

Chapter 8 → Utilities Element

The Utilities Element sets forth City policies for water, sanitary sewer and storm drainage services, and relates the Comprehensive Plan to development plans of independent utility providers in a coordinated and consistent manner. It incorporates by reference the Oak Harbor Comprehensive Water System Plan, 2014, and Oak Harbor Comprehensive Sewer System Plan, 2007, and any updates thereto.

The Utilities Element was prepared in accordance with Section 36.70A.070 of the Growth Management Act (GMA). The Utilities Element contains a statement of Goals and policies, and a general inventory of existing and planned utilities.

Scope and Organization of the Utilities Element

GMA requires that the, "utilities element [consist] of the general location, proposed location, and capacity of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunication lines, and natural gas lines" (RCW 36.70A.070). The City is also required to plan for water, sanitary sewers, storm drainage and solid waste facilities, and has elected to address these services in the Utilities Element (WAC 365-195-210).

The format of this chapter is consistent with WAC 365-195-320, Growth Management Act -- Procedural Criteria for Adopting Comprehensive Plans and Development Regulations. Section II provides an inventory of the utilities serving the City of Oak Harbor and its Urban Growth Area (UGA), analyzing existing capacity, future needs and planned improvements. This is followed by a statement of City Goals and policies for utility siting and

service in Section IV. Technical and financial information about city utilities is found in the Capital Facilities Element, Comprehensive Water System Plan (2014), Comprehensive Sewer System Plan (2007), and Comprehensive Storm Drainage Plan (2007).

Inventory and Planned Improvements

City Owned Utilities

The City manages the water system, sanitary sewers system, storm drainage system and solid waste. Non-city owned utilities are natural gas, electricity, telecommunications, television, and internet services.

Water System

Oak Harbor obtains water from Anacortes via 10- and 24-inch transmission lines, and from an aquifer below the city via three wells. The Anacortes supply is the primary source. The City updated its Comprehensive Water System Plan in 2014.

Oak Harbor has entered into a 20-year Water Supply Agreement with Anacortes, and renegotiates water charges and committed water volume with an annual amendment. The most recent water service amendment (2006) allows Oak Harbor to withdraw 970 million gallons/year, or adequate water through the year 2025. The Navy and the City have an equal allocation of water capacity through the existing transmission lines.

The supply and transmission system has sufficient capacity to meet the projected 2025 peak-day demand for the UGA service area. The Water System Plan analyzed the City's need for reservoir capacity and proposes

additions to the system to meet projected demand, including required fire flows.

Sanitary Sewer System

The City of Oak Harbor Comprehensive Sewerage Plan, adopted by City Council in 2007, contains all pertinent information concerning the sanitary sewer system. The plan contains a description of the existing system, population projections, design criteria for future systems, and proposed improvements. In 2015, the City began the construction of a new wastewater treatment facility located immediately north of the existing RBC plant in Windjammer Park. The new facility is designed to handle 2.7 million gallons per day and with minor upgrades can handle the projected growth until 2060.

Storm Drainage

A Comprehensive Storm Drainage Plan was adopted by the Mayor and City Council in 2007. The Plan contains background information, water quality assessment, alternative solutions for improving Oak Harbor's run off quality, and funding alternatives for implementing the Comprehensive Plan.

Solid Waste

In July of 1980, the City of Oak Harbor terminated its sanitary landfill operations and began, through an interlocal agreement, to use the County's landfill site for disposal of its municipal solid waste. All operating revenues are obtained through collection and container fees and storage rentals. User charges are adjusted according to present needs.

Natural Gas

Washington State law requires gas providers to demonstrate that existing customers will not subsidize new customers. Thus, gas transmission line extensions are not planned in advance but are initiated only when there is sufficient customer demand.

Natural gas is piped to North Whidbey Island through a six inch high-pressure submarine line

connecting Brown's Point on Camano Island to Strawberry Point east of the NAS-Whidbey Seaplane Base. Within the City of Oak Harbor, gas pipelines are typically located in street rights-of-way, however, some developments may receive service through utility easements on adjoining properties. Service is limited to the incorporated city limits, NAS Whidbey Island, and surrounding unincorporated areas within a short distance of the transmission main.

