City of Bend
Goal 11 Sewer Public Facility Plan
2011
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Purpose

The City of Bend has drafted this sewer public facility plan (PFP) to satisfy Statewide Planning Goal 11, Public Facilities and Services, and its implementing administrative rule at OAR 660-011. This plan shows the sewer public facility systems, as proposed in plans for the collection and the treatment systems, satisfy Goal 11 and the implementing rule for the 2008 Bend urban growth boundary (UGB)\(^1\). The sewer PFP consists of this document and key elements from master plans developed for the City. Public facility systems are defined under OAR 660-011-0005(7) as those facilities of a particular type that combine to provide water, sewer, or transportation services. For the purposes of Division 11 (OAR 660-011-0005(7)(b)), a public facility system for sanitary sewer includes a treatment facilities system and a primary collection system.

In 2007, Montgomery, Watson and Associates (MWH) developed a collection system master plan (CSMP) for the City. This CSMP covered the current UGB, the areas identified as urban reserve on the Bend Area General Plan map, the City’s Juniper Ridge property, and property owned by the State of Oregon identified as Section 11\(^2\). The CSMP included specific basin plans for nine (9) separate sub-basins. In 2008, Carrollo Engineering developed a master plan for the City’s wastewater reclamation facility (WRF). The master plan identifies improvements needed at the WRF to treat wastewater collected by the collection system by the year 2030. The WRF master plan also includes ten (10) technical memoranda that were developed in support of the master plan\(^3\). In 2009, the Bend City Council adopted Ordinance NS-2111 through which the Council adopted the CSMP and the WRF master plan, along with their respective technical memoranda and appendices, as the City’s sewer PFP for the Bend UGB. This ordinance and the planning documents were submitted to the Oregon Department of Land Conservation and Development in June 2009 to be reviewed and acknowledged alongside the City’s proposed UGB expansion.

On November 3, 2010, the Oregon Land Conservation and Development Commission (LCDC) issued Order 001795 in which LCDC: (1) acknowledged the proposed WRF master plan and (2) remanded the CSMP back to the City. LCDC agreed that the City could adopt a sewer PFP for the current (2008) UGB and if it does so, this plan must consider current and potential future land uses allowed under its acknowledged comprehensive plan\(^4\). However, LCDC also concluded that a sewer PFP for the current UGB cannot address areas outside of the acknowledged urban growth boundary\(^5\) in connection with the proposed UGB expansion. With respect to any expansion of the

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\(^1\) OAR 660-011-0000(5)(7) defines the terms “public facility systems as those facilities of a particular type that combine to provide water, sewer, or transportation services. Most definitions of terms used under Goal 11 are defined under 660-011-0000(5).

\(^2\) The reader can find pdf copies of the CSMP, nine (9) area plans, addenda, and technical memorandum online at: [http://www.ci.bend.or.us/depts/public_works/sewer_master_plan.html](http://www.ci.bend.or.us/depts/public_works/sewer_master_plan.html).

\(^3\) The WRF master plan and technical memorandum (See the Appendices) are available online at: [http://www.ci.bend.or.us/depts/public_works/water_reclamation_facility_plan/index.html](http://www.ci.bend.or.us/depts/public_works/water_reclamation_facility_plan/index.html).

\(^4\) See LCDC’s Partial Acknowledgement/Remand Order 001795 at pages 96-113 for their disposition of the issues raised on appeal regarding the City’s public facility plans. The order is available through the City’s website: [http://www.ci.bend.or.us/depts/community_development/ugb_expansion_information.html](http://www.ci.bend.or.us/depts/community_development/ugb_expansion_information.html).

\(^5\) The PFP may address areas outside the City currently served by City water, but not currently unserved areas outside the UGB.
UGB, LCDC found that the City may, if it chooses, analyze sewer service for alternative areas considered for expansion under Goal 11, Goal 14, locational factor 2, and OAR 660-024-0060(8). This analysis would need to be adopted as part of the City’s findings on any UGB expansion. In addition, the City could subsequently choose to either: 1) amend the existing sewer PFP, or; 2) develop a new Goal 11 sewer PFP that shows how sewer service would be provided to the UGB and the areas included in the UGB amendment. Finally, with respect to the sewer system, LCDC further concluded that the City could plan for facilities and capacity to serve areas outside the UGB provided the City could not provide service to such areas until included within the UGB.

