



Comprehensive Plan
Citizen Advisory Committee
AGENDA
Thursday, July 28, 2016

HILLSBORO CIVIC CENTER
 150 East Main Street

4:00-6:00 PM
 Conference Room 113B/C

Time	Topic	Lead	Action
4:00	A. Introductions/Welcome	All	I
4:05	B. Water Supply & Distribution Follow-up Discussion a. Background Report b. Draft Goals and Policies	Nick	I, D, R
4:30	C. Public Facilities a. Background Report b. Draft Goals and Policies	Laura K.	I, D, R
5:30	D. Updates from Prior Topics a. Economic Development	Aaron	I, D
5:40	E. Staff Updates a. Planning Commission Public Hearing b. Celebrate Hillsboro Public Outreach c. CAC Member Recognition	Aaron	I
5:50	F. Public Comment	-	
6:00	G. Adjourn		

I=Information, D=Discussion, R=Recommendation

Attachment	Page
1. Staff report for July 2016 meeting	1
2. Water Supply & Distribution a. Background Report b. Draft Goals & Policies	3 23
3. Public Facilities a. Background Report b. Draft Goals & Policies c. Existing Comp Plan Goals & Policies	25 51 55
4. Updates from Prior Topics a. Economic Development	64

Next Regular Meeting:

Thursday, August 25, 2016
 4:00-6:00pm
Hillsboro Civic Center
Conference Room 113B/C
150 E. Main Street, Hillsboro

For further information on agenda items, contact Aaron Ray, Senior Planner and Comp Plan Project Manager, at (503) 681-6476 or email at aaron.ray@hillsboro-oregon.gov.



MEMORANDUM

To: Comprehensive Plan Update Citizen Advisory Committee (CAC)
From: Long Range Planning Staff
Date: July 22, 2016
Subject: Water Supply & Distribution Follow-Up Discussion, and Public Facilities Background Report and draft goals and policies Review

Requested Citizen Advisory Committee Action:

Review and provide feedback on Background Reports and draft Comprehensive Plan goals and policies concerning Water Supply & Distribution (incorporating changes following the May 2016 meeting) and Public Facilities. Also, review and provide additional feedback concerning Economic Development goals and policies following the June meeting.

Background:

This month, the committee will examine goals and policies from:

Core Area	Topic
Building Economy and Infrastructure	<ul style="list-style-type: none">• Water Supply & Distribution (revised following CAC review in May 2016)• Public Facilities

For each, staff is requesting that CAC members read the materials prior to the meeting. It is, of course, preferable that you read the background reports in their entirety; however, if you do not, please do read Sections 7 and 8 of all of the background reports to be discussed. The CAC meeting will include, if needed, discussion of suggested revisions to the background reports, although the meetings will focus primarily on draft goals and policies.

Water Supply & Distribution

The CAC reviewed an initial draft of the Water Supply & Distribution Background Report and goals and policies at their May 2016 meeting. Based on input from that meeting, both the Background Report and goals and policies have been substantially revised. The materials included in this month's packet reflect input from the initial review. In addition to requested edits made by Planning staff, representatives from Water department contributed additional edits. Both sets of edits are included as tracked changes in the attached documents.

The attached Background Report and draft goals and policies will also be reviewed by the Hillsboro Utilities Commission and the Tualatin Valley Water District (TVWD) board at their August meetings.

Input from the CAC, the Utilities Commission, and the TVWD board will be reflected in drafts to be shared with the Planning Commission at their September 14 work session.

Public Facilities

Public facilities planning is a necessary element of comprehensive planning and is required by Statewide Planning Goal 11. Many aspects of public facilities and services are covered in other sections of the Comprehensive Plan. The scope of the Public Facilities section, therefore, focuses on service planning and delivery, internal and interagency coordination, resource and right-of-way management, and funding.

Jurisdictions are required to complete and adopt a formal Public Facilities Plan as a technical and implementing report of their Comprehensive Plans only when in periodic review. The City is updating the Comprehensive Plan outside of periodic review and as such, is not mandated to complete a PFP at this time, although a policy is included to develop and maintain such a plan in the future.

The Background Report and draft goals and policies for this section were developed collaboratively by an internal working group including staff from the Planning Department, Public Works Department, and City Manager's Office. The attached documents reflect input from TAC at their June meeting. Following CAC review, the Background Report and draft goals and policies will be presented to the Planning Commission for review at their August 24 work session.

Economic Development

An updated draft of Economic Development goals and policies is included in this month's packet, with tracked changes reflecting input from the TAC and CAC in June. The most significant input includes:

- Revisions based on CAC feedback include adding Policy 1.3, in addition to existing Policy 3.7, to emphasize the need for an ample employment land supply.
- A CAC member suggested exploring a policy under Goal 3 about the downtown government cluster's role in economic development. Staff decided not to include such a policy after researching existing plans (e.g., the Downtown Framework Plan, Hillsboro 2035) and based on other CAC member input at the last meeting.
- Additional edits intended to align definitions and terminology between Economic Development, Public Facilities, and other sections previously reviewed.

CAC members will have the opportunity to discuss these Economic Development goal and policy revisions briefly before they are sent to the Planning Commission for review.

Cost:

Costs for preparation of these documents includes staff time only.

Attachments:

1. Water Supply & Distribution Background Report and draft goals and policies (with updates following May 2016 meeting)
2. Public Facilities Background Report, draft goals and policies, and existing Comp Plan language
3. Updated Economic Development draft goals and policies

Water Supply and Distribution

Background Report (DRAFT)

Review History

Date	Reviewed By
2.17.2016	Internal Committee – <i>Feedback incorporated</i>
5.12.16	Technical Advisory Committee – <i>Feedback shown as tracked changes</i>
5.26.2016	Citizen Advisory Committee – <i>Feedback shown as tracked changes</i>

1. Introduction

Safe and reliable ~~drinking~~ water is essential to the health and prosperity of Hillsboro and its residents. Providing quality water—a process that involves the intake, treatment, storage, transmission, and distribution of water—requires significant planning and coordination.

This report examines the topic of water supply and distribution as it relates to land use and transportation planning within the City of Hillsboro. The scope of this report, which is one of a series of background reports identifying key policy questions and recommended updates to the Hillsboro Comprehensive Plan, is limited to the supply and distribution of ~~drinking~~ water. Natural resources, surface water management, and wastewater management are covered at length in separate background reports.

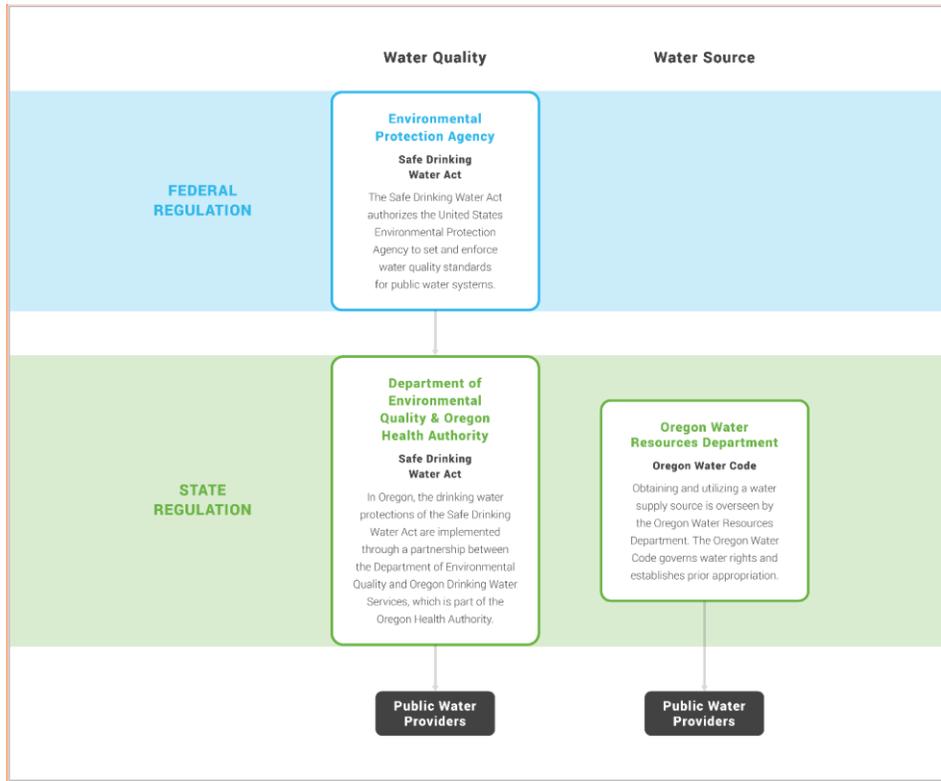
The existing Comprehensive Plan addresses ~~drinking~~ water delivery through the broader topic of public facilities and services, but it does not include specific goals and policies for the supply and distribution of ~~drinking~~ water. The outcome of this report is a set of policy questions and recommendations that will inform the update of the Building Economy and Infrastructure section of the City’s updated Comprehensive Plan.

Prepared initially by staff from City of Hillsboro Planning, City of Hillsboro Water, and Tualatin Valley Water District, this background report will be reviewed and refined through a process that includes guidance from a Technical Advisory Committee, Citizen Advisory Committee, the Planning Commission, and City Council.

Commented [NB1]: Removed “drinking” from text (other than in the title of the Safe Drinking Water Act, for instance), per CAC feedback.

2. Regulatory Context

Figure 2 — Water Quality and Water Source Regulatory Structure



Commented [NB2]: Added regulation summary graphic, per CAC feedback.

1.1.2.1. Federal Water Regulation

In 1974, Congress passed the Safe Drinking Water Act to “protect public health by regulating the nation’s public drinking water supply.”¹ The Act authorizes the United States Environmental Protection Agency (EPA) to set and enforce water quality standards for public water systems.

The Safe Drinking Water Act regulates and influences multiple facets of public water systems including treatment and disinfection; reservoir and distribution system maintenance; infrastructure financing; operator training; and providing information to the public. The Act also promotes the protection of

¹ *Understanding the Safe Drinking Water Act*, U.S. Environmental Protection Agency, epa.gov

surface water and ground water sources. Furthermore, it requires regulators to conduct on-site inspections and review and approve plans for system improvements.

Under the Safe Drinking Water Act, the EPA has established maximum allowable contaminant levels for more than 85 distinct contaminants, requiring public water systems to test for and report compliance with these levels. The categories of contaminants include microorganisms, disinfectants, disinfection byproducts, inorganic chemicals, organic chemicals, and radionuclides.² The EPA has also established non-mandatory standards for an additional 15 contaminants. These guidelines help public water systems monitor and manage aesthetic considerations such as taste, color, and odor.³

1-2-2.2. State Water Regulation

The Safe Drinking Water Act also allows states to obtain “primacy,” giving them the authority to administer the Act so long as the standards adopted are at least as stringent as EPA’s standards.¹⁴ Oregon is one such state that has received primacy, and drinking water protection is implemented through a partnership between the Department of Environmental Quality and Oregon Drinking Water Services, which is part of the Oregon Health Authority.

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While the Oregon Health Authority regulates the quality of water provided, obtaining and utilizing a water supply source is overseen by the Oregon Water Resources Department. In 1909, the Oregon Water Code established that water belongs to the public and using water requires a permit (or water right). It also established the “prior appropriation doctrine,” granting older water users entitlement to water before newer users⁴. The Water Resources Department administers and enforces the Water Code, including determination of when access to specific water rights is authorized or denied based on water levels in the rivers.

1-3-2.3. Local Authority

The City of Hillsboro Charter establishes a separate Utilities Commission to oversee the Water Department. The Commission has authority over the operation and management of the City water system, including the acquisition and sale of real property, setting rates for the use and consumption of water, and setting system development charges for new and expanding construction. The Hillsboro Utilities Commission is made up of three to five Hillsboro residents that serve three-year terms. Appointments are made by the Mayor with consent of the City Council.

The Tualatin Valley Water District (TVWD) is a special district that focuses solely on providing drinking water. TVWD is governed by a five-member Board of Commissioners elected to four-year terms by District voters. The Board is responsible for establishing rules and regulations for the District service boundary, including monthly rates and system development charges for new development projects.

² *Table of Regulated Drinking Water Contaminants*, U.S. Environmental Protection Agency, epa.gov

³ *Secondary Drinking Water Standards*, U.S. Environmental Protection Agency, epa.gov

⁴ Rick Bastasch, *The Oregon Water Handbook: A Guide to Water and Water Management*, (Oregon State University Press, 2006), pg. 55.

Figure 3.1 illustrates the portions of Hillsboro that are located within the service areas of Hillsboro Water and TVWD.

2.3. Background

Hillsboro’s first publicly-delivered water reached residents by way of a wooden pipe in 1913, when the People’s Water and Gas Company routed water east from Sain Creek (in the Tualatin River watershed) to Hillsboro’s population, then just 2,150 residents. In the 1940s, the City of Hillsboro purchased the existing water system, formed its own Utilities Commission, and constructed an intake at Haines Falls along the Tualatin River as well as 26 miles of 18-inch steel pipeline. The 75 years since the City of Hillsboro began operating its own water system have brought several significant water system projects and upgrades, all of which make Hillsboro’s water system an important part of a network that serves over 360,000 customers in Washington County.

TVWD was formed in 1991 when the Wolf Creek Water District and Metzger Water District merged to provide drinking water to their residents and businesses. It operates a network over 75 miles of water mains, serving over 218,000 customers within a 45 square-mile area including unincorporated Washington County, Hillsboro, Beaverton, Tigard, and Portland.

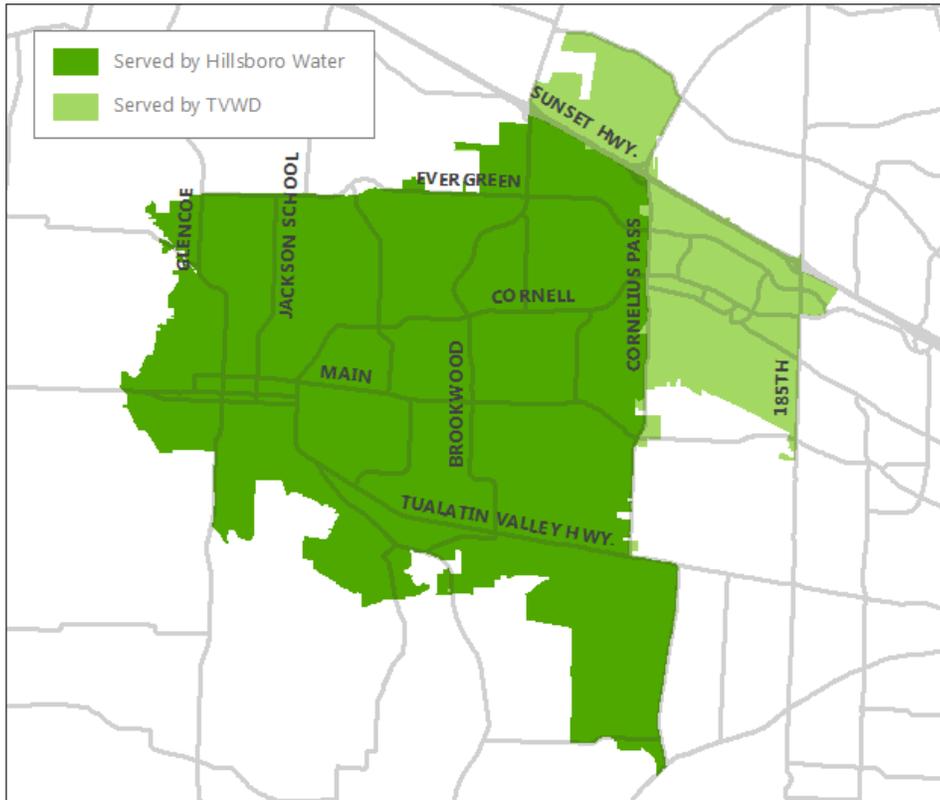
2.1.3.1. Supplier

The Joint Water Commission (JWC) is the primary drinking water supplier in Washington County. The JWC was formed in 1976 by the Cities of Hillsboro and Forest Grove, and now includes the City of Beaverton and the Tualatin Valley Water District as partner agencies. These partner agencies collaborate to build, maintain, and operate facilities, as well as share assets to treat and deliver drinking water. This intergovernmental organization is managed by the City of Hillsboro.