Future Demand and Proposed Facilities

Natural Gas

The location, capacity and timing of improvements to the Compressed Natural Gas (CNG) distribution system are driven purely by demand. This means that, unlike electrical or telephone service, improvements are initiated solely by customer requests. This applies to both new service connections and conversion from other energy sources to natural gas. Requests for natural gas service may legally be refused if the extension is not cost-effective to the company.

No major new facilities, upgrades, or extension of services beyond the existing service areas are planned or anticipated within the next 20 years, but the utility may serve new development outside present service areas if it is relatively close to existing mains.

Electric Utility and Provider

Company Overview: Puget Sound Energy (PSE) is a private utility providing electric and natural gas service to homes and businesses in Puget Sound region and portions of Eastern Washington, covering 10 counties and approximately 6,000 square miles. PSE's regional and local electric and natural gas planning efforts are integrated and centered on providing safe, dependable, and efficient energy service. PSE provides electrical power to more than 1.2 million electric customers throughout eight counties.

Regulatory Environment: PSE's operations and rates are governed by the Washington Utilities and Transportation Commission (WUTC). PSE electric utility operations and standards are further governed by the Federal Energy Regulatory Commission (FERC), the National Electric Reliability Corporation (NERC), and the Western Electricity Coordinating Council (WECC). These respective agencies monitor, assess and enforce compliance and reliability

standards for PSE. The residents of The City of Oak Harbor and the region rely on the coordinated effort between PSE and the County for the adoption and enforcement of ordinances and/or codes to protect transmission and distribution line capacity and support federal and state compliance of safe, reliable, and environmentally sound operation of PSE's electric facilities. Routine utility maintenance work, including vegetation management is required to maintain compliance with FERC, NERC, and WECC regulations.

Integrated Resource Plan: In order for PSE to meet regulatory requirements, it updates and files an Integrated Resource Plan (IRP) with the WUTC every two years. The IRP presents a long-term forecast of the lowest reasonable cost combination of resources necessary to meet the needs of PSE's customers to provide dependable and cost effective service over the next 20 years. The current plan, which was filed in May of 2013, details both the energy supply and transmission resources needed to reliably meet customers' wintertime, peak-hour electric demand over the next 20 years. The plan, which will be updated in the fall of 2015, forecasted that PSE would have to acquire approximately 4,900 megawatts of new power-supply capacity by 2033. This resource need is driven mainly by expiring purchased-power contracts and expected population and economic growth in the Puget Sound region. The IRP suggests that roughly more than half of the utility's long-term electric resource need can be met by energy efficiency and the renewal of transmission contracts. This reduces the need down to 2,200 MW by 2033. The rest of PSE's gap in long-term power resources, the IRP stated is likely to be met most economically with added natural gas-fired resources.

PSE generates approximately 46 percent of the electricity for its customers' from its own generation specifically generation plants; hydro, thermal, solar and wind. PSE currently has about 3,000 megawatts of power-generating

capacity, and purchases the rest of its power supply from a variety of other utilities, independent power producers and energy marketers across the western United States and Canada.

System Overview: To provide the City of Oak Harbor (the City) with electricity, PSE builds, operates, and maintains an extensive integrated electric system consisting of generating plants, transmission lines, substations, switching stations, sub-systems, overhead and underground distribution systems, attachments, appurtenances, and metering systems.

Electricity provided by PSE to the City is produced nearby in Skagit County (Baker River Dams) and elsewhere as PSE is interconnected to the Northwest's regional transmission grid through an extensive network of transmission facilities providing bulk transmission service to meet the demands of electricity customers within the region's eight states. PSE electric transmission facilities within and near the City are important components of the electric energy delivery grid serving the Puget Sound region. As electricity reaches the homes and businesses in the city, the voltage is reduced and redistributed through lower-voltage transmission lines, distribution substations, overhead and underground distribution lines, smaller transformers, and to individual meters.