Background

The City is the sewer service provider for the citizens in the Bend UGB. There are no special districts or private utilities with which the City coordinates to provide wastewater collection and treatment. The City’s sewer system includes a collection system, a number of pumping stations, and an interceptor through which wastewater is sent to the City’s wastewater reclamation facility (WRF).

Sanitary Sewer Collection System

The sanitary sewer collection system was constructed in the early 1980’s. The system provided gravity sanitary sewer service to much of the developed City. In addition to the core system of gravity sewers, a trunk line was constructed approximately five miles long that transported wastewater to the new wastewater treatment plant. The collection system on the west side of the Deschutes River flows to the Westside Pump Station where the wastewater is pumped across the Deschutes River to the gravity system on the east side of the river.

The City has grown from a population of 17,300 in 1980 to 80,995 in 2008. Over this period the wastewater collection system has been expanded as areas were developed. These expansions have been connected to the original core system. Much of this sanitary sewer expansion has incorporated either pump stations to avoid deep sewer construction or use of pressure sewer systems which can also be constructed in much shallower trenches. All new sewers were oriented to discharge to the core area and ultimately flow through the plant interceptor to the Water Reclamation Facility (WRF). This has created two major issues that, unless corrected, will cause problems with future sanitary sewer service. First, because of this flow pattern recent residential and commercial growth has overloaded the original gravity system which was not designed to handle flows of this magnitude. Second, the inordinate use of shallow sewers and pump stations to serve many of the subdivisions north and south of the City’s core area has increased the system maintenance requirements. This increased maintenance has increased operating cost which will ultimately cause user service fees to escalate more rapidly then service with a more gravity oriented system. In addition, the City allowed multiple pump stations to be connected to force mains. This includes both public and private connections. During peak flow events the larger pump stations overwhelmed the smaller pump stations feeding into the same line, causing the smaller ones to back up. The gravity systems the force mains are now connected are now overwhelmed because of the number of pump stations. Fundamentally, it is the network of pump stations all
connected to the same discharge line that is causing so many of the problems and capacity issues.

The existing collection system consists of a combination of gravity sewers, pressure sewers and pump stations. A gravity sewer is a line that flows by gravity in an open line. The segment of the gravity sewer is interconnected by a manhole to provide access to the sewer line for inspection and maintenance. Local sewers range in size from 6 to 8-inches in diameter. As these sewers combine, they become larger trunk sewers ranging in size from 10-inches up to 42-inches. Pressure sewers are lines that transport pumped flows and operate under pressure. These are either small local pressure lines providing service to local home sumps or larger lines serving area or regional pump stations. These generally range in size from 2-inches to 3-inches in diameter. Large pressure sewers are used as pump station force mains transporting flow between service basins. These pressure sewers range in size from 3-inches to 16-inches depending on the size of the pump station.

**Wastewater Reclamation Facility**

The Wastewater Reclamation Facility (WRF) is located north and east of Bend on McGrath Road and located on a 1,600 acre tract of land. The WRF is an activated sludge plant with a currently permitted treatment capacity of 7 mgd based on average annual flows and a hydraulic capacity of 12 mgd\(^6\). The major liquid process facilities include the headworks, primary treatment, secondary treatment, disinfectant, tertiary treatment, and disposal. The major soils processes and facilities include a gravity belt thickener, anaerobic digestion, a belt filter press, and drying beds.

The WRF began operation in 1981. Prior to that time, the City operated a small wastewater facility east of Pilot Butte that received and treated sewage from the downtown area of Bend. Treated wastewater was discharged into a lava crevice near the treatment plant site. Other areas of the City disposed of sewage individually either by a sewage drain hole or by septic tank and drain field.

Recognizing potential groundwater pollution threats of the wastewater disposal practices, the Oregon State Sanitary Authority asked the Federal Water Pollution Control Administration in 1966 to investigate the “environmental hazards associated with the disposal of sewage wastes in deep lava sinkholes in the Deschutes Valley, Oregon.” The investigation was completed in 1968, as documented in the report *Liquid Waste Disposal in the Lava Terrain of Central Oregon* prepared by Jack E. Sceva.

