Oregon
Kate Brown, Governor

Department of Land Conservation and Development
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NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

Date: April 19, 2016

Jurisdiction: City of Brookings

Local file no.: CP-2-15

DLCD file no.: 004-15

The Department of Land Conservation and Development (DLCD) received the attached notice of adopted amendment to a comprehensive plan or land use regulation on 04/15/2016. A copy of the adopted amendment is available for review at the DLCD office in Salem and the local government office.

Notice of the proposed amendment was submitted to DLCD 42 days prior to the first evidentiary hearing.

Appeal Procedures

Eligibility to appeal this amendment is governed by ORS 197.612, ORS 197.620, and ORS 197.830. Under ORS 197.830(9), a notice of intent to appeal a land use decision to LUBA must be filed no later than 21 days after the date the decision sought to be reviewed became final. If you have questions about the date the decision became final, please contact the jurisdiction that adopted the amendment.

A notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR chapter 661, division 10).

If the amendment is not appealed, it will be deemed acknowledged as set forth in ORS 197.625(1)(a). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

DLCD Contact

If you have questions about this notice, please contact DLCD's Plan Amendment Specialist at 503-934-0017 or plan.amendments@state.or.us

DLCD FORM 2

NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

FOR DLCD USE

File No.: 004-15 {24146}

Received: 4/15/2016

Local governments are required to send notice of an adopted change to a comprehensive plan or land use regulation **no more than 20 days after the adoption.** (*See* OAR 660-018-0040). The rules require that the notice include a completed copy of this form. **This notice form is not for submittal of a completed periodic review task or a plan amendment reviewed in the manner of periodic review.** Use Form 4 for an adopted urban growth boundary including over 50 acres by a city with a population greater than 2,500 within the UGB or an urban growth boundary amendment over 100 acres adopted by a metropolitan service district. Use Form 5 for an adopted urban reserve designation, or amendment to add over 50 acres, by a city with a population greater than 2,500 within the UGB. Use Form 6 with submittal of an adopted periodic review task.

Jurisdiction: City of Brookings

Local file no.: **CP-2-15**

Date of adoption: 04/11/2016 Date sent: 4/15/2016

Was Notice of a Proposed Change (Form 1) submitted to DLCD?

Yes: Date (use the date of last revision if a revised Form 1was submitted): **11/25/2015**

No

Is the adopted change different from what was described in the Notice of Proposed Change? Yes No

If yes, describe how the adoption differs from the proposal:

Yes, additional information was included regarding Harbor Sanitary District as well as clarification regarding the provision of water within the City limits.

Local contact (name and title): Donna Colby-Hanks, Planning Manager

Phone: (541) 469-1137 E-mail: dcolbyhanks@brookings.or.us

Street address: 898 Elk Drive City: Brookings Zip: 97415-

PLEASE COMPLETE ALL OF THE FOLLOWING SECTIONS THAT APPLY

For a change to comprehensive plan text:

Identify the sections of the plan that were added or amended and which statewide planning goals those sections implement, if any:

Text revisions to the Public Facilities Plan and Goal 11 Public Facilities and Services to reflect a new Waste Water Master Plan.

For a change to a comprehensive plan map:

Identify the former and new map designations and the area affected:

Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.

Location of affected property (T, R, Sec., TL and address):

The subject property is entirely within an urban growth boundary

The subject property is partially within an urban growth boundary

If the comprehensive plan map change is a UGB amendment including less than 50 acres and/or by a city with a population less than 2,500 in the urban area, indicate the number of acres of the former rural plan designation, by type, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

If the comprehensive plan map change is an urban reserve amendment including less than 50 acres, or establishment or amendment of an urban reserve by a city with a population less than 2,500 in the urban area, indicate the number of acres, by plan designation, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

For a change to the text of an ordinance or code:
Identify the sections of the ordinance or code that were added or amended by title and number:

For a change to a zoning map:
Identify the former and new base zone designations and the area affected:

Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:

Identify additions to or removal from an overlay zone designation and the area affected:

Overlay zone designation:	Acres added:	Acres removed:

Location of affected property (T, R, Sec., TL and address):

List affected state or federal agencies, local governments and special districts: DLCD and Harbor Sanitary Districct

Identify supplemental information that is included because it may be useful to inform DLCD or members of the public of the effect of the actual change that has been submitted with this Notice of Adopted Change, if any. If the submittal, including supplementary materials, exceeds 100 pages, include a summary of the amendment briefly describing its purpose and requirements.

IN AND FOR THE CITY OF BROOKINGS
STATE OF OREGON

ORDINANCE 16-O-755

IN THE MATTER OF ORDINANCE 16-O-755, AN ORDINANCE ADOPTING REVISIONS TO THE CITY OF BROOKINGS COMPREHENSIVE PLAN, GOAL 11, PUBLIC FACILITIES AND SERVICES, ADOPTING A NEW PUBLIC FACILITIES PLAN, AND REPEALING THE PREVIOUS PUBLIC FACILITIES PLAN ADOPTED UNDER ORDINANCE 14-O-734 AND ITS SUBSEQUENT REVISIONS.

Sections:

The City Council for the City of Brookings ordains as follows:

Section 1: Findings

1. Goal 11 of the Brookings Comprehensive Plan is in need of amending to reflect the updated Waste Water Facilities Plan. Amended Goal 11 is attached hereto and incorporated by reference.

2. The Public Facilities Plan is also in need of updating to reflect the updated Waste Water Facilities Plan. The amended plan is attached hereto and incorporated by reference.

3. Staff sent the 35 day notice to DLCD as required under ORS 197.610 for post acknowledgment plan amendments for the proposed changes to the Comprehensive Plan and Public Facilities Plan.

4. Staff conducted a public hearing before the Brookings City Planning Commission on January 5, 2016. The Commission recommended approval to the City Council.

5. Following public notice, as required by law, the Brookings City Council conducted a hearing on the proposed amendments on Monday, March 28, 2016 at 7:00 P.M. at the Brookings City Hall. Approval was given to the Comprehensive Plan and to the Public Facilities Plan that are attached hereto and incorporated by reference.

Section 2 Amendments

The City of Brookings Comprehensive Plan (Ordinance 14-O-734, previously the most recent revision) is amended as shown by the attached changes in the Comprehensive Plan, and by adopting the attached Public Facilities Plan.

Section 3: Severance Clause

If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or otherwise invalid, such decision shall not affect the validity of the remaining portions of this ordinance.

Section 4: Effective Date:

This ordinance shall take effect 30 days following its passage.

First Reading: 4/11/16 Passage: 4/11/16

Second Reading: 4/11/16 Effective Date: 5/10/16

Signed by me in authentication of its passage this 13th, day of April, 2016

Ron Hedensko

Mayor Ron Hedenskog

ATTEST:

City Recorder Joyce Heffington

PUBLIC FACILITIES PLAN

CITY OF BROOKINGS WATER SYSTEM

The City of Brookings acquired the water system serving property within the City in 1973 and operates the water system as a City business enterprise. The City has made substantial improvements to the water system over the years.

The water enterprise consists of the following operating systems:

- Source of Supply: The locations where the City takes or has the right to take ground water for municipal purposes, and the system for transmission of the water taken from these locations identified in Table 3.1 to the water treatment plant and distribution system.

- Treatment: Filtering and chemically treating water from the sources of supply during river turbidity which DHS has determined the water treatment is not necessary.

- Distribution: A system of pipes that delivers water from the treatment plant to storage reservoirs, fire hydrants and individual properties for domestic and industrial use. Distribution includes operation and maintenance of water usage meters.
- Management and Customer Service: Overall management of the water enterprise, engineering, planning, meter reading, billing/collections and customer service (new connections, turn-on/turn off, etc).

WATER SOURCE

Following is the current status of the City's various water right development applications and certificates.