Hillsboro residents and businesses purchase their water from one of two JWC member agencies depending on their location within the city (see Figure 3.1). Residents and businesses south of U.S. 26 and west of Cornelius Pass Road or south of S.W. Tualatin Valley Highway and west of S.W. 209th Avenue are served by the Hillsboro Water Department, whereas residents and businesses that are either north of U.S. 26, east of Cornelius Pass Road, or east of S.W. 209th Avenue are served by the Tualatin Valley Water District. The service boundary between the two water providers is outlined and formalized in Water Service Agreements.

The City of Hillsboro provides drinking water and services to portions of rural, unincorporated Washington County, including the communities of Cherry Grove, Patton Valley, and Dilley. The City of Hillsboro also wholesales drinking water to the City of Cornelius, the City of Gaston, and the LA Water Co-Op.

Figure 3.1 — Water Service Providers for the City of Hillsboro



2-2.3.2. Source

The Joint Water Commission water distributed to Hillsboro residents and businesses is treated surface water from the upper Tualatin River and its tributaries. The upper Tualatin River serves as Hillsboro's water source in the winter and spring months,⁵ when water flows are high, and is supplemented by water from Hagg Lake and Barney Reservoir during the summer and fall.⁶ The JWC and its individual partner agencies have portfolios of water rights and contracts to ensure ample quantity of water is available at all times.

⁵ [Water Sources: Winter Water Source](http://www.jwcwater.org), Joint Water Commission, jwcwater.org

⁶ [Water Sources: Summer Water Sources](http://www.jwcwater.org), Joint Water Commission, jwcwater.org

The Tualatin River begins in the Coast Range Mountains and flows east into the agricultural areas and urban fringes of Washington County before meeting the Willamette River in the City of Tualatin. The JWC withdraws water directly from the Tualatin River south of Forest Grove. The land area that drains water into the JWC’s water treatment plant is 212 square miles in size. Flows in the Tualatin River typically decrease in May or June and do not naturally return to high flows until September or October. During this time period, water is released from behind two dams. Without these releases, flows in the Tualatin River would be too low to provide ~~drinking water~~ [to customers within Hillsboro’s water service area](#). The Oregon Water Resources Department determines when the JWC is required to release water stored in Hagg Lake and Barney Reservoir.

Hagg Lake is formed by Scoggins Dam, which was built in 1975 by the U.S. Bureau of Reclamation. Hillsboro contracts with the Bureau for access to water stored behind the dam, which is released into the Tualatin River via Scoggins Creek. The JWC Partners contract with the Bureau for use of the Spring Hill Pumping Plant to divert water from the Tualatin River into the JWC’s water treatment plant.

Barney Reservoir, formed by the Eldon Mills Dam, was originally constructed in 1970 and was quintupled in size in 1999. It is located on the Trask River system, and a gravity-fed pipeline diverts water from behind the Reservoir into the headwaters of the Tualatin River. It is owned and operated by the Barney Reservoir Joint Ownership Commission, another local intergovernmental organization that the City of Hillsboro manages. The Barney Commission also includes the Cities of Forest Grove and Beaverton, Tualatin Valley Water District, and Clean Water Services.

~~As a wholesale customer,~~ TVWD also purchases water from the City of Portland’s ~~Bull Run watershed as a wholesale customer~~. [The Bull Run](#) watershed is approximately 102 square-mile and collects water from rain and snowmelt that then flows to the Bull Run River and its tributaries. Portland also uses the Columbia South Shore Well Field to augment the Bull Run supply as needed. Approximately 60 percent of TVWD water is ~~from the Portland waters~~ [purchased from the City of Portland](#).

Aquifer storage and recovery (ASR) is a supply option that injects treated ~~drinking~~ water into the groundwater aquifer and pumps it out ~~of the aquifer~~ at a later date for delivery to customers. ASR is ideal for areas like the Portland Metro region for two reasons:

1. excess supply is available in the winter and supplies are limited in the summer
2. access to geological formations particularly well-suited to storing groundwater

The continued expansion of ASR is an industry trend. TVWD has an active and expanding ASR program. During the winter, TVWD stores treated ~~drinking~~ water underground in the aquifer surrounding the Grabhorn Aquifer Storage and Recovery (ASR) well. The stored water is pumped from the aquifer to help meet peak summer demands. TVWD is constructing another ASR well, which is scheduled to be operational in summer of 2017. Hillsboro ~~is~~ [began](#) investigating the feasibility of developing its first ASR well ~~beginning~~ in 2016.

2.3.3.3. Treatment

There are two water treatment plants on the Tualatin River—the Joint Water Commission Water Treatment Plant (JWC WTP) and the Cherry Grove Slow Sand Filter Plant.

The JWC Water Treatment Plant (WTP), which is owned jointly by the JWC member agencies, is located just south of Forest Grove and could treat up to 21.3 million gallons of water per day when completed in 1976. The plant has since been expanded several times to account for Beaverton and TVWD becoming members of the JWC and to meet the growing demands in the region. It now has the capacity to treat up to 75 million gallons per day using a conventional treatment process that includes filtration, sedimentation, and chlorine disinfection. Plans are currently underway to expand this facility to a maximum capacity of 85 million gallons per day by 2019.

The Cherry Grove Slow Sand Filter Plant is owned entirely by City of Hillsboro and is located near Haines Falls. This plant is able to treat up to 3 million gallons of water per day.⁷ Historically, this facility served the residents of Hillsboro, but today it is relied upon to serve Hillsboro's customers in rural Washington County.

2.4.3.4. Storage

The JWC can store up to 40 million gallons of treated drinking water at its two Fern Hill Reservoirs. These storage tanks are located near the JWC water treatment plant and each has a capacity of 20 million gallons. Fern Hill Reservoir #1 was completed in 1982 and was upgraded in 2006 as part of the project to construct Fern Hill Reservoir #2.

Hillsboro Water also has three storage reservoirs within the city. The largest is Evergreen Reservoir, which was built in 2000 and holds 15 million gallons of water. Crandall Reservoir (completed in 2013) and the 24th Street Reservoir (built in the 1960s) hold an additional 10 million and 6 million gallons respectively.

TVWD has a network of 22 storage reservoirs with a combined total capacity of approximately 60 million gallons of treated drinking water. These reservoirs range in size from 0.125 million gallons to 10 million gallons. As mentioned in Section 3.2 of this report, TVWD also has ASR wells with potential storage of over 600 million gallons.

2.5.3.5. Transmission and Distribution

The JWC sends water to Hillsboro Water, TVWD, and its other members and wholesale agencies through large pipes referred to as transmission lines. Water from the Fern Hill Reservoirs is gravity-fed to Hillsboro and TVWD through the JWC's South Transmission Line, a 45-inch concrete pipeline constructed in 1975 that runs along the southern portion of the city. In the mid-2000s, the JWC made a significant upgrade to its transmission system capacity by building the North Transmission Line, a 72-inch concrete pipeline that carries treated water pumped from the JWC Water Treatment Plant and passes through Forest Grove and Cornelius before reaching Hillsboro. This line runs north through the western portion of Hillsboro, where it then becomes a 66-inch concrete pipeline that routes water eastward through northern Hillsboro and extends to the TVWD boundary.⁸ This addition more than doubled transmission capacity and created a looped transmission system that provides redundancy in the event of an emergency shutdown of one of the lines.

⁷ *Current Source*, Hillsboro Water, hillsborowatersupply.org

⁸ *What We Do: Transmission*, Joint Water Commission, jwcwater.org

The North-South Intertie is a 42-inch concrete pipeline that was completed in the early 2000s. The South Transmission Line connects to the North-South Intertie near the Jackson Bottom Wetlands Preserve. The North-South Intertie extends north from there to a connection with the North Transmission Line.

Once the treated **drinking** water reaches the City of Hillsboro through the JWC transmission lines, it becomes the responsibility of either Hillsboro Water or TVWD to deliver water to individual customers. Each of these agencies maintains a network of underground distribution lines [\(which are smaller than transmission lines\)](#) to provide water to the city's residents and businesses.

2.6.3.6. Sampling and Testing

JWC, Hillsboro Water, and TVWD staff collect water samples on a regular basis from locations throughout the Tualatin River watershed, within the water treatment plant, and within the community. These samples are analyzed for **thousands of a range of** contaminants. Tests for some contaminants with legal limits are required, and other tests are optional but are deemed essential to assure the highest level of water quality.

In connection with the required testing, Hillsboro Water and TVWD both release an annual consumer confidence report specifying the amount of regulated contaminants that have been detected, if any, and whether those amounts are in compliance with the Environmental Protection Agency's Safe Drinking Water Act standards.

The **drinking** water delivered to Hillsboro and TVWD residents is of exceptionally high quality, as demonstrated in the 2015 Drinking Water Quality Reports.^{9,10} (More information on water quality testing is provided under *Section 2.1. Federal Water Regulation.*)

3.7. Demand

Non-residential customers account for roughly three-fifths of Hillsboro's retail water consumption, as demonstrated in Table 3.7.1. Among regional water providers, Hillsboro has the highest percentage of non-residential water use and is the only provider that has over half of its water consumed by non-residential customers.

Commented [NB3]: Added section describing residential vs. non-residential consumption and comparing Hillsboro to other water providers, per CAC request.

⁹ *2015 Drinking Water Quality Report*, Hillsboro Water, hillsboro-oregon.gov

¹⁰ *2015 Drinking Water Quality Report*, TVWD, tvwd.org

Table 3.7.1 — Comparison of Average Consumption by Customer Class Between 2004 and 2013¹¹

Provider	Average Day Production (MGD ¹)	Share of Total Consumption	
		Residential	Non-Residential
Portland Water Bureau	63.7	58%	42%
TVWD	18.6	71%	29%
Hillsboro	15.1	41%	59%
Gresham	6.6	70%	30%
Beaverton	6.9	71%	29%
Rockwood	6.4	68%	32%
Tigard	5.4	78%	22%
Sunrise	4.6	N/A	N/A
Oak Lodge	2.9	N/A	N/A
Tualatin	4.1	53%	47%
Forest Grove	3.1	59%	41%
Wilsonville	3.2	52%	48%
Sandy	0.9	75%	25%
West Slope ²	1.1	N/A	N/A
Raleigh	0.5	N/A	N/A

Commented [KF4]: The numbers provided in this table are an average of 2004-2013. Also, these numbers only reflect the Retail service area, meaning that deliveries to Wholesale customers is excluded. The WMCP numbers are a shorter time span and include the deliveries to wholesale customers.

1 — Millions of gallons per day. 2 — Consumption data are used because production data are not available.

3.7.1. Residential Demand

Reflecting national trends, local per capita residential water demand has been falling recently. These demands are measured by the average gallons consumed each day by single-family and multifamily customers divided by the number of people living in the service area. Hillsboro’s water service area has seen a dramatic drop from 97 gallons per capita per day (gpcd) in 2002 to 66 gpcd in 2014. This trend has manifested itself due to an increased availability of water-efficient appliances, improvements in the plumbing code to reduce small leaks, and a decrease in lot sizes.

This trend has a counterintuitive effect on billing rates. While a customer sees cost savings from using less water, it can lead to an increase of overall rates. This is because most costs associated with providing water service are fixed costs that do not change when the amount of water sold changes. Thus when the

¹¹ Table reproduced from the draft *Regional Water Supply Plan Update 2016, Appendix A: Analysis of Trend in Water Demand in the Retail Service Areas of the RWPC Members*, by the Regional Water Providers Consortium

number of gallons sold drops, it can lead to an increase in the cost per gallon to continue to cover the fixed costs.

2.7.3.8. Future Water Source

It is anticipated that demand for ~~drinking~~ water in Washington County will double over the next 50 years.¹² Effective water conservation programs and newer low-water-use appliances have decreased water use by Washington County homes by 15% to 20% per capita over the past decade, but conservation alone is not enough to meet projected future demands. Without development of a new water supply source, Hillsboro and TVWD will not have the necessary water supplies to respond to increased water demand resulting from projected population growth and development in the region.

A new water source is also needed to increase the resiliency and redundancy of the water supply system in the event of earthquakes, droughts and other potential threats to the system. For example, current water supply infrastructure is not projected to be able to withstand subduction zone earthquakes, and significant upgrades to existing infrastructure cannot occur until a new supply is online. With the addition of a new water supply source, the region will not be entirely reliant on any one source to meet the needs of customers; if one source is limited or unavailable, another source can be relied upon to supply water.

The Willamette River has been studied for several decades and was initially envisioned to become a regional water supply source for the Portland Metro area. When the City of Wilsonville developed the source in 2002 in response to severely limited groundwater supplies, TVWD invested in the intake and portions of the water treatment plant with the intent to develop the source in the future when it had the need for additional supply.

Subsequent studies identified the Willamette River as the highest-rated alternative for supply expansion, both for the City of Hillsboro and TVWD. The City and TVWD partnered in the development of the supply, creating the Willamette Water Supply Program (WWSP). The [City Hillsboro Utilities Commission](#) approved the WWSP in 2012, and the TVWD Board of Commissioners approved it in 2013. In May 2016, the City of Hillsboro secured purchased a water rights on the Willamette River through a deal with from the City of Salem. Securing this acquisition asset ensures that Hillsboro will be able to meet projected water needs well into the future.

Commented [NB5]: Added based on TAC feedback.

Following the approval of the WWSP program, a number of pipeline alignments were evaluated to determine the route of the 30-miles of transmission pipelines that best met the supply needs while avoiding and minimizing, to the extent possible, impacts to the environment and surrounding community. Construction of the first section of the transmission line along the extension of SW 124th Avenue is set to begin in 2016. The majority of pipeline construction is scheduled to occur between 2019 and 2025, with anticipated completion in 2026. The analysis of pipeline alignments may require updating in the future as additional information becomes available and the design continues to progress.

¹² [Hillsboro](#), Willamette Water Supply, ourreliablewater.org

3.4. Hillsboro 2020 and Hillsboro 2035

The Hillsboro 2020 Vision and Action Plan and the Hillsboro 2035 Community Plan lay out the community’s shared vision of Hillsboro’s future. As part of the collaborative process that produced these two plans, numerous stakeholders and thousands of members of the public provided input on the issues and opportunities that are important to those who live, work, and play in Hillsboro. Hillsboro 2020 and Hillsboro 2035 serve as the foundation for Hillsboro’s new Comprehensive Plan.

3.1.4.1. Hillsboro 2020

The following table lists the Hillsboro 2020 actions relating to water supply and distribution as well as the status of these actions.

Table 4.1 — Water-Related Hillsboro 2020 Actions

Action	Action Status
<i>Action 33.1: Take a leadership role in ongoing actions to ensure the adequacy of the regional water supply and delivery system.</i>	Ongoing.
<i>Action 33.2: Active, ongoing support for capital improvement projects to develop and implement adequate water delivery and storage systems.</i>	Ongoing.
<i>Action 33.3: Develop and implement water conservation programs.</i>	Ongoing.

3.2.4.2. Hillsboro 2035

The following table lists the Hillsboro 2035 action relating to water supply and distribution as well as the status of this action.

Table 4.1 — Water-Related Hillsboro 2035 Actions

Strategy and Action	Action Status
<i>Action 3C: Develop and enhance Hillsboro’s globally competitive infrastructure essential to supporting and attracting traded-sector employers including development ready sites, transportation, workforce, communications systems, water supply and incentives.</i>	To be implemented by 2020.

Commented [KF6]: Wouldn’t this be ongoing as well? The current language implies that the goal isn’t a moving target we will constantly have to strive to meet.

Commented [KF7R6]: Nick says that this is the language given in the 2035 plan and this is just a reproduction of that plan.

4.5. Existing Comprehensive Plan Goals and Policies

With over 210 references to water in Hillsboro’s existing Comprehensive Plan, it is important to note that many of the goals and policies that mention water will be covered in other sections of the Comprehensive Plan update.

Goals and policies that refer to waterways, wetlands, floodplains, and groundwater will be covered in the Natural Resources background report; goals and policies that refer to stormwater will be covered in the Storm Water Management background report; and goals and policies that refer to wastewater and sanitary sewer systems will be covered in the Wastewater Collection background report.

