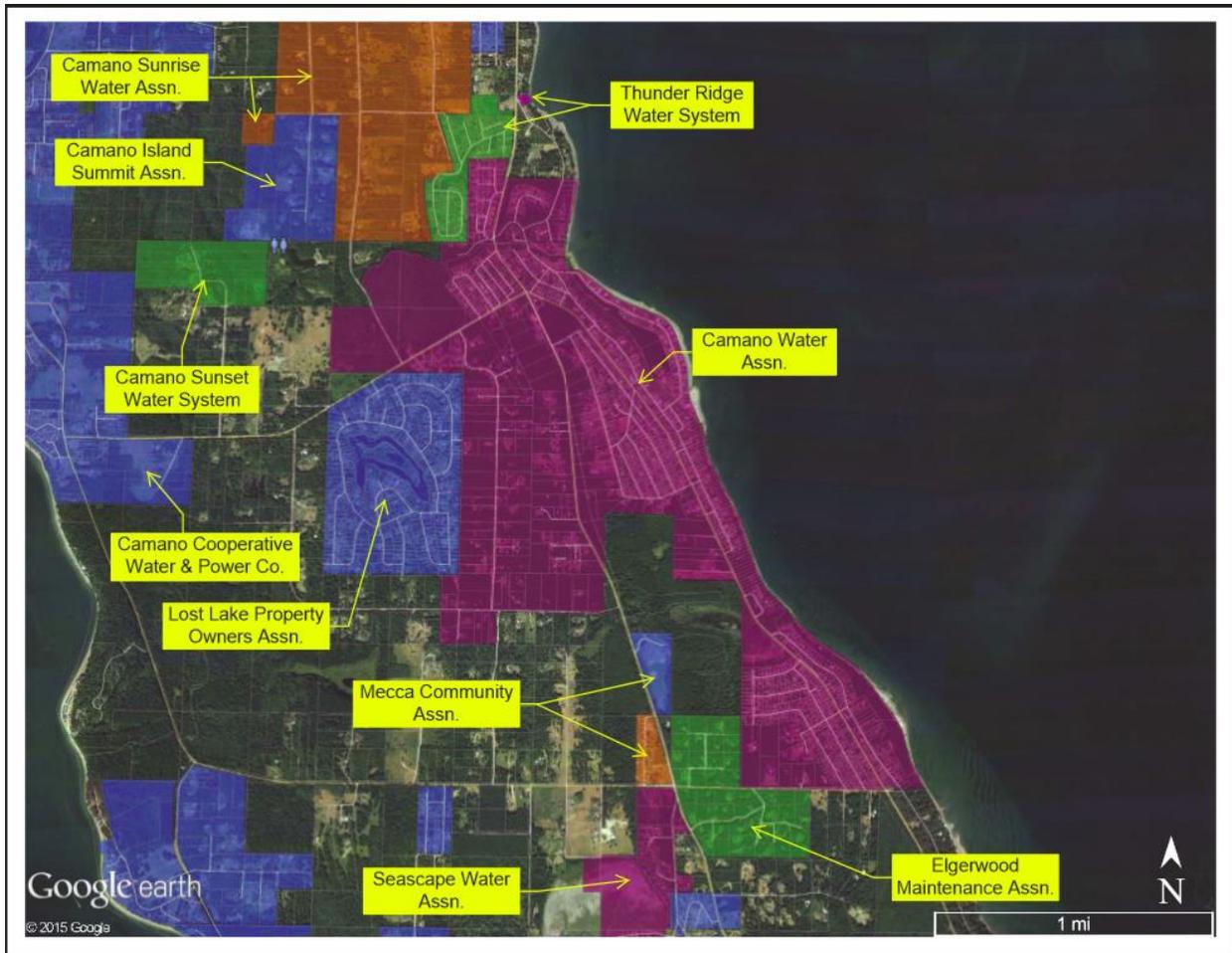
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The current environment

Camano Island has 329 different community water systems serving a population of about 14,000 people. Nearly all of these water systems have fewer than 100 connections. All these systems are privately owned.