Table 3.1: City of Brookings Water Rights

Source/Type	Permit No.	Certificate No.	Priority Date	Quantity
Chetco River (S) (Ranney)	27610	63682	9/14/1961	4.0 cfs
Chetco River (S) (Ranney)	31293	87358	1/21/1966	1.57 cfs
Chetco River (G) ("Tide Rock")	G5601	64614	8/14/1972	6 cfs
Chetco River (S)	51383		12/12/1990	1.0 cfs (Mar 1 - Jun 30)
Chetco River (R)	R11535		5/13/1993	62.3 Ac-ft
Chetco River (R) (10 Reservoirs)	51595		5/13/1993	62.3 Ac-ft
Ferry Creek (S)	1740	2078	8/22/1913	3.0 cfs
Ferry Creek Reservoir (R)	372	1407	8/9/1916	1.5 MG
Ferry Creek Reservoir (R)	408	2071	8/25/1917	26 Ac-ft
Ferry Creek Reservoir (R)	31224	46861	2/10/1966	167.4 Ac-ft
Ferry Creek Reservoir (R)	R4720	46860	2/10/1966	167.4 Ac-ft
Joe Hall Creek (S)	4674	4953	6/23/1920	2.5 cfs
Ransom Creek (S)	18123	20734	2/24/1948	0.53 cfs

Currently, the Chetco River supplies 100 per cent of the City's water needs through a Ranney type groundwater intake collector located along the North Bank Chetco River approximately 4 miles upstream from the Highway 101 bridge. The Ranney Collector is designed for a capacity of 5.7 cubic feet per second (cfs) with all three pumps running, although a portion of the 12-inch AC piping from the intake to the treatment plant is questionably undersized for this flow rate. The Ranney Collector is operated with only 1 pump running rated 1250 gpm or 2.7 cfs. The City installed 9,500 ft of new 16-inch raw water line from the point of diversion to the treatment plant in 2008. There is 4,900 feet of 12-inch AC line between the intake and treatment plant that should be upsized to 16-inch DI in order to operate more than one 1250 gpm (2.7 cfs) pump at the intake.

In 2012, Certificates 83682 and 87358 were obtained as part of a negotiated agreement with Oregon Water Resources Department (OWRD) and Waterwatch, and represent the only water rights currently used by the city for municipal water production.

WATER TREATMENT

The water treatment plant, installed in 1976, is a Neptune Microfloc Aquarius Model AQ-300 that utilizes the conventional rapid sand filtration treatment process. The plant consists of two identical, side-by-side units with a combined capacity of approximately 2.6 mgd. DHS recently downgraded the requirement to operate the treatment plant and water is allowed to be delivered year round with only disinfection. The water treatment plant is also the location of the main distribution pumps which are operated at 2.1 MGD.

WATER DISTRIBUTION

The main line distribution system consists of approximately 26.5 miles of pipe ranging in size from 2 to 16 inches. Pipe materials vary with the most common types being asbestos cement (AC) and polyvinyl chloride (PVC). The distribution system is over-extended in the higher elevation portions of the service area and is not capable of delivering fire flows in some areas. The master plan update has identified over $6 million dollars in needed distribution pipe upgrades and replacements.

WATER USAGE

Water projection demands in 2013 maximum day demand is 2.1 MGD and expected to increase to 2.3 MGD by 2018. Residential water use has significantly decreased from 96.9 gpcd in 2007 to 96.9 gpcd in 2012. The City began offering water conservation incentives to customers in 2007. Unaccounted for water use has also reduced from 17% loss in 2007 to 10.1% water loss in 2012. The City has contracted an annual leak detection survey to credit for the loss reduction.

FIRE FLOWS

The water system must offer sufficient capacity to furnish water for firefighting while maintaining adequate flows for domestic, commercial and industrial demands. In addition, the required fire flow must be delivered at an accepted residual pressure, which is 20 psi. The City of Brookings has adopted the Oregon Fire Code. The Oregon Fire Code provides the minimum fire flow standard applied to new development. A matrix used to determine fire flow requirements can be

found in Oregon Fire Code, Appendix B, Table 105.1- Minimum required fire flow and flow duration for buildings. There is no community-wide standard, although a basic fire flow of 1,500 gpm for a two hour duration is a minimum in the Oregon Fire Code.

WATER STORAGE

With the completion of the 1.6 million gallon Seacrest reservoir in 2009, the current available storage is 3.6656 million gallons, or 1.78 times the peak day demand. The sizing of the Seacrest reservoir was reduced from a proposed 2.0 mg due to site constraints. The City received a grant to fund installation of a .5 mg water reservoir east of the Brookings Airport. Construction is slated to begin on this project in the fall of 2014. The site will accommodate an additional .5 mg reservoir in the future. In addition, the 2014 master plan update recommends an additional new water storage facility of at least 250,000 gallons in the Old County Road area.

WATER SYSTEM MASTER PLAN

The City adopted a Water System Master Plan Update prepared by PACE, An Engineering Services Company on July 28, 2014.

Harbor Water People's Utility District

WATER SOURCE

Currently the Chetco River supplies the Harbor Water Peoples Utility District (HWPUD) water needs. The river intake is a Ranney collector with a rated capacity of 6 million gallons per day. Four pumps serve the intake; each rated at 2.4 mgd capacity. The pumps alternate, with two operating together to handle peak demands.

The HWPUD currently holds two surface water rights from the Chetco River and has two ground water sources. These are summarized in the following table.

Harbor Rural Water District Water Rights			
Source	Priority Date	Amount	Amount
Chetco River	1966	3.500 cfs	2.26 mgd
Chetco River	1980	7.00 cfs	4.53 mgd
Well G3240	1966	3.50 cfs	2.26 mgd
Well G9438	1980	7.00 cfs	4.53 mgd
	Total	21.00 cfs	13.58 mgd

WATER TREATMENT

The Ranney intake is considered equivalent to a ground water system. For this reason, water treatment is not practiced.

WATER DISTRIBUTION

The distribution system is an extensive loop system that extends from the Chetco River to the California border, and consists of approximately 50-55 miles of pipe ranging in size from 2 to 16 inches. Pipe materials vary with the most common types being asbestos cement (AC) and polyvinyl chloride (PVC), and ducitile pipe.

WATER USAGE

Current water production data shows that the average daily water demand is 700,000 gallons with the peak day demand being 1,700,000 gallons. Serving an estimated 2,500 persons, the current population, the average daily water usage per person is approximately 280 gallons, with a peak demand of 680 gallons.

FIRE FLOWS

The water system must offer sufficient capacity to furnish water for fire fighting while maintaining adequate flows for domestic, commercial, and industrial demands. Also the required fire flow must be delivered at an accepted residual pressure which is 20 psi. The HWPUD has sufficient storage to meet a demand of 1500 gpm for two hours where necessary. The necessary storage to meet that requirement would be 180,000 gallons. HWPUD has the capacity to deliver fire flows.

WATER STORAGE

There are eleven water storage reservoirs in the HWPUD, which give a total storage capacity of 2,060,000 gallons. The following table summarizes the current water storage for the district.

Harbor Water District Storage			
Reservoir	Bottom Elevation	Overflow Elevation	Storage Capacity
Crown Terrace 1	525.5'	537.5'	10,000 gal
Crown Terrace 2	525.5'	537.5'	10,000 gal
Crown Terrace 3	795'	807'	10,000 gal
Crown Terrace 4	795'	807'	10,000 gal
Crown Terrace 5	1,025'	1,037'	10,000 gal
Crown Terrace 6	1,025'	1,037	10,000 gal
Hallway 1	201.36'	234.81'	750,000 gal
Hallway 2	203.62'	234.81'	500,000 gal
Coleman	355.18'	388.60'	300,000 gal
Benham	355.18'	386.60'	200,000 gal
Freeman	203.32'	234.74'	250,000 gal
TOTAL			2,060,000 gal

The required storage for the HWPUD is shown in the following table.

Harbor Water Storage Estimate		
Peak Day Demand	1,700,000 gallons	
Twice the Ave Day Demand	1,400,000 gallons	
Larger of the above two		1,700,000 gallons
Fire Storage	1500 gpm x 2hrs	180,000 gallons
Equalization Storage	20% peak	340,000 gallons
	Required Storage	2,220,000 gallons

HARBOR WATER PUD MASTER PLAN

Harbor Water PUD adopted a Master Plan in December, 2000 that is incorporated herein by this reference.

CITY OF BROOKINGS WASTEWATER SYSTEM

The original Brookings sewer system was constructed about 1916 and service was initially limited to the downtown area. The City assumed operation of the sewer system soon after incorporation in 1951. The City operates the wastewater system as a City business enterprise. The wastewater enterprise consists of the following operating systems:

COLLECTION

The City accepts domestic sewage from property in the service area that is connected to the sanitary collection system, and transmits the sewage to the wastewater treatment plant. The collection function includes the operation of sewage lift stations installed at various locations within the collection system to assist the flow of sewage to the treatment plant.

Currently, the collection system consists of a network of 6, 8, 10 and 12-inch mains connected to 18 and 21-inch interceptors and lift stations. There are approximately 32.7 miles of 6-inch to 21-inch gravity mains and 2.75 miles of 4-inch to 14-inch diameter force mains in the collection system. The system provides service connections to individual properties within the service area. The interconnection with the HSD also functions as a part of the collection system.

