

NEWPORT PENINSULA URBAN DESIGN PLAN¹

Findings:

Newport's historic peninsula district is the heart of the city. The City of Newport anticipates that population, employment growth, and increased tourism on the peninsula, combined with automobile-dependent development, will negatively affect the quality of life and lifestyle, as well as the physical character of the historic core of the city. The peninsula's ability to accommodate change requires careful attention to urban design in order to preserve and strengthen the inherent qualities which have guided Newport's development to date. These summary findings are more fully developed in the Newport Peninsula Urban Design Study, which is incorporated herein as a background reference document and provides substantial evidence for these findings, policies, and implementation strategies. It is our key finding that is necessary to both stimulate and guide development in order to graciously incorporate change and preserve the peninsula as a wonderful place to live. Consequently, the following policies are adopted for the peninsula.

Policies:

1. Preserve the beautiful natural setting and the orientation of development and public improvements in order to strengthen their relationship to that setting.
2. Enhance new and redeveloping architectural and landscape resources to preserve and strengthen the historic and scenic character and function of each setting.
3. Improve the vehicular and pedestrian networks in order to improve safety, efficiency, continuity, and relationships connecting the peninsula neighborhoods.
4. Coordinate with the Oregon Department of Transportation (ODOT) highway projects which are compatible with and responsive to these policy objectives and design districts implementing said policies.
5. Improve cohesion of each neighborhood subject to design district overlay by enhancing its function, character, and relationship to its natural setting and orientation.
6. Preserve and strengthen the ability of peninsula institutions to continue as centers of employment.
7. Improve the built environment in order to strengthen the visual appearance and

¹ Chapter added by Ordinance No. 1677 (July 6, 1993).

attractiveness of developed areas.

8. Strengthen the peninsula's economic vitality by improving its desirability through improved appearance, function, and efficiency.
9. Preserve and enhance the existing housing supply. Encourage the increase of affordable housing in Newport.
10. Adopt up to six urban design districts on the peninsula for the purpose of implementing said policies in a manner consistent with the purpose of implementing said policies in a manner consistent with the character and function of each area as further defined herein.

Implementation:

The urban design policies may be implemented by additional specific policies related to these objectives in the transportation system play, especially as these may relate to integration of pedestrian, vehicular and bicycle environments and networks, parking, and coordination with ODOT.

These policies may also be implemented by specific development/zoning code amendments requiring integration of key policy elements into development plans. Such policies may include a system of incentives to achieve density, height, pedestrian orientation, and scenic enhancement.

The key implementation for these urban design policies specifically authorized by this amendment shall be the creation of urban design districts. The purpose of each design district shall be to preserve and enhance the function and character of each district area. Design districts shall be considered as refinement plans and adopted as zoning and development code overlays. The character and function of the six urban design districts is as follows:

1.) City Center District (including U.S. Highway 101 Corridor).

A. City Center

The City Center area shall be characterized by Twentieth Century Commercial and Vernacular style structures. This area will be the most intensively developed commercial node on the peninsula. It will be enhanced as the City Center by development of a transportation network which links this area to all others on the peninsula. The building sites and public rights-of-way are to be characterized by land efficient parking and views of the Pacific Ocean and Yaquina Bay.

B. City Center North

City Center North shall be characterized by concentrating government buildings into a government center both east and west of U.S. Highway 101. It will serve as a gateway to the peninsula while linking with the Center in both function and character.

C. City Center South

City Center South shall focus on the Pacific Communities Hospital development. Development in this area shall be pedestrian and bicycle oriented, with effective linkages to the City Center and the U.S. Highway 101 Corridor.

2.) Waterfront District.

Historically, this area was the original development site with the City of Newport. Marine dependent industries--timber transport, fishing, etc.--were the first source of livelihood for early settlers and inhabitants and shall continue to be referenced in the design of the area. The Waterfront District shall continue to reflect the working class character of the commercial fishing industry. Appropriately, existing commercial buildings line both sides of Bay Boulevard and are of wood frame construction, clad with stucco, masonry and tin, covered with flat and gable roofs, 1 - 3 stories in height, with zero building setbacks. Many buildings have awnings, and some are built on pilings above the water. Piers project beyond the buildings. The historic character of the area is strong due to numerous intact, original buildings which date from the 1870's through the 1940's, and preservation of these historic buildings should continue to the extent possible. (At the intersection of Hatfield Drive and Bay Boulevard, the addition of contemporary buildings and lack of intact historic buildings has changed the character of the area to the east.) The U.S. Coast Guard Station/Ocean House Hotel Site is noteworthy architecturally as a unique building of the Colonial Revival style within the City of Newport. The location of this building on a bluff above the Waterfront District is an important aspect of its significance and shall be preserved.

3.) Nye Beach District.

The Nye Beach District is significant for the collection of cohesive architectural resources and landscape elements which reflect a working-class neighborhood. The area consists of wood frame buildings, 1 to 2½ stories in height, covered with gable and hip roofs, and clad with clapboard, shingle and/or fire retardant siding. The landscape character of the area is defined by rock walls, terraces, sidewalks, and small front lawns. There are some small scale commercial buildings within this residential neighborhood which relate directly in building materials, scale, and massing to the character of the area. (Some changes have occurred in the neighborhood, including building alterations such as retardant siding materials and infill of non-compatible buildings on once vacant properties.) The Nye

Beach sub-area is most important as a cohesive neighborhood, defined by the character of these vernacular buildings and the building/site relationship. Every effort should be made to integrate the goals of the Nye Beach Study (*Seventh Amendment to the Newport Urban Renewal Plan*) with any new developments in this area for maximum benefit to the city and community.

4.) Upland Residential District.

Quiet area of well-maintained, modern single-family residential homes to be maintained overlooking Yaquina Bay. Sites are characterized by steep slopes and shall be sensitively developed. Existing vegetation, such as shore pines, fir, hemlock, and Monterey Cypress, is important to the character of this area, as well as the entire peninsula, and should be preserved.

5.) East Olive District.

This district consists of mixed use development and the middle school, high school, county fairgrounds, and city/ county maintenance shops. The East Olive District shall redevelop with emphasis on attractive development character and corridor improvements, including efficiently organized vehicular, pedestrian and bicycle traffic, and site planning that emphasizes pedestrian orientation and children's safety.

6.) Oceanfront Lodging/Residential District.

Multi-story buildings of varying heights, including rectangular oceanfront motels of contemporary construction. Occasional views of ocean between buildings to be encouraged. Orientation of visitors to the ocean is to be enhanced by the emphasis of native/naturalized plantings on public and private property. Multi-family residential structures to be encouraged. Single-family homes south of motel area, on bluff overlooking the beach, to be respected by adjacent developments. Parking conflicts to be improved by site planning and new buildings to reflect pedestrian orientation. Beach accesses to be maintained or enhanced. Public open spaces to be encouraged.

Specific Peninsula Implementation Strategies:

Development on the peninsula and in each urban design district may use these additional implementation strategies:

- 1.) Encourage development of a pedestrian-friendly environment throughout the peninsula through creation of public open spaces and pedestrian amenities within each of the peninsula's primary sub-areas. Such public places should be supportive of intensive commercial activity centers (such as the City Center), tourist areas (such as the Waterfront and Oceanfront Lodging areas), and orientation to major

natural features (such as Yaquina Bay and the Pacific Ocean).

- 2.) Work with the Oregon Department of Transportation to develop the best coast parkway design, responsive to both the City of Newport's commercial development interests and user accessibility requirements. Include U.S. Highway 20, the East Olive entrance, as a major component of the work with ODOT. Coordinate compliance with Oregon's Transportation Rule for improved traffic flow and safety for cars, pedestrians, bicycles, and--where appropriate--transit throughout the peninsula. Further:
 - (a) Develop a strong, local circulation network by forming north-south streets (7th north from Bayley to 15th; and 9th north from Bayley to 12th) parallel to U.S. Highway 101 through the central peninsula area.
 - (b) Preserve the Yaquina Bay Bridge as a beautiful piece of architecture that greatly enhances the Newport Peninsula's entrance from the South.
- 3.) Encourage developer partnerships in implementation of these urban design principles through a system of incentives (e.g., density, height, pedestrian orientation).
- 4.) Use the redesign of U.S. Highway 101 to link the existing City Center with office employment centers and to link the Waterfront with Oceanfront Lodging/Residential and Nye Beach. Strive to fully integrate U.S. Highway 101 improvements into the City of Newport.
- 5.) Establish visual continuity by seeking opportunities for relocating or undergrounding utilities and implementing a signage program and signage ordinances.
- 6.) Preserve the significant scenic qualities from the Waterfront to the top of the Upland Residential bluff and from the Embarcadero through the Yaquina Bay State Park. Foster developer partnerships in implementation of these scenic preservation principles through a system of incentives (e.g., density, height, pedestrian orientation, parking reductions).
- 7.) Preserve the natural character of the Newport peninsula--its remaining stands of significant native vegetation--by utilizing creative site planning on both public and private development projects. Carefully monitor potential impacts of new development and redevelopment efforts. (Definition of "significant" here is relative, since a single tree--a Douglas Fir or a Monterey Cypress, for example--is significant when located anywhere along the Uplands Residential bluff skyline above the Waterfront, helping form the peninsula's characteristic appearance from the South.)
- 8.) Support the scenic restoration process (a) by implementing improvements within the highway and local street rights-of-way and (b) through the development and

redevelopment processes of both commercial and residential lands. Scenic enhancement measures will be compatible with development rights.

- 9.) Resolve the traffic congestion and spatial limitations relating to use of the Lincoln County Fairgrounds, the Newport High School, and the Newport Middle School.

INTRODUCTION **TO PUBLIC FACILITIES**¹

The City of Newport has recognized the need for updating its public facilities data base to encourage sound planning for future development. In response to this need, the city engaged CH2M HILL, INC., to prepare a public facilities plan for the incorporated area and the revised urban growth boundary. The "Public Facilities Plan for the City of Newport, Oregon," hereafter known as the "Facilities Plan," addresses facilities development for the planning period from the present to the year 2010 and is hereby included in this document by reference. In 1999 the City adopted an updated Transportation System Plan (with additional updates to portion of the Transportation System Plan adopted in 2008). In 200-9 the City adopted an updated Water System Master Plan.

Public Facilities Plan Purposes and Relationships:

This Facilities Plan has been developed to facilitate sound planning for the economic, efficient, and environmentally sensitive development of urbanizable land, and sound public fiscal management. It was prepared in accordance with Oregon Administrative Rule 660-11-000 through 660-11-050, which requires Oregon cities containing populations of over 2,500 persons to prepare such plans.

The Facilities Plan is a support document to the city's Comprehensive Plan. Portions of the Facilities Plan, however, have been adopted as part of the Comprehensive Plan and include:

- > A list of public facility project titles.
- > A map of the public facility projects' locations and service areas.
- > The urban growth management agreement designating the provider of each public facility system.

Master plans for water, wastewater, transportation, drainage, airport, and waterfront facilities have been prepared or revised for Newport. Much of the information from the master plans has been incorporated directly into this Facilities Plan. The master plans can be obtained at the Community Development Department and include the following titles:

¹ The public facilities section of this document represents a summary of CH2M HILL's "Public Facilities Plan for the City of Newport, Oregon," 1989 and subsequent amended portions of the facilities plans. Tables are included here, but the CH2M HILL document or the applicable amended portion of the document must be referenced for figures and maps. See also adopted South Beach Neighborhood Plan for additional analysis and amendments regarding this Section for the South Beach Neighborhood Plan area.

- > "2008 Water System Master Plan", Civil West Engineering Services, Inc.

- > "Wastewater System Master Plan Update 1988 for the City of Newport, Oregon," CH2M HILL.
- > "City of Newport Transportation System Plan, June 1997", Parsons Brinckerhoff Quade & Douglas, Inc. (adopted in 1999).

Updates to the Transportation Plan include:
 - >"Northside Local Street Plan", Parametrix (adopted in August 2008).
 - >"Newport Pedestrian and Bicycle Plan", Alta Planning & Design (adopted in August 2008).
- > "City of Newport Storm Sewer Facilities, February 1990," CH2M HILL.
- > "Master Plan: Newport Municipal Airport, Newport, Oregon," August 1989, FORESITE Group, Inc., DRAFT.
- > "Newport Urban Renewal Agency: Update of Port Development Element of Comprehensive Plan," 1989, CH2M HILL.

This Facilities Plan summarizes the master plans and provides a condensed reference for people interested in settling or developing in Newport. Each of the following sections of the Facilities Plan presents an inventory of existing facilities, statements concerning their general condition, and a discussion of the major projects recommended to improve or provide new services to Newport through the year 2010 or to a later date as identified in the adopted updated portions of the Facilities Plan. Maps identifying existing and projected facilities are provided (where applicable) at the end of each section. All tables and maps are titled by section.

Facilities Plan Area:

The Facilities Plan applies to the area within the Newport urban growth boundary as shown in the City of Newport's Comprehensive Plan Map and including the Thiel Creek destination resort area. The Facilities Plan area encompasses approximately 5,600 gross acres not including lands subjected to tidal action and resulting flooding. Included in the 5,600 acres are approximately 1,000 acres of land encompassing the Thiel Creek destination resort area south and east of the city's municipal airport. A portion of the Thiel Creek area property to the east of the airport was removed from the Urban Growth Boundary as part of the adoption of the South Beach Neighborhood Plan in 2006 (acknowledged in 2007), and additional land was added to the Urban Growth Boundary to the east and northeast of Mike Miller Park.

Establishing The Need For Future Facilities Projects:

The planning period established for the Facilities Plan is 20 years. The need for future projects has been identified by analyzing the following:

- ° Land use data and population projections contained in the City of Newport Comprehensive

Land Use Plan of 1980 and a document titled "Petition to Amend the Lincoln County and City of Newport Comprehensive Plans," dated March 1987.

- ° Historical uses of the facilities.
- ° Information contained in master plans.

The city estimates that Newport's population will reach about 11,500 in the year 2000. The population projection at year 2010 is 13,500. This is an average annual growth rate of 2.0%. However, since the master plans are for the entire urbanizable area, a higher potential population figure of 20,000 was used. This allows for facilities planning for the entire UGB. Updated portions of the Facility Plan may contain revised population projections and timeframes as applicable to the updated plan portion.

Historical uses of each facility are discussed at length in each of the facility master plans. Each master plan also divides the facility plan area according to the most efficient manner to manage each facility considering terrain, existing land uses, related existing facilities, projected facility needs, and buildout of the urban growth boundary.

All of the proposed facility improvement projects discussed in this Facilities Plan and amended sections are prioritized. Project priorities correspond to when the project would be needed. The type of improvement and the increase in capacity (if applicable) is indicated in each project's title. The projects outlined in this facilities plan are subject to change as various development proposals and construction projects occur, as environmental impact statements are processed, design studies are completed, master plans modified, capital improvement programs changed, facility components malfunction, site availability changes, or growth rate changes.

WATER SUPPLY FACILITIES

Water supply facilities north and south of the bay to near the boundary between Sections 17 and 20 (generally referred to as the South Beach area) are provided by the City of Newport. The area lying south of the boundary between Sections 17 and 20, including the municipal airport and the proposed Thiel Creek development area, are provided water by the Seal Rock Water District.

Existing Water Supply Facility Components:

The Newport Comprehensive Plan and portions of Chapters 3 and 4 of the "Water System Master Plan Update 1988 for the City of Newport, Oregon" (hereinafter referenced as the "Water System Master Plan"), provide an inventory of the components of the existing water supply system. Map W1 in the CH2M HILL update identifies the location of all existing primary water supply system components within the city and the urban growth boundary. Generally, the water supply system is in good condition. A brief summary of major components of the Newport water supply system and a general assessment of the system's components follows.

Supply: The City of Newport water service area, not including the Seal Rock Water District, consists of approximately 3,000 acres, which contains about 8,500 people. The service area is divided into three major pressure zones, or service levels, based primarily on existing terrain and existing and expected hydraulic profiles (Map W1). Big Creek provides the water supply for the city and has a water flow adequate to meet the city's need to about 1990-1992. The city has the earliest priority dates on water rights in Big Creek amounting to 6.45 million gallons per day from natural flow. Two raw water storage reservoirs with a combined storage right for 1,170 acre-feet of raw water are used to meet summer water demands. A portion of the lower reservoir has silted in, resulting in a limited loss of capacity. The city maintains an unutilized 6-cubic-foot-per-second water permit on the Siletz River.

Treatment: All of the water for the City of Newport is produced from the Newport Water Treatment Plant located on Big Creek. The recently improved plant has a 5.75 million gallon per day capacity.

Transmission, Pumping, and Storage of Treated Water: Treated water is pumped from the water treatment plant through a 16-inch pipeline. This pipeline branches near the plant into two pipelines, a 16-inch and a 12-inch. The 16-inch pipeline carries water to the southeast and to the second level reservoirs. Flow from this pipeline is also delivered to the first level distribution system. The 12-inch second level pipeline delivers

flow west to Big Creek County Road and west along 20th Street. Branching north from this primary 12-inch line, a 10 and 12-inch transmission pipeline supplies water from the treatment plant to the Agate Beach area. The South Beach area is served by a 12-inch bay undercrossing receiving water from the aforementioned 16-inch primary transmission line.

Five pump stations, not including second level pumps at the treatment plant, serve the city. The Nautilus Pump Station is subject to vandalism and will require extensive repairs to upgrade it to current standards. The four remaining pump stations meet the current demand and are in good condition.

The first level service area is served by two concrete reservoirs with a combined volume of 1.1 million gallons. These reservoirs have slow leaks and are in need of repair or replacement. The second level service area is served by two 2 million gallon steel reservoirs. A 40,000 gallon concrete reservoir at the Nautilus Pump Station serves the Agate Beach area but is in poor condition.

Recommended Water Supply Improvement Projects:

The Water System Master Plan analyzed the adequacy of the existing system by using a mathematical model. The model and the results of the analysis are included on pages 4-6 through 4-9 of the Water System Master Plan. The verified water system model was used to test various flow conditions such as maximum hour demand, reservoir refill, and fire flows during maximum-day demand periods. The existing water transmission and distribution system was tested. Additional computer test runs were used to determine the future parameters for the design of pipelines, pump stations, and reservoirs for the projected growth conditions. The results of the tests and conclusions about the adequacy of the current system provided the basis for the recommended Phase I improvements. The recommendations contained in the Water System Master Plan are summarized in the following subsection.

Table 1 (page 143) lists recommended water supply system improvement projects identified in the Water System Master Plan. The type of improvement and the increase in capacity (if applicable) is indicated in each project's title. The location of the recommended improvement and the service level with which each project is associated is indicated on Map W1. The projects listed in Table 1 are recommended to upgrade the existing system to meet the city's projected water flow requirements, including increased raw water availability, emergency storage, fire flows, peak flow demands, and equalization through the year 2010. The improvements requiring the most immediate attention are the Priority A projects proposed to be constructed during the first 5-year planning period.

Table 1
CH2M HILL, INC.
Recommended Water System Improvements

Anticipated
Year of Funding
Costs^a Construction^b Source(s)

PHASE I, PRIORITY A--1988-1995 COMPONENTS

1. Silt removal, culvert and road work at Big Creek Reservoir No. 1	\$120,000	1991	GOB
2. Siletz River raw water intake	460,000	1992	GOB
3. Siletz River 16-inch water pipeline, 28,000 lf	1,765,000	1992	GOB
4. WTP expansion to 7.75 mgd	2,000,000	1992	GOB
5. South Beach 1.0 mg reservoir	380,000	1995	GOB
6. Thiel Creek 1.0 mgd reservoir	380,000	1995	GOB
7. Agate Beach 1.0 mg reservoir	380,000	1993	GOB
8. Yaquina Heights 1.0 mgd reservoir	380,000	1993	GOB
9. Altitude valves at existing 4 mg reservoirs	50,000	1992	GOB
10. Repair or replace existing City Shops reservoirs	380,000	1992	GOB
11. Modify control to N.E. 7th Street 3rd level pump station	20,000	1993	GOB
12. N.E. Nautilus Street 3rd level pump station, 350 gpm	110,000	1994	GOB
13. PRV- 1-6"; 1-8"	65,000	1993	GOB
14. Arterial and transmission pipelines	2,161,000	1995	GOB
PHASE I TOTAL ESTIMATE COSTS	\$8,651,000		

PHASE II, PRIORITY B--1996-2000 COMPONENTS

1. WTP expansion to 9.75 mgd	\$200,000		GOB
2. King Ridge, 1.0 mg reservoir	380,000		GOB
3. South Beach 2nd level pump station, 570 gpm	175,000		GOB
4. PRV- 1-4"; 4-8"	102,000		GOB
5. Arterial and transmission pipelines	4,027,000		GOB
PHASE II TOTAL ESTIMATED COSTS	\$ 4,884,000		

PHASE III, PRIORITY C--2001-2010 COMPONENTS

1. Upper Agate Beach 1.0 mg reservoir	\$380,000		GOB
2. Yaquina Heights 4th level pump station, 350 gpm	110,000		GOB
3. Thiel Creek 3rd level pump station, 300 gpm	100,000		GOB
4. PRV- 1-6"; 2-8"	92,000		GOB
5. New 12-inch bay undercrossing pipeline	550,000		GOB
6. Arterial and transmission pipelines	1,240,000		GOB
PHASE III TOTAL ESTIMATED COSTS	\$2,472,000		

Source: "Water System Master Plan Update 1988 for the City of Newport, Oregon," CH2M HILL.

Note: Reference Map W1.

a A1 August 1987 costs (ENR 4430); b The anticipated year of construction may vary depending upon the rate and direction of growth and availability of funding; mgd = million gallons per day; mg = million gallons; gpm = gallons per minute; GOB = general obligation bonds.

Supply: Two major projects during the first 5-year planning period are designed to increase raw water supply. These projects include the following:

- ° Developing the Siletz River raw water supply by constructing intake and pipeline facilities
- ° Increasing raw water storage by removing silt in the Big Creek Reservoir No. 1

Treatment: Water treatment is planned to be increased to 7.75 million gallons per day by expanding the water treatment plant. This expansion will accommodate the water received from the Siletz River raw water source.

Transmission, Pumping, and Storage: Major recommended pipeline and pumping developments are designed to maintain adequate residential, commercial, industrial, and emergency water volumes and pressure during peak demands. These developments include the following:

- > A 16-inch raw water pipeline from the Siletz River to the water treatment plant.
- > A third level pump station on Nautilus Street that, in combination with a new storage reservoir, will supply water to the Agate Beach area.
- > New arterial and/or transmission pipelines to improve or establish delivery to the Thiel Creek area, Agate Beach area, and the east central city and west central urban growth boundary area.

Water storage requirements were derived by considering the needs for equalizing pressure, fire reserve, and emergency storage. Priority A projects designed to significantly increase water storage include four 1-million gallon reservoirs. These reservoirs will serve the Agate Beach second and third service levels, the third service level area north of Highway 20 and near the urban growth boundary, the proposed Thiel Creek development area south of the airport, and the first level service area of the northern South Beach area.

During the second planning period (1995-2000), the water treatment plant capacity will be increased to 9.75 million gallons per day, and storage capacity will be increased by adding one 1-million gallon reservoir and a second level pump station, and improving arterial and transmission pipelines. The third planning period (2001-2010) will be marked by the addition of two pump stations serving the upper service levels, a 1-million gallon reservoir, and a new bay undercrossing pipeline.

It is recommended that the city provide water service to the Thiel Creek development area when facilities can be constructed. Until then, water will be provided to the development from the Seal Rock Water District. Anticipated city water system improvements to the area would include construction of a new transmission system from the existing city water system in the South Beach area south to the development. To realize

this development south, the existing city system will require modifications, including the construction of two new pressure reducing valves on the south side of the bay and new connecting pipelines to the second service level on the north side of the bay.

Funding:

The cost estimates in Table 1 are based upon current costs for constructing only the major arterial and transmission pipelines, pump stations, and storage reservoirs shown on Map W1. The costs of distribution pipelines, water service connection pipelines to structures, and any special metering devices to serve all potential users have not been included. The Water System Master Plan (pp. 5-5 through 5-6) identifies material type and construction technique assumptions used in producing the cost estimates.

Water development projects in Newport generally have been financed through General Obligation Bonds issued by the city. It is expected that projected water development projects will continue to be financed through general obligation bonds issued by the city. General obligation bonds are primarily supported by the city's taxing power and credit. The bonds reduce the city's available debt level because local governments are limited in the amount of debt which can be secured overall.

WASTEWATER FACILITIES

Wastewater facilities are provided by the City of Newport. The sewerage service area encompasses most of the major developed areas within the city limits north of the bay. The areas lying south of South Beach and outside the city limits but within the UGB are currently unserved by the city's wastewater facilities.

Existing Wastewater Facilities:

The primary components of the wastewater system are the wastewater treatment plant, gravity sanitary sewer lines, force mains, and lift stations. These components are identified in Map WW1 (CH2M HILL update) and are discussed in greater detail in the "Wastewater System Master Plan Update 1988" (hereinafter referenced as the "Wastewater Master Plan").

No systematic and detailed evaluation has been made to determine the conditions of the components of the existing system, other than to identify the sizes and flow carrying capacities. General conditions of the existing components are inferred by recommendations in the Wastewater Master Plan that address their maintenance, upgrading, or replacement: the greater their deterioration and significance to the overall function of the wastewater system component, the higher their priority for maintenance or replacement.

Several events have occurred since 1981 that improved the condition of the wastewater facilities. These events are outlined in the following.

Treatment: The city's existing treatment plant was expanded in two major stages to provide secondary treatment for an average daily flow of 3.2 million gallons per day. This treatment capacity is adequate to serve a population of around 11,000 residents. Between 1980 and 1986, the greatest sewage flows received at the city's treatment plant were approximately 2.49 million gallons per day.

Collection: Some of the existing trunk sewers, lift stations, and force mains were modified to expand their capacities. Some new sewers were added to provide sewer service to previously unsewered areas within the city limits.

Recommended Wastewater System Facility Improvement Projects:

The Wastewater Master Plan briefly describes the need for facility improvements necessary to accommodate the projected population growth in Newport, considering the following factors:

- > Existing and forecasted sewer service needs by area and type
- > Total peak flow rate of wastewater

- > Natural drainage contours, topography, site access, and sewer system construction factors
- > Oregon State Department of Environmental Quality's policies covering the design of sewer systems

The existing major facilities together with the proposed facilities shown on Map WW1 combine to make up the wastewater system facilities plan for Newport. Table 2 (page 142) lists wastewater system improvement projects identified in the Wastewater Master Plan. A brief discussion of the facility needs and means to address these needs follows.

The City of Newport and its urban growth boundary have been divided into 14 separate drainage basins that are largely based on natural gravity drainage patterns and topography, but are also functions of land use and potential for phased construction of sewer extensions. These drainage basins are indicated on Map WW1.

Treatment: A preliminary sizing of the needed wastewater treatment facilities was based on the forecasted daily base flow from the projected residential population plus an allowance for infiltration of ground water. Wastewater flow during the summer months has increased significantly since 1981. The concentrations of suspended solids and biochemical oxygen demand in the influent have continued to remain high during the summer months, indicating the increased flow during the summer is mostly domestic sewage and not an increase of ground water infiltration or stormwater inflow. It is suspected that the higher summer domestic sewage flow results from an increase in tourism, industry, and commercial activity.

By using the flow rates given for the various drainage basins shown on Map WW1, several different alternatives have been examined for transmission of wastewater to treatment facilities and disposal of treated effluent. Major development anticipated south of the bay determines many of the forecasted wastewater facility needs. The current 3.2 million gallon per day capacity of the existing treatment plant provides secondary treatment for a residential population of around 11,000 people. Assuming the population of Newport increases as projected, particularly in the South Beach area and in the Thiel Creek area, additional treatment facilities located on a separate site will be required. Either a treatment plant will need to be constructed on the south side of the bay, or additional transmission capacity will be needed to supplement the existing 8-inch force main bay undercrossing. The Wastewater Master Plan recommends that a new treatment plant, with an initial capacity of 3.5 million gallons per day, be constructed on the south side of the bay with a new ocean effluent outfall pipeline. The plant would be constructed to allow an expected inflow of 3.9 million gallons per day by the year 2010.

Collection: A combination of force mains and gravity sanitary trunk sewer lines will parallel U.S. 101, supplying effluent to the South Beach treatment plant. Generally, gravity sanitary trunk sewers will service the peripheral areas of South Beach, directing sewage to the lines paralleling the highway. Because of beneficial topography on developable properties on the north side of the bay, almost all of the proposed new sewer lines will be gravity sanitary trunk sewer lines. One exception to this pattern is an 8-inch force main serving the northeast bay area.