By contrast, the entire Seattle metropolitan area has a single water system.

Ten of these Camano Island water systems are located in the central area of the island. The following map shows the service areas of the 10 central Camano Island water systems.



The Washington State Department of Health (DOH) is concerned about the proliferation of small community water systems, for the following reasons:

- Many are managed by community volunteers rather than water system professionals.
- Most of them have limited funds for capital improvements and system maintenance.
- They tend to have more water quality violations and instances of regulatory noncompliance.
- Some are ill-equipped to respond to water emergencies.
- Many are probably not able to maintain their water utility in the long-term as a sustainable enterprise.

The Washington state legislature has also expressed concern over the financial sustainability of small community water systems.

The Department of Health, therefore, is motivated to consolidate water systems where it makes logical business sense. It believes that consolidated water systems can increase water source reliability and also leverage costs through economies of scale.

Camano Water Association, with more than 1,000 connections, is the largest water system on the island. Several years ago, it started becoming aware of the jeopardy that multiple small water systems on the island presents to the residents, both in terms of the availability of clean and safe drinking water as well as a reliable water supply in the event of an island-wide emergency.

Through informal conversations with leaders of neighboring water companies, it appeared that they shared this concern, but did not see how the problem could be solved, especially if it involved additional expenses or relinquishing control of their own community water system.

What kinds of cooperation might be feasible?

In February 2015, Camano Water Association applied for a consolidation grant from the Washington State Department of Health to fund the Water System Cooperation Opportunities Project. The goal was to explore opportunities and do a feasibility study for small to large cooperative efforts and capacity-building among several water systems in central Camano Island. This feasibility study report documents this exploration and the resulting recommendations.

This study looked to answer the question: “What types of cooperative working relationships among the many water systems on Camano Island might build capacity, prepare for water emergencies, and enhance operational efficiency so that a safe and abundant drinking water supply is ensured for Camano Island residents?”

When the project was proposed, planners expected to research up to 10 water systems in the central Camano Island area and identify each water system’s challenges and goals with regard to water safety, system sustainability, compliance, and operations.

With the participating water systems, planners expected to explore opportunities to help resolve existing challenges, build capacity, or achieve organizational goals through the following types of cooperative activities:

- Emergency preparedness and management
- Interties
- Resource sharing to mitigate substandard water treatment
- Resource sharing to mitigate unreliable or inadequate supply
- Resource sharing to mitigate low pressure or water outage situations
- Other types of resource sharing
- Water system consolidation or ownership transfer
- Other consolidation activities as yet undiscovered

It was expected that the study would clarify what was feasible in this region, along with the best options for planning and obtaining funding to implement the infrastructure improvements indicated by the study.

The activities of the Water System Cooperation Opportunities Project were to:

- Engage with the leaders of neighboring water systems to open the dialog about water system cooperative efforts and to participate in working meetings.
- Obtain commitments from water systems who were willing to participate in the study.
- Conduct engineering and business operations research with each of the participating water systems.
- Collate the research, analyze the findings, and make recommendations as part of the feasibility study report.

- Determine the next steps for coming to consensus and the recommendations.
- Deliver the feasibility study report to all participating water systems, the Washington State Department of Health as a condition of the grant, and other stakeholders.

The following eight water systems committed to participate in the feasibility study:

1. Camano Cooperative Water & Power Co., #10600
2. Camano Island Summit Association, #08344
3. Camano Sunset Water System, #26951
4. Camano Water Association, #107507
5. Elgerwood Maintenance Association, #09131
6. Mecca Community Association, #22888
7. Seascape Water Association, #07095
8. Thunder Ridge Water System, #88200

The following additional water systems in the vicinity were invited but they chose not to participate in the study:

1. Camano Sunrise Water Association #1 (north area), #10746
2. Camano Sunrise Water Association #2 (south area), #29669
3. Lost Lake Property Owners Association, #48345

Because the Department of Health awarded the grant to fund the project to Camano Water Association, leaders in this water system took on the roles of project coordinator, outreach, and administration.