LIFT STATIONS

The City currently operates 13 lift/pump stations located to serve areas which cannot be served with gravity-fed sewer mains.

TREATMENT

Treatment involves removal of solids from the sewage received at the wastewater treatment plant, and clarification of processed solids after biological treatment and disinfect using U.V. bulbs in the effluent stream, to meet federal and state standards prior to discharge into the ocean. Treatment includes the processing, reprocessing and disposal of solids removed from the sewage.

The wastewater treatment plant has been located at Chetco Point since the early 1950's. Major modifications to the plant were made in 1973, 1991, and 2000.

Treated water, or effluent, produced by the wastewater treatment plant is discharged to the Pacific Ocean. The Oregon Department of Environmental Quality establishes discharge limitations for discharge to ocean waters. A new Class B sludge dewatering facility was constructed and brought on line in December, 1012 which eliminated the need for sludge trucking to Grants Pass.

RELATIONSHIP TO HARBOR SANITARY DISTRICT

In 1976, the Harbor Sanitary District was formed to serve an area just south of the City. The City and HSD have entered into a series of intergovernmental agreements whereby the City accepts sewage from HSD for treatment. See below for a description of the HSD system.

BROOKINGS WASTEWATER MASTER PLAN

The City adopted a Wastewater Facilities Master Plan in April, 2016. That Master Plan is incorporated herein by reference. A detailed discussion of the treatment system and plant capacity can be found in the Plan. Until sewer service can be extended to properties, interim urban-level treatment systems may be allowed only if specifically provided for in master plans which set forth appropriate standards and conditions and which have been adopted as post-acknowledgement plan amendments or periodic review work task elements.

HARBOR SANITARY DISTRICT WASTE WATER SYSTEM

The community of Harbor is an unincorporated residential, commercial, and industrial area south of the Chetco River and the City of Brookings. The Harbor Sanitary District (HSD) has served this area since June 1976. The HSD operates only a collection system. Wastewater is piped to the Brookings wastewater treatment plant for treatment. The area's land use is predominantly residential, but a regional shopping center and an extensive commercial and industrial complex surround the Brookings-Harbor Boat Basin. The Harbor Bench area south of Harbor, an area experiencing steady growth, currently is out of the sewer service area; however, it is an area that potentially may become part of the service area. In 1979 the Oregon Health Division directed the HSD to annex an adjoining area, the Oceanview Mobile Home Estates, due to wastewater treatment concerns.

POPULATION

The following population data was taken from the "City of Brookings Comprehensive Utilities Plan" dated September 1981. Population projections were based on the 1970s, a growth period.

Harbor Sanitary District Population Growth				
Year	1980	1990	2000	2010
Population	1,968	2,645	3,555	2,770

COLLECTION SYSTEM

In 1976, the HSD was formed. The collection system consists of four pump stations and a network of gravity lines. Wastewater is pumped across the Chetco River to the south portion of the City of Brookings service area. There a 20-inch gravity main conveys the wastewater to the Brookings treatment plant. The daily flow rate is approximately 0.28 mgd.

The collection system consists of 16.5 miles of 8-inch and 12-inch transite pipe.

PUMP STATIONS
Flows from the entire Harbor collection system enter HSD pump station No. 14. Discharge from this station is to the Brookings WWTP by means of an 8-inch force main over the Chetco River or a 12-inchforce main under the Chetco River. Space for additional force mains is available. Pump station No. 14 is rated at 2,000 gpm and 125 feet. The other three pump stations are small and serve limited areas.

HARBOR SANITARY DISTRICT MASTER PLAN
HSD completed and adopted a Master Plan in December.

Until sewer service can be extended to properties, interim urban-level treatment systems may be allowed only if specifically provided for in master plans which set forth appropriate standards and conditions and which have been adopted as post-acknowledgement plan amendments or periodic review work task elements.

CITY OF BROOKINGS STORM DRAINAGE

The City of Brookings operates a storm drainage system within the city boundaries. Drainage basins flow to the ocean or the Chetco River. Generally local area flows are conveyed via pipes to discharge points at surface drainage ways. The majority of the existing piping system is located in the western old portions of the city draining to the Chetco. Highway 101 presents a major flow obstruction to natural drainage pattern, requiring culvert crossings. Some limited historical flooding has occurred, but the problems are related to site-specific causes.

CURRY COUNTY
Curry County services all public storm drainage in the study areas north and south of the Chetco outside City limits. The service level is mainly rural road maintenance that consists of ditch culvert cleaning associated with road maintenance. All other drainage features are privately owned. The Harbor Bench area, which is outside the urban growth area, has experienced flooding and erosion due to upstream growth and diversion of flows due to culvert placement.

CITY/ COUNTY STORM DRAINAGE MASTER PLAN
On January 12, 2009, the City and the County adopted the "Storm and Surface Water Facilities Plan for Brookings-Harbor Area." In the Plan are design and development standards and proposed improvements to the storm drainage facility. There are also maps depicting the various basin areas in City limits and the Urban Growth Area, hydrologic/ hydraulic analysis, and the discussion of the effects on specific areas in the Plan. The Plan is hereby incorporated by this reference.

The Storm and Surface Water facilities Plan for Brooking Harbor Area" contains the following policies:

- Low impact development is preferred.
- Negative impacts to natural watercourses are to be avoided.
- Piping of a natural watercourses is to be avoided, where practicable.

- Protection of ground water sources is critical.
- Proposed facilities should address water quality impacts and mitigation measures.
- Erosion and sediment must be controlled using the City, County, and Department of Environmental Quality requirements.
- Stormwater discharges shall be maintained at current levels.
- A public education program is recommended to disseminate information on the importance of preventing negative impacts from stormwater.

The "Storm and Surface Water Facilities Plan for Brookings-Harbor Area" contains specific design and development standards and proposed improvements to the storm drainage facility. To avoid adverse impacts created by development, the Plan contains five strategies to be generally utilized:

1. There should be no post-development net increase in storm drainage discharge downstream.
2. Low impact development practices as described in the 2007 "Storm and Surface Water Facilities Plan" shall be implemented.
3. The capacity of the downstream drainage infrastructure is improved to convey the increased flow. Usually this means constructing larger culverts and storm drains. Generally, the natural drainage channels are improved, but because of the study area's proximity to the ocean and the steep rocky terrain, these channel improvements may not be necessary.
4. A regional detention facility is constructed to capture the additional runoff and release the flow at a slower natural rate. A regional facility is normally associated with a single drainage way or creek.
5. An onsite detention facility is constructed for each individual development. The goal for a regional or onsite detention facility is that the runoff from the post-development condition be reduced to flow equaling the pre-development condition.

The Harbor Hills Master Plan Area within the UGA is required to prepare a comprehensive surface water management plan prior to any land use approvals. The details required and the review and approval process are described in the "City of Brookings and Curry County Joint Management Agreement", dated June 30, 2010.

BROOKINGS HARBOR
URBAN GROWTH AREAS
URBAN GROWTH BOUNDARY
BROOKINGS CITY LIMITS
CITY OF BROOKINGS
PACIFIC
OCEAN
W&H PACIFIC

GOAL 11 PUBLIC FACILITIES AND SERVICES

GOAL:

To plan and develop a timely, orderly and efficient arrangement of public facilities and services to provide a framework for urban and rural development.

FINDINGS:

1. The City has adopted a Public Facilities and Services Plan that establishes the framework for the distribution of water and sanitary sewer services and storm drainage systems throughout the expanded Urban Growth Boundary.

2. The City has adopted a Water Master Plan/Conservation Management Plan. On July 28, 2014, the City adopted "City of Brookings Water Master Plan Update". This update included data in the appendices from the 2007 "Water System Master Plan Update" regarding the Harbor Water People's Utility District which serves the Brookings Urban Growth Area south of the Chetco River Bridge.

3. The City has adopted a Water Curtailment ordinance that provides the city with the mechanisms to curtail water use in emergencies, including low surface water flows in the Chetco River.

4. On January 12, 2009, the City adopted the "Storm and Surface Water Facilities Plan for Brookings-Harbor Area." New policies from this Plan are found in the "Public Facilities Plan for Urban Growth Expansion."

5. On April 11, 2016 the City adopted a Wastewater Facilities Plan developed by the Dyer Partnership dated November 2015.

