

## Chapter XI **PUBLIC FACILITIES**

### **BACKGROUND**

In 2001, a Public Facilities Plan was prepared for the City to meet Statewide Planning Goal 11 and provide a framework for future improvement and maintenance of the City's water, wastewater, storm drainage and transportation facilities. The Public Facilities Plan is a supporting plan and implementing document of the Comprehensive Plan and is included by reference by the Boardman Comprehensive Plan. It includes a list and description for each type of facility, short and long range capital improvement plans, a financing plan and policies related to public facilities. The following is a synopsis of that information, including updated inventories, future plans, financing information and public facilities policies.

### **WASTEWATER COLLECTION AND TREATMENT FACILITIES**

#### Collection Facilities

The entire developed area in the City of Boardman is currently provided with wastewater collection facilities, with the exception of the South side of Interstate 84 at Laurel Lane. Wastewater is conveyed through approximately 76,000 feet of gravity and pressurized sewer mains and six lift stations. This system feeds a three-mile long interceptor sewer leading to the City's lagoon site. There are no reported problems with the gravity collection system network. Its capacity appears to be adequate to meet projected future needs and extraneous water inflow and infiltration are within acceptable limits. Development patterns may require the need for upsizing some lines to meet additional densities in the future. In addition, partial rehabilitation of the three main lift stations are being completed per Capital Improvement Project #6 (Table IX-1 of this Chapter) to address corrosion, inadequate alarm telemetry, redundant power supply for all stations and to correct inoperable valves and pump control deficiencies at one of the stations.

#### Treatment Facilities

Current wastewater treatment in the City of Boardman is accomplished by use of a facultative lagoon treatment system with land application of treated effluent. A Wastewater Study for the City was completed in May of 2000. This Study reviewed current and future needs and provided recommendations for future system improvements, including the creation of a financing and implementation plan. The study is based on a 20-year population forecast which estimates an increase to 5,500 people by the year 2020, which is based on an average annual growth rate between 2.6% to 3.0%. The Study identified the following deficiencies:

- The lagoon system was operating at 92% of hydraulic capacity and 89% of organic loading capacity, necessitating capacity improvements to meet future population needs.
- The lagoon system had inadequate chlorine spill containment, a lack of lagoon level measurement equipment, inadequate alarm telemetry, aging flow control valves and inadequate work space in the site control building.

- The City's irrigation site did not have adequate buffer area to meet existing or future needs. It was operating at 40% of capacity based on nitrogen loading.

The Wastewater System Improvement Project completed in 2003 recommended improvements to the City of Boardman's facilities based on the above-mentioned deficiencies. System upgrades were completed which included additional hydraulic loading of the system and by the City obtaining more irrigation land to meet present and future needs. The lagoon treatment system, with the completion of the Wastewater System Improvement Project includes three cells totaling 42 acres of surface area. Each lagoon provides storage and treatment. Treated wastewater is disinfected using chlorine prior to application on alfalfa crops at the City's 105 acre irrigation site.

#### Financing

To meet its long-term system improvement needs, the City is using a range of funding sources. In 2000, the City obtained a \$3 million loan to pay for additional capacity at its sewage treatment plant that is expected to meet the City's treatment needs for the next 20 years. The City uses a sewer system development charge (SDC) to finance certain types of capital projects and improvements. Utility rate revenues also are used to finance sewer utility operations.

The City regularly reviews its sewer utility rates to assure there is adequate revenue to operate the sewer system in conformance with state and federal discharge permits for municipal wastewater collection and treatment systems. The combination of tax assessments, SDC collections, and utility operating revenue provide a foundation for financing the sewer system capital improvement program and system operation for the 20-year planning horizon.