Implementing the feasibility study

The outcome of the consolidation activities for the Water Systems Cooperation Opportunities Project feasibility study was a formal analysis of the costs and benefits of initiating cooperative working relationships and building capacity among neighboring water systems up to and including system consolidation. This study consisted of multiple discussions among eight neighboring water systems and an in-depth analysis of planning, design, and engineering components for each system.

The following is the timeline of major activities for implementing the Water Systems Cooperation Opportunities Feasibility Study.

February 23, 2015. Camano Water Association submitted its proposal to the Department of Health Consolidation Activities Grant program, requesting \$30K for the Water Association Cooperation Opportunities project.

March 19, 2015. Camano Water Association received letter announcing the award of funding from the Department of Health Consolidation Activities Grant program for the full amount requested.

April 9, 2015. Camano Water Association sent a letter to participating companies to inform them that grant was awarded and that work can begin with a kickoff meeting on April 22.

April 22, 2015. The project kickoff meeting was held with the participating water companies. The meeting agenda included:

1. The issue of many water companies and the potential for cooperation.
2. The engineering and management research for the feasibility study.
3. The Department of Health perspective; the presentation titled “Water System Consolidation and Restructuring” was given by DOH engineers.
4. The engineering research approach for gathering data and preparing the reports; the presentation titled “Water System Consolidation Study” was given by consulting engineer Greg Cane.

April 29, 2015. Camano Water Association submitted the grant project scope of work and budget to the Department of Health.

July 21, 2015. Engineer Greg Cane sent letters to all participants regarding the start of the data-gathering phase of the feasibility study. The letter included a questionnaire and a request to return information before the site visit.

July 24, 2015. The grant contract was signed and executed by Camano Water Association Board President Dave Weir and the Department of Health.

September through November 2015. Although none of the questionnaires were returned, site visits took place. Project coordinator Dave Weir, engineer Greg Cane, and others visited all

participating water systems to gather data for the feasibility study and to discuss opportunities for sharing resources up to and including consolidation.

December 22, 2015. A meeting was held with all participants to review project progress. Greg Cane presented a sample report for one water system.

January 20, 2016. Project coordinator Dave Weir sent a letter to all participants summarizing current progress. The letter included notification of a March meeting to present preliminary engineering reports from data gathered at all systems.

February 2016. Greg Cane developed the map of a possible “Central Camano Water System – 2050.”

March 4, 2016. The project coordinator sent an email to all participating systems asking for their company’s overall financial information: gross revenue and expenses, capital improvements fund, and debt amount for 2015 so that financial feasibility could be assessed. The email also asked for the company’s bylaws for the assessment of legal feasibility.

March 9, 2016. Greg Cane produced engineering reports (Capital Facilities Replacement Review) for all systems.

March 10, 2016. A meeting was held with all participants to give a project update. Greg Cane reviewed the study’s format, results, and future possibilities. The individual reports were distributed to each company’s representatives for their review and feedback, which were requested by April 11.

March 14, 2016. The project coordinator emailed all participants to request that they send a list of obstacles and concerns about moving forward with a water systems consolidation. There were no responses.

April 22, 2016. No further feedback was received on the preliminary reports, and the final engineering reports were made available to all study participants.

August 16, 2016. A meeting was held with local, county, and state stakeholders to discuss the findings of the feasibility study and possible next steps. This included the Water Resources Advisory Committee (WRAC), Whidbey Island Water Systems Association (WIWSA), Island County, and the Department of Health. They discussed the findings of the feasibility study, resource sharing scenarios among water systems, and possible structures for a consolidated system over the next 20-30 years.

August 31, 2016. The preliminary feasibility study was delivered to the Department of Health. This marked the end of grant period.

Water system analysis

Before the feasibility study began, preliminary research on area water systems from records and self-reporting filed with the Washington State Department of Health specified the following known issues.