6. The city currently provides the following facilities and services within the City Limits:

   A. Public Works

      1) Water Treatment - 2.0 to 2.6 mgd capacity.
      2) Water Distribution, Pumping and Storage - (Total connections 3,354 -3,053 of the connections are residential, 2012).
      3) The service area includes the incorporated area of Brookings plus the Harbor Sanitary District to the South. (Total of 3358 connections within the City limits. The Harbor Sanitary District has approximately 895 connections, which are pumped to the City's treatment plant., November 2015). Current capacity provides for an average dry weather flow of 1.7 MGD, peak day average flow of 10.9 MGD and a peak wet weather hydraulic capacity of 15.5 MGD.
      4) Wastewater Collection and Pumping - All public facilities within the city limits are the responsibility of the City of Brookings. All such facilities in the Harbor Sanitary District are owned, operated and maintained by that district.
      5) Street and Infrastructure Maintenance - The City's Public Works Department provides maintenance of City streets, water mains, sewer mains, storm drains, and other infrastructure systems.

B. Solid Waste Removal - is presently done by franchised contract

C. Fire Prevention and Protection Services

These services are provided with two paid employees (Operations Chief and Captain) and 24 volunteers. Ratings outlined in the Inventory document show an adequate program with primary need being in the area of improved water system. However, improvements have been made that resulted in the classification being upgraded from a 7 to a 4B.

D. Police Protection

1) Existing police facilities in the city hall were rated as having a moderate risk of failure in a major seismic event by FEMA through the Rapid Visual Screening Score. The location was rated as a very high risk seismic zone in the same screening process.
2) If population growth exceeded significantly the number projected or if the city boundaries were considerably expanded through annexation, or if the incident of crime jumped radically, it is conceivable that new facilities and additional manpower might be required.

E. Parks and Recreation Facilities and Services

1) One state park, Harris Beach State Park, is located within the City of Brookings. See adopted Harris Beach Master Plan, 2003.
2) The city owns and maintains approximately 54.4 acres of parkland.
   a. Azalea Park (formally Azalea State Park)
      - 33 -.2 acres
      - 2 Softball fields
      - Outdoor amphitheater/bandshell
      - 2 Volleyball Courts
      - Kidtown (.25 ac.)
      - Walking and biking trails
      - Capella by the Sea (weddings and passive meditation)
      - Gazebo
      - -4 Horseshoe pits
      - -2 Bar-ba-que grills
      - -11 Picnic tables
      - -Flower garden/natural area
      - -Restroom facilities
      - -Snack shack
   b. Bud Cross Park
      - 6.4 acres
      - 3 lighted tennis courts
      - 2 baseball fields
      - swimming pool and bathhouse
      - restroom facilities
      - concession stand
      - -Skate park
      - -3 Picnic tables
      - -Basketball courts
   c. Chetco Point Park
      - 8.9 acres
      - walking trails
      - 5 picnic tables
      - ocean access/ beach access
      - 4 Horseshoe pits
      - Fire pit
      - Restroom facilities
      - 4 Seating benches
   d. Easy Manor Park
      - .8 acres
      - playground facilities (remodeled in 2010)
      - 4 Picnic tables
      - 2 Bar-ba-que grills
      - -Restroom facilities

- 4 Seating benches

e. Stout Park
-3.3 acres - Manley Arts Center
- walking paths
- 8 Seating benches
- Model railroad garden

f. Numerous mini parks around the City (pocket parks).

3) The City adopted a Parks Master Plan in Aug., 2002. This Plan is incorporated herein by reference.

F. Other facilities and services provided in the City of Brookings are

1) Schools
2) Transportation for the elderly.
3) Regional recreational facilities such as state parks and harbor facilities.

7. The following entities will provide services outside of the city limits within the Urban Growth Boundary.

A. Wastewater Collection

1) The Harbor Sanitary District.
   a. Collects wastewater within their district south of the Chetco River and pumps to the City's wastewater treatment plant.
   b. Has stated, expansion of the District will only occur when it is in compliance with the Districts adopted Growth Management Policy (Resolution 07-18-R).
2) The City of Brookings
   a. Will provide wastewater collection in the Urban Growth Boundary, south of the Chetco River outside of the Harbor Sanitary District boundaries when land is annexed to the city.
   b. Will provide wastewater collection in the Urban Growth Boundary north of the Chetco River when land is annexed to the city.

B. Water Distribution

1) The Harbor Water District People's Utility District
   a. Pumps from an intake on the south bank of the Chetco River.
   b. District boundaries include the entire Urban Growth Boundary expansion south of the Chetco River except for the areas north of its intake facility and the top of the Harbor Hills.
   c. Is willing to expand its boundaries to include the entire Urban Growth Boundary south of the Chetco River.
2) The City of Brookings
   a. The City currently provides water service to some areas of the Urban Growth Boundary north of the Chetco River.
   b. The City will provide service to the entire Urban Growth Boundary north of the Chetco River.
   c. The right to furnish the inhabitants of said City with water shall be forever vested in the City of Brookings, and no franchise, right or privilege shall

hereafter be granted to or contract made with any person or corporation by said City to furnish or supply the said City or its inhabitants with water, without the authorization of the legal voters of said City.

C. Fire Protection

1) Brookings Rural Fire Protection District.
   a. Is located around the City in the area north of the Chetco River.
   b. Is served under contract by the Brookings Fire Department
2) Harbor Rural Fire Protection District
   a. Provides service to the entire Urban Growth Boundary south of the Chetco River.
   b. Fire station is located on Benham Lane.

D. Police protection

All of the Urban Growth Boundary outside of the city limits is provided police protection by the Curry County Sheriff's Department.

E. Storm Drain Maintenance

1) The Oregon Department of Transportation maintains all drainage facilities within a state road or highway rights-of-way.
2) The Curry County Road Department maintains all drainage facilities within county road or street rights-of-way.
3). Drainage facilities on private property are maintained by the property owner.

POLICIES:

To insure timely, orderly and efficient arrangement of public facilities and services the following policies will be implemented by the City of Brookings.

1. Public Works

A. Water treatment facilities. Facilities will be maintained with the proper observation and planning to expand facilities on a timely basis to provide continued service to existing customers and projected growth. Expansion programs will be funded through the most cost-effective methods utilizing all available federal, state and local funds.

B. Water distribution, pumping and storage. New development requiring extension of water mains, pumping and storage facilities will be paid for and constructed by the developer pursuant to the provisions of the current City of Brookings Engineering Requirements and Standard Specifications for Public Works Infrastructure document.

C. Water Master Plan/Conservation Management Plan. The City will maintain a Water Master Plan/Water Conservation Management Plan, which will be updated as required.

D. A Backflow Prevention Program was adopted in 2012.

E. Wastewater treatment facility. Expansion programs will be funded through the most cost-effective methods utilizing all available federal, state and local funds.

F. Wastewater collection facilities. New development requiring extension of sewer mains and new pumping stations will be paid for and constructed by the developer pursuant to the provisions of the current City of Brookings Engineering Requirements and Standard Specifications for Public Works Infrastructure document.

G. Streets and other infrastructure facilities. The City's Public Works Department will inspect and maintain all public street and subsurface infrastructure facilities. The extension of existing streets for new development shall be paid for and constructed by the developer pursuant to the provisions of the current City of Brookings Engineering Requirements and Standard Specifications for Public Works Infrastructure document.

H. Storm drain facilities. New development requiring new storm drain systems or the extension of existing systems including provision of detention basins, will be paid for and constructed by the developer pursuant to the provision of the current City of Brookings Engineering Requirements and Standard Specifications for Public Works Infrastructure document.

2. Fire Prevention and Protection

The Fire Operations Chief will continue to serve as the head of prevention and protection services. He will continue to maintain the high level of training and service that the community has come to expect through the conduct of local and regional training sessions and a continued education for himself.

3. Police Protection

The Chief of Police shall be responsible for continually monitoring the department's facility requirements and operations. In conjunction with the annual preparation of his budget request, a written evaluation shall be prepared for the City Manager, who in turn, may call attention to specific items for consideration by Planning Commission, Council or staff.

CITY OF BROOKINGS

Council Agenda Report

Meeting Date: March 28, 2016

Originating Dept: PWDS

LL Snook
Public Works Development Services Director

City Manager Approval

Subject: A hearing on File CP-2-15 for consideration of the 2015 Waste Water Facilities Plan Update (WWFP) and revisions to the Public Facilities Plan and Goal 11 of the Comprehensive Plan.

Recommended Motion: Approve the 2015 WWFP developed by Dyer Partnership Engineers and Planners, Inc. as well as the revisions to the Public Facilities Plan and Goal 11 of the Comprehensive Plan and direct Staff to draft the adopting ordinance.