#### Future Wastewater Treatment and Collection Facility Improvements

As noted above, a number of improvements were required to address current and projected future deficiencies in the City's treatment system. Project improvements are identified in the Capital Improvement Project Table (Table IX-1 of this Chapter)

- Rehabilitation of the main lift station (lift station #3);
- Expansion of the City's lagoon system to increase treatment capacity;
- Expansion of the City's irrigation site to provide an adequate buffer area to meet existing and future needs; and
- Rehabilitation of two additional lift stations

### **WATER SYSTEM TREATMENT FACILITIES**

#### Source

The City obtains its raw water exclusively from a horizontal collector well located on the Columbia River. The collector has a capacity of 6,030 gallons per minute (g.p.m.). The City also has a deep well that has not been used since the late 1970's because of high hydrogen sulfide levels. The City recently completed construction of a second collector well adjacent to the Columbia River to meet

the City's expected long-term needs. This system is expected to be on-line and operational by October 2003 and will have an expected capacity of 10,000 g.p.m.

### Distribution System

The City's water distribution system is pressurized by a booster pump system drawing treated water from the detention cells and steel reservoir and discharges it directly to the distribution system. The booster pump system includes 6 pumps capable of a capacity of 10,000 g.p.m. with future expansion to bring the capacity to 16,000 g.p.m. Water from the City's existing horizontal collector is treated by chlorine and routed to a detention chamber -- a 300,000 gallon concrete reservoir, with a usable capacity of 180,000 gallons. The steel reservoir will act as a second detention chamber.

### Financing

To meet its long-term system improvement needs, the City uses a range of funding sources. The City recently secured a \$3.8 million loan to pay for a new horizontal well collection system and improvements to the distribution system. These improvements are expected to meet the City's domestic water supply needs for the next twenty years and beyond.

The City uses a water system SDC to finance certain types of water system facilities. In total, SDC collections are expected to finance about 43% of the equity investment. Utility rates also are used to pay for maintenance and improvement of the water system. The City regularly reviews its utility rates to assure there is adequate revenue to operate the water system in conformance with state and federal health standards. The combination of tax assessments, SDC collections, and utility operating revenue provide a foundation for financing the water system capital improvement program and system operation for the 20-year planning horizon.

### Future Water Facility Improvements

The City is in the process of completing a Water System Master Plan (draft expected 2005), which is based on a 20-year population projection of 5,700. As noted above, the City recently completed construction of a second horizontal collector to meet future long-term water source needs. Additional improvements, completed as part of the in Phase II of the Water System Improvements Project (expected to be operational in October 2003) included:

- Construction of a 300,000 gallon steel reservoir to act as a second detention chamber to maintain chlorine contact time and help balance pumping rate differences.
- Changes to the disinfecting system to improve system safety, reduce risks to operators and residents, and eliminate the risk of a chlorine leak.
- Modifications to the City's booster pump system to better meet fluctuating demands and be more energy efficient.

## **STORM DRAINAGE**

### Background Information

Historically, the management of storm runoff has not received the same consideration as the more immediate problems of providing other municipal services, such as sewerage and water system. Boardman is fortunate that it is not faced with major storm drainage problems associated with excessive rainfall, flooding rivers or combined storm sanitary sewers.

The City's storm drainage system is intended for management of urban storm runoff, an environmental service, rather than for flood control during extremely heavy periods of rainfall.

### Existing System

Historically, new developments have been required to provide on-site systems, including drainage ways, storm sewer detention or other facilities. Older residential areas north of Interstate 84 include storm drains that discharge to low-lying areas near the Columbia River. Developments in newer areas south of the Interstate more typically include partial drainage facilities that drain to swales or other low-lying areas. The area's rapidly draining soils and gentle slopes allow storm runoff to be managed on-site through the use of bio-swales, modified bio-swales, and retention basins. In 2002, the City established provisions and standards related to on-site storm drainage and adopted these standards as part of the City's Development Code.

### Financing

The City does not have a dedicated funding program for its storm water system. Separate funding has not been necessary because the area's porous soils and relatively dry climate allows storm water to be managed onsite. The storm water conveyance system that is in place in some portions of the City functions as part of the road system and is developed and maintained using revenue from the street fund. Future similar facilities are expected to be funded in a similar manner. On-site drainage facilities, such as modified bio-swales are expected to be paid for by developers as development occurs pursuant to City Development Code provisions.