1. Elgerwood Maintenance Association
Well is in an area identified as being at “very high risk” for seawater intrusion.
2. Camano Sunrise Water Association #1 (north area) (not a study participant)
Some recent non-acute coliform violations.
3. Camano Sunrise Water Association #2 (south area) (not a study participant)
Some nitrate impacts on well source.
Recent history on non-acute coliform MCL violations.
4. Camano Sunset Water System
Iron and manganese (both secondary contaminants) exceed respective MCLs.
2013 Sanitary Survey reported treatment system not functioning properly.
5. Mecca Community Association.
Iron (secondary contaminant) level exceeds MCL.
One recent (2013) failing total coliform test.
6. Thunder Ridge Water System
2012 Sanitary Survey recommended a second well.
Recent history of non-acute coliform MCL violations.
E.coli presence in the distribution system in 2011.

Eight water systems on Camano Island participated in the feasibility study. They took part in several meetings, offered input, and shared information. A professional engineering firm worked with each water system, doing research and analysis to learn its water infrastructure, capacity, strengths, and weaknesses (see Appendix A for an example of the memo, questionnaire, and preliminary research findings sent to each participating water system). This research resulted in a comprehensive capital facilities replacement plan for each system, which are included in Appendix C.

This comprehensive analysis was done to thoroughly understand the resources available and the future capital requirements for each system, as this would affect opportunities for interties, resource sharing, emergency planning, and system consolidation. This analysis was also needed to determine the financial feasibility for cooperative activities. It was important to understand the resources — such as wells, water tanks, and piping — for each water facility, their age, when replacement would be necessary, how much it would cost to replace, and the number of households served.

The first step of the engineering data-gathering phase consisted of collecting information from the Washington State Department of Health Sentry website, which contains public information about all water systems.

The second step of the engineering data-gathering phase consisted of site visits at each of the participating water systems. The engineer visited their systems, took photos, reviewed maps,

as-built drawings. He also spoke with as many water managers and board members as were available.

While the engineering research was being done, other project team members coordinated the study and met with leaders of the participating water systems to facilitate the conversation about possibilities, communicate possible outcomes, learn more about their business operations, and to uncover potential obstacles to cooperative working relationships.

After the data gathering phase was complete, the second phase was data analysis and report preparation.

Findings

The feasibility study found that it would indeed be beneficial for all water companies on Camano Island to join as a single entity, either with coordinated management or physically consolidating. All perspectives — water systems, capital improvements, finance, and business operations — support this assertion. Water customers would indeed see improved efficiencies, resource sharing leading to lower capital improvement costs, and better emergency preparedness. Joining together as a larger water system would greatly improve a community's ability to maintain a water utility as a sustainable enterprise in the long term.

When the project was first initiated, it was expected that when all the data was gathered and analyzed, there would be a clear case for system consolidation, providing benefits for public health, customer service, and finance. The participating water systems responded initially with cooperation and degrees of enthusiasm. The principals for each system were willing to have the engineering research done on their systems. In fact, they all received, free of charge, a comprehensive water systems analysis — the Capital Facilities Replacement Review, included in Appendix C for each water system in the study. The analysis details each individual water system's components, capabilities, and capital improvement needs and costs into future years. It also includes the number of households served.

However, the project lost momentum, as meeting attendance dwindled and requests for business operations information went largely unanswered. This points to an inclination among participating parties to move more slowly, and it became clear that outcomes might not be realized for 20 years or more.

The following are the key barriers to cooperative efforts that were uncovered in the study:

- Finances are a roadblock to cooperation efforts. In nearly all cases, the cost to replace system components likely exceeds what the households in their service areas would be willing to pay. However, certain water systems can save a lot of money with certain interties, other joint activities, or the sharing of tanks and wells to reduce duplication.
- While some leaders of individual water systems would welcome the opportunity to implement certain cooperative scenarios, others are more reluctant and even resistant. The inclination toward self-determination and autonomy might be a roadblock to cooperative efforts.
- The county permitting process allows new small water systems to be easily formed. So many water systems currently exist because of the ease and low cost to drill a well, along with the state's ease of access to water rights for an application fee of \$25.