Financial Impact: Estimated cost of $12.1 million dollars projected over the next 10 years.

Background/Discussion:
This matter was discussed at the January 4, 2016 Council workshop and a copy of the full report was provided to each Councilor.

While the total estimated cost of all improvements is $12,142,475, this cost includes projects ranging from being characterized as immediate needs to projects recommended for completion within the next 10 years. About $3.0 million of this total includes improvements needed exclusively to support the development of the Lone Ranch project. The City has entered into an infrastructure financing plan with U.S. Borax Corporation related to undertaking this work. Staff has reviewed the report and has developed a 10 year Capital Improvements Projects list based on immediate need due to function as well as cost savings to the City.

1. All recommended I&I projects will be completed within the next 24 months. This work would substantially decrease the amount of wet-weather flow moving through the WWTP and reduce operating costs. It would also extend the life of sewer mains and manholes.
2. The "Oak Interceptor" project is an immediate need to resolve potential capacity issues relating to continuing to provide serve to the Harbor Sanitary District while preserving adequate capacity for expansion within the City. It is also important that this project precede Railroad Street reconstruction project (scheduled for 2018) as much of the work will occur within the Railroad Street right of way. This project will be completed in two phases, the Railroad Street portion scheduled for 2016-17 and the Oak Street portion to be completed in 2017-18.

CITY OF BROOKINGS

Council Agenda Report

Meeting Date: April 11, 2016

Originating Dept: PWDS

Public Works Development Services Director

City Manager Approval

Subject: An Ordinance adopting revisions to the City of Brookings Comprehensive Plan, Goal 11, Public Facilities and Services and adopting a new Public Facilities Plan.

Recommended Motion: Motion to adopt Ordinance No. 16-O-755 to implement revisions to the City of Brookings Comprehensive Plan, Goal 11, Public Facilities and Services and adopting a new Public Facilities Plan.

Financial Impact: Estimated cost of $12.1 million dollars projected over the next 10 years.

Background/Discussion:
This matter was discussed at the January 4, 2016 Council workshop. A Public Hearing was conducted by the Planning Commission on January 5th. The Planning Commission considered the WWFP as well as proposed revisions to the Public Facilities Plan and Goal 11, Public Facilities and Services, to reflect the information in the WWFP.

A second Public Hearing was conducted by the City Council on March 28, 2016. Councilor Triglia noted a mistake related to the date of adoption of the Harbor Sanitary District Master Plan, that date has been corrected.

Adoption of the revised Public Facilities and Services Plan adopts the updated WWFP by reference. An updated WWFP is necessary for eligibility for Federal Disaster Funding as well as for other Agency funding opportunities.

Policy Considerations:
In keeping with Council Goal of maintaining updated Master Plans to facilitate long range planning of maintenance and construction of City infrastructure.

Attachment(s):

a. Ordinance No. 16-O-755
b. Goal 11, Public Facilities and Services
c. Corrected Public Facilities Plan

3. All Priority 1 pump station repairs are scheduled to be completed as well as various deferred maintenance projects that were listed in an unfavorable report from DEQ last year.

The estimate for the above projects total $2.6 million. Staff recommends submitting a proposal for funding under the Community Development Block Grant program as the WWTP service area includes areas outside the City Limits which meet the CDBG income eligibility criteria.

The plan was presented to the Planning Commission at their January 5th meeting. The Planning Commission considered the WWFP as well as proposed revisions to the Public Facilities Plan and Goal 11, Public Facilities and Services, to reflect the information in the WWFP. The Planning Commission recommended approval of the WWFP with a further recommendation to amend the Plan to include additional information related to Harbor Sanitary Districts (HSD) impact on the system. All items recommended by the Planning Commission that fall within the scope of the study have been added to the plan.

Policy Considerations:
In keeping with Council Goal of maintaining updated Master Plans to facilitate long range planning of maintenance and construction of City infrastructure.

Attachment(s):

a. Council Workshop Report
b. Goal 11 changes
c. Public Facilities Plan changes

CITY OF BROOKINGS PLANNING COMMISSION
STAFF REPORT

SUBJECT: Comprehensive Plan Amendment
FILE NO: CP-2-15
HEARING DATE: January 5, 2016

REPORT DATE: December 23, 2015
ITEM NO: 5.1

GENERAL INFORMATION

APPLICANT:	City Initiated.
REPRESENTATIVE:	City Staff.
REQUEST:	Approval of the Wastewater Facilities Plan (WWFP), 2015, as well as text revisions to the Public Facilities Plan (PFP) and Goal 11 Public Facilities and Services to reflect the information from the master plan. City initiated.
PUBLIC NOTICE:	Published in local newspaper.

BACKGROUND INFORMATION

Although Master Plans are developed to assess needs over a 20 year time period, it is prudent to review them on a 5 year schedule to determine that the assumptions used in their development continue to be viable. The last update to the WWFP was done in 2008 by former City Engineer, HGE.

The purpose of the WWFP is to provide guidance for the following:

- Identifying potential improvements and management options
- Prioritize the repair of aging infrastructure
- Address current sizing needs
- Serves as a planning document to meet long term growth needs within the City
- Addresses regulatory requirements for health, sanitation and security
- Identifying funding options for financing

Minor inconsistencies, unnecessary background information and scriveners errors have been identified by Planning Commission members and have been brought to the attention of the Dyer Partnership. These items will be corrected prior to final adoption.

Revisions have been made to the Public Facilities Plan and Goal 11, Public Facilities and Services of the Brookings Comprehensive Plan to reflect the information from the WWTP. All documents will be presented to Council for adoption after recommendation of the Planning Commission.

RECOMMENDATION

After careful consideration, and any input the public may provide, Staff supports a Planning Commission recommendation of approval of file CP-2-15, Wastewater Facilities Plan, and revisions to the Public Facilities Plan and Goal 11, to the City Council.

Attachment A

The complete document may be reviewed at City Hall, at Chetco Community Library, or on the City's webpage.

Volume 1

CITY OF BROOKINGS

WASTEWATER FACILITIES PLAN

Prepared By:

The Dyer Partnership

Engineers & Planners, Inc.

Engineers, Planners, Surveyors,

Water, Wastewater, Transportation

Project 145.49 November 2015

City of Brookings

Curry County, Oregon

WASTEWATER FACILITIES PLAN

November 2015

Project No. 145.49

The Dyer Partnership
Engineers & Planners, Inc.

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PUBLIC FACILITIES PLAN

CITY OF BROOKINGS WATER SYSTEM

The City of Brookings acquired the water system serving property within the City in 1973 and operates the water system as a City business enterprise. The City has made substantial improvements to the water system over the years.

The water enterprise consists of the following operating systems:

- Source of Supply: The locations where the City takes or has the right to take ground water for municipal purposes, and the system for transmission of the water taken from these locations identified in Table 3.1 to the water treatment plant and distribution system.

- Treatment: Filtering and chemically treating water from the sources of supply during river turbidity which DHS has determined the water treatment is not necessary.

- Distribution: A system of pipes that delivers water from the treatment plant to storage reservoirs, fire hydrants and individual properties for domestic and industrial use. Distribution includes operation and maintenance of water usage meters.
- Management and Customer Service: Overall management of the water enterprise, engineering, planning, meter reading, billing/collections and customer service (new connections, turn-on/turn off, etc).

WATER SOURCE

Following is the current status of the City's various water right development applications and certificates.

Table 3.1: City of Brookings Water Rights

Source /Type	Permit No.	Certificate No.	Priority Date	Quantity
Chetco River (S) (Ranney)	27610	83682	9/14/1961	4.0 cfs
Chetco River (S) (Ranney)	31293	87358	1/21/1966	1.57 cfs
Chetco River (G) ("Tide Rock")	G5601	64614	8/14/1972	6 cfs
Chetco River (S)	51383		12/12/1990	1.0 cfs (Mar 1 - Jun 30)
Chetco River (R)	R11535		5/13/1993	62.3 Ac-ft
Chetco River (R) (10 Reservoirs)	51595		5/13/1993	62.3 Ac-ft
Ferry Creek (S)	1740	2078	8/22/1913	3.0 cfs
Ferry Creek Reservoir (R)	372	1407	8/9/1916	1.5 MG
Ferry Creek Reservoir (R)	408	2071	8/25/1917	28 Ac-ft
Ferry Creek Reservoir (R)	31224	46861	2/10/1966	167.4 Ac-ft
Ferry Creek Reservoir (R)	R4720	46860	2/10/1966	167.4 Ac-ft
Joe Hall Creek (S)	4674	4953	6/23/1920	2.5 cfs
Ransom Creek (S)	18123	20734	2/24/1948	0.53 cfs

Currently, the Chetco River supplies 100 per cent of the City's water needs through a Ranney type groundwater intake collector located along the North Bank Chetco River approximately 4 miles upstream from the Highway 101 bridge. The Ranney Collector is designed for a capacity of 5.7 cubic feet per second (cfs) with all three pumps running, although a portion of the 12-inch AC piping from the intake to the treatment plant is questionably undersized for this flow rate. The Ranney Collector is operated with only 1 pump running rated 1250 gpm or 2.7 cfs. The City installed 9,500 ft of new 16-inch raw water line from the point of diversion to the treatment plant in 2008. There is 4,900 feet of 12-inch AC line between the intake and treatment plant that should be upsized to 16-inch DI in order to operate more than one 1250 gpm (2.7 cfs) pump at the intake.