At present, the following Comprehensive Plan goals currently address water supply and distribution within Hillsboro’s city limits, either directly or indirectly through the broader topic of public facilities and services:

- **Section 2: Urbanization**
 - **Goal 1D**—“Establishing land use designations in particular areas will be based upon the need to...provide for the orderly and efficient extension of public facilities and service.”
 - **Policy C**—“Any land use implementation measure adopted by the City or other government agency shall be consistent with and support the need to expand public facilities and services as outlined in this goal, and shall be designed in a manner that accommodates increased public demands for urban services and is responsive to both expected growth in the commercial and industrial sectors and to population growth in the area.”
- **Section 3: Housing**
 - **Policy A**—“The development of housing shall be coordinated with the extension of public facilities and services necessary to assure safe, healthy, and convenient living conditions.”
 - **Policy L**—“New residential areas shall have water, sewers, storm drainage, street lights and underground utilities.”
 - **Policy W**—“In determining residential densities, developers may be given credit for land donated and accepted by the City for needed public facilities.”
- **Section 7: Air, Water, and Land Resource Quality**
 - **Policy G**—“New development shall be allowed only if urban services such as water, sewer, and streets, are available, and only in accord with the Urban Planning Area Agreement.”
 - **Policy H**—“All government agencies responsible for assuring air, water, and land resource quality in the planning area shall be contacted when plans affecting waste and process discharges are proposed.”
 - **Policy I**—“Implementation measures designed to maintain and improve the air, land and water resources and manage land use and development shall be consistent with, and reflective of, the community’s desires for a quality living environment, state and federal environmental quality statutes, rules, standards and implementation plans.”

- **Section 10: Economy**
 - **Policy B4**—“Public facilities and services necessary to meet the special needs of industrial activities should be planned for those areas designated industrial on the Comprehensive Plan Map and should be provided at a level sufficient to support proposed activities.”
- **Section 12: Public Facilities and Services**
 - **Goal A**—“Provide public facilities and services in an orderly and efficient manner consistent with the expansion of urbanization into rural areas.”
 - **Goal B**—“Utilize the availability of public facilities and services as a tool for guiding urbanization with the Hillsboro Planning Area.”
 - **Goal D**—“Provide that existing land uses are and will continue to be supported by needed public facilities and services.”
 - **Goal E**—“Provide that future development is appropriately guided and supported by the provision of public facilities and services in a timely, orderly, and efficient manner.”
 - **Policy A**—“The extension of a public facility, utility or service outside the urban area shall occur only in conjunction with an expansion of the Urban Growth Boundary and shall be provided at a level consistent with the intended density and designated land use for the area.”
 - **Policy D**—“Public facilities and services shall be provided at a level sufficient to create and maintain an adequate supply of housing and service an increasing level of commercial and industrial activity.”
 - **Policy E**—“The ability of residents to pay for public facilities and services at varying densities of development should be a prime consideration in determining appropriate densities and land uses in the planning area.”
 - **Policy L**—“Citizens should assist in the development of funding methods and programs for public facility and service projects.”
 - **Policy M**—“The City shall promote coordination among the City and other governmental and interested parties including special districts to facilitate the most effective uses of public facilities serving the planning area.”

5.6. Other Plans, Programs, and Reports

5.1.6.1. Water System Master Plans and Capital Improvement Plans

Like many other service and infrastructure dependent sectors, **drinking**-water providers develop Master Plans, Facility Plans, and Capital Improvement Plans. Master Plans are high-level evaluations of the current system that identify and define capital improvement needs to serve current and future populations for years to come. A Facility Plan is similar to a Master Plan, but focuses on one building or suite of buildings, such as a water treatment plant. A Capital Improvement Plan is more detailed than the Master Plan. It is typically a five-year budgeting plan that prioritizes capital needs.

The Hillsboro Utilities Commission adopted a Water System Master Plan in 2013. Volume II of the Master Plan was the Long Term Water Supply Study. This Master Plan also included a 20-year Capital Improvement Program through 2029.

Each biennium TVWD updates its six-year Capital Improvement Plan. It includes in-District capital projects appropriated as capital outlay in the Capital Improvement Fund.¹³

The Joint Water Commission adopted a Water System Master Plan in 2009. A 5-year CIP was completed in 2011. The JWC is currently updating the Facility Plan for the WTP in conjunction with the expansion of the facility.

5.2.6.2. *Water Management and Conservation Plans (WMCP)*

Since the JWC and its member agencies are water providers that hold certain water rights, submission of a Water Management and Conservation Plan (WMCP) at regular intervals to the Oregon Water Resources Department is required. WMCPs describe current and projected future water use, conservation efforts and curtailment planning, and strategies for meeting future water supply needs. ~~These plans are~~ used to determine if established conservation goals are being met, and whether the State will authorize additional diversions of water.

The JWC partners submitted a joint WMCP in 2010 and a 5-year progress report in 2015. TVWD submitted a WMCP in 2014. Hillsboro and TVWD will be submitting a joint WMCP in the coming years as part of the Willamette Water Supply Project.

5.3.6.3. *Drinking Water Quality Report*

Publication of annual Consumer Confidence Reports are a requirement of the Safe Drinking Water Act. These reports describe ~~drinking~~ water sources, the treatment process, and any water quality or operational violations. They also compare the maximum allowable levels of regulated contaminants to the actual levels present in sampled water. Hillsboro and TVWD Consumer Confidence Reports are available online.

5.4.6.4. *Sustainability Plan*

In 2010, the City of Hillsboro released a Sustainability Plan that serves as the framework for the City's formal sustainability initiative. The plan provides an assessment of the sustainability of the City's operations and establishes a structure and process for improving the efficiency of those operations. The plan covers a number of different operational areas, including the treatment and transmission of water. More information on energy conservation in the water supply and distribution process is provided in *Section 7.7*.

5.5.6.5. *Source Water Protection Plan*

The Joint Water Commission completed a source water protection plan to promote collaboration between agencies and stakeholder organizations to protect, enhance, and preserve the quality of water flowing into the JWC water treatment plant. It was completed in 2014 and includes a 5-year work plan.

¹³ <https://www.tvwd.org/media/136947/cips.pdf>

6.7. Issues, Challenges, Trends, and Opportunities

Several issues, challenges, trends, and opportunities play a role in Hillsboro's future water supply and distribution efforts. A number of these, particularly those relating to land use, are discussed below.

6.1.7.1. Seismic Rehabilitation

Earthquakes, especially one on the Cascadia Subduction Zone, are expected to have major impacts to water providers on several fronts, including water supply, treatment, and transmission and distribution.

The U.S. Bureau of Reclamation has identified Scoggins Dam as in need for seismic rehabilitation. Since Hillsboro Water contracts with the Bureau for access to stored water, Hillsboro Water will be required to pay some of the costs associated with the rehabilitation.

The JWC water treatment plant (WTP) has also been evaluated for seismic risk. Although work to implement life and safety improvements is currently underway, full seismic rehabilitation cannot occur until the Willamette River supply is fully operational in 2026 and the WTP can be temporarily taken offline.

Other system facilities are also at risk of damage from seismic activity, including the storage reservoirs and the transmission and distribution networks. Both Hillsboro and TVWD have small stockpiles of pipelines, but not enough to repair an entire system. The JWC owns one emergency water distribution system capable of distributing water in 1.5 gallon sacks.

7.2. Emergency Response and Recovery

Water providers must have flexible response and recovery plans. The Joint Water Commission, the City of Hillsboro, and TVWD each have Emergency Response Plans that are exercised and updated on a regular basis. Each also has a Curtailment Plan that guides response when water supplies are either limited or unavailable.

Response to a large event, such as a Cascadia Subduction Zone earthquake, would be challenging. The first priority would be to ensure that public health needs are met. The City of Hillsboro and TVWD would find ways to deliver water to meet public health needs, but initially this would not take place through the normal distribution system into homes and businesses. Hillsboro Water and TVWD own emergency response equipment, including Emergency Water Distribution Systems and emergency portable piping that runs above ground, which would aid in the response to a major emergency.

When a water system is damaged, water providers evaluate the entire infrastructure system to best plan for a full recovery. Multiple considerations must be made to respond and recover from such an event, including:

- the amount of damage done to the water treatment plant, transmission lines, and distribution lines
- the amount of water the water treatment plant can produce, or the amount available from ASR and other sources
- the anticipated duration of the reduction in available water

Commented [KF8]: Added to address the CAC's questions about how the water supply system would be repaired after an emergency event.

- [the amount of damage across the City](#)
- [and the availability of supplies \(i.e., pipes and valves\) and personnel to perform repairs](#)

[Since water systems are a network of pipes, repairs must happen systematically and would likely begin at the stable water supply sources and move towards the City of Hillsboro.](#)

[6.2.7.3. Supply Development](#)

Water utilities must anticipate the need for water and have new supply sources fully developed before the increased demands arrive. This is because it takes decades of dedicated work to develop a new supply. Also, a long planning and implementation horizon eases the financial pressure on customers. Beyond the WWSP, Hillsboro and TVWD must monitor anticipated growth in population and commercial and industrial development and, where needed, plan for development of additional water resources in a way that maintains rates and system development charges at an affordable level.

Aquifer storage and recovery is a good example of cost-effective supply diversification, and will remain an industry trend. The cost of developing an ASR well is significantly lower than the costs to build a similarly sized dam and has fewer negative impacts to fish and wildlife.

[6.3.7.4. Aging Infrastructure](#)

Nationwide, [drinking-water](#) utilities have entered the “replacement era”. Investment of \$1 trillion is needed to maintain, restore, or replace the nation’s existing transmission and distribution systems alone¹⁴. Most utilities have never experienced the need for pipe replacement on a large scale. A significant number of pipes are now reaching the end of their useful life of 50 to 100 years. [The Hillsboro](#) water service area’s oldest pipes were installed in the late 1940s.

It is important to tackle this challenge quickly, as postponing investment only makes the problem worse. Older pipes break more often and cause more damage due to sinkholes and flooding. These emergency fixes are more expensive than planned replacements, and breaks can threaten public health and safety. Hillsboro and TVWD work hard to prudently plan for replacement to limit the financial impacts to customers.

[6.4.7.5. Regulatory Challenges and Emerging Contaminants](#)

[Drinking wW](#)ater regulations are not static. Every six years, the US Environmental Protection Agency (EPA) must review the current standards for water quality contaminants. For example, EPA has been reviewing the current regulations on lead and will likely release the draft of the new regulations on an accelerated timeline due to the events in Flint, Michigan. New regulations focused on monitoring and reporting the presence of bacteria [will take](#) effect on April 1, 2016.

In addition, contaminants that are unregulated but anticipated to occur in public water systems across the nation are evaluated for potential regulation every five years. Each review can include up to 30

¹⁴ American Water Works Association, Buried No Longer: Confronting America’s Water Infrastructure Challenge, 2011. <http://www.awwa.org/Portals/0/files/legreg/documents/BuriedNoLonger.pdf>

contaminants and they can be from a variety of sources. The most current review includes 10 toxins produced by algae (which impacted Toledo, Ohio in 2014) and 10 other chemicals. The previous review included hexavalent chromium (resulting from water quality contamination in Hinkley, California), seven hormones, and two viruses including norovirus.

The evaluation of these emerging contaminants will determine if they have a perceived, potential, or real threat to human health. They are often evaluated because a new source or pathway has been discovered or a new detection method or treatment technology has been developed.¹⁵

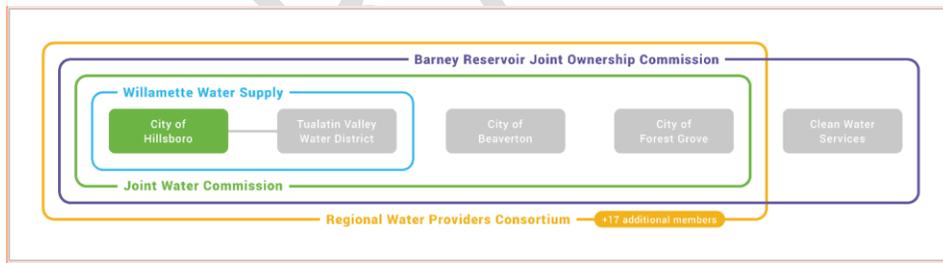
6.5.7.6. Meeting Unique Quantity and Quality Needs

The City has a unique customer base compared to other water utilities across the nation. This is due to the large presence of high-volume, technically-sophisticated industrial water users with specific water supply and quality needs. Water providers in the City also work closely with economic development efforts to respond to the specific needs of current and potential future businesses and industries.

The Joint Water Commission and industrial users have developed protocols to communicate when certain water quality characteristics are present and when certain water treatment processes are needed. These water quality changes do not impact water quality for human consumption, but may have great impact on the efficiency of certain industrial processes.

7.7. Local and Regional Collaboration

Figure 7.6 — Providers and Partnerships



Commented [NB9]: Added based on CAC feedback.

Successful provision of drinking water requires the collaboration of local governments, special districts, stakeholder organizations, regulatory agencies, and the public. Collaborative efforts will continue to be an ongoing trend, as exemplified in the development of the Willamette River supply. Collaboration provides opportunities for innovation and cost-savings.

¹⁵ DENIX Department of Defense, Environment, Safety and Occupational Health Network and Information Exchange. 2011. Chemical & Material Risk Management Program. www.denix.osd.mil/cmrm/ECMR/ECProgramBasics.cfm

Recently, regional agencies have focused collaborative efforts on emergency response preparedness; conservation media messaging, campaigns and education; population estimates (since very few water service boundaries follow city boundaries); and demand analysis.

Both Hillsboro and TVWD are active members of the Regional Water Providers Consortium, a “collaborative and coordinating organization to improve the planning and management of municipal water supplies in the greater Portland, Oregon metropolitan region.”¹⁶

Commented [NB10]: Added based on TAC feedback.

6.6. Water Conservation

7.8.

7.8.1. Provider Conservation

Hillsboro Water and TVWD have implemented and are in the process of implementing a variety of water conservation measures. A full description of conservation programs can be found in the Water Management and Conservation Plan. A subset of these measures is provided below:

- **Automated Meter Reading (AMR) System** — Hillsboro and TVWD are replacing water meters with an AMR system that “is designed to flag both intermittent leaks and sustained leaks in the customer side of the distribution system.”¹⁷
- **System-Wide Leak Repair** — Hillsboro and TVWD repair or replace leaky pipelines in order to limit water loss throughout the distribution system.
- **Public Education** — Hillsboro and TVWD run programs to educate customers of all ages on efficient water use.
- **Rate Structure** — Hillsboro and TVWD have both adopted rate structures that promote water conservation.
- **Technical and Financial Assistance** — Hillsboro and TVWD administer financial and technical assistance programs for water customers.
- **Retrofits and Replacement** — Hillsboro and TVWD offer different rebate programs for a variety of high-efficiency appliances for residential and non-residential customers. For example, Hillsboro currently offers a \$50 rebate for water-efficient washing machines, with \$30,000 budgeted for the program each year.

7.8.2. Residential Conservation

A range of residential water conservation measures have contributed to the decrease in per capita water usage in Hillsboro’s water service area between 2002 (97 gallons per capita per day) and 2014 (66 gallons per capita per day).

Common indoor water conservation methods include regularly checking for and repairing leaks, installing water-efficient appliances, and making behavioral changes such as washing only full loads of laundry or dishes, taking shorter showers, and so on.

¹⁶ *About Us*, Regional Water Providers Consortium, 2016.

¹⁷ *2015 Progress Report: Water Management and Conservation Plan*, Joint Water Commission

Outdoor methods involve water-efficient landscaping and maintenance practices, including planting low water use plants, grouping plants with similar watering needs, installing weather-based irrigation controllers, watering when temperatures are cooler and evaporation is minimized, adjusting automatic sprinkler schedules on a regular basis, and using automatic hose shut-off nozzles.

7.8.3. Rainwater Collection

As a water conservation method, rainwater collection is less effective than other methods due to the seasonality of the region's rainfall, the water needs of a typical lawn, and the limited storage capacity of rain barrels. Watering a 100 square foot patch of lawn from May to September, for instance, would require approximately 24 (55-gallon) rain barrels¹⁸, an amount that would occupy roughly 96 square feet of land. Collecting rainwater from impervious surfaces such as rooftops and paved areas does not require a permit from the Oregon Water Resources Department.

Figure 7.8.3 — Rainwater Collection Illustration



Commented [NB11]: Added based on CAC feedback.

7.9. Energy Efficiency and Sustainability

Energy is one of the primary input needs into treat and deliver water delivery. Therefore, measures that conserve water—on either the supplier or customer side—conserve energy. Furthermore, water providers that implement measures that conserve energy and improve energy efficiency are able to operate in a more economically and environmentally sustainable manner.

The purchase of electricity from non-renewable sources increases the amount of greenhouse gases indirectly emitted by water providers. To offset the impact of indirect operational greenhouse gas emissions, some water providers—including TVWD—purchase Renewable Energy Credits, which are “tradable, non-tangible energy commodities in the United States that represent proof that one megawatt-hour (MWh) of electricity was generated from an eligible renewable energy resource.”¹⁹ Since 2006, 100 percent of TVWD’s operational emissions have been offset by the purchase of RECs.