PSE is prudently and systematically deploying smart grid technology at each level of infrastructure to enhance and automate monitoring, analysis, control and communications capabilities along its entire grid. Smart grid technologies can impact the electricity delivery chain from a power generating facility all the way to the end-use application of electrical energy inside a residence or place of business. The ultimate goals of smart grid are to enable PSE to offer more reliable and efficient energy service, and to provide customers with more control over their energy usage.

PSE serves commercial and residential locations within the City and operates and maintains approximately 43 miles of overhead facilities and 70 miles of underground cables, see map.

Future Projects: To meet local electric demand, new transmission lines and substations may need to be constructed. In addition, existing facilities are always being maintained and at times rebuilt to serve current and future demand. The system responds differently year to year and PSE is continually adding or modifying infrastructure to meet electrical demands.

PSE continues to evaluate the growth and development on Whidbey to determine when a third transmission line may be added to serve the needs of the Island. That transmission line would utilize a submarine cable from some point near SW Snohomish County to the south end of the Island.

Telecommunication Facilities

Telephone

Like investor-owned gas and electric companies, telecommunications companies are regulated by the WUTC, which establishes service levels and rates. Standard telephone facilities include a central plant, which houses switching gear (usually in the same building as central offices), utility poles, and overhead or underground lines. Underground installation of telephone lines and use of efficient fiber optic systems is becoming more common as technology advances and regulators respond to aesthetic concerns.

Cellular Telephone Service

A cellular system consists of cells (geographic areas served by a transmitting and receiving tower), cell sites (the tower site, base station radio and interconnecting equipment), a switching station (which receives and distributes signals from the cell sites via conventional lines and microwave signals), and the cellular phones themselves. Cellular phones can operate only

within the range of a given cell site. Therefore, in order to cover broad service areas, cell sites must be located close enough to one another to provide uninterrupted service as the user moves from one location to another. With advances in digital technology, the capacity of cell sites will increase. Therefore, capacity is not anticipated to be a problem in the future. There are several providers of cellular telephone service within the Oak Harbor UGA. These providers operate a network of cell sites within the City of Oak Harbor, Island County and surrounding counties in order to provide adequate coverage. Additional cell sites will be constructed in response to consumer demand as regulated by the Federal Communications Commission.

Siting Issues: Cellular towers can pose siting problems due to aesthetic concerns and conflicts with competing radio signals. The towers can be free-standing, but are often placed on top of existing structures. As service demands change, cell sites may need to be reconfigured. For example, as additional cell sites are added to the system, tower heights may need to be changed to prevent overlapping radio coverage. The Federal Communications Commission (FCC) regulates the public airwaves, assigning frequencies and licensing cellular telephone utilities. The FCC requires that transmitting towers be located such that signals are unobstructed. Local governments may regulate tower siting to the extent that a utility's federally-licensed right to use the airwaves is not impeded. A local jurisdiction can deny approval of an individual tower site based on established policy, but cannot impose an outright ban on towers, or effectively prohibit towers within its jurisdiction through repeated denials or excessive conditions.

The Federal Aviation Administration (FAA) also reviews proposed towers when they exceed 200 feet in height or when the proposed location is within 20,000 feet of a major airport (i.e., serving military or commercial aircraft), or

within 10,000 feet of a smaller airport. While the FAA does not have the authority to deny siting proposals, it coordinates its review process with the FCC, who may deny a particular site if the FAA objects.

Cable

Cable utilities transmit television programming via coaxial cable from trunk lines, which originate at "head-end" or data processing sites. Though the term "cable" implies wiring throughout the system, many cable systems also rely on satellite dishes and microwave antennas. Overhead utility poles are often used to run cable distribution lines, however, underground installation is becoming more common.

Goals and Policies

The following Goals and Policies serve as a framework for the expansion of public and private utilities serving Oak Harbor. They are intended to provide a long-range plan for utilities to protect the public health, welfare and safety. Utility construction projects must be consistent with Goals and Policies. The Utilities Element meets the requirements of GMA, and is consistent with the County Wide Planning Policies and Urban Growth Area Agreement between the City of Oak Harbor and Island County.