In 2012, Certificates 83682 and 87358 were obtained as part of a negotiated agreement with Oregon Water Resources Department (OWRD) and Waterwatch, and represent the only water rights currently used by the city for municipal water production.

WATER TREATMENT

The water treatment plant, installed in 1976, is a Neptune Microfloc Aquarius Model AQ-300 that utilizes the conventional rapid sand filtration treatment process. The plant consists of two identical, side-by-side units with a combined capacity of approximately 2.6 mgd. DHS recently downgraded the requirement to operate the treatment plant and water is allowed to be delivered year round with only disinfection. The water treatment plant is also the location of the main distribution pumps which are operated at 2.1 MGD.

WATER DISTRIBUTION

The main line distribution system consists of approximately 26.5 miles of pipe ranging in size from 2 to 16 inches. Pipe materials vary with the most common types being asbestos cement (AC) and polyvinyl chloride (PVC). The distribution system is over-extended in the higher elevation portions of the service area and is not capable of delivering fire flows in some areas. The master plan update has identified over $6 million dollars in needed distribution pipe upgrades and replacements.

WATER USAGE

Water projection demands in 2013 maximum day demand is 2.1 MGD and expected to increase to 2.3 MGD by 2018. Residential water use has significantly decreased from 96.9 gpcd in 2007 to 96.9 gpcd in 2012. The City began offering water conservation incentives to customers in 2007. Unaccounted for water use has also reduced from 17% loss in 2007 to 10.1% water loss in 2012. The City has contracted an annual leak detection survey to credit for the loss reduction.

FIRE FLOWS

The water system must ...r sufficient capacity to furnish water ... irefighting while maintaining adequate flows for domestic, commercial and industrial demands. In addition, the required fire flow must be delivered at an accepted residual pressure, which is 20 psi. The City of Brookings has adopted the Oregon Fire Code. The Oregon Fire Code provides the minimum fire flow standard applied to new development. A matrix used to determine fire flow requirements can be found in Oregon Fire Code, Appendix B, Table 105.1- Minimum required fire flow and flow duration for buildings. There is no community-wide standard, although a basic fire flow of 1,500 gpm for a two hour duration is a minimum in the Oregon Fire Code.

WATER STORAGE

With the completion of the 1.6 million gallon Seacrest reservoir in 2009, the current available storage is 3.6656 million gallons, or 1.78 times the peak day demand. The sizing of the Seacrest reservoir was reduced from a proposed 2.0 mg due to site constraints. The City received a grant to fund installation of a .5 mg water reservoir east of the Brookings Airport. Construction is slated to begin on this project in the fall of 2014. The site will accommodate an additional .5 mg reservoir in the future. In addition, the 2014 master plan update recommends an additional new water storage facility of at least 250,000 gallons in the Old County Road area.

WATER SYSTEM MASTER PLAN

The City adopted a Water System Master Plan Update prepared by PACE, An Engineering Services Company on July 28, 2014.

Harbor Water People's Utility District

WATER SOURCE

Currently the Chetco River supplies the Harbor Water Peoples Utility District (HWPUD) water needs. The river intake is a Ranney collector with a rated capacity of 6 million gallons per day. Four pumps serve the intake; each rated at 2.4 mgd capacity. The pumps alternate, with two operating together to handle peak demands.

The HWPUD currently holds two surface water rights from the Chetco River and has two ground water sources. These are summarized in the following table.

Harbor Rural Water District Water Rights			
Source	Priority Date	Amount	Amount
Chetco River	1966	3.500 cfs	2.26 mgd
Chetco River	1980	7.00 cfs	4.53 mgd
Well G3240	1966	3.50 cfs	2.26 mgd
Well G9438	1980	7.00 cfs	4.53 mgd
	Total	21.00 cfs	13.58 mgd

WATER TREATMENT

The Ranney intake is considered equivalent to a ground water system. For this reason, water treatment is not practiced.

WATER DISTRIBUTION

The distribution system is an extensive loop system that extends from the Chetco River to the California border, and consists of approximately 50-55 miles of pipe ranging in size from 2 to 16 inches. Pipe materials vary with the most common types being asbestos cement (AC) and polyvinyl chloride (PVC), and ducitile pipe.

WATER USAGE

Current water production data shows that the average daily water demand is 700,000 gallons with the peak day demand being 1,700,000 gallons. Serving an estimated 2,500 persons, the current population, the average daily water usage per person is approximately 280 gallons, with a peak demand of 680 gallons.

FIRE FLOWS

The water system must offer sufficient capacity to furnish water for fire fighting while maintaining adequate flows for domestic, commercial, and industrial demands. Also the required fire flow must be delivered at an accepted residual pressure which is 20 psi. The HWPUD has sufficient storage to meet a demand of 1500 gpm for two hours where necessary. The necessary storage to meet that requirement would be 180,000 gallons. HWPUD has the capacity to deliver fire flows.

WATER STORAGE

There are eleven water storage reservoirs in the HWPUD, which give a total storage capacity of 2,060,000 gallons. The following table summarizes the current water storage for the district.

Harbor Water District Storage			
Reservoir	Bottom Elevation	Overflow Elevation	Storage Capacity
Crown Terrace 1	525.5′	537.5′	10,000 gal
Crown Terrace 2	525.5′	537.5′	10,000 gal
Crown Terrace 3	795′	807′	10,000 gal
Crown Terrace 4	795′	807′	10,000 gal
Crown Terrace 5	1,025′	1,037′	10,000 gal
Crown Terrace 6	1,025′	1,037	10,000 gal
Hallway 1	201.36'	234.81'	750,000 gal
Hallway 2	203.62'	234.81'	500,000 gal
Coleman	355.18'	388.60'	300,000 gal
Benham	355.18'	386.60'	200,000 gal
Freeman	203.32'	234.74'	250,000 gal
TOTAL			2,060,000 gal

The required storage for the HWPUD is shown in the following table.

Harbor Water Storage Estimate		
Peak Day Demand	1,700,000 gallons	
Twice the Ave Day Demand	1,400,000 gallons	

Larger of th. ove two		1,7 00 gallons
Fire Storage	1500 gpm x 2hrs	180,000 gallons
Equalization Storage	20% peak	340,000 gallons
	Required Storage	2,220,000 gallons

HARBOR WATER PUD MASTER PLAN

Harbor Water PUD adopted a Master Plan in December, 2000 that is incorporated herein by this reference.

CITY OF BROOKINGS WASTEWATER SYSTEM

The original Brookings sewer system was constructed about 1916 and service was initially limited to the downtown area. The City assumed operation of the sewer system soon after incorporation in 1951. The City operates the wastewater system as a City business enterprise. The wastewater enterprise consists of the following operating systems:

COLLECTION

The City accepts domestic sewage from property in the service area that is connected to the sanitary collection system, and transmits the sewage to the wastewater treatment plant. The collection function includes the operation of sewage lift stations installed at various locations within the collection system to assist the flow of sewage to the treatment plant.

Currently, the collection system consists of a network of 6, 8, 10 and 12-inch mains connected to 18 and 21-inch interceptors and lift stations. There are approximately 32.7 miles of 6-inch to 21-inch gravity mains and 2.75 miles of 4-inch to 14-inch diameter force mains in the collection system. The system provides service connections to individual properties within the service area. The interconnection with the HSD also functions as a part of the collection system.

LIFT STATIONS

The City currently operates 13 lift/pump stations located to serve areas which cannot be served with gravity-fed sewer mains.

TREATMENT

Treatment involves removal of solids from the sewage received at the wastewater treatment plant, and clarification of processed solids after biological treatment and disinfect using U.V. bulbs in the effluent stream, to meet federal and state standards prior to discharge into the ocean. Treatment includes the processing, reprocessing and disposal of solids removed from the sewage.