## **OTHER PUBLIC FACILITIES**

### Solid Waste

Presently, Boardman utilizes solid waste disposal service from a private disposal firm located in Hermiston. A tentative solid waste disposal site for Boardman is situated east of the City and south of the freeway. The Navy bombing range to the south and other private lands utilized for grazing offer a broad variety of alternative sites and merit future consideration.

### Police Protection

Boardman currently maintains a ten person Police Department. Backup services and specialized enforcement are provided by Morrow County Sheriff's Department and the Oregon State Police. Protection has proven adequate and has improved over the past several years.

### Fire Protection

The City's Fire Services are provided by the Boardman Rural Fire Protection District. The District and the City combined provisions in 1997 to provide an area (District) with fire services as a way to more economically meet the fire protection needs of the City. The City and District are currently (2003) drafting a Cooperative and Urban Services Agreement to further clarify this agreement. This Agreement is expected to be adopted by both parties by 2004.

### Health Services

Public health services, such as Mental Health and a Public Health Nurse, Children's Services, and Public Welfare, are administered through the Morrow County Health Services Division and the State of Oregon.

### Energy and Communication

The City is served by a variety of local utility companies, including electricity, gas, telephone, and TV cable. The City requires underground installation of all utilities within new developments, as well as many main utility feeder lines.

## **GOAL XI: PUBLIC FACILITIES POLICIES**

1. The City shall assure urban services (water, sewer and storm drainage services and transportation infrastructure) to residential, commercial and industrial lands within the City's Urban Growth Area as these lands are urbanized.
2. To minimize the cost of providing public services and infrastructure, the City shall discourage inefficient development without adequate public services and promote efficient use of urban and urbanizable land within the City's urban growth boundary, including requiring all urban development to be served by full urban services.
3. The City shall support development that is compatible with the City's ability to provide adequate public facilities and services.
4. The City shall assure there are adequate sites for solid waste disposal and solid waste collection for the City and Urban Growth Boundary. The service may be provided by private contractors or public entities.
5. The City shall promote coordination among the City, Port of Morrow, and other interested parties to facilitate the most effective uses of public facilities serving the planning area.
6. The City shall prioritize development of land serviced by utilities and require the extension of water, sewer and storm drainage facilities for all urban level development within the UGB.
7. The City shall coordinate provision of public services with annexation of land outside the City limits.

8. The City shall adopt long range master plans for its water, sewer, storm drainage and transportation systems and review and/or update them periodically.
9. The City shall adopt and periodically update the City's Public Facilities Plan for development of public services and facilities in conformance with the policies of the Comprehensive Plan. Significant changes in projected capacity of public facilities required by proposed new development to be served by the City may necessitate update of the Public Facilities Plan.
10. The City shall comply with state and federal regulations for utility systems.
11. The City shall establish and maintain a range of funding mechanisms for building new water, sewer, storm drainage and transportation infrastructure and maintaining existing infrastructure.
12. The City shall monitor the condition of water, sewer, storm drainage and transportation infrastructure and finance regular maintenance of these facilities.
13. The City shall utilize its adopted System Development Charges (SDCs) to finance new water and wastewater infrastructure as allowed by state law, and adjust SDCs to keep them up to date with current costs.
14. The City shall establish and maintain utility rates and user fees that equitably allocate costs for operations and maintenance to users.
15. The City shall maintain an eight (8) year supply of commercial and industrial land that is serviceable by water, sewer, storm drainage and transportation infrastructure.
16. The City will periodically amend the Comprehensive Plan list of public facility projects when implementing plans or agreements are updated.
17. The City shall protect its water supply and enhance groundwater quality and quantity of the City's drinking water supplies by:
  - Establishing wellhead protection measures;
  - Working with landowners and managers for protection of water sources; and
  - Adhering to applicable permitting requirements when approving new residential, commercial and industrial development and when constructing new water, sewer, storm drainage transportation infrastructure.
18. The City shall plan for and establish standards for storm drainage detention and management facilities for management of urban storm runoff as an environmental service, rather than flood control, during periods of heavy rain. In doing so, where feasible, the City will encourage natural storm drainage management techniques, such as modified bio-swales, landscaping, retention ponds and natural drainage ways.