Goal 1 - Facilitate the orderly and cost-effective development of all utilities at adequate levels of service to accommodate the projected growth..

Policies:

- I.a. Ensure that all public utility services within the Urban Growth Area (UGA) are at a level that is consistent with an urban community.
- I.b. Sound growth management principles should be used to guide extension of utilities within the UGA.
- I.c. Consider allowing phased upgrading of utilities for existing uses, for example, meeting fire flow and city sewer requirements, when immediate upgrading of existing properties would create an undue hardship.
- I.d. No new water and sewer extensions should be allowed beyond the UGA and the boundaries of existing service districts.
- I.e. Consider actual usage fee rates on an income needs-based scale that will assist low-income adults to remain in their own homes (for example: actual water and solid waste, sewer and direct-cost service hook-up fees).
- I.f. Coordinate land use and utility planning to promote cost-effective utility services. Specifically, the Land Use Element and level-of-service standards shall be used to determine future service requirements, and utilities shall be designed accordingly.
- I.g. Encourage innovative solutions for reducing utility costs, managing growth and protecting the public health, safety and welfare.
- I.h. Encourage co-location of utilities should be encouraged when co-location reduces impacts and does not

- substantially increase costs. Utility lines should be co-located in trenches whenever possible.
- I.i. Flexible and innovative construction techniques which reduce cost and impacts of utilities should be encouraged.
 - I.j. Seek to recover costs for extending utilities, including overhead costs, and the costs to maintain and operate these systems. Debt financing shall be minimized whenever possible.
 - I.k. Consider exceptions to extend utilities into the enterprise areas in the UGA ahead of annexation to promote economic development.
 - 1. As a condition of the City granting sewer service prior to annexation within an enterprise area, property owners shall be required to commence annexation proceedings within a timeframe established by agreement with inclusion of an intended completion date.
 - 2. Sewer service may be provided prior to annexation within enterprise areas only for non-residential uses.
 - 3. Any new construction on properties within enterprise areas provided sewer service prior to annexation shall comply with current standards of the Aviation Environs Overlay Zone and with current Noise Attenuation Standards.
 - 4. Financing of utility extensions into enterprise areas should be mainly borne by the properties receiving the extended service unless grants or other outside financial sources are found or made available. The City may wish to participate in financing utility extensions in order to encourage economic development.
 - I.l. Review annually the capacity of the shared sewer treatment facility with the Navy
 - I.m. Minimize service interruptions for utility siting and related construction..
 - I.n. Conditions which facilitate a utility' s ability to meet its public service obligations under state law should be included in contract and franchise agreements between City and private utilities.

Goal 2 - Process permit requests for utilities in a fair and timely manner to ensure predictability.

Policies:

- 2.a. Provide timely, effective notice to private utilities and customers regarding the review and approval of major projects.
- 2.b. Work with private utilities and other jurisdictions to coordinate long-range plans for service expansion.
- 2.c. Facilitate public participation in utility siting decisions early on in the design and site development process.
- 2.d. Review and amend existing regulations as necessary to provide clear and objective standards for maintenance, repair, installation and replacement of utilities. Such changes shall be consistent with other Goals and policies of the Comprehensive Plan for construction practices, restoration of City property/rights-of-way, environmental protection and oak tree preservation.

Goal 3 - In conformance with the Comprehensive Plan use the Utilities Element and consult with utility providers, to guide decision-making and achieve community Goals.

Policies:

- 3.a. Review proposed utility projects based on Comprehensive Plan policies and other regulations. Land use, transportation, urban design and environmental elements should guide the decision-making process. Appropriate conditions for compliance shall be established as needed.
- 3.b. Encourage public involvement in finalizing location of utility corridors and other planned facilities..
- 3.c. Coordinate with Island County and utility providers to encourage orderly extension of services.
- 3.d. Encourage the joint use of land for utilities, when feasible.