Based upon the Sceva Report, the Oregon Environmental Quality Commission determined that continued use of sewage drain holes was a threat to groundwater quality and ordered their use eliminated by 1980. Construction of any new sewage drain holes was only allowed in urban areas where a City sewage collection, treatment, and disposal system would replace them by 1980.

Construction of the new WRF and collection system began in the summer of 1978. At the time, however, an acceptable means to dispose treated wastewater was still not known. The original, approved facilities plan had called for land irrigation, but upon

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\(^6\) mgd = million gallons/day
further investigation, the site for irrigation was not suitable. Seepage ponds were later identified as an environmentally acceptable alternative as part of an Environmental Impact Statement (EIS) process.

Two ponds were installed at the WRF as part of the initial facilities construction. High seepage areas were found in both ponds, which precluded the slow seepage designed to provide final polishing of the wastewater prior to reaching the groundwater. In response, one pond was repaired and two additional ponds were constructed. Since 1981, virtually all wastewater has been disposed into the two new ponds with no evidence of rapid seepage or leaks. The new headworks facility for the WRF was completed in 2008. Expansion of the plant is currently under design with construction anticipated to begin in 2012.

The original WRF was a conventional activated sludge plant with a capacity of 6 million gallons per day (MGD) based on average annual flows. Many of the original facilities are still in operation. Significant upgrades to the facilities include the addition of two new seepage ponds around 1983, construction of a new solids handling building in 1996, and upgrades to the secondary treatment process in 2000.

**Goal 2 Planning Requirements**

The City’s decision to develop and adopt a Goal 11 sewer PFP must be consistent with state planning law and with the City’s General Plan and Development Code. Statewide Planning Goal 2, Land Use Planning, requires the following for local government planning decisions.

- **Consistency** - The City’s plans must be internally consistent and consistent with plans of county, state, and federal agencies, and special districts.

- **Factual Base** - The City’s plans must be supported by an adequate factual base. For a legislative land use decision such as this Goal 11 PFP, an adequate factual base must be supported by substantial evidence. Substantial evidence exists to support a finding of fact when the record, viewed as a whole, would permit a reasonable person to make that finding.

- **Coordination** - The City’s plan must also be coordinated with the relevant plans of the county, state, federal agencies, and special districts. A plan is “coordinated” when the needs of all levels of governments, semipublic and private agencies and the citizens of Oregon have been considered and accommodated as much as possible (See ORS 197.015(5)).

There are no private utilities or special districts that provide sanitary sewer service in the Bend UGB, as defined by Goal 11. Those areas of the Bend UGB that are unsewered are served by individual, on-site sewage disposal systems regulated by Deschutes County Community Development Department under rules for on-site sewage disposal and treatment developed by the Oregon Department of Environmental Quality (DEQ). DEQ rules regulate site evaluation, permitting, and inspection of on-site sewage disposal systems. These rules also state that a permit for an on-site system shall not be issued where a sewerage system that can serve the proposed sewage flow is both legally and
physically available\textsuperscript{7}. Inside the current UGB, sewer service is legally available, but may not be physically available due to capacity limitations in certain areas. With respect to the City's facilities outside the UGB that serve the areas within the UGB, these facilities are not legally available to provide sewer service because Statewide Planning Goal 11 does not allow extensions of sewer lines from within urban growth boundaries to serve land outside those boundaries, except where the new or extended system is the only practicable alternative to mitigate a public health hazard and will not adversely affect farm or forest land\textsuperscript{8}.

The City has had the following documents developed by consultants for the collection and treatment of wastewater. Using the Goal 11 definition of a sanitary sewer system as a guide, the following lists the documents upon which the City has developed this Goal 11 sewer PFP.

**Primary Collection System** (See OAR 660-011-0000(7)(b)(A):
- CSMP Addendum #1: Final Executive Summary and “Alternative Technical Analysis: North East Bend” (2007) prepared by MacKay & Sposito, Inc.
- CSMP Addendum #4 – Technical Memorandum (2011) CH2M-Hill

**Treatment Facilities System** (See OAR 660-011-0000(7)(b)(B)
Water Reclamation Facilities Plan (2008), Carollo Engineering. The City proposes to adopt this Goal 11 PFP with the forgoing documents as appendices to this PFP. This Goal 11 PFP is intended to show the City's plans for providing sanitary sewer collection and treatment comply with Statewide Planning Goal 11 for the Bend UGB as of 2008.