The wastewater treatment plant has been located at Chetco Point since the early 1950's. Major modifications to the plant were made in 1973, 1991, and 2000.

Treated water, or effluent, produced by the wastewater treatment plant is discharged to the Pacific Ocean. The Oregon Department of Environmental Quality establishes discharge limitations for discharge to ocean waters. ~~The residual of the solids removal process, or sludge,~~

~~is currently taken from bio-solids storage tank and transpc l to a processing facility in Grants Pass during the summer months. Approximately 1,598,040 gallons of sludge was transported for disposal in 2009.~~ A new Class B sludge dewatering facility **was constructed and brought on line in December, 1012** ~~is planned for construction during 2010-11~~ which ~~will~~ eliminated the need for sludge trucking to Grants Pass.

RELATIONSHIP TO HARBOR SANITARY DISTRICT

In 1976, the Harbor Sanitary District was formed to serve an area just south of the City. The City and HSD have entered into a series of intergovernmental agreements whereby the City accepts sewage from HSD for treatment. See below for a description of the HSD system.

BROOKINGS WASTEWATER MASTER PLAN

The City adopted a Wastewater Facilities Master Plan in ~~March, 2008~~ **(date of adoption)**. That Master Plan is incorporated herein by reference. A detailed discussion of the treatment system and plant capacity can be found in the Plan. Until sewer service can be extended to properties, interim urban-level treatment systems may be allowed only if specifically provided for in master plans which set forth appropriate standards and conditions and which have been adopted as post-acknowledgement plan amendments or periodic review work task elements.

HARBOR SANITARY DISTRICT WASTE WATER SYSTEM

The community of Harbor is an unincorporated residential, commercial, and industrial area south of the Chetco River and the City of Brookings. The Harbor Sanitary District (HSD) has served this area since June 1976. The HSD operates only a collection system. Wastewater is piped to the Brookings wastewater treatment plant for treatment. The area's land use is predominantly residential, but a regional shopping center and an extensive commercial and industrial complex surround the Brookings-Harbor Boat Basin. The Harbor Bench area south of Harbor, an area experiencing steady growth, currently is out of the sewer service area; however, it is an area that potentially may become part of the service area. In 1979 the Oregon Health Division directed the HSD to annex an adjoining area, the Oceanview Mobile Home Estates, due to wastewater treatment concerns.

POPULATION

The following population data was taken from the "City of Brookings Comprehensive Utilities Plan" dated September 1981. Population projections were based on the 1970s, a growth period.

Harbor Sanitary District Population Growth				
Year	1980	1990	2000	2010
Population	1,968	2,645	3,555	2,770

COLLECTION SYSTEM

In 1976, the HSD was formed. The collection system consists of four pump stations and a network of gravity lines. Wastewater is pumped across the Chetco River to the south portion of

the City of Brookings se e area. There a 20-inch gravity ma onveys the wastewater to the Brookings treatment plant. The daily flow rate is approximately 0.28 mgd.

The collection system consists of 16.5 miles of 8-inch and 12-inch transite pipe.

PUMP STATIONS
Flows from the entire Harbor collection system enter HSD pump station No. 14. Discharge from this station is to the Brookings WWTP by means of an 8-inch force main over the Chetco River or a 12-inchforce main under the Chetco River. Space for additional force mains is available. Pump station No. 14 is rated at 2,000 gpm and 125 feet. The other three pump stations are small and serve limited areas.

HARBOR SANITARY DISTRICT MASTER PLAN
HSD plans to complete a Master Plan during the winter of 2010.

Until sewer service can be extended to properties, interim urban-level treatment systems may be allowed only if specifically provided for in master plans which set forth appropriate standards and conditions and which have been adopted as post-acknowledgement plan amendments or periodic review work task elements.

CITY OF BROOKINGS STORM DRAINAGE

The City of Brookings operates a storm drainage system within the city boundaries. Drainage basins flow to the ocean or the Chetco River. Generally local area flows are conveyed via pipes to discharge points at surface drainage ways. The majority of the existing piping system is located in the western old portions of the city draining to the Chetco. Highway 101 presents a major flow obstruction to natural drainage pattern, requiring culvert crossings. Some limited historical flooding has occurred, but the problems are related to site-specific causes.

CURRY COUNTY
Curry County services all public storm drainage in the study areas north and south of the Chetco outside City limits. The service level is mainly rural road maintenance that consists of ditch culvert cleaning associated with road maintenance. All other drainage features are privately owned. The Harbor Bench area, which is outside the urban growth area, has experienced flooding and erosion due to upstream growth and diversion of flows due to culvert placement.

CITY/ COUNTY STORM DRAINAGE MASTER PLAN
On January 12, 2009, the City and the County adopted the "Storm and Surface Water Facilities Plan for Brookings-Harbor Area." In the Plan are design and development standards and proposed improvements to the storm drainage facility. There are also maps depicting the various basin areas in City limits and the Urban Growth Area, hydrologic/ hydraulic analysis, and the discussion of the effects on specific areas in the Plan. The Plan is hereby incorporated by this reference.

The Storm and Surface Water facilities Plan for Brooking Harbor Area" contains the following policies:

- Low impact development is preferred.
- Negative impacts to natural watercourses are to be avoided.
- Piping of a natural watercourses is to be avoided, where practicable.
- Protection of ground water sources is critical.
- Proposed facilities should address water quality impacts and mitigation measures.
- Erosion and sediment must be controlled using the City, County, and Department of Environmental Quality requirements.
- Stormwater discharges shall be maintained at current levels.
- A public education program is recommended to disseminate information on the importance of preventing negative impacts from stormwater.

The "Storm and Surface Water Facilities Plan for Brookings-Harbor Area" contains specific design and development standards and proposed improvements to the storm drainage facility. To avoid adverse impacts created by development, the Plan contains five strategies to be generally utilized:

1. There should be no post-development net increase in storm drainage discharge downstream.
2. Low impact development practices as described in the 2007 "Storm and Surface Water Facilities Plan" shall be implemented.
3. The capacity of the downstream drainage infrastructure is improved to convey the increased flow. Usually this means constructing larger culverts and storm drains. Generally, the natural drainage channels are improved, but because of the study area's proximity to the ocean and the steep rocky terrain, these channel improvements may not be necessary.
4. A regional detention facility is constructed to capture the additional runoff and release the flow at a slower natural rate. A regional facility is normally associated with a single drainage way or creek.
5. An onsite detention facility is constructed for each individual development. The goal for a regional or onsite detention facility is that the runoff from the post-development condition be reduced to flow equaling the pre-development condition.

The Harbor Hills Master Plan Area within the UGA is required to prepare a comprehensive surface water management plan prior to any land use approvals. The details required and the review and approval process are described in the "City of Brookings and Curry County Joint Management Agreement", dated June 30, 2010.

BROOKINGS HARBOR
URBAN GROWTH AREAS
URBAN GROWTH BOUNDARY
Servicing Providers
North of Chetco River
Water, wastewater, storm drainage - City of Brookings
South of Chetco River
Wastewater, storm drainage - City of Brookings
Water - Harbor Water PUD
W&H PACIFIC
PACIFIC
OCEAN
CITY OF BROOKINGS
LONE RANCH CREEK MASTER PLAN AREA
HARBOR HILLS MASTER PLAN AREA & AREA OF SPECIAL ENVIRONMENTAL CONCERN
FG
AFD
N
0
1800
3200
BROOKINGS CITY LIMITS

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GOAL 11 PUBLIC FACILITIES AND SERVICES

GOAL:

To plan and develop a timely, orderly and efficient arrangement of public facilities and services to provide a framework for urban and rural development.

FINDINGS:

1. The City has adopted a Public Facilities and Services Plan that establishes the framework for the distribution of water and sanitary sewer services and storm drainage systems throughout the expanded Urban Growth Boundary.

2. The City has adopted a Water Master Plan/Conservation Management Plan. On July 28, 2014, the City adopted "City of Brookings Water Master Plan Update". This update included data in the appendices from the 2007 "Water System Master Plan Update" regarding the Harbor Water People's Utility District which serves the Brookings Urban Growth Area south of the Chetco River Bridge.

3. The City has adopted a Water Curtailment ordinance that provides the city with the mechanisms to curtail water use in emergencies, including low surface water flows in the Chetco River.

4. On January 12, 2009, the City adopted the "Storm and Surface Water Facilities Plan for Brookings-Harbor Area." New policies from this Plan are found in the "Public Facilities Plan for Urban Growth Expansion."