Discussion - When practicable, new utility distribution lines should be installed in shared rights-of-way. Development of surface water detention and infiltration areas jointly with parks and open spaces should be encouraged when mutually compatible. The City should initiate agreements with private utilities and property owners to allow joint use of utility corridors for trails, open space and storm water management, to the extent that the uses are consistent with the Comprehensive Plan, and corridors are determined to be suitable for the proposed use (See Comprehensive Parks and Recreation Plan; Comprehensive Storm Drainage Plan).

- 3.e. Require easements to be provided by property owners during development applications as necessary to install and maintain utilities.
- 3.f. Observe the Island County wellhead protection program for development in vicinity of operating wells in the unincorporated areas.

Goal 4 - Minimize aesthetic and environmental degradation from utility operation, installation, replacement, repair and maintenance.

Policies:

- 4.a. Strive to reduce the environmental and aesthetic impacts of the construction, operation and maintenance of utilities when practical.
- 4.b. Avoid, or minimize and mitigate impacts on environmentally sensitive areas, based on best available science.
- 4.c. Regulate utility construction to mitigate construction-related disruptions to neighborhoods and disturbances to the environment.
- 4.d. Require undergrounding of utility distribution lines in all new developments.
- 4.e. Require above ground utilities to be screened within a building, sight obscuring fence or landscape, or locate the utilities out of public view.
- 4.f. Continue to implement Puget Sound Water Quality Management Plan standards for storm water.
- 4.g. Meet National Pollution Discharge Permit requirements for storm and sanitary sewer discharge.
- 4.h. Coordinate utility projects to avoid or mitigate impacts to Garry Oak Trees.

Discussion - Permits must be obtained prior to any tree-trimming projects involving Garry Oak trees.

Goal 5 - Encourage sustainable design and alternatives that are efficient and encourages resource conservation.

Policies:

- 5.a. The City should adopt site design standards, which provide for solar access, and installation of solar energy systems where feasible.
- 5.b. Continue to support energy efficiency by encouraging low impact sustainable development through building practices, landscaping and site designs, which promote natural resource conservation.
- 5.c. Continue to develop the City's solid waste recycling program as a means of resource conservation. Encourage site designs, which allow for co-collection of trash and recyclables.
- 5.d. Encourage use of storm drainage solutions, which use natural processes to make existing infrastructure more efficient while protecting wetlands and drainage functions.
- 5.e. Protect groundwater recharge capacity through sustainable development practices to the greatest extent practicable.
- 5.f. Require preservation and/or replanting of landscaping in developments to support energy conservation Goals.
- 5.g. Implement the Water Conservation Program, as outlined in the Comprehensive Water System Plan, including adoption of a conservation rate structure.
- 5.h. Explore using gray water as a method of water conservation.
- 5.i. Promote water conservation, facilitate recycling and manage sanitary sewer treatment capacity.

Goal 6 - Coordinate with the City of Anacortes to ensure Oak Harbor's water needs are addressed.

Policies:

- 6.a. Coordinate with the City of Anacortes to maintain water supply needs with consistency in projecting growth for Oak Harbor and NAS Whidbey.
- 6.b. Maintain a long-term contract to address forecasted water demands and long-term viability of water resources.
- 6.c. Support the City of Anacortes in maintaining water rights.

Goal 7 - The City should develop a program, in cooperation with the affected utilities, to encourage the under-grounding of overhead utility lines.

Policies:

7.a. Be opportunistic on retrofitting and burying of overhead distribution lines adjacent to City arterial streets and other areas.