**Goal 11 Planning Requirements for Public Facility Plan**

\textsuperscript{7} See OAR 340-071-0160 regarding Permit Application Procedures for on-site systems: 
\textsuperscript{4} Permit denial. The agent must deny a permit if any of the following occurs.
\textsuperscript{f} A sewerage system that can serve the proposed sewage flow is both legally and physically available, as described in paragraphs (A) and (B) of this subsection.
\textsuperscript{A} Physical availability.
\textsuperscript{i} A sewerage system is considered available if topographic or man-made features do not make connection physically impractical and one of the following applies.
\textsuperscript{I} For a single family dwelling or other establishment with a maximum projected daily sewage flow not exceeding 899 gallons, the nearest sewerage connection point from the property to be served is within 300 feet.
\textsuperscript{II} For a proposed subdivision or group of two to five single family dwellings or other establishment with the equivalent projected daily sewage flow, the nearest sewerage connection point from the property to be served is not further than 200 feet multiplied by the number of dwellings or dwelling equivalents.
\textsuperscript{III} For proposed subdivisions or other developments with more than five single family dwellings or equivalent flows, the agent will determine sewerage availability.
\textsuperscript{A} Legal availability. A sewerage system is deemed legally available if the system is not under a department connection permit moratorium and the sewerage system owner is willing or obligated to provide sewer service.

\textsuperscript{8} See OAR 660-0015-0000(11).

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Statewide Planning Goal 11 requires cities to develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development. The Land Conservation and Development Commission has adopted an administrative rule at OAR 660-011 that identifies what public facilities must be addressed under this rule and the requirements for completing a public facility plan. This plan draws from a number of sewer planning documents to address the requirements for a PFP under Goal 11 and the Goal 11 rule, but only to the extent that these planning documents address land within the existing Bend urban growth boundary (UGB).

This Goal 11 PFP addresses sewer service for the area within the Bend UGB as of 2008. The UGB is shown in Figure 1. This plan does not propose sewer service to any area identified for UGB expansion under the City’s 2009 proposal that is under remand pursuant to LCDC Order 001795. To address the requirements for PFPS under Goal 11, this PFP will refer to the 2007 CSMP, the 2008 CIP, and the 2011 Addendum #4 in the following table. The 2007 CSMP studied nine (9) planning areas; seven of which included territory outside the current Bend UGB. Figure 1 of the 2011 Addendum #4 shows the same nine study areas, with several reduced in size and location to match the 2008 UGB. None of the planning areas in Figure 1 include territory outside the current UGB. For this PFP, Addendum #4 will be referred to when necessary to direct the reader to changes in the 2011 Addendum #4 that recommend improvements in the current (2008) UGB.

The Goal 11 administrative rule, OAR 660-011, lists certain elements that must be included in a Goal 11 public facility plan. These elements are listed at OAR 660-011-0010(1)(a) through (1)(g). For each element, the table identifies whether a finding or document refers to the collection system master plan (CSMP), the water reclamation facility plan (WRFP), or one of their respective supporting documents.

Table 1: Sewer Public Facility Plan components for City of Bend

<table>
<thead>
<tr>
<th>Goal 11 and OAR 660-011-0005(1) consideration of land uses served by the PFP</th>
<th>CSMP – See Section 2 of MWH 2007 CSMP Final report. This section includes the basis for planning, including the City’s 2005 buildable lands inventory and coordinated population forecast. See also pages 1 through 8 of Addendum #4 prepared by CH2MHIll.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The 2007 CSMP and the 2011 Addendum #4 were prepared by firms to present the City with recommendations on needed improvements to the sewer collection system that rely on gravity and that can direct sewage flows to the city’s wastewater treatment plan north and east of Bend. The 2011 Addendum #4 proposes modifications to the CSMP</td>
</tr>
</tbody>
</table>

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10 See OAR 660-011 at - [http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_011.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_011.html).
11 Any reference in any of the appendices to service outside existing service areas and the existing UGB are not part of this public facilities plan.
12 See 2008 CIP prepared by Murray, Smith, and Associates for the collection system master plan listed above in Goal 2 Planning Requirements of this report.
13 See Figure 4-1, page 4-2, 2007 MWH CSMP
that focus on what improvements are needed to serve the land uses in the existing UGB.