5. **On (date)** ~~In March, 2008~~, the City adopted a **Wastewater Facilities Plan developed by the Dyer Partnership dated November 2015.**

6. The city currently provides the following facilities and services within the City Limits:

   A. Public Works

   1) Water Treatment - 2.0 to 2.6 mgd capacity.
   2) Water Distribution, Pumping and Storage - (Total connections 3,354 -3,053 of the connections are residential, 2012).
   3) ~~Wastewater Treatment – 15.4 mgd peak wet weather capacity. The yearly average flow is 1.42 mgd.~~ The service area includes the incorporated area of Brookings plus the Harbor Sanitary District to the South. (Total of ~~2,228~~ **3358** connections within the City limits. The Harbor Sanitary District has approximately 895 connections, which are pumped to the City's treatment plant., **November 2015** ~~July 8, 2010~~). **Current capacity provides for an average dry weather flow of 1.7 MGD, peak day average flow of 10.9 MGD and a peak wet weather hydraulic capacity of 15.5 MGD.**
   4) Wastewater Collection and Pumping - All public facilities within the city limits

are the responsibility of the City of Brookings. All such facilities in the Harbor Sanitary District are owned, operated and maintained by that district.

5) Street and Infrastructure Maintenance - The City's Puhlic Works Department provides maintenance of City streets, water mains, sewer mains, storm drains, and other infrastructure systems.

B. Solid Waste Removal - is presently done by franchised contract

C. Fire Prevention and Protection Services

These services are provided with two paid employees (**Operations** Chief and **Captain** ~~Assistant Chief~~) and **24** ~~40~~ volunteers. Ratings outlined in the Inventory document show an adequate program with primary need being in the area of improved water system. **However, improvements have been made that resulted in the classification being upgraded from a 7 to a 4B.**

D. Police Protection

1) Existing police facilities in the city hall ~~are presently adequate as a base of operations~~ **were rated as having a moderate risk of failure in a major seismic event by FEMA through the Rapid Visual Screening Score. The location was rated as a very high risk seismic zone in the same screening process.**
2) If population growth exceeded significantly the number projected or if the city boundaries were considerably expanded through annexation, or if the incident of crime jumped radically, it is conceivable that new facilities and additional manpower might be required.

E. Parks and Recreation Facilities and Services

1) One state park, Harris Beach State Park, is located within the City of Brookings. See adopted Harris Beach Master Plan, 2003.
2) The city owns and maintains approximately 54.4 acres of parkland.
   a. Azalea Park (formally Azalea State Park)
      - 33 -.2 acres
      - 2 Softhall fields
      - Outdoor amphitheater/bandshell
      - 2 Volleyball Courts
      - Kidtown (.25 ac.)
      - Walking and biking trails
      - Capella by the Sea (weddings and passive meditation)
      - Gazebo
      - -4 Horseshoe pits
      - -2 Bar-ba-que grills
      - -11 Picnic tables
      - -Flower garden/natural area
      - -Restroom facilities
      - -Snack shack
   b. Bud Cross Park
      - 6.4 acres
      - 3 lighted tennis courts
      - 2 baseball fields
      - swimming pool and bathhouse
      - restroom facilities
      - concession stand
      - -Skate park
      - -3 Picnic tables
      - -Basketball courts
   c. Chetco Point Park
      - 8.9 acres
      - - 4 Horseshoe pits

- walking trails
- 5 picnic tables
- ocean access/ beach access
- Fire pit
- Restroom facilities
- 4 Seating benches

d. Easy Manor Park
   - .8 acres
   - 2 Bar-ba-que grills
   - playground facilities (remodeled in 2010)
   - 4 Picnic tables
   - Restroom facilities
   - 4 Seating benches

e. Stout Park
   - 3.3 acres
   - walking paths
   - 8 Seating benches
   - Model railroad garden
   - Manley Arts Center

f. Numerous mini parks around the City (pocket parks).

3) The City adopted a Parks Master Plan in Aug., 2002. This Plan is incorporated herein by reference.

F. Other facilities and services provided in the City of Brookings are

1) Schools
2) Transportation for the elderly.
3) Regional recreational facilities such as state parks and harbor facilities.

7. The following entities will provide services outside of the city limits within the Urban Growth Boundary.

A. Wastewater Collection

1) The Harbor Sanitary District.
   a. Collects wastewater within their district south of the Chetco River and pumps to the City's wastewater treatment plant.
   b. Has stated, expansion of the District will only occur when it is in compliance with the Districts adopted Growth Management Policy (Resolution 07-18-R).
2) The City of Brookings
   a. Will provide wastewater collection in the Urban Growth Boundary, south of the Chetco River outside of the Harbor Sanitary District boundaries when land is annexed to the city.
   b. Will provide wastewater collection in the Urban Growth Boundary north of the Chetco River when land is annexed to the city.

B. Water Distribution

1) The Harbor Water District People's Utility District
   a. Pumps from an intake on the south bank of the Chetco River.
   b. District boundaries include the entire Urban Growth Boundary expansion south of the Chetco River except for the areas north of its intake facility and the top of the Harbor Hills.
   c. Is willing to expand its boundaries to include the entire Urban Growth Boundary south of the Chetco River.

2) The City of Brookings
   a. The City currently provides water service to some areas of the Urban Growth Boundary north of the Chetco River.
   b. The City will provide service to the entire Urban Growth Boundary north of the Chetco River.
   c. ~~Due to City Charter language, the City must provide water service to properties in the Urban Growth Area that want to annex unless the legal voters of the City authorize another water provider to serve.~~

C. Fire Protection
   1) Brookings Rural Fire Protection District.
      a. Is located around the City in the area north of the Chetco River.
      b. Is served under contract by the Brookings Fire Department
   2) Harbor Rural Fire Protection District
      a. Provides service to the entire Urban Growth Boundary south of the Chetco River.
      b. Fire station is located on Benham Lane.

D. Police protection

All of the Urban Growth Boundary outside of the city limits is provided police protection by the Curry County Sheriff's Department.

E. Storm Drain Maintenance
   1) The Oregon Department of Transportation maintains all drainage facilities within a state road or highway rights-of-way.
   2) The Curry County Road Department maintains all drainage facilities within county road or street rights-of-way.
   3). Drainage facilities on private property are maintained by the property owner.

POLICIES:

To insure timely, orderly and efficient arrangement of public facilities and services the following policies will be implemented by the City of Brookings.

1. Public Works

A. Water treatment facilities. Facilities will be maintained with the proper observation and planning to expand facilities on a timely basis to provide continued service to existing customers and projected growth. Expansion programs will be funded through the most cost-effective methods utilizing all available federal, state and local funds.

B. Water distribution, pumping and storage. New development requiring extension of water mains, pumping and storage facilities will be paid for and constructed by the developer pursuant to the provisions of the current City of Brookings Engineering Requirements and Standard Specifications for Public Works Infrastructure document.

C. Water Master Plan/Conservation Management Plan. The City will maintain a Water Master Plan/Water Conservation Management Plan, which will be updated as required.

D. A Backflow Prevention Program was adopted in 2012.

E. Wastewater treatment facility. Expansion programs will be funded through the most cost-effective methods utilizing all available federal, state and local funds.

F. Wastewater collection facilities. New development requiring extension of sewer mains and new pumping stations will be paid for and constructed by the developer pursuant to the provisions of the current City of Brookings Engineering Requirements and Standard Specifications for Public Works Infrastructure document.

G. Streets and other infrastructure facilities. The City's Public Works Department will inspect and maintain all public street and subsurface infrastructure facilities. The extension of existing streets for new development shall be paid for and constructed by the developer pursuant to the provisions of the current City of Brookings Engineering Requirements and Standard Specifications for Public Works Infrastructure document.

H. Storm drain facilities. New development requiring new storm drain systems or the extension of existing systems including provision of detention basins, will be paid for and constructed by the developer pursuant to the provision of the current City of Brookings Engineering Requirements and Standard Specifications for Public Works Infrastructure document.

2. Fire Prevention and Protection

The Fire **Operations** Chief will continue to serve as the head of prevention and protection services. He will continue to maintain the high level of training and service that the community has come to expect through the conduct of local and regional training sessions and a continued education for himself.

3. Police Protection

The Chief of Police shall be responsible for continually monitoring the department's facility requirements and operations. In conjunction with the annual preparation of his budget request, a written evaluation shall be prepared for the City Manager, who in turn, may call attention to specific items for consideration by Planning Commission, Council or staff.