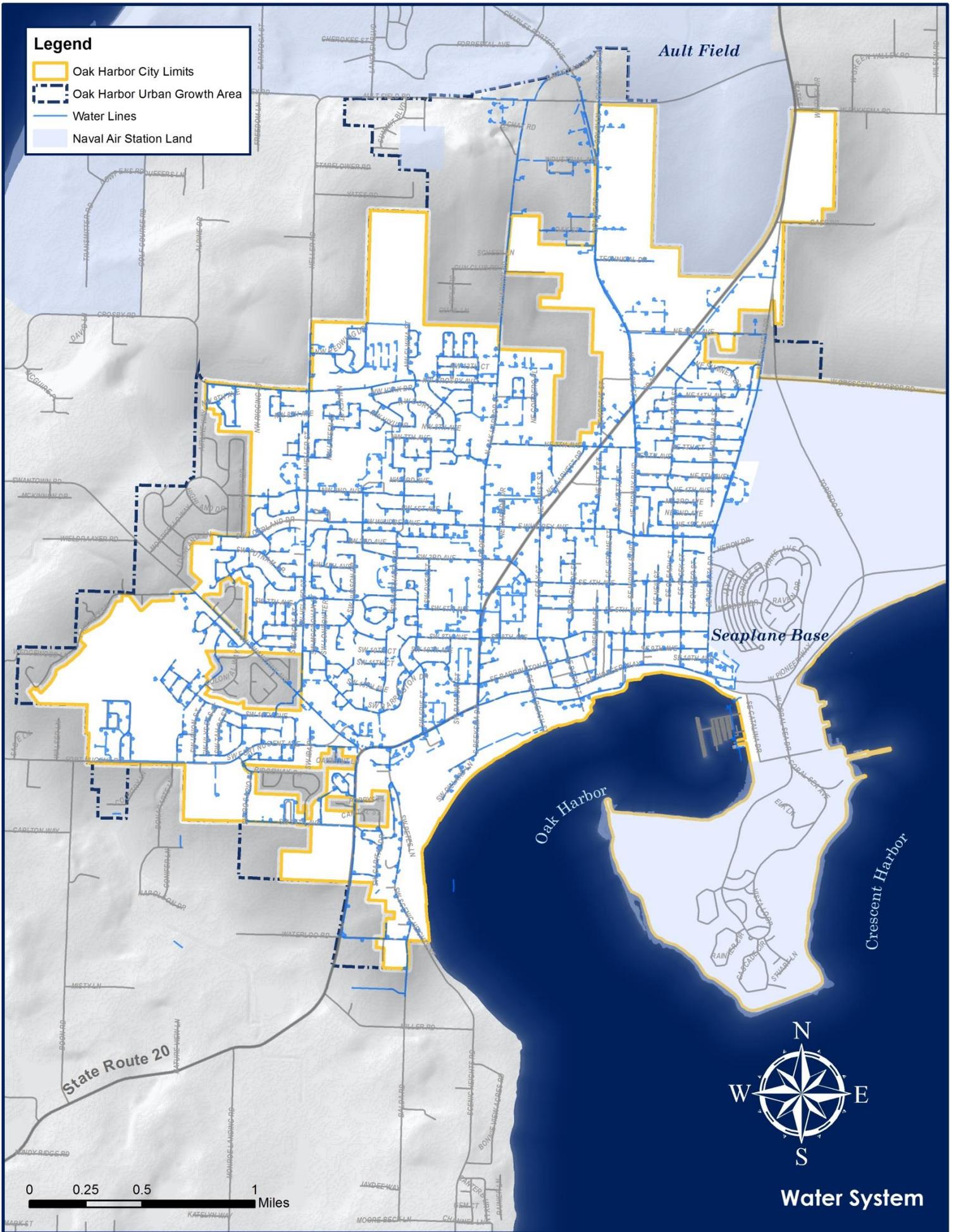
7.b. Budget for and coordinate burying of overhead utilities with other street upgrade projects and include this activity in the capital facilities budget.

7.c. Work with the local utility providers to develop a plan that will provide for underground power lines in the downtown business core.