19. The City shall take steps to minimize adverse impacts from construction and other sources of erosion and sedimentation on natural drainage ways and storm drainage facilities.
20. In order to allow for safe, orderly and coordinated development, the City shall adopt utility and transportation design standards and construction specifications as part of its development code.
21. The City will continue to work with the Boardman Rural Fire Protection District in their provision of fire protection services for the City.
22. The City is working (as of 2003) with the Oregon Water Resources Department to complete and obtain approval for, a Water Management and Conservation Plan, pursuant to OAR 690-86. Should the approved Plan include system improvement projects, the Capital Improvements Project list will be updated to reflect these additional projects.

## **PUBLIC FACILITIES PROJECT LIST**

The following project titles are taken from the Public Facility Plan project list and capital improvement plan (CIP); these plans are adopted here by reference. Project numbers correspond to those listed in the CIP and accompanying maps. Estimated locations also are indicated on the maps that follow this section. Information about costs and timing are included in the Public Facility Plan. The adoption of this project list into the Comprehensive Plan provides an estimate of the infrastructure improvements needed to serve urban development in the Boardman urban growth boundary for the planning period. The adoption of this list does not constitute a pledge on the part of the City or other service providers to build the projects, to secure public funding for the projects, or to obligate present or future elected bodies to pursue the development of listed projects. Securing necessary public and/or private funding for the design and construction of these projects is independent of the Comprehensive Plan. Oregon Statutes regulating municipal budget and financing, state and federal program regulations and private investment decisions will determine if, when and where listed projects are constructed. Changes in projected needs and capacity may require the City to revise specific proposed projects or the schedule for completing them.



**Table XI-1  
 City of Boardman Capital Improvement Project List**

<b>Project</b>	<b>Description</b>	<b>Schedule</b>
<b>Sanitary Sewer System</b>		
1. Wastewater Treatment Capacity Upgrades	Identify and install treatment capacity to .650 MGD	Medium term (5 to 10 years)
2. Effluent Irrigation expansion	Increase acreage facilities	Medium term (5 to 10 years)
3. Biosolids application expansion	Removal and application	Medium term (5 to 10 years)
4. Biosolids facilities	Septage and handling facilities	Medium term (5 to 10 years)
5. Supplemental Water Source (current facility)	Drill well for alternate irrigation water supply	Medium term (5 to 10 years)
6. Lift Station upgrades (#1-#3)	Upgrade lift stations for increased capacity	Medium term (5 to 10 years)
7. Lift Station Upgrade/Replacement LS#4	Install flow recorders	Medium term (5 to 10 years)
8. Lift Station Upgrade/Replacement LS#5	Install flow recorders	Medium term (5 to 10 years)
10. Port Interchange area extensions	Placement of lines to serve Port interchange	Medium term (5 to 10 years)
11. Future Trail Blvd. Sewer lines extensions	Plan and construct sewerage Future Blvd.	Long term (5 to 20+ years)
12. Future Trail Blvd. Sewer lines extensions	Plan and construct sewerage Future Blvd.	Long term (5 to 20+ years)
13. Faler Road Upgrades	Install/replace 8" with 12" line to address density capacity	Medium term (5 to 10 years)
14. Desert Springs sewer line upgrades	Upgrade lines from 6" to 8" and from 8" to 12" to serve densities	Medium term (5 to 10 years)
15. Main line grade adjustment Faler/Mt. Adams	Engineer/Construct grade adjustment for 176' of 8" AC Main line (possible small LS)	Short term (0 to 5 years)
16. Paul Smith Rd. UGB sewer line placement	Extension of service along S. Paul Smith Rd. (Size at 10")	Medium term (5 to 10 years) & Long term (5 to 20+ years)
17. West Glen Sewer lines placement	Plan/construct sewerage to West Glen (Size at 10")	Medium term (5 to 10 years)
18. S. Main/Wilson Rd. Sewer line extensions	Plan/construct sewerage to S. Main Kinkade to Kunze	Long term (5-20+ years)
19. Slip Line Sewer Mains	Sewer line lining	Short term (0 to 5 years), Medium term (5 to 10 years) & Long term (5-20+ years)
20. Collection System upgrades		Short term (0 to 5 years), Medium term (5 to 10 years) & Long term (5-20+ years)
21. New Shop		Medium term (5 to 10 years)
<b>Water System</b>		
22. Sewer system construction equipment	Backhoe (33% share), mechanical rodder	Short term (0 to 5 years) & Medium term (5 to 10 years)
23. Sewer system maintenance equipment	Jet rodder, vacuum truck, cleaning, video inspection	Short term (0 to 5 years) & Medium term (5 to 10 years)