Commented [NB12]: Added based on TAC feedback.

¹⁸ Rain Barrels (<http://www.conserveh2o.org/rain-barrels-portland-oregon>), Conserve H2O

¹⁹ TVWD Greenhouse Gas Emissions for Calendar Year 2013, Tualatin Valley Water District, 2013.

6.7.7.10. Renewable Energy Development

Drinking water systems provide unique opportunities to develop small-scale renewable energy generation. The site of Hillsboro’s Evergreen Reservoir contains solar panels, and Crandall Reservoir has in-conduit hydro-electric generation. Renewable energy generation opportunities will continue to be considered, where feasible and appropriate both economically and operationally.

Commented [KF13]: I think maybe TVWD also has some energy development....maybe.

7.8. Recommended Plan Updates and Policy Questions to Consider

Hillsboro’s existing Comprehensive Plan lacks a specific set of goals and policies that address the supply and distribution of drinking water. This update of the Comprehensive Plan represents an opportunity to set clear land use policies relating to the provision of drinking water.

Based the challenges and opportunities presented in Section 7, recommended plan updates include the following:

- Develop a goal and accompanying policy language that specifically addresses **water supply**.
- Develop a goal and accompanying policy language that specifically addresses **water quality**.
- Develop a goal and accompanying policy language that specifically addresses **water conservation**.

Water Supply and Distribution

Goals and Policies (DRAFT)

Review History

Date	Reviewed By
2.17.2016	Internal Committee – <i>Feedback incorporated</i>
5.12.2016	Technical Advisory Committee – <i>Feedback shown as tracked changes</i>
5.26.2016	Citizen Advisory Committee – <i>Feedback shown as tracked changes</i>

[NOTE: Goals and policies that refer to waterways, wetlands, floodplains, and groundwater will be covered in the Natural Resources section; goals and policies that refer to stormwater will be covered in the Storm Water Management section; goals and policies that refer to wastewater and sanitary sewer systems will be covered in the Wastewater Collection section; and goals and policies that refer to the extension of public facilities for new development will be covered in both the Urbanization section and the Public Facilities section of the Comprehensive Plan update.]

GOAL 1 Provide safe, high-quality drinking water to all customers.

POLICY 1.1 Regulatory standards. Ensure that Hillsboro drinking water meets all current and future water quality regulatory standards.

POLICY 1.2 Industrial users Water quality. Support the water quality needs of industrial all water users.

POLICY 1.3 Source protection. Coordinate with local and regional stakeholders to protect the quality of Hillsboro’s current and planned drinking water sources.

GOAL 2 Provide a reliable, and adequate, and economical supply of water to meet current and future needs.

POLICY 2.1 Coordination. Coordinate the provision of drinking water with local and regional water agencies and stakeholders.

POLICY 2.2 Leadership. Maintain a leadership role in regional water provision water delivery.

POLICY 2.3 Supply development and diversification. Plan for the development of additional water sources to meet projected water demand and diversify Hillsboro’s portfolio of water sources.

POLICY 2.4 Capital improvement projects. Support capital improvement projects that enhance Hillsboro’s ability to deliver an adequate supply of drinking water to current and future households and businesses.

POLICY 2.5 Storage and operational facilities. Provide sufficient opportunity for water storage and operational facilities to ensure supply reliability and serve emergency needs.

Commented [NB1]: TAC revision

Commented [NB2]: Removing the word “drinking” from all goals and policies, per CAC feedback.

Commented [NB3]: CAC revision

Commented [NB4]: CAC revision

Commented [NB5]: Removing the word “drinking” from all goals and policies, per CAC feedback.

Commented [NB6]: CAC addition

Commented [NB7]: Removing the word “drinking” from all goals and policies, per CAC feedback.

Commented [NB8]: CAC addition

Commented [NB9]: Removing the word “drinking” from all goals and policies, per CAC feedback.

POLICY 2.6 **Industrial users.** Plan for the water supply needs of high-volume industrial water users.

POLICY 2.7 **Aging infrastructure.** Plan for the replacement or rehabilitation of existing infrastructure that is near the end of its useful life.

POLICY 2.8 **Resiliency.** Upgrade existing infrastructure to reduce risk posed by seismic events, climate change, and other natural hazards.

Commented [NB10]: TAC addition

GOAL 3 Encourage sustainable practices in the supply and distribution of drinking water.

Commented [NB11]: TAC revision

POLICY 3.1 **Water conservation.** Support water-conserving development practices while maintaining the financial viability of the municipal water supply and distribution system as the primary source of water to customers.

Commented [NB12]: Modified based on CAC feedback; additional clarification may be needed

POLICY 3.2 **Energy conservation.** ~~Pursue~~Promote measures that conserve energy in the water treatment and transmission processes when financially and operationally feasible.

Commented [KF13R12]: Kevin Hanway desires the description of development practices to be left to the implementation plan and not spelled out in the policy here.

POLICY 3.3 **Reuse and Recycling.** ~~Promote~~Support and provide guidance to customers pursuing the reuse and recycling of water.

Commented [NB14]: TAC addition

POLICY 3.4 **Renewable energy.** Pursue renewable energy generation as part of water facilities when economically-financially and operationally appropriate.

Commented [NB15]: TAC addition

Commented [KF16R15]: I'm getting clear direction that Water Dept. role is to support and guide, and not to promote.

Definitions:

Commented [KF17]: Changed to keep language consistent among the Policies under this goal.

Public Facilities

Background Report Draft- July 8, 2016

Review History

Date	Reviewed By
June 10-30, 2016	Internal Committee Meeting– <i>Comments Incorporated</i>
July 14	TAC Meeting- <i>Comments Incorporated</i>

1. Introduction

The City of Hillsboro is proud to be a full-service city, one of only a few in the region providing direct municipal and community services to citizens, including police and fire protection, community development, library, parks and recreation, and some utilities such as sanitary sewer. The City also partners with other service providers and districts who supply joint or special services. Infrastructure systems and service areas are not necessarily co-terminus with city boundaries; provision of services to city residents and businesses is governed in part by the 2003 Hillsboro Urban Service Agreement (HUSA)¹ and its subsequent amendments.

Public Facilities is a broad topic spanning a wide range of issues, many of which are covered in other sections of the Comprehensive Plan. To avoid duplication, this background report and subsequent Comprehensive Plan section will not address the following topics:

- Surface water management
- Water supply & distribution
- Transportation
- Energy & climate change
- Wastewater
- Water quality
- Air quality
- Library services
- Parks & recreation
- Urbanization
- Police & fire
- Natural hazards
- Emergency management & facilities

2. Background

Public facilities planning allows jurisdictions to create coordinated strategies for infrastructure and service provision over a longer term horizon than is normally used in programs such as Capital Improvement Programs (CIPs), which plan for the short-term- typically 1-5 years. Without adequate planning for public facilities, utilities and services, coordination between multiple city departments, service providers, and districts can prove challenging and may result in gaps in service, inefficiencies and/or unnecessary expenses.

The State of Oregon, via Statewide Planning Goal 11, directs communities with populations greater than 2,500 to plan for public facilities through Public Facilities Plans (PFPs). Pursuant to OAR 660-011-0005(5), such plans are required to address, “water, sewer, and transportation facilities”. Other

¹ An agreement made in accordance with ORS 195.065 between the City and all providers of services. The agreement specifies the unit of government that: will deliver the services, sets forth the functional role of each service provider, determines the future service area, and assigns responsibilities for planning and coordination of services.

facilities and services may be included in a PFP, although they would not be subject to state review. The City of Hillsboro last completed a PFP in 2001 as part of periodic review.

3. Provision of Services

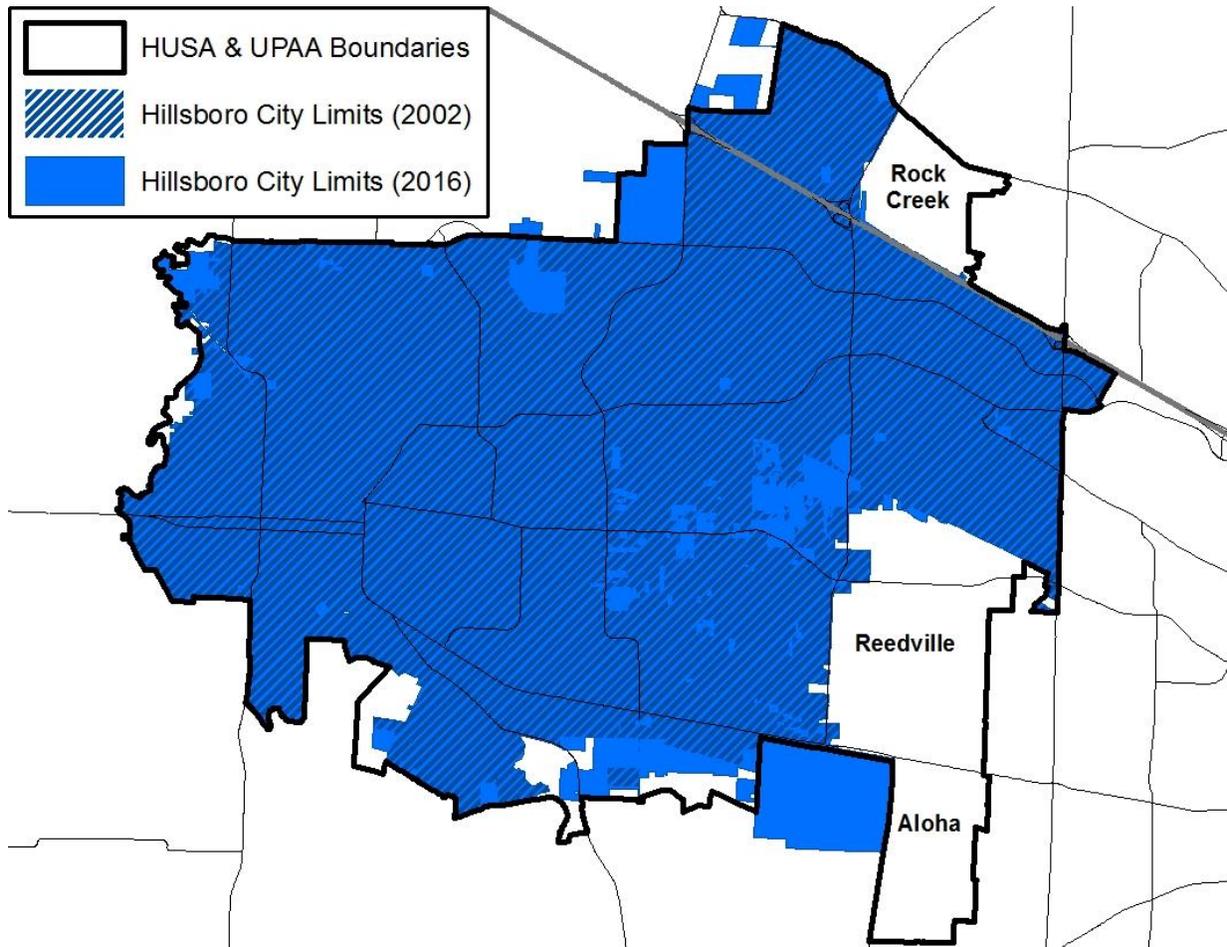
Senate Bill 122 Agreements

Senate Bill 122, passed by the Oregon Legislature in 1993 and codified in Oregon Revised Statutes (ORS-195) in 1994, directed long-term provision of urban services by cities. This bill was intended to promote good planning by improving cooperation among governments and special districts and facilitating the orderly utilization of land within the UGB. Cooperative agreements between governments and special districts were to lead to the annexation of urbanized unincorporated county areas by cities, with the cities eventually providing urban services within their UGBs. Responding to the Senate Bill 122 requirement, the Hillsboro Urban Service Area Agreement (HUSA) was signed in 2003 by the City, Washington County, City of Beaverton, Metro, and multiple special districts. While the Oregon Department of Transportation (ODOT) has jurisdiction over transportation facilities within Hillsboro, ODOT is not a signatory to the HUSA. The HUSA identified that the City would ultimately be the primary or sole provider of multiple urban services, the ultimate source of local governance within the Hillsboro Urban Service Area, and detailed the transition to governance. The Urban Planning Area Agreement (UPAA), signed in 2004 by the City and Washington County, identified the eventual boundaries of Hillsboro, transferred planning and road jurisdiction to the City, and guided the transition of urban unincorporated lands when annexed to Hillsboro.

The Hillsboro Urban Service Area and Urban Planning Area Agreement boundaries generally include the city limits as of the early 2000's, Hillsboro's UGB as of the early 2000's, and unincorporated county portions of Aloha, Reedville, and the Rock Creek neighborhood located west of the Hillsboro and Beaverton School District Boundary line. The Aloha and Reedville areas were already established farming communities when Oregon joined the union in 1859. Aloha and Reedville today are rapidly-growing with a combined 50,000 people in just over nine square miles between the cities of Beaverton and Hillsboro. The Rock Creek neighborhood just north of Sunset Highway began development in the 1960's and surrounds the Rock Creek Golf Course and Country Club. If the Aloha, Reedville, Rock Creek neighborhood, and other surrounding urban areas between Hillsboro and Beaverton were incorporated into a single new city it would be the second most populous city in Oregon. See Figure 1 for the Hillsboro Urban Service Area and Urban Planning Area Agreement boundaries.

Though the HUSA and UPAA were to be amended on a regular basis these agreements have not been updated for over a decade.

Figure 1: HUSA & UPAA Boundaries



3.1. Community Infrastructure

3.1.1. Roads, Airport and Transit

Transportation infrastructure within City limits is provided and maintained by several jurisdictions:

- Oregon Department of Transportation owns and maintains certain highways and major arterials (e.g. Tualatin Valley Highway, US:26)
- Washington County is responsible for certain major arterials and arterials (e.g. Cornelius Pass Rd, Brookwood Pkwy, Evergreen Rd, Cornell Rd, 185th Ave)
- City of Hillsboro is responsible for most remaining roads with the exception of private streets and drives
- Union Pacific Rail owns and maintains the heavy rail line on the south side of Tualatin Valley Highway
- TriMet is responsible for the light rail, bus, and public shuttle facilities and services
- The Hillsboro Airport is owned and operated by the Port of Portland

Refer to **Error! Reference source not found.** This topic is addressed in detail in the Transportation section of the Comprehensive Plan.

3.1.2. [Water, Sewer and Stormwater Management](#)

The Joint Water Commission (JWC) supplies drinking water for most of the City from surface reservoirs in the Coast Range and the Tualatin River. A new Willamette Water Supply project is underway which will result in a new, regional water supply system, including treatment, to be completed sometime around 2026. Distributing drinking water within the HUSA is the shared responsibility of the City of Hillsboro and Tualatin Valley Water District (TVWD). Pursuant to the HUSA, TVWD directly serves portions of Hillsboro east of Cornelius Pass Rd. and north of US 26.

Refer to *Exhibit B: Drinking Water Map*. This topic is addressed in detail in the Water Supply & Distribution section of the Comprehensive Plan.

As a county service district organized under ORS 451, Clean Water Services (CWS) has the legal authority for the sanitary sewage and storm water (surface water) management within the City and the urban unincorporated area. For sanitary sewers, CWS develops regional master plans, standards and work programs, is the permit holder, and operates the treatment plants. They are also responsible for operation and maintenance of conveyance elements (24" diameter and greater pipes and pump stations). The City is responsible for operation and maintenance of sanitary sewer collection facilities (21" and smaller diameter pipes) and monitoring individual service connections.

Responsibility for storm water management is also shared between CWS and the City. CWS is responsible for overall regional master planning and for operation responsibility of the natural drainage system, large diameter pipe network, and regional detention/retention facilities. The City is responsible for all conveyance pipes and minor tributaries (ditches and intermittent streams). Washington County is responsible for drainage improvements associated with County roads and in unincorporated areas.

Refer to

Exhibit C: Clean Water Services Boundary. These topics are addressed in detail in the Wastewater and Storm Water Management sections of the Comprehensive Plan.

3.1.3. [Police & Fire](#)

The Hillsboro Police Department is currently made up of 133 sworn officers and 52 professional staff members. It provides police services to the entire City of Hillsboro and provides support for regional and countywide interagency teams. The department has two precincts.