The process was invaluable to learn the capabilities of the water systems in the study area. The water infrastructure is now thoroughly understood, and there's now a basis for informed discussion about emergency preparedness, interties, resource sharing, and consolidation. There's also a clearer understanding about the cost savings that might be realized through certain types of relationships.

This study resulted in a more open dialog among neighboring water systems.

Recommendations

Although there are several alternatives, the researchers and community stakeholders concluded that the best scenario for a safe and abundant drinking water supply for Camano Island residents is to establish some kind of consolidated structure that smaller water companies can join over time. Forming a water district or public utility district are possibilities for such a consolidated structure, which can ensure coordinated management and also provide the infrastructure and resources needed to physically combine wells, pipes, and other water system resources where financially advantageous.

It's also recommended that work be done with Island County commissioners to improve the water permit process with developers. Each water system has its unique strengths and challenges, and the chosen solution should take these into account and be sensitive to preferences of the leaders. Implementing a plan gradually over a number of years can be part of the plan.

Over the next 20 or 30 years, it's possible that the vision of a future "Central Camano Water System" (see the map on the next page) could become a reality.

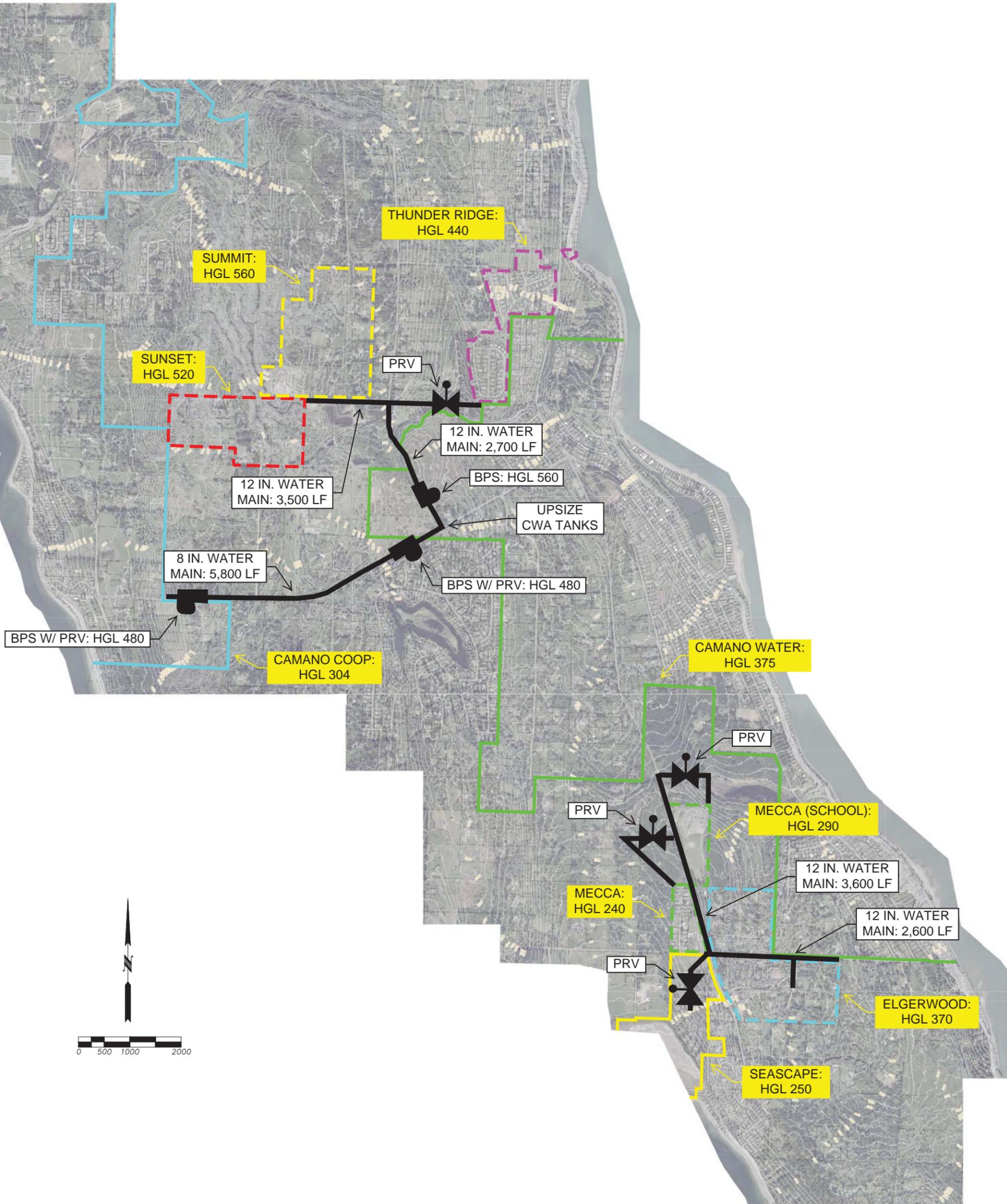
In the near term, the following actions could be considered:

- Mecca Community Association, Seascope Water Association, and Elgerwood Maintenance Association might consider sharing resources or even consolidating, as it makes good engineering as well as economic sense.
- Camano Water Association and Camano Cooperative Water & Power might consider an intertie.
- The other three water systems (Camano Island Summit Association, Camano Sunset Water System, and Thunder Ridge Water System) could remain unchanged for the near term, as there's no economic sense to make any immediate changes.

For the engineering and technical details about these and other recommended actions, see Appendix B, "Central Camano Water Systems Cooperation Study: Discussion of Notional System Consolidation."

With certain incremental changes, small benefits will start to be seen in the near term. A foundation can now be laid for more far-reaching benefits in the future.

CENTRAL CAMANO WATER SYSTEM - 2050



LEGEND	
	CAMANO COOPERATIVE WATER & POWER COMPANY
	CAMANO ISLAND SUMMIT ASSOCIATION
	CAMANO SUNSET WATER SYSTEM
	CAMANO WATER ASSOCIATION
	ELGERWOOD MAINTENANCE ASSOCIATION
	MECCA COMMUNITY ASSOCIATION
	SEASCAPE WATER ASSOCIATION
	THUNDER RIDGE WATER SYSTEM

Next steps

The following are the recommended next steps, based on the work of the feasibility study and discussions with stakeholders:

1. Research the establishment and operation of a water district, public utility district, and municipality.
2. Decide which structure is most beneficial for Camano Island water systems and their customers.
3. Develop a business plan to detail the operations, engineering, finance, legal, and personnel aspects of the new water system structure.
4. Develop the project plan to implement the new water system structure.
5. Work with Island County officials to revise the water permit process in such a way that water system consolidation can be sustained and successful.

Acknowledgments

Thanks go to the following individuals for their contributions to the Water Systems Cooperation Opportunities project and this feasibility study.

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Appendixes

- A. Data gathering phase: Sample memo and questionnaire
- B. Central Camano Water Systems Cooperation Study:
Discussion of notional system consolidation
- C. Engineering reports for the eight participating water companies
 - 1. Camano Cooperative Water and Power Co.
 - 2. Camano Island Summit Association
 - 3. Camano Sunset Water System
 - 4. Camano Water Association
 - 5. Elgerwood Maintenance Association
 - 6. Mecca Community Association
 - 7. Seascape Water Association
 - 8. Thunder Ridge Water System

For each of the eight participating water systems, the data includes the following components as applicable:

- Initial information from the Department of Health Sentry website
 - Water System File Report
 - Water Facilities Inventory Form
 - Pre-Adequacy Data Summary
 - Exceedances
- Water systems overview map
- Final letter
- Capital facilities replacement review
- Water system components expected useful life
- New drilled well budget construction cost
- Well pump budget replacement cost
- Pumphouse budget construction cost
- Fe/Mn/As removal treatment budget cost information
- Reservoir budget installation cost
- Distribution system piping budget construction cost
- 4-inch PRV station (for 6" main) budget construction cost
- Backup generator budget installation cost
- Chain link fence budget replacement cost