Legend

-  Oak Harbor City Limits
-  Oak Harbor Urban Growth Area
-  Water Lines
-  Naval Air Station Land



Ault Field

Seaplane Base

Oak Harbor

Crescent Harbor

State Route 20

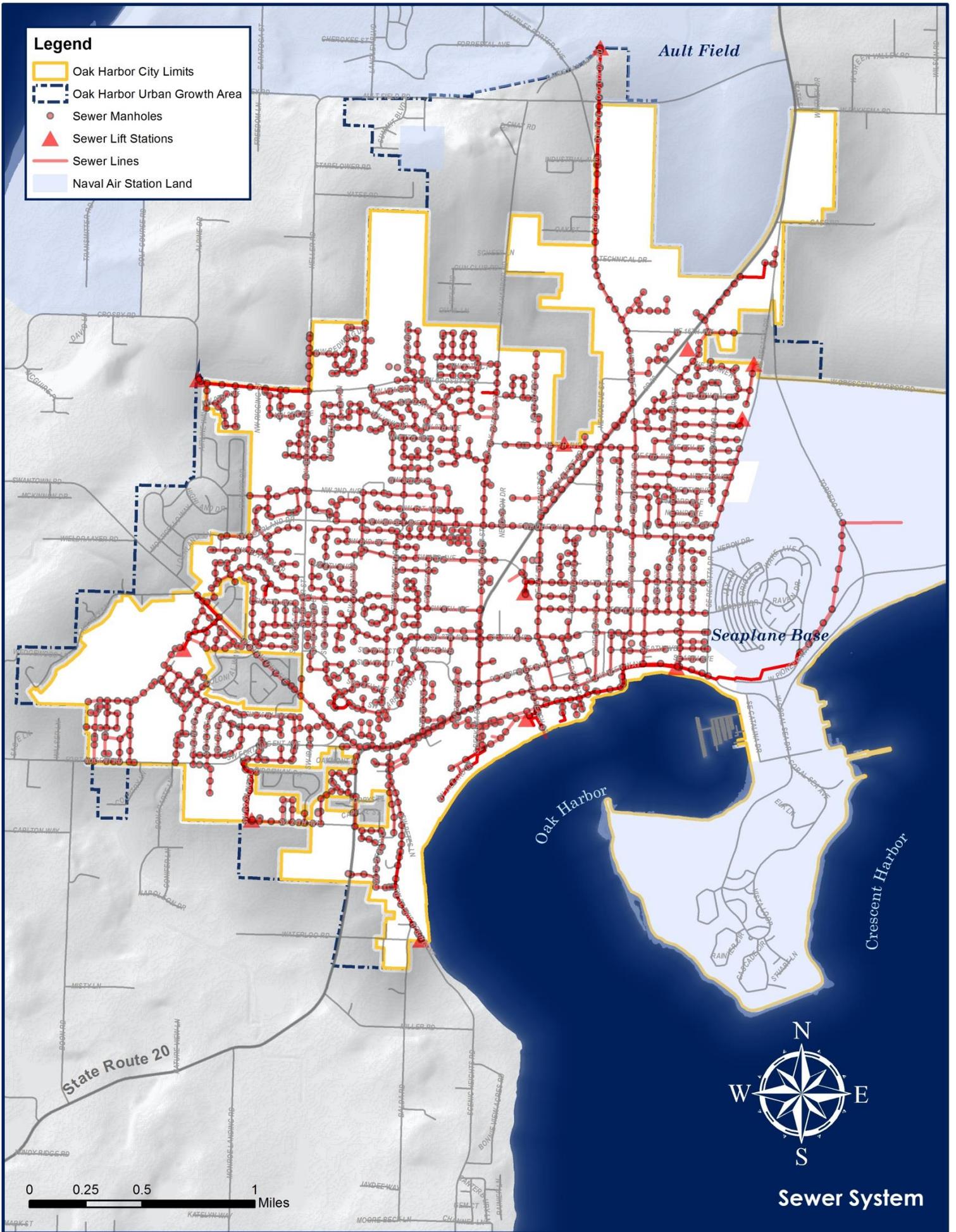
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Water System