Hillsboro's primary provider of fire and emergency medical services is the Hillsboro Fire Department, which currently has 111 full time employees and 13 volunteers who staff five fire stations citywide. Today, there are no portions of the City that are served by another fire service provider. However, as Hillsboro continues to grow, parts of the HUSA which include Rock Creek and Aloha would be served by Tualatin Valley Fire and Rescue (TVF&R) until the majority of that area annexes to the City, at which time fire service would be provided by Hillsboro Fire Department.

Ambulance services are contracted rather than provided in-house.

Refer to

Exhibit D: Police and Fire Map. This topic is addressed in detail in the Police & Fire Protection section of the Comprehensive Plan.

3.1.4. Parks & recreation; civic facilities, libraries

The HUSA designates the City as the provider of park, recreation and open spaces services to the HUSA. Metro also owns and is the provider of region-wide parks, recreation and open space facilities within the HUSA. Metro Greenspace and Parks facilities typically serve a broader population base than services provided to residents of the HUSA by the City. With the adoption of the 2003 HUSA, the City and Tualatin Hills Park and Recreation District (THPRD) agreed to an orderly transition of facilities from THPRD jurisdiction to City jurisdiction. In addition, properties annexing to the City are to be transferred from THPRD to City park service provision and fees paid to THPRD in accordance with the terms of the HUSA.

The City owns and operates a multitude of facilities including two libraries, two stadiums, an aquatic center, senior center, cultural arts center and government buildings including the Civic Center (city hall), public works building, and facilities maintenance. Supporting services include a fleet of over 400 City vehicles, and the Facilities Maintenance Program, which oversees the care and preservation of City assets.

Refer to

Exhibit E: Park District Map. This topic is addressed in detail in the Recreational Needs and Library Services sections of the Comprehensive Plan.

3.1.5. Private Franchises

Franchise fees are charged by the City to private and public utilities for the use of the public rights-of-way. Private franchised activities paying the fee include electricity, natural gas, telecommunications, cable television, and solid waste haulers. Public water, sanitary sewer, and storm sewer providers also pay a franchise fee.

The Hillsboro area is well-served by several national "last mile" telecommunications carriers providing fiber optic data, voice, and wireless internet service. It has the densest network of international and domestic cable in the Pacific Northwest with six Tier 1 carriers, three transpacific cable landing sites, and more than 7 regional carriers serving the city.

Hillsboro is currently serviced for electricity and gas by Portland General Electric (PGE) and NW Natural respectively. Like all investor-owned utilities in Oregon, they undergo a rate case process with the Oregon Public Utility Commission to set rates. Rates are based on complex forecasts of future costs plus a reasonable rate of return.

Private Franchise Service	Provider	
Electricity	Portland General Electric	
Natural Gas	NW Natural	
Solid Waste	Aloha Garbage Valley West Refuse Cornelius Disposal Service	Washington Co. Drop Box Garbarino Disposal Hillsboro Garbage Disposal

Fiber Optic/ Telecommunications	Alaska Communications Century Link Comcast Freewire Frontier Communications	Integra Level 3 Communications ZO Communications Zayo Group
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Refer to

Exhibit F: Solid Waste Haulers Map.

3.1.6. Schools

Both Hillsboro School District (HSD) and Beaverton School District (BSD) are the public educational service providers within Hillsboro City limits and within the HUSA. Today, HSD comprises four high schools, four middle schools, twenty-five elementary schools, two alternative education schools, one online academy, and one charter school.

Currently, BSD includes five high schools (with a sixth under construction), eight middle schools (soon to be nine), thirty-three elementary schools (with a thirty-fourth under construction), five options schools, and two charter schools.

Refer to *Exhibit G: Schools Map.*

4. Regulatory Context

4.1. Statewide Planning Goals

Public facilities planning is a necessary element of comprehensive planning and is required by Statewide Planning Goal 11. Goal 11 states that jurisdictions must “plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.” The specific requirements of this Goal, which include the completion of a Public Facilities Plan (PFP), are provided in OAR 660-011. Jurisdictions are required to complete and adopt a PFP as a technical and implementing report of their Comprehensive Plans only when in periodic review. The City is updating the Comprehensive Plan outside of periodic review and as such, is not mandated to complete a PFP at this time.

4.1.1. Existing Public Facility Plan (PFP)

The City of Hillsboro last completed a Public Facility Plan (PFP) in 2001 as part of periodic review, when the plan was adopted into the Comprehensive Plan as a technical report. The plan addressed intergovernmental agreements (IGAs); policies for water, sewer, storm drainage and parks; environmental protection and standards; and identified service needs. Several updates occurred in conjunction with the plan’s adoption, including updating Section 12 of the Comprehensive Plan and implementing documents such as the Capital Improvement Plan (CIP).

Since that time, the City has updated the transportation element of the Comprehensive Plan, but most other elements are out of date. In addition, many of the assumptions and documents upon which the 2001 PFP was based have changed, including:

- Adoption of new or updated master plans for parks and trails, facilities, sanitary sewer, and drinking water;

- A changed planning area due to several substantial Urban Growth Boundary (UGB) expansions, annexations, and adoption of the 2003 HUSA;
- Articulated City priorities which recognize the need to maintain aging infrastructure in addition to providing new services and facilities;
- Implementation of the 2020 Vision and adoption of the 2035 Community Plan;
- New/changing sources of infrastructure and facilities funding including Gain Share and Strategic Investment Programs (SIP);
- Improved ability and effort to track the condition and performance of city assets;
- Newly constructed or acquired facilities including parks, civic buildings, and emergency services;

4.2. Metro

Metro's Regional Framework Plan, adopted in 1995, requires that local governments within the Metro region do comprehensive planning in compliance with Metro's Urban Growth Management Functional Plan. During the latter half of the 1990s and in 2000, the City adopted a variety of Comprehensive Plan amendments and amendments to its implementing ordinances to address the Functional Plan.

Metro Code 3.09 *Local Government Boundary Changes*, further governs local jurisdictions' provision of urban services (sanitary sewers, water, fire protection, parks, open space, recreation and streets, roads and mass transit), in accordance with ORS 268.347 to 268.354. Consistent with State law, Metro Code 3.09 prohibits cities and districts from extending water or sewer service from inside a UGB to territory that lies outside the UGB. Metro is also responsible for solid waste planning and disposal and is accountable for state-mandated waste-reduction goals in the region.

4.3. Local Planning

4.3.1. Infrastructure Master Plans

Nearly all service providers in the HUSA complete some form of infrastructure and/or service master plan. While some plans such as school facility plans (discussed in detail in later sections) are state-mandated, others are completed as a best practice in infrastructure and service planning. Plans include:

- Parks & Trails Master Plan
- Trails Master Plan
- Intelligent Transportation System (ITS) Plan (underway)
- Sanitary Sewer Master Plan
- Storm Sewer Master Plan (AKA Storm water master plan)
- Port of Portland Hillsboro Airport Master Plan
- Water Master Plan

4.3.2. Community Plans

The City, in coordination with partner jurisdictions, service providers, and property owners, has created a number of community plans, focused on specific geographies, which have been adopted into the Comprehensive Plan. These plans establish the overarching framework for new or redeveloping urban areas including the land use designations, transportation systems, infrastructure and service provision details, and community design characteristics. Plans include:

- South Hillsboro

- North Hillsboro Industrial Area
- Amberglen
- Downtown Framework
- Witch Hazel Village
- Tanasbourne Town Center
- NE 28th Ave/East Main Street

4.3.3. Transportation System Plan

The Transportation System Plan (TSP) provides specific information regarding transportation needs to guide future transportation investment in the City and to determine how land use and transportation decisions can be coordinated beneficially for the City. The TSP was updated in 2004 to be consistent with the Hillsboro 2020 Vision, and the Metro Regional Transportation Plan, to reflect new population and employment information, and to improve coordination with transportation plans from other jurisdictions – namely Washington County and the City of Beaverton. The TSP is being updated concurrently with the Comprehensive Plan update. The topic of transportation is addressed under a separate background report and Comprehensive Plan section.

5. Hillsboro 2020 and Hillsboro 2035

As part of Hillsboro’s ongoing community visioning efforts, the public has provided input on the issues and opportunities that are important to those who live, work, and play in Hillsboro. In 2000, the Hillsboro 2020 Vision and Action Plan Implementation Committee distilled more than 1,500 comments from community members into a shared community vision—known as Hillsboro 2020—and accompanying implementation measures. Building upon the success of Hillsboro 2020, the City began developing the next iteration of the community’s vision, Hillsboro 2035, in 2013.

5.1. 2020 Vision

Action & Summary	Status
7.1 Downtown Community Meeting Centers: (A) Locate and develop an additional facility for community meeting space in downtown Hillsboro. (B) Study the viability of renovating the Town Theater for a third place use. If renovation is not viable, study other third place uses for the site.	Implemented 2005-2015
26.1 Waste Reduction Promotion: Promote and encourage existing waste reduction programs (including hazardous wastes, plastics and other materials not currently recycled) by simplifying the sorting process and increasing incentives to recycle. Target under-served areas, such as businesses and construction sites.	Implemented. Ongoing
29.1 Resource Conservation Incentives: Create incentives and educational programming to promote conservation of water, electricity, gas and other limited resources.	Ongoing
30.10 Wireless Networks Access: Explore the feasibility of establishing wireless networks in public spaces and places.	To be implemented 2016-2020
34.1 Airport Master Plan Involvement: Participate in the implementation of the Hillsboro airport master plan update.	Implemented. Ongoing

34.3 Community Data Network Strategy: Develop a high-speed data network strategy throughout the community.	Implemented. Ongoing
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5.2. 2035 Vision

Action & Summary	Status
Economy and Infrastructure 2. C. Develop and enhance Hillsboro’s globally competitive infrastructure essential to supporting and attracting traded-sector employers including development ready sites, transportation, workforce, communications systems, water supply and incentives	To be implemented by 2020
Livability and Recreation 2.E. Develop a world-class high-speed communications system	To be implemented in 2020 or later

5.2.1. Sustainability Plan

The Hillsboro 2035 Community Plan² includes an Environmental Sustainability Plan that addresses natural resources. On June 16, 2015, the Hillsboro City Council adopted the first community-wide Hillsboro Environmental Sustainability Plan. The Environmental Sustainability Plan includes a number of objectives relating to waste reduction and reuse. The plan contains three primary goal areas:

Energy Objectives

- Reduce greenhouse gas emissions
- Reduce use of non-renewable energy resources
- Expand use of renewable energy resources to meet demand

Resource Conservation Objectives

- Enhance understanding of the importance of natural assets and ecosystem services
- Protect and enhance environmental assets (air, land, water and habitat)
- Foster healthy human and wildlife populations

Resource Recovery and Renewal Objectives

- Reduce waste stream volumes
- Repurpose waste stream elements for beneficial use
- Pursue a “one-water” use and reuse strategy

Table 1: Hillsboro Environmental Sustainability Plan Natural Resource-Related Goals and Targets

Indicator	Target	Target Year	Baseline	Baseline Year
9. % reduction in daily residential water use	40% reduction (58 GPCPD)	2025	97 GPCPD	2002

² Hillsboro 2035. (2015). *Hillsboro 2035 Community Plan*.

10. % potable water loss prevented	Maintain annual water system losses below 10%	N/A	3%	2013
14. # of businesses and institutions participating in some form of natural resource conservation activity or educational programming (e.g. waste prevention, recycling, green procurement, toxics reduction)	Net annual increase	N/A	TBD	TBD
16. Total tons per capita solid waste collected by franchised waste haulers	5% reduction (1,786)	2025	1,880	2014
17. Amount of solid waste recovered (i.e., recycling, composting, waste to energy)	40% recovery rate of materials collected by franchised haulers	2025	30%	2014

Hillsboro Environmental Sustainability Plan potential projects and policies:

- Conduct residential water conservation and education programs
- Install automated water meters
- Conduct water leak surveys
- Replace water conveyance lines system-wide
- Promote mail opt-out programs
- Encourage proper backyard composting (yard waste and vegetative food)
- Encourage use of non-disposable (durable) goods at businesses (pallets, food serviceware, shipping packaging)
- Promote reuse projects (donation from homes; goods swap at multifamily communities; building materials reuse and donation; ResourceFull Use for business program)
- Coordinate with haulers to develop new metrics to better track performance
- Increase household participation in curbside recycling (mixed recyclables, glass and organics)
- Promote participation in Recycle at Work (RAW) program
- Encourage compliance with Business Recycling Requirement (BRR)
- Ensure households at multifamily communities have access to adequate mixed recycling and glass collection service
- Identify recycling options for other materials
- Track and promote deconstruction over demolition
- Offer incentives for buildings that meet recovery goals
- Promote the Construction and Demolition (C&D) toolkit
- Set up permanent green/resource efficient building kiosk in Permit Center lobby
- Adopt equitable solid waste service rate structure that incentivizes food scrap separation and collection
- Provide technical assistance to set up food scrap collection through RAW program
- Capture grease for anaerobic digester use

- Encourage businesses to adopt RAW practices regarding waste prevention
- Install green infrastructure in developing portions of Hillsboro where appropriate; retrofit existing areas where possible

6. Existing Comprehensive Plan

6.1. Existing Goals and Policies

6.1.1. Goals

- **Section 2: Urbanization**

- **Goal 1D**—“Establishing land use designations in particular areas will be based upon the need to...provide for the orderly and efficient extension of public facilities and service.”
- **Policy C**—“Any land use implementation measure adopted by the City or other government agency shall be consistent with and support the need to expand public facilities and services as outlined in this goal, and shall be designed in a manner that accommodates increased public demands for urban services and is responsive to both expected growth in the commercial and industrial sectors and to population growth in the area.”

- **Section 3: Housing**

- **Policy A**—“The development of housing shall be coordinated with the extension of public facilities and services necessary to assure safe, healthy, and convenient living conditions.”
- **Policy L**—“New residential areas shall have water, sewers, storm drainage, street lights and underground utilities.”
- **Policy W**—“In determining residential densities, developers may be given credit for land donated and accepted by the City for needed public facilities.”

- **Section 7: Air, Water, and Land Resource Quality**

- **Policy B**—“The City shall design a storm sewer and sanitary sewer master plan and develop implementation measures necessary to assure that a storm sewer and sanitary system are provided to areas designated urban. The plan shall be designed to accommodate the growth anticipated in undeveloped portions of the Hillsboro Planning Area.”
- **Policy F**—“Land use activities which result in conflicting impacts on the air, land, or water should be separated and/or buffered to minimize the negative effects of the conflicting activities.”
- **Policy G**—“New development shall be allowed only if urban services such as water, sewer, and streets, are available, and only in accord with the Urban Planning Area Agreement.”
- **Policy H**—“All government agencies responsible for assuring air, water, and land resource quality in the planning area shall be contacted when plans affecting waste and process discharges are proposed.”
- **Policy I**—“Implementation measures designed to maintain and improve the air, land and water resources and manage land use and development shall be consistent with, and reflective of, the community’s desires for a quality living environment, state and federal environmental quality statutes, rules, standards and implementation plans.”

- **Section 10: Economy**
 - **Policy B4**—“Public facilities and services necessary to meet the special needs of industrial activities should be planned for those areas designated industrial on the Comprehensive Plan Map and should be provided at a level sufficient to support proposed activities.”
- **Section 12: Public Facilities and Services**
 - **Goal A**—“Provide public facilities and services in an orderly and efficient manner consistent with the expansion of urbanization into rural areas.”
 - **Goal B**—“Utilize the availability of public facilities and services as a tool for guiding urbanization with the Hillsboro Planning Area.”
 - **Goal C**—“Provide a safe and healthy living environment.”
 - **Goal D**—“Provide that existing land uses are and will continue to be supported by needed public facilities and services.”
 - **Goal E**—“Provide that future development is appropriately guided and supported by the provision of public facilities and services in a timely, orderly, and efficient manner.”
 - **Policy A**—“The extension of a public facility, utility or service outside the urban area shall occur only in conjunction with an expansion of the Urban Growth Boundary and shall be provided at a level consistent with the intended density and designated land use for the area.”
 - **Policy D**—“Public facilities and services shall be provided at a level sufficient to create and maintain an adequate supply of housing and service an increasing level of commercial and industrial activity.”
 - **Policy E**—“The ability of residents to pay for public facilities and services at varying densities of development should be a prime consideration in determining appropriate densities and land uses in the planning area.”
 - **Policy G**—“The location of schools should be used as a tool in directing future growth within the planning area.”
 - **Policy I**—“When possible, government offices should locate in the vicinity of the County courthouse to form over time a public buildings complex and civic center.”
 - **Policy J**—“The City shall work with the school districts to develop a facilities plan designed to meet enrollment increases and population growth.”
 - **Policy K**— Utilization of schools and other public facilities as multi-purpose facilities should be encouraged to help meet the education, recreation and civic needs of the community.”
 - **Policy L**—“Citizens should assist in the development of funding methods and programs for public facility and service projects.”
 - **Policy M**—“The City shall promote coordination among the City and other governmental and interested parties including special districts to facilitate the most effective uses of public facilities serving the planning area.”