This sewer PFP was developed to address the requirements of Goal 11, and in doing so rely on the documents referred to above as the factual base to support the city’s decisions on Goal 11. The sewer planning documents are part of the Goal 2 factual base.

The 2007 CSMP and Addendum #4, are intended and have been developed to serve the land uses designated under the Bend Area General Plan. Table 2-3 of the 2007 CSMP presents the first data linking the development of the CSMP with the land uses contemplated under the Bend Area General Plan (BAGP). The planning area included the area within the Bend UGB, as shown on Figure 2-2 of the CSMP. The discussion of residential and non-residential flow factors begins on Page 2-4. The discussion of Land Use information used to develop the plan begins on Page 2-14 and continues to Page 2-21. The consultant developed flows to be applied to residential and non-residential land. For residential land average flows per dwelling unit were applied based on existing units and average density of each residential zone. For non-residential flows, flows were estimates using a non-residential flow per acre, based on a property’s given designation (e.g. commercial, industrial).

In addition, the sewer PFP will serve the land uses contemplated under the General Plan because the facilities proposed under the sewer planning documents have been designed to accommodate a population greater than the one expected at buildout of the UGB. In 2009, as an element of the City’s proposed UGB expansion, the City estimated that an estimated 10,059 additional housing units could be accommodate in the Bend UGB, based on the existing General Plan designations for housing. By 2028, with the existing and potential units in the Bend UGB, the population would be an estimated 99,244 people. This represents 87% of the forecasted population growth over the planning period, and is based on what the existing residential plan designations would accommodate. Addendum 4 relies on a population forecast of 115,063. The Director of DLCD concluded that this population forecast for 2028 complied with state law and could be used for land need estimates for the UGB.

The 2007 CSMP and the 2011 Addendum #4 also considered flows for non-residential uses: commercial, industrial, mixed use, and public facilities – using either a residential density as a surrogate measure or flows per acre based on the plan designation.

Taken together, the estimates of flows using population and those using flows/acre for non-residential plan designations will ensure that the proposed improvements to the sewer collection system comply with Goal 11. These proposed improvements are intended to serve a population larger than the estimated future residential and non-

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14 The base 2008 population estimate was 76,551. Assuming 94% of these housing units are occupied at 2.4 persons per occupied unit yields an estimated population of 22,693 additional people. The estimated population of 99,244 is the sum of 76,551 plus 22,693.

15 See January 8, 2010 Director's Report and Order 001775, page 25 of 156.
residential land uses combined.

WRFP – Unlike the collection system, the wastewater reclamation facility has been designed to accommodate flows based on population growth and analysis of historic wastewater flow data. The wastewater flow data includes analysis of dry and wet weather flows along with the composition of the wastewater.

- See subsections 2.3.1 and 2.3.2 on economic trends and population forecast (pages 6-7)
- See also Section 4 on Wastewater Flows and Loading (pages 16-19)
- See Section 5 for the Basis of Planning (pages 20 through 28)

<table>
<thead>
<tr>
<th>OAR 660-011-0010, Required Elements</th>
<th>Information or Location of information in Planning Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>OAR 660-011-0010(1)(a) inventory and General Assessment</td>
<td>CSMP – See Section 2 of MWH 2007 CSMP Final report. The description of the inventory and its general assessment begins on page 2-1. Tables 2-1 and 2-2 include lists of sewer lines by size and type and pump stations by location. See also Figure 2-1, which is Figure 2 in this plan.</td>
</tr>
<tr>
<td></td>
<td>CSMP – See also Section 2 of the MWH 2007 CSMP Final report. Figure 2-1 maps the location of the collection system and the areas served within the current Bend UGB. Table 2-1 describes the characteristics of the pipe used in the collection system; Table 2-2 describes the characteristics of the pumping stations, both the local and regional pump stations. The pipe system and pumping stations are generally in good condition. Section 3 of the 2007 CSMP describes the modeling work performed to remedy capacity deficiencies and identify needed improvements for the collection system in the UGB. This work was modified in Addendum #4 by CH2MHill.</td>
</tr>
<tr>
<td></td>
<td>WRFP – See discussion starting at page 1 to page 28. This section goes into depth on the location and history of the WRF, including an inventory of its components, starting at page 8. See pages 11 through 15 for an assessment of the WRF’s components (Table 3.1). A separate table, Table 3.3, identifies those components in poor condition.</td>
</tr>
<tr>
<td>OAR 660-011-0020, CSMP</td>
<td>CSMP – See also Section 2 of the MWH 2007 CSMP Final report.</td>
</tr>
</tbody>
</table>