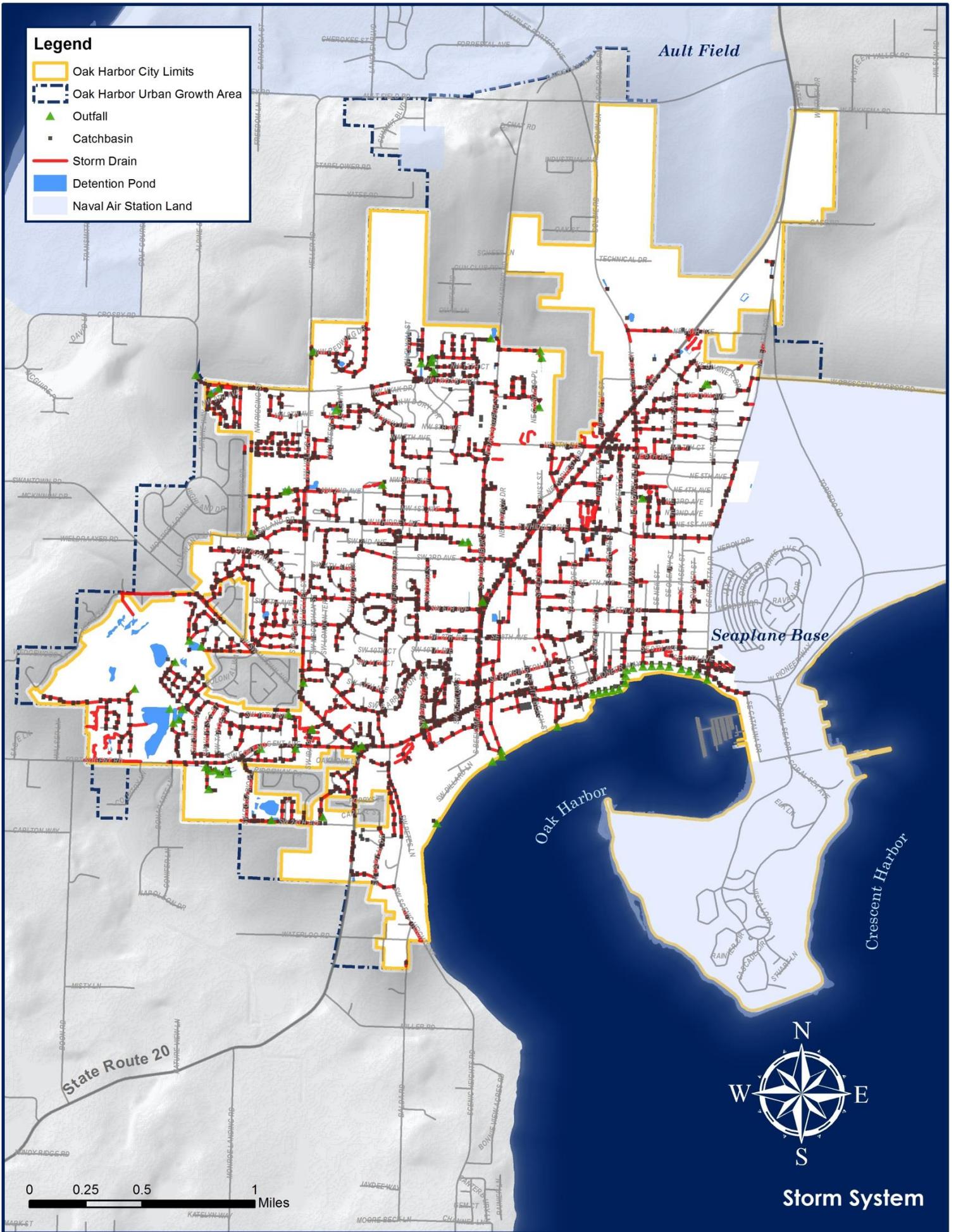
Legend

-  Oak Harbor City Limits
-  Oak Harbor Urban Growth Area
-  Sewer Manholes
-  Sewer Lift Stations
-  Sewer Lines
-  Naval Air Station Land



Legend

-  Oak Harbor City Limits
-  Oak Harbor Urban Growth Area
-  Outfall
-  Catchbasin
-  Storm Drain
-  Detention Pond
-  Naval Air Station Land



Storm System