7. Emerging Trends, Issues, and Opportunities

7.1. Service Planning and Delivery

With an array of special districts, City departments, private franchises, and other jurisdictions providing facilities, utilities and services to City residents, the City must ensure effective collaboration and planning. Many facilities, utilities and services are subject to state and federal regulations, and must be kept in compliance with these requirements. Intergovernmental coordination can provide cost efficiencies and problem solving.

Service providers can also benefit from collaborative planning for new and expanding facilities. Colocation of infrastructure and facilities, such as an underutilized school field being made available to the public through a park department, can increase capacity and reduce gaps in service. In both Hillsboro 2020 and Hillsboro 2035, increasing the number and capacity of public meeting space was identified as an important community need. Coordination between service providers can address such facility gaps.

As noted in Section 4.1, Hillsboro is required to complete and adopt a PFP when updating its Comprehensive Plan via periodic review. As the City is not currently in periodic review, it has chosen not to update its PFP at this time. However, as the plan is now 15 years old, the City has identified updating the PFP as a potential implementation measure of the Comprehensive Plan, which is consistent with current City policy to update the PFP at each periodic review and, “as needed to reflect major changes in service provision”. In addition, although the state requires only a select set of public services to be addressed in the PFP, the City may choose to expand the scope to include others such as schools, parks, library, and civic buildings. The City may wish to consider developing the PFP as a tool to align community goals with future investments and as a means to balance maintenance with new construction needs.

The extension of public services to annexation areas or areas outside the UGB is another topic for which extensive planning and coordination is needed. This topic is addressed in detail in the Urbanization section of the Comprehensive Plan.

7.1.1. Boundary issues

The 2003 HUSA was an important milestone in jurisdictional and special district collaboration as it established agreed-upon boundaries for a number of different services. The HUSA identifies a definitive geography for which the City and its partner jurisdictions and special districts are committed to providing urban services with incorporation into City boundaries. These urban services include parks, fire and emergency services, water, sewer, stormwater management, and more. Agreements were reached that allowed the transfer of facilities such as parks and fire stations for mutually agreeable payments. Despite the fact that the HUSA identifies specific service provider boundaries, several inconsistencies and implementation challenges have arisen since its adoption. Specifically,

- With recent UGB expansions, there is a misalignment between the HUSA geography and the Urban Growth Boundary. As a result, some properties that have been newly added to the UGB and are expected to annex to the City in the future, are not covered by the HUSA. The City should update the HUSA to align with these areas. Furthermore, the City should

reevaluate the HUSA geography to ensure it will be adequately sized to accommodate anticipated growth and update the HUSA itself to reflect associated modifications.

- The HUSA contains agreements with both THPRD and TVWD that designate the City as the service provider for parks and water services when properties in the HUSA³ annex to the City. These agreements assume that properties will be automatically withdrawn from THPRD and TVWD and provided with City services when annexation occurs⁴. However, these district withdrawals have not occurred automatically, resulting in occasional duplication of services and property tax impacts. To remedy this, the City de-annexed 160 tax lots from THPRD and approximately 1,400 tax lots from TVWD west of Cornelius Pass Road in 2011. The City may wish to consider a more permanent solution to resolve boundary withdrawals contemporaneously with annexation and thus better reflect the HUSA.
- As established in the HUSA, the TVF&R service boundary currently extends into the HUSA geography. However, this does not present a duplication of service or property tax issue as the HUSA states that the City is to be the ultimate provider of fire and emergency services within the HUSA geography in accordance with the agreed-upon transition of facilities triggered by annexation of the surrounding area. As this annexation has not yet occurred, these boundary inconsistencies do not require correction.
- Two school districts currently serve the HUSA. Hillsboro School District (HSD) serves all of Hillsboro except parts of Tanasbourne and Amberglen⁵, which are served by Beaverton School District (BSD). Recently, the two school districts completed an agreed-upon territory swap to effect more streamlined and sensible service provision in the South Hillsboro and South Cooper Mountain areas. Because the provision of educational service by two districts within City limits does not present a duplication of service or property tax issue, no remedy is necessary.

7.1.2. Costs of Service Provision

The costs of providing the City's share of the community's public facilities, utilities and services are estimated in annual budgets. An array of fees, taxes and transfers are utilized to cover the costs of these services. When the City is contemplating annexation requests, the public facilities, utilities and services must be evaluated to determine if extending and/or expanding such services to serve the annexation area will be detrimental to existing residents. The City must ensure that if a proposed annexation area does not meet City standards, the necessary improvements can be completed and financed to the City's satisfaction. Examples of infrastructure funding include development fees, Local Improvement Districts, and the City's Capital Improvement Program.

³ As it pertains to water service, the HUSA identifies TVWD as the service provider east of Cornelius Pass Rd and north of US 26.

⁴ Pursuant to the HUSA, de-annexation from THPRD when properties annex to the City was to begin five years after the signing of the agreement, or April 2008. For all other districts, de-annexation protocols were to take effect immediately after signing of the agreement.

⁵ Specifically, the portion between 185th and 206th; between light rail and US26.

7.1.3. Internal Coordination

While the City has many external service provider partners, including those that provide solid waste collection and wastewater treatment, it provides and maintains most public services in house. Police and fire protection, library, parks and recreation, and some utility services are provided by departments of the City of Hillsboro. As noted in Section 7.1, coordination between service providers can yield efficiencies and reduce costs. Similarly, coordination between City departments is essential for effective planning and budgeting.

7.1.4. School District Coordination

As the City has seen rapid growth over the past few decades, area public school districts have grown in attendance. Hillsboro School District (HSD), the fourth largest school district in the state, has more than 20,300 students, an increase of approximately 1,000 students from 2005 enrollment numbers. As the third largest school district in Oregon, Beaverton School District's enrollment numbers increased by more than 4,000 students- from approximately 36,600 to over 40,700 students- in the same 10-year period. Both school districts have been planning, expanding, and constructing facilities in addition to modifying their attendance boundaries in order to keep up with changing student needs.

School siting can be a complex endeavor as districts attempt to accommodate anticipated growth in locations that will be proximate to the increasing student populations. In Hillsboro's case, much of the City's recent growth has been in new urban areas via Urban Growth Boundary (UGB) expansions. The UGB expansion process has become particularly litigious in recent years and this uncertain planning environment has made school siting even more difficult. As cost and parcel size are key determinants in new facility site selection, both school districts have sought to acquire future school sites located outside the UGB, where suitably-sized parcels can often be found at much lower costs than inside the UGB. However, planning for a new school outside the UGB offers coordination challenges including timing and uncertainty of UGB expansion, ability of service providers to extend infrastructure and services, and costs associated with such extension.

For these reasons and more, large school districts⁶ are required by ORS 195.110 to create a school facility plan covering a period of at least 10 years. School facility plans must include identification of desirable school sites, financial plans to meet school needs, site acquisition schedules, and an analysis of land supply within the UGB which is suitable for school facilities. Should the analysis conclude that an inadequate land supply exists within the UGB, the school district, in coordination with affected jurisdictions, is required to identify and take the necessary actions to remedy the deficiency.

ORS195.110 (2) further requires cities or counties with large school districts to:

Include as an element of its comprehensive plan a school facility plan prepared by the district in consultation with the affected city or county.

⁶ As used in ORS 195.110(1), "large school district" means a school district that has an enrollment of over 2,500 students based on certified enrollment numbers submitted to the Department of Education during the first quarter of each new school year.

Initiate planning activities with a school district to accomplish planning as required under ORS 195.020 (Special district planning responsibilities).

HSD is currently developing a school facility plan and, once completed, the City will be required to adopt it into its Comprehensive Plan. In recent years, much of the planning for future schools has happened between the City and school districts at the subarea level, in which future school district needs are incorporated into community plans such as South Hillsboro. Although planning for schools with each new planning area is important, particularly for refining capacity estimates/school needs analysis and site specific acquisition plans, it is not a substitute for school facility planning on a comprehensive (districtwide) scale.

Siting new schools and expansion of existing facilities is also occurring within city limits, and coordination between the City and school districts is critical to successful facilities planning. Procedures should be implemented to allow school districts to become aware of large developments which may impact school capacity and/or provide opportunities for siting new school facilities. In some cases, the City may require the dedication or reservation of land for a future school in accordance with a school district's School Facility Plan. The City should also consider the location of actual or planned major capital investments by school districts when making its own infrastructure investments in order to complement and leverage these projects.

To keep up with projected increases in enrollment numbers coupled with rising land costs, school districts may need to employ new approaches. For example, they may find it necessary to reevaluate assumptions about space and land needs, education delivery methods, and district/agency partnerships. The City should be prepared to assist school districts in planning for new and expanded facilities as needed, including long-term forecasting, coordinating with developers on site acquisition, evaluating UGB expansion options, and creating detailed growth strategies.

7.1.5. Solid waste and recycling management

In Oregon, solid waste and recycling are regulated by state law and by extension at the regional level. Metro's Regional Solid Waste Management Plan (RSWMP) establishes the regional framework for coordinating most solid waste collection and disposal programs, directing waste reduction and recovery efforts, identifying roles and responsibilities, and fulfilling DEQ's requirement that the region have an overall waste reduction plan.

Cities and counties are responsible for designing and administering waste reduction programs for their jurisdictions. These activities must comply with state laws, including the Opportunity to Recycle Act and the Oregon Recycling Act, as well as the RSWMP. The City is also responsible for regulating and managing solid waste and recycling collection services within its jurisdictional boundaries (including setting franchise boundaries), and setting rates and standards for collection of solid waste. Accordingly, Hillsboro maintains franchise agreements with private haulers that provide garbage and recycling collection services. The City participates in Metro's plan update process and implements the plan through the Washington County Cooperative, which includes a number of cities in Washington County.

The City can help further state and regional goals by ensuring residents and businesses have good access to waste management services such as recycling collection.

7.2. Use of right of way

The City and other service providers acquire right of way via dedication, purchase, or condemnation, for the purpose of installing and maintaining physical infrastructure such as roads, light rail, power lines, and more. Often, rights of way contain a variety of public structures, including sewer and storm pipes, gas and water lines, telephone and other communication infrastructure, in addition to streets and sidewalks.

In some circumstances, rights of way can also provide space for community and commercial activities. Streets may be temporarily closed for a block party or festival; cafes and restaurants may wish to take advantage of a wide sidewalk space to provide outdoor dining. Determining who can use the public right of way and for what types of activities should be considered.

Occasionally, it is necessary or desirable to permanently remove, or vacate, right of way so that it reverts back to private ownership. Given the array of public services often provided in rights of way, in addition to their function as part of the overall transportation network, decisions to vacate rights of way should be given careful consideration.

7.2.1. Utility undergrounding

Infrastructure related to the provision of utility services, while important, can be visually unappealing. Historically, lower voltage power and cable lines have been strung on poles in the street right of way and high voltage power lines are often placed in utility corridors for transmission over longer distances. Vaults and associated equipment are also commonly found in the street right of way, where they may take up needed sidewalk space and/or present a visual impediment to drivers. In addition to aesthetic considerations, the aging conditions of overhead lines and poles, the encroachment of overgrown trees, and public safety concerns – such as vehicle/utility pole accidents and live-wire contact injuries – are convincing many jurisdictions to require the placement of transmission lines underground.

Current City policies regarding undergrounding utilities within the public right of way are limited to areas of new housing construction (Housing Policy L). The City may wish to encourage undergrounding citywide or in specific parts of the city where improved aesthetics are desired.

7.2.2. Technology and communication facilities

Recognizing that information and technology services are essential infrastructure, Hillsboro 2020 called for the development of a high-speed data network strategy for the community and an initiative identified in the 2035 Community Plan is to “develop a world-class high-speed communications system”. The City and other service providers have an opportunity to expand the capacity of the community’s high speed data network with the installation of new infrastructure and repair of existing infrastructure, which can result in cost and resource efficiencies.

7.3. Infrastructure efficiency, sustainability & quality

7.3.1. Sustainability

The City has outlined its continued commitment to sustainability in the 2015 Hillsboro Environmental Sustainability Plan (see Section 5.2.1), which includes a number of initiatives to incentivize and require sustainability actions. Such initiatives generally focus on reducing energy

and resource use, waste and carbon emissions. This topic is covered in more detail under the Energy and Climate Change section of the Comprehensive Plan.

7.3.2. Asset and risk management

The use of asset management principles has become more prevalent in recent years as City departments have begun to integrate these practices into infrastructure planning and management. The City utilizes an asset management system for sanitary sewer, stormwater management and water systems and is seeking to enhance asset management for traffic signs, traffic markings, and street lights.

Asset management generally involves developing a plan to reduce costs while increasing the efficiency and the reliability of assets. An asset management plan incorporates detailed asset inventories, operation and maintenance tasks and long-range financial planning to ensure that annual revenue reserves and reinvestment are sufficient to facilitate long-term viability of the system. Development of asset management plans should be encouraged as a best practice for infrastructure management.

Managing risk is a shared responsibility among all critical infrastructure stakeholders, including governments, industry partners, first responders and non-government organizations. Partnerships and information-sharing represent the building blocks to enhancing the resiliency of critical infrastructure. Working together with other critical infrastructure stakeholders, the City can develop plans and practices to maintain public facilities to minimize risk and increase resilience of critical infrastructure.

This topic is covered in more detail in the Natural Hazards section of the Comprehensive Plan.

7.4. Funding and coordination of investments

The City owns and maintains a wide variety of infrastructure, with a range of ages, conditions, and life expectancies. Replacement of older capital facility systems that are at the end of their useful life, have outdated technologies, or cannot handle the additional demands of growth, can be expensive and must compete with demands for new infrastructure. Challenges also include the lack of dedicated transportation revenue sources of any real magnitude, requiring a significant amount of funding to come from operating/general fund transfers that always have to compete for funding with other services the City provides. The City has adopted budget policies relating to the need to balance maintenance and operations with construction of new infrastructure. The City has also committed to fully funding the Pavement Management Program to eliminate all pavement maintenance deferrals by 2020 bringing all of the City's roadways into good or better condition. Currently, the Comprehensive Plan contains a policy (Public Facilities and Services, Policy L) for citizens to, "assist in the development of funding methods and programs for public facility and service projects".

Development of new infrastructure associated with development of new urban areas can be extremely costly. With South Hillsboro, the City endeavored to work with developers on creating the new community without passing on the costs of such development to existing residents. The City may wish to expand this approach and require all new development and redevelopment to pay for its own infrastructure costs.

7.4.1. Hillsboro Capital Improvement Program

Hillsboro's Capital Improvement Program (CIP) addresses 5-year City investment in projects that add, improve, and extend the life of the City's infrastructure. Generally, projects with a total cost of \$25,000 or more are included in the CIP. In addition to capital projects, fleet vehicles are included in the CIP. As the City plans for expanding and maintaining its infrastructure, projects are prioritized based on need, available funding, and impact on operating costs.

Capital projects can impact the future operating and maintenance costs of the City. In some instances, such as construction of a new facility, operating costs will increase with the additional utility and maintenance costs. In other instances, such as an upgrade to the HVAC system, operating costs may decrease. As the City makes decisions about which capital projects to implement, it evaluates future operating impacts and determine if the City will be able to afford those costs in the future. By approving CIP projects, the City is making a commitment to adequately fund those future operating costs and to invest in maintaining the facilities and infrastructure.

Partner districts and jurisdictions have their own CIPs addressing projects within their service boundaries, which often cover a broader area than City limits. Working with its partners in developing CIPs and funding strategies is a best practice the City can employ to promote coordinated and cost-effective investments.