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| inventory requirements | Figure 2-1 maps the location of the collection system and the areas served within the current Bend UGB. Table 2-1 describes the characteristics of the pipe used in the collection system; Table 2-2 describes the characteristics of the pumping stations, both the local and regional pump stations. The pipe system and pumping stations are generally in good condition.

Section 3 of the 2007 CSMP describes the modeling work performed to remedy capacity deficiencies and identify needed improvements for the collection system in the UGB. This work was modified in Addendum #4 by CH2M Hill.

Section 4 of the 2007 CSMP identifies the capacity improvements needed in both the pipe and pumping station. This section is modified through the work presented in Addendum #4 – See Tables 6a through 6c at pages 16 through 25.

**WRFP** – See pages 1 through 28 of the WRF Plan. This section includes a description of the City’s service area (Figure 2.1); a description of the treatment plant facilities and their capacity (pages 11 through 19), and a general assessment of the facility (See Tables 3.1 through 3.3).

| OAR 660-011-0010 (1)(b) list of significant public facility projects | **CSMP** – The 2007 CSMP included three (3) sections that identified significant projects for the collection system:
• Section 4 identified capacity improvement projects
• Section 5 identified needed pump station improvements
• Section 6 proposed an interceptor plan

This work was further modified through the 2008 CIP developed by MSA. Pages 52 through 89 list the projects needed by 2030; Pages 90 through 141 identify the improvements needed for build-out.

Addendum #4 refined both of these documents and includes a list of projects needed for the current (2008) UGB, found in Tables 6a through 6C.

**WRFP** – Section 7 of the WRFP is the Recommend Plan for improvements at the WRF (See pages 70 through 82). This section includes a capital improvements planning schedule (See Table 7.2 at page 80) and a recommended phasing plan (See Table 7.3 at pages 81 and 82).

| OAR 660-011-025, timing of required facilities | **CSMP** – Section 4 of the 2007 CSMP identifies needed capacity improvements to the current collection system. Table 4—9 identifies those improvements that are “existing” which, for the purpose of this sewer PFP, are those improvements needed in the short term. All other improvements are long term improvements. The costs for these projects were refined in the 2008 CIP and the 2011 Addendum #4 for the existing UGB.

**WRFP** – See Section 7 of the WRFP, Tables 7.2 and 7.3. Table 7.3 includes recommended phasing of improvements at the reclamation facility plant. Phases 1 and 2 include short-term projects (2008 to
| OAR 660-011-0030, location of projects | **CSMP** – In the 2007 CSMP, project locations are shown for capacity improvements, pump station improvements, and interceptors on Figures 4-1 through 4-9, Figures 5-5 and 5-6, and Figures 6-1 through 6-5. Addendum #4 modifies these project locations to focus on the current (2008) UGB in Figure 3.  

**WRFP** – In the 2008 WRFP, see Figures 7 and 7.2 for the location of improvements recommended for the wastewater reclamation facility plant.

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| OAR 660-011-0010 (1)(c) rough cost estimates | **CSMP** – In the 2007 CSMP, rough cost estimates are provided in a series of tables for capacity improvements, pump station improvements, and interceptors. See Tables 4-2 through 4-9, Tables 5-1 through 5-3, and Table 6-1. These rough cost estimates are modified to recognize those improvements needed for the current (2008) UGB in Addendum #4 (2011) in Tables 6a through 6c.  