<b>Project</b>	<b>Description</b>	<b>Schedule</b>
24. Second Ranney collector construction	Construction of 2 <sup>nd</sup> collector site and transmission piping to distribution facility	Short term (0 to 5 years)
25. Water Storage Facilities (5MG-24 to 36 hrs storage)	ID and install new storage facilities capable of up to 48 hours storage @ peak daily flows	Medium term (5 to 10 years)
26. Water Tower resurfacing/upgrades	Complete structural/internal/external rehabilitation of 125,000 gallon elevated storage tank PWD building	Medium term (5 to 10 years)
27. Water system capacity upgrades	Pumping, Disinfection treatment capacity increases	Short term (0 to 5 years), Medium term (5 to 10 years) & Long term (5-20+)
28. Public Works Shop/Office/Storage Yard	New public works shop with storage and office space for increase equipment, materials & personnel	Medium term (5 to 10 years)
29. Water Meter Replacement program	Replace ALL meters with new Pro-Read meters, including hardware	Short term (0 to 5 years), Medium term (5 to 10 years)
29. Booster Pump/Re-chlorination station S. Boardman	ID and install of booster/re-chlorination station for water quality improvements throughout system	Short term (0 to 5 years) & Medium term (5 to 10 years)
30. Boardman/Columbia Loop water line upgrades	6" water line from 2 <sup>nd</sup> to Columbia on Boardman	Long term (5-20+ years)
31. Future Blvd. water lines	12" water line from S. Main to Paul Smith Rd.	Long term (5-20+ years)
32. S. Main and Wilson Rd water line extensions	12" line along S. Main (Kinkade to Wilson) and 8" lines to Kunze, Anderson and along Wilson to west tying into current distribution lines	Long term (5-20+ years)
33. System Looping - Sunridge Cul-de-sacs	Tie cul-de-sac water lines together for looping	Long term (5-20+ years)
36. Desert Springs Water upgrades	Upgrade 6" to 8" to 12" lines in area for zoned/projected densities and pop. increases	Long term (5-20+ years)
37. System Looping - Hayden Hills to DSE	Installation of lines from Hayden Hills to DSE	Long term (5-20+ years)
38. Paul Smith Rd. UGB water lines	Main placement to serve UGB area south of Kunze along Paul Smith Rd. and east along Kunze	Long term (5-20+ years)
39. West Glen Water line extensions	Main placement to serve UGB area at West Glen Est.	Long term (5-20+ years)
40. Port Interchange water lines	Main placement to serve Port interchange area with adequate water for identified zoning/density	Long term (5-20+ years)
41. E. Columbia/Olson water line upgrades	Placement of mains from Columbia to NE Front	Long term (5-20+ years)
42. Marine Drive Water line extensions	Placement of mains/looping to serve Marine Dr. within City limits to serve waterfront properties	Long term (5-20+ years)
43. Locust Rd. water line upgrades	8" water line placement from Willowfork to Wilson	Long term (5-20+ years)
44. Faler Rd. Water main upgrades	Replacement of 8" main with 12" main to improve overall flow characteristics in SW Boardman	Long term (5-20+ years)
45. West side Interstate crossing - N Main & Columbia	Replace 6" I-84 crossing with 12" to improve flow	Long term (5-20+ years)