Exhibits

Exhibit A: Transportation Providers Map

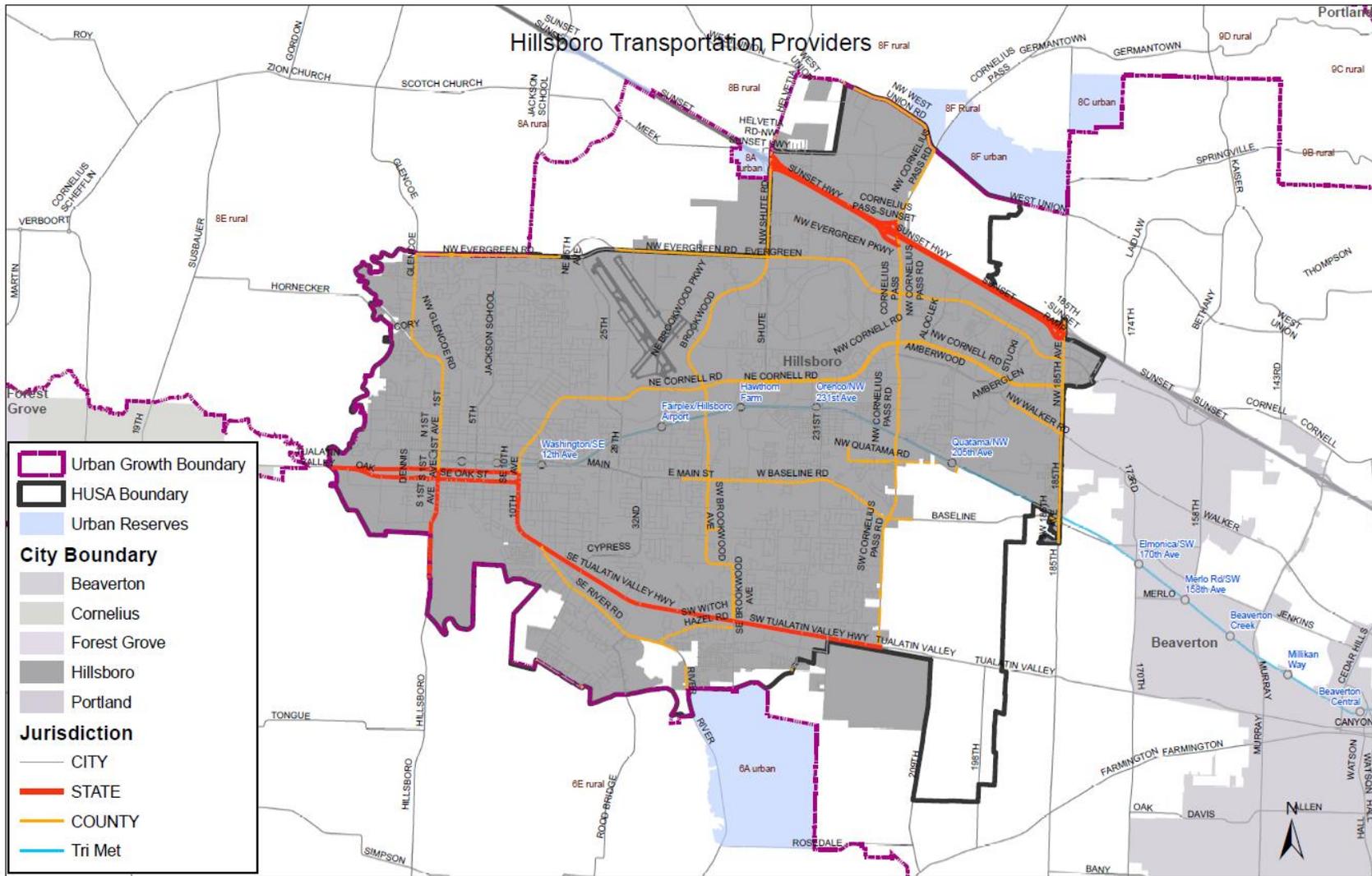


Exhibit B: Drinking Water Map

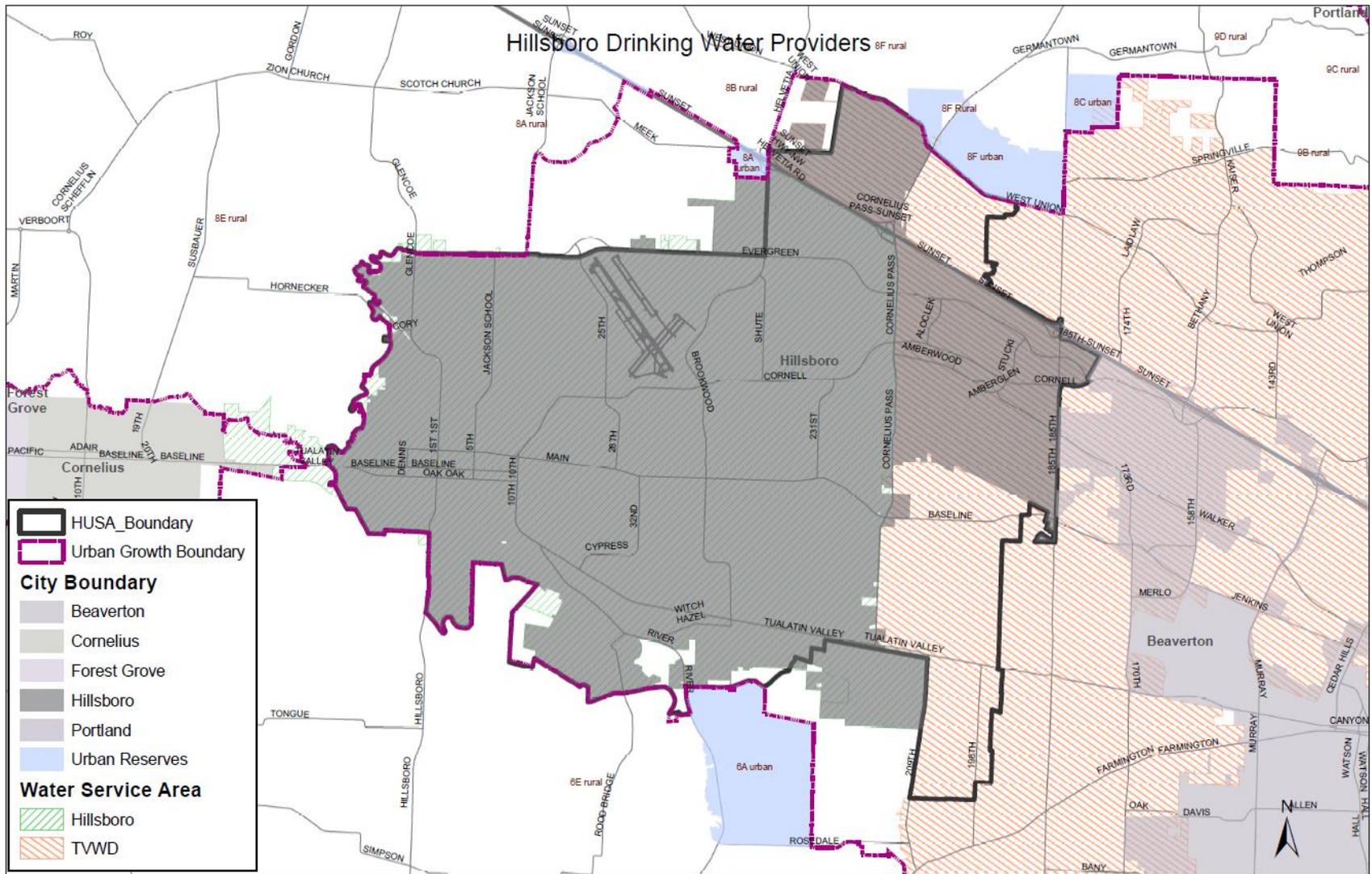


Exhibit C: Clean Water Services Boundary

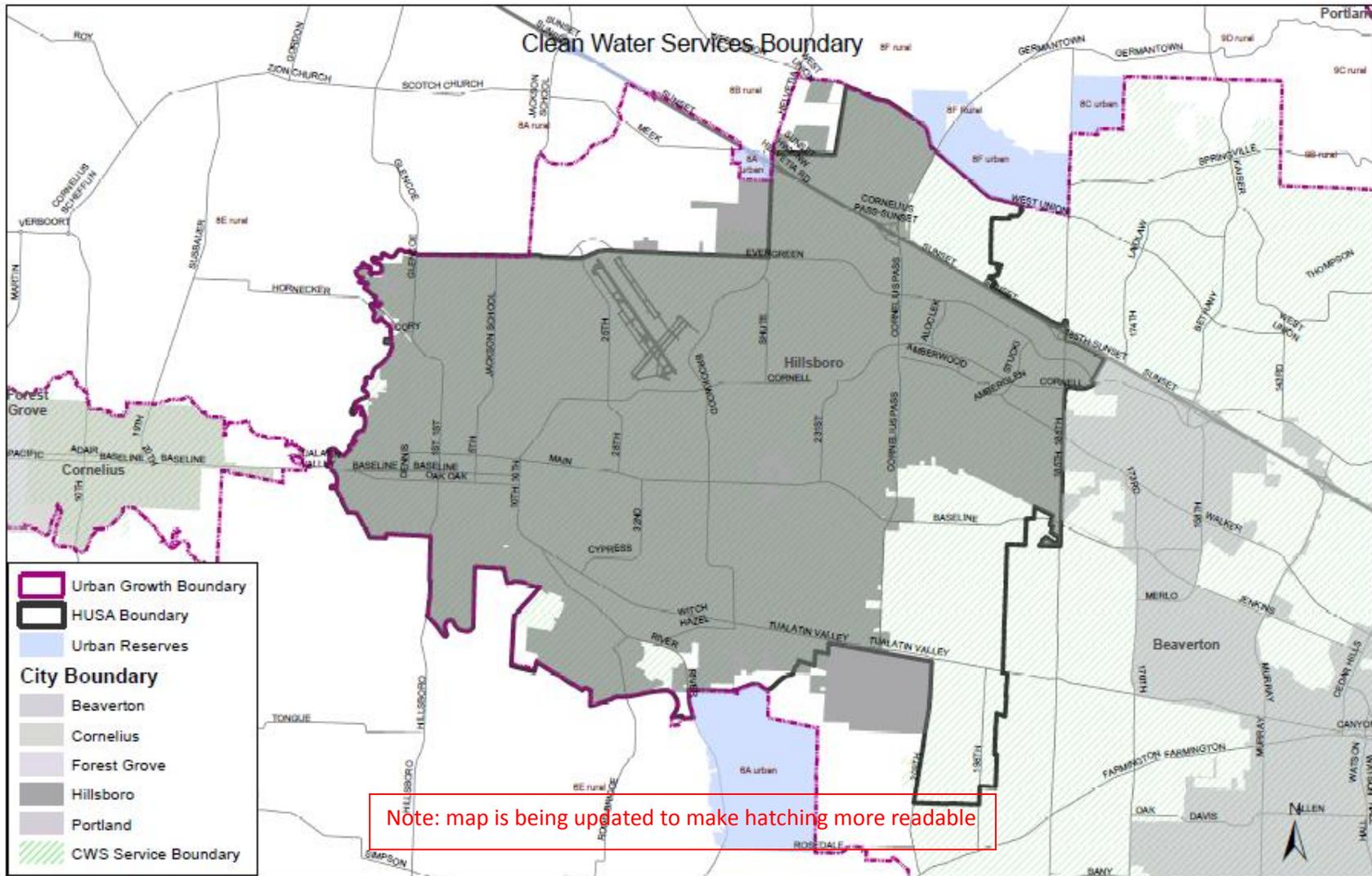


Exhibit D: Police and Fire Map

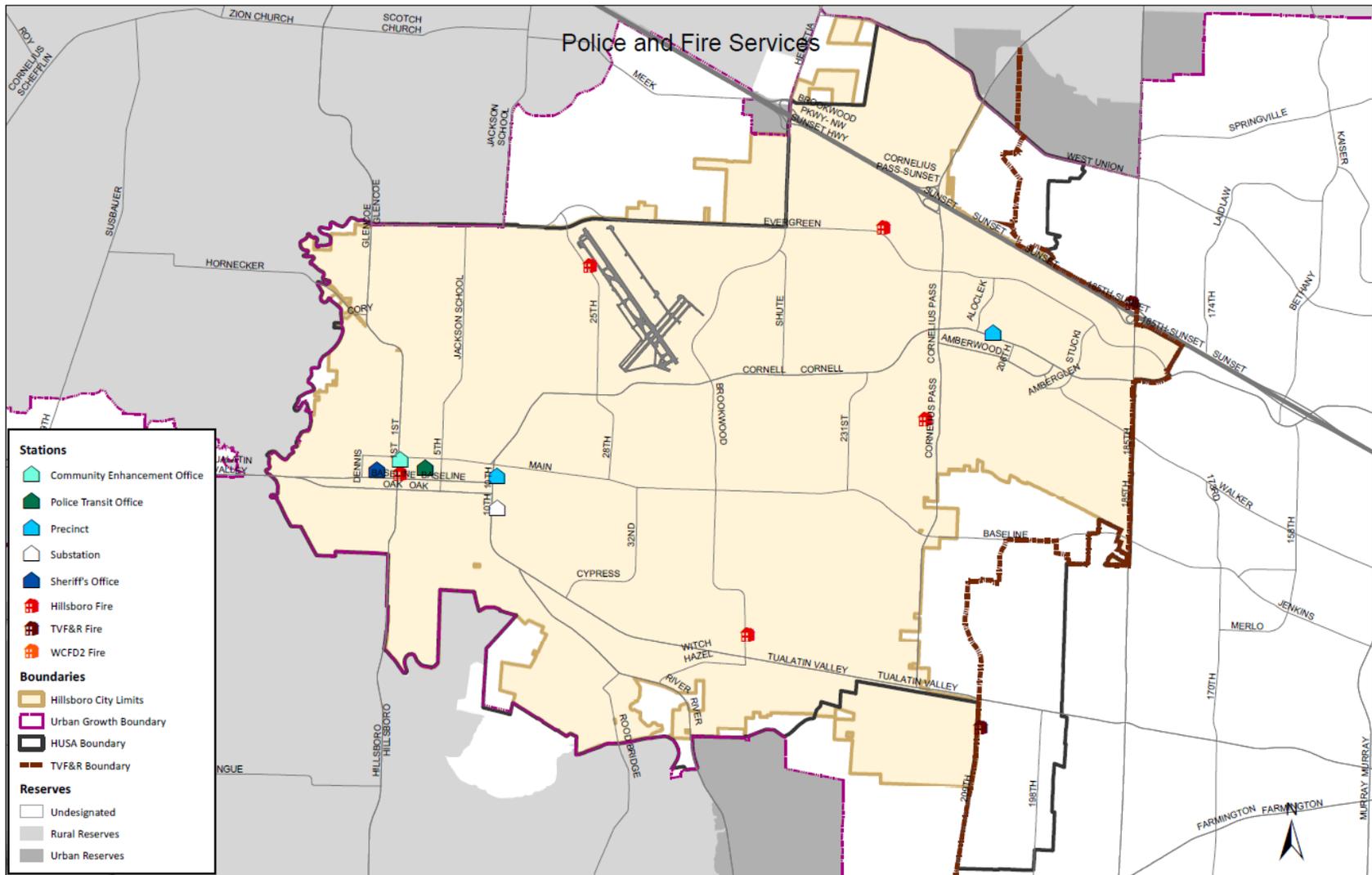


Exhibit E: Park District Map

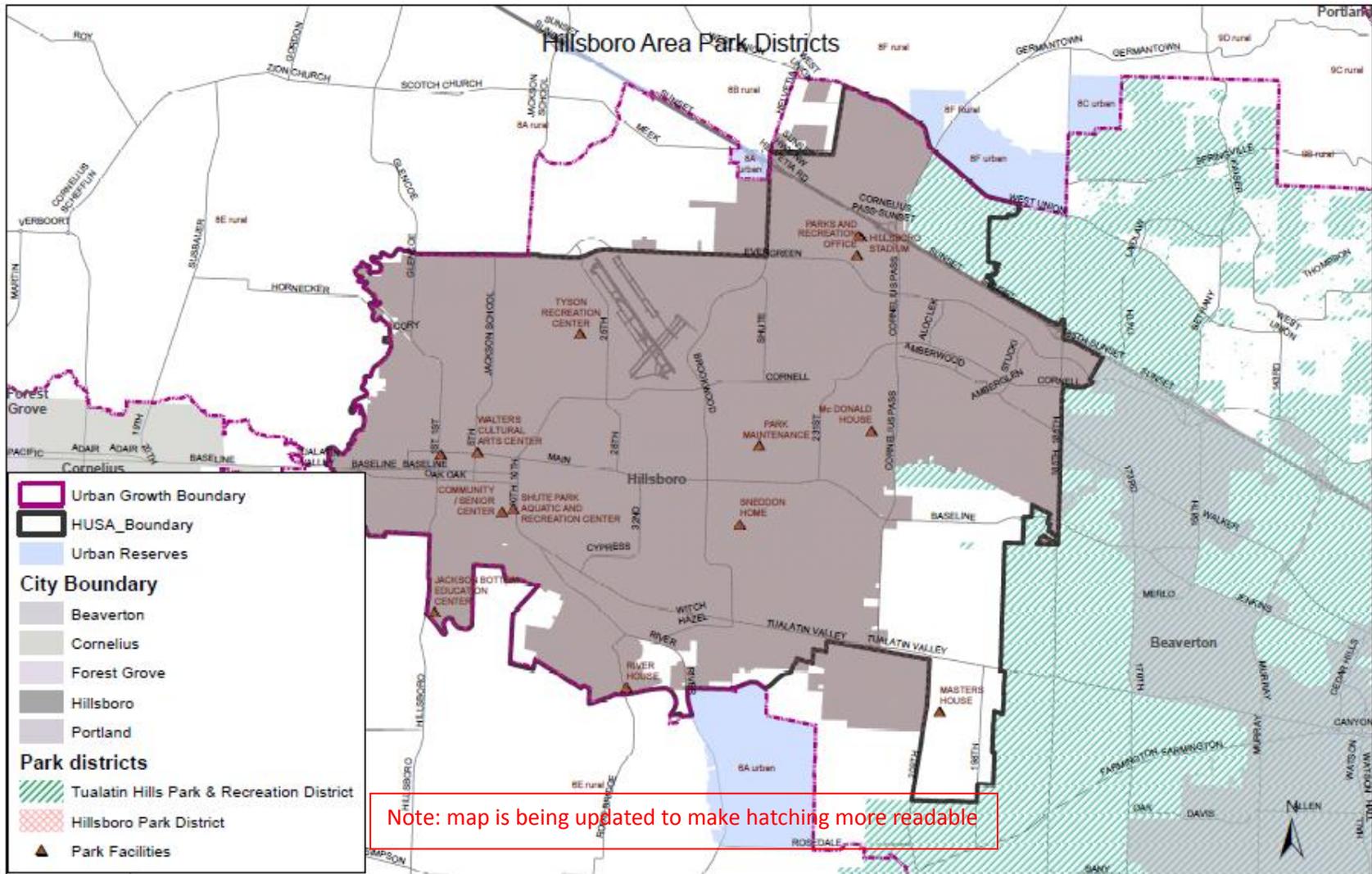
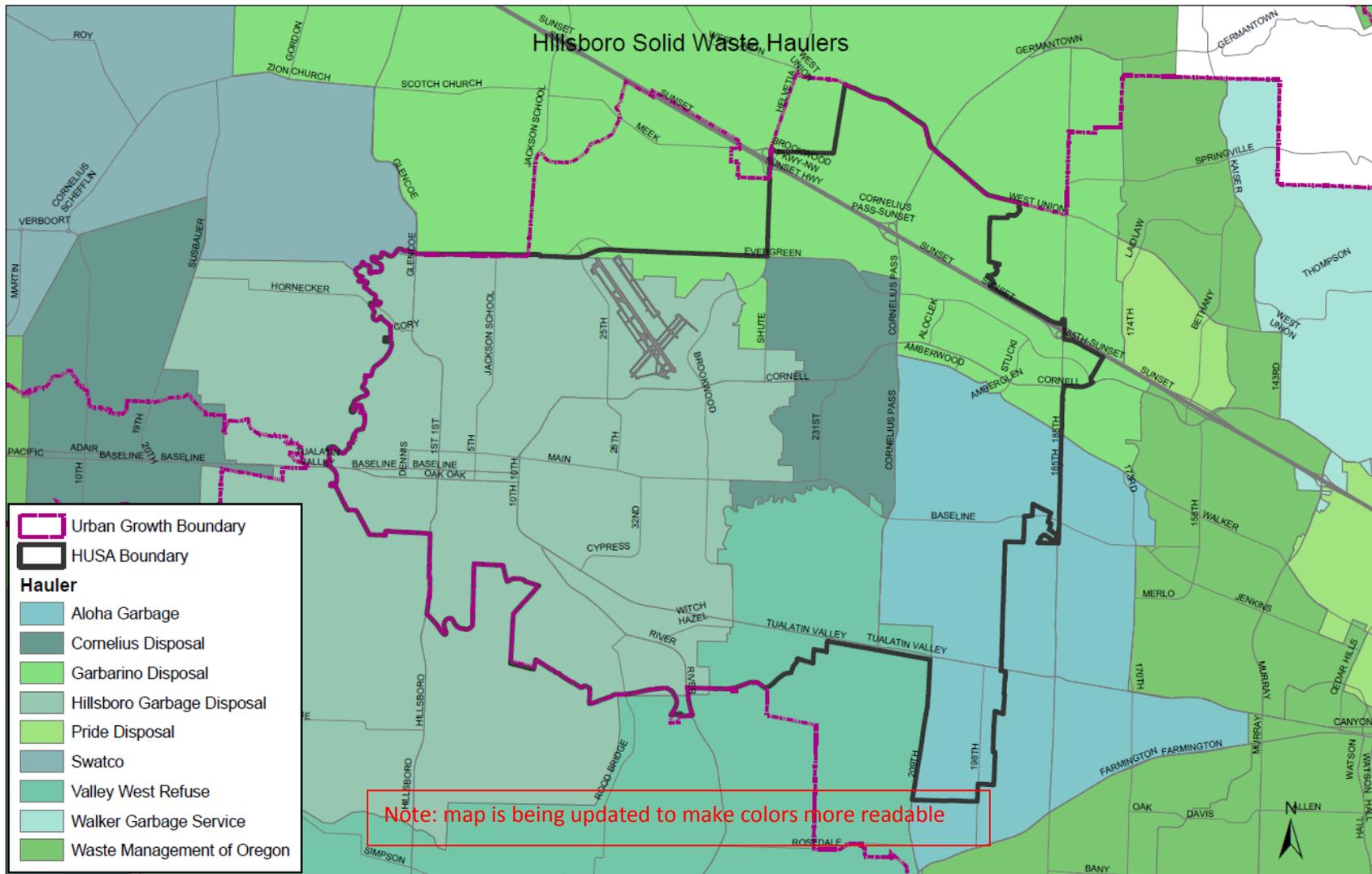


Exhibit F: Solid Waste Haulers Map



Public Facilities

Goals and Policies DRAFT – July 14, 2016

Review History

Date	Reviewed By
June 30, 2016	Internal Committee Meeting– <i>Comments Incorporated</i>
July 14, 2016	TAC Meeting- <i>Comments Incorporated</i>

GOAL 1 Provide public facilities, utilities and services in a timely, orderly and efficient manner.

- POLICY 1.1 **Service Provider Coordination.** Collaborate with service providers* on extensions of public facilities, utilities and services and prioritization of capital expenditures.
- POLICY 1.2 **Intergovernmental agreements.** Clearly define roles and responsibilities through the use of interagency coordination agreements with service providers, including the Hillsboro Urban Service Area Agreement (HUSA) and Urban Planning Area Agreement (UPAA).
- POLICY 1.3 **Ultimate service provision.** Manage boundaries and agreements to ensure the City of Hillsboro is the ultimate local governance and municipal service provider to the urban area* where appropriate, except as otherwise specified in the HUSA.
- POLICY 1.4 **City department coordination.** Coordinate planning and provision of public facilities, utilities and services among City departments, as appropriate.
- POLICY 1.5 **Public facility plan.** Develop and maintain a Public Facility Plan* as a 20-year strategy to ensure delivery of public facilities, utilities and services to the planning area at urban levels of service.
- POLICY 1.6 **School facility plans.** Coordinate with public school districts in developing and updating their facility plans designed to meet enrollment increases and population growth, including land supply analysis for future school siting.
- POLICY 1.7 **Regulatory consistency.** Collaborate with state and regional partners on the regulations that address regional environmental and infrastructure impacts, such as transportation, stormwater mitigation, and floodplain development standards.
- POLICY 1.8 **State and federal regulations.** Work toward cost-effective compliance with state and federal mandates through intergovernmental coordination and problem solving.
- POLICY 1.9 **Data and information exchange.** Develop processes to ensure a timely and accurate exchange of data with service providers to facilitate utilization of best available information.
- POLICY 1.10 **Urban service extension.** Allow the extension or provision of public facilities, utilities or services outside of City limits only in conjunction with annexation or in cases where the City has agreements or contracts in place.

Commented [APR1]: Staff may include additional language here based on pending input from the Public Works department.

GOAL 2 Utilize the availability of public facilities, utilities and services as a tool for guiding urbanization within the Hillsboro Planning Area*.

- POLICY 2.1 **Future levels of service.** Improve the capacity of public facilities, utilities or services where feasible and cost effective, in order to provide future delivery of services to urbanizable areas upon annexation.
- POLICY 2.2 **Concurrency.** Require the provision of public facilities, utilities and services prior to or concurrent with development.
- POLICY 2.3 **Feasible and cost effective service.** Ensure that properties to be annexed can be reasonably served by public facilities, utilities and services and that any public costs associated with annexation are minimized.
- POLICY 2.4 **Future school siting.** Collaborate with public school districts to identify acceptable sites for new schools within the Urban Growth Boundary (UGB) or, if inadequate land supply exists within the UGB, work with the school district to rezone, aggregate existing lots or parcels in separate ownership, or expand the UGB.
- POLICY 2.5 **School capacity planning.** Provide notification to public school districts when new residential development is proposed and encourage their participation when master planning activities are initiated.

GOAL 3 Equitably support existing and planned land uses with needed public facilities, utilities and services.

- POLICY 3.1 **Balanced service extension.** Balance the extension of public facilities, utilities and services in a manner that accommodates expected population and employment growth while maintaining the City's ability to continue providing existing services citywide.
- POLICY 3.2 **Adequate service provision.** Establish, improve, and maintain public facilities, utilities and services at levels appropriate to support land use patterns, densities, and anticipated residential and employment growth, as physically feasible and as sufficient funds are available.
- POLICY 3.3 **Appropriate service levels.** Maintain facilities and systems, including public buildings, technology, fleet, rights of way, and internal service infrastructure, to enable service provision at appropriate levels.
- POLICY 3.4 **Collocation of community amenities.** Collaborate with public and private entities such as schools and recreation providers to facilitate the shared use of multi-purpose venues to help meet the education, recreation and civic needs of the community, particularly in neighborhoods with limited access to parks and public spaces.
- POLICY 3.5 **Community and business group partnerships.** Partner with community and business groups to improve the appearance, maintenance, and functionality of public spaces, rights-of-way, and community venues.
- POLICY 3.6 **School access planning.** Collaborate with public school districts to provide safe routes to existing schools and to consider safety and access when determining attendance boundaries, new school locations and school designs.
- POLICY 3.7 **Waste management.** Ensure development review, rights-of-way regulations,

and public facility investments to allow the City to manage solid waste effectively and in a manner that is consistent with regional and state waste reduction and recovery goals.

POLICY 3.8 **Equitable access to services.** Ensure access to services in all areas of the city, reduce disparities in capacity and affordability, and provide reliable service for the community.

GOAL 4 Provide and manage the public facilities, utilities, and services necessary for a safe, healthy, and livable environment.

POLICY 4.1 **Efficiency of facilities.** Endeavor to reduce the energy and resource use, waste, and carbon emissions from public facilities.

POLICY 4.2 **Risk management.** Work with service providers to ensure the facilities, utilities and services for the community are maintained and improved to minimize or eliminate risks to the economy, public health, safety, and the environment.

POLICY 4.3 **Infrastructure resiliency.** Create durable and resilient infrastructure through monitoring, planning, investment, maintenance, adaptive technology, asset management, and continuity planning.

POLICY 4.4 **Minimize visible utilities.** Minimize overhead and other visible electrical and telecommunications utility infrastructure, especially in Regional Centers, Town Centers and in areas where higher density development is allowed.

POLICY 4.5 **Technology and communication.** Work with service providers to ensure the community's technology and communication facilities are adequately maintained and enhanced to support public safety, facilitate access to information, and maintain City operations.

POLICY 4.6 **Temporary use of right of way.** Support temporary commercial or community use of rights-of-way, such as for public gatherings, events, outdoor dining, and other unique uses, with appropriate permits, as long as they provide a community benefit, maintain safety, and minimize conflict with the ultimate use and purpose of rights-of-ways.

GOAL 5 Provide public facilities, utilities, and services in a cost-effective manner.

POLICY 5.1 **Capital improvement program.** Maintain a long-term capital improvement program to include a comprehensive list of projects from service providers' adopted master plans, and identifies costs and funding sources for achieving desired types and levels of public facilities, utilities and services.

POLICY 5.2 **Funding sources.** Adopt additional funding methodologies, as needed, to ensure that new development and redevelopment fund the adequate and equitable extension and long term maintenance of public facilities, utilities and services

POLICY 5.3 **Asset management.** Improve and maintain public facility systems using asset management principles to optimize preventative maintenance, reduce unplanned reactive maintenance, achieve scheduled service delivery, and protect the quality, reliability, and adequacy of City services.

POLICY 5.4 **Investment coordination.** Encourage infrastructure investments that

complement and leverage other major capital investments.

POLICY 5.5 Funding priorities. Prioritize funding for facilities, utilities and services considered critical to the livability and safety of the City, including those that protect life and safety, as well as contractual obligations such as debt service.

Definitions

- a) **Planning Area.** In this section planning area corresponds to the adopted Hillsboro Urban Service Area (HUSA).
- b) **Public Facilities and Services** – Facilities and services provided by government agencies, service districts, or other public entities to meet the health, safety and welfare needs of the public, including but not limited to police and fire protection, recreation facilities and services, transportation system and services, energy and communication services, health and education services, zoning and subdivision control, and local government services.
- c) **Public Facilities Plan.** A plan, required by Goal 11 and OAR 660-011, that includes, but need not be limited to, the water, sewer and transportation facilities which are to support the land uses designated in the appropriate acknowledged comprehensive plan within an urban growth boundary containing a population greater than 2,500.
- d) **Service Providers.** City departments, other public agencies, and special districts providing public utilities, infrastructure, facilities, and services within the planning area.
- e) **Urban Area.** See Planning Area.
- f) **Utilities** – Fundamental services necessary to support community health, well-being, and economic function, including but not limited to electricity, natural gas, water, sewer, telecommunications, and waste management services.

Section 12. Public Facilities and Services.

The Statewide Planning Goal 11 requires the City to prepare a Public Facilities Plan. The purpose of the plan is to help assure that urban development in and around Hillsboro is guided and supported by urban facilities and services that are appropriate for the needs of the area and to provide a framework for future improvement and maintenance of the City's transportation, water, sanitary sewer, storm drainage, and parks and recreation facilities. The Public Facilities Plan is a supporting plan and implementing document of the Comprehensive Plan. It includes a list and description for each type of facility, short and long-range capital improvement plans, a financing plan and policies related to public facilities. This section of the HCP also addresses general government, police services, fire protection, libraries, schools, and energy and communications. (Added by Ord. No. 5102/1-02.)

(I) Goals.

- (A) Provide public facilities and services in an orderly and efficient manner consistent with the expansion of urbanization into rural areas.
- (B) Utilize the availability of public facilities and services as a tool for guiding urbanization with the Hillsboro Planning Area. (Amended by Ord. No. 3433/12-83.)
- (C) Provide a safe and healthy living environment.
- (D) Provide that existing land uses are and will continue to be supported by needed public facilities and services. (Added by Ord. No. 5102/1-02.)
- (E) Provide that future development is appropriately guided and supported by the provision of public facilities and services in a timely, orderly, and efficient manner. (Added by Ord. No. 5102/1-02.)

(II) Definitions.

- (A) **Public facilities, utilities and services.** Facilities, utilities and services provided by government agencies, public service facilities and public utilities to meet the health, safety and welfare needs of the public and include: police and fire protection, water, sanitary and storm sewer, health and education services, zoning and subdivision control, recreation facilities and services, transportation system and services, energy and communication services and local government services.
- (B) **Planning Area.** In this section planning area corresponds to the Hillsboro Urban Service Boundary Area (HUSBA), which is the study area for the Public Facilities Plan. The HUSBA is defined to the north, south, and west of Hillsboro by the Metro Urban Growth