**WRFP** – In the 2008 WRFP, See Table 7.2, Capital Improvements Phasing Schedule.

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| OAR 660-011-0010 (1)(d) map or written description of projects' general location or service area | **CSMP** – In the 2007 CSMP, project locations are shown for capacity improvements, pump station improvements, and interceptors on Figures 4-1 through 4-9, Figures 5-5 and 5-6, and Figures 6-1 through 6-5. Addendum #4 modifies these project locations to focus on the current (2008) UGB in Figure 3.  

**WRFP** – In the 2008 WRPF, See Figure 2.1 for the City's service area (a.k.a 2008 UGB). See also Figure 7 at page 71 for a presentation of the recommended improvements for the treatment plant.

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| OAR 660-011-0010 (1)(g) discussion of funding mechanisms | **CSMP** and **WRFP** - The City has adopted System Development Charges (SDCs), as allowed under state law, to help pay for new facilities. SDCs are levied against all new uses at the time of development. These fees are earmarked for major system improvements identified in the City’s Utility Systems Master Plan such as interceptor lines and expansion of the wastewater treatment plant.  

As of fiscal year 2006-07, the sewer System Development Charge (SDC) is at 100 percent of the allowable maximum charge. The City Council determined that this percentage reflects the proportionate share of system improvement costs that can be attributed to new growth. The remaining share of system improvement costs benefit the whole community and are collected as a part of the monthly user fees.  

In addition to SDCs, the City will fund improvements identified in the CSMP and WRFP through monthly sewer rates.
Policy Statements for Sewer Providers

OAR 660-011-010(1)(e) requires that a public facility plan include policy statement(s) or urban growth management agreement(s) identifying the provider of each public facility system. If there is more than one provider with the authority to provide service within the area covered by the public facility plan, then the rule requires the designation of each provider. This section of the PFP proposes policy statements that identify the City as the provider of sanitary sewer service within the Bend UGB.

The City proposes to add the following new language to Chapter 8 of the Bend Area General Plan, Public Facilities and Services, as a policy identifying the City of Bend as a provider of sanitary sewer service in the City’s UGB.

a. The City of Bend is the provider of sanitary sewer collection and treatment service for the Urban Growth Boundary under Statewide Planning Goal 11.

b. The City shall not provide sanitary sewer service to areas outside of the Bend the Urban Growth Boundary without an acknowledged exception to Oregon Statewide Planning Goal 11.

c. The City sewer system shall rely on gravity for collection. New pumping stations shall be regional.

d. Sanitary sewer service will not be extended and provided to land unless it is within the Urban Growth Boundary at the time service is provided.

Urban Growth Management Agreement

The City has entered into a joint management agreement (JMA) with Deschutes County for planning in the Bend UGB. The City and County entered into this agreement on February 24, 1998\(^\text{16}\). Section (4)(a)(1) of the JMA states the City is responsible for textual changes in the BAGP or implementing ordinances within the UGB. Section (10)(B) states the City is responsible for the preparation, adoption, and amendment of the public facility plan required by ORS 197.712(2)(e) with the aid and assistance of the County. This same section also provides that the City shall coordinate the preparation of the public facility plan with the County, special districts, state and federal agencies, and private providers of public facilities as required by ORS 660-011-015(2).

This PFP is a textual change to the BAGP and represents a new element to the BAGP. In addition, the PFP includes proposed changes to the text of Chapter 8 of the BAGP. There are no special districts that operate sanitary sewer systems, as that term is defined under Goal 11, within the UGB. OAR 660-011-0015(4) is not applicable because the City is not receiving state agency funding for the development of this public facility plan.

\(^{16}\) The JMA is available on-line at [http://www.ci.bend.or.us/online_forms_and_documents/docs/CityCounty_IGA_Managed_services.pdf](http://www.ci.bend.or.us/online_forms_and_documents/docs/CityCounty_IGA_Managed_services.pdf).
Figure 1: City of Bend UGB (as shown on Bend Area General Plan Map)
Appendices

2. CSMP Addendum #1: Final Executive Summary and “Alternative Technical Analysis: North East Bend” (2007) prepared by MacKay & Sposito, Inc.
5. CSMP Addendum #4 – Technical Memorandum (2011) CH2M Hill