<b>Project</b>	<b>Description</b>	<b>Schedule</b>
to S Main/Front	characteristics to South Boardman	
46. Main placement NE Front Main to NE 2nd.	Install 8" main from NE 2 <sup>nd</sup> to N. Main St.	Long term (5-20+ years)
<b>Transportation System</b>		
47. Main St. Wilson Rd. Traffic control	Revise traffic control devices and improve pedestrian crossing	Short term (0-5 years)
48. Re-stripe Main Street	Re-stripe main street to a 3-lane section	Short term (0-5 years)
49. Main St. Sidewalk/Bike Lanes	Sidewalks and bike lanes Interstate 84 to Marine Drive	Short term (0-5 years)
50. Oregon Trail Blvd. construction	Complete construction from S. Main to City Limits (match transportation tie to S. Olson Rd)	Medium term (5-10 years)
51. I-84 overpass	Construction of I-84 overpass @ Olson Rd.	Medium term (5-10 years)
52. Multi-use path Columbia Ave.	Main Street to Olson Road	Medium term (5-10 years)
53. Multi-use path Marine Dr.	Main Street to east UGB	Medium term (5-10 years)
54. Boardman Ave. Extension	Extend NE Boardman Avenue to Olson Road	Long term (5-20+ years)
55. Local street extensions	Extension of Third Street, Second Street and Chaparell Drive, Kinkade Road and Anderson Road as development increases	Long term (5-20+ years)
56. Olson Road Sidewalk/Bike Lanes	Sidewalks and bike lanes Kunze Road to Marine Drive	Long term (5-20+ years)
57. Boardman Avenue Sidewalk	Sidewalk Riverside High School to Olson Road	Concurrent with development
58. Front Street Sidewalk	Sidewalk West of W. 1 <sup>st</sup> to Olson Road	Concurrent with development
59. Second Street Sidewalk	Sidewalk Boardman Avenue to Front Street	Concurrent with development
60. Third Street Sidewalk	Sidewalk Boardman Avenue to Front Street	Concurrent with development
61. Wilson Road Multi-use Path	Multi-use path West of Faler Road and East of Anderson	Concurrent with development
62. Smith Road Sidewalk or Path	Sidewalk or multi-use path Future Boulevard to Kunze Road	Concurrent with development
63. Locust Road	Base, Pave & Curb/gutter entire loop	No schedule listed
63. Boardman/Columbia Loop	Sub-base, base, pave, curb/gutter entire loop	No schedule listed
65. E. Columbia Ave.	Storm Drainage/curb/gutter entire loop	No schedule listed
66. N. Front Street paving	Concrete paving of freeway interchange area	No schedule listed
67. S. Front Street paving	Concrete paving of freeway interchange area	No schedule listed
68. Underground Storage Tank Replacement	Replace fuel oil UST # Public Works Shop	No schedule listed
<b>Storm Drainage System</b>		
70. Storm drainage Master Planning	Conduct comprehensive stormwater planning study	No schedule listed
71. Implementation standards	Develop plans and drawings to implement new procedures	No schedule listed
72. North side outfall	Relocate North Side storm outfall	Short term (0-5 years)
73. SW Storm project	Identify/plan/construct two storm drains/outfall(s) for SW	No schedule listed

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<b>Project</b>	<b>Description</b>	<b>Schedule</b>
	quad	
74. SE Storm Project	Plan for and implement new regulatory framework for SE quad	No schedule listed
75. NE Storm Project	Identify/plan construct storm drains/outfall(s) for NE quad	No schedule listed
76. Industrial/Port Interchange Storm Project	Identify/plan/construct storm drains/outfall(s) for Industrial and Port Interchange area.	No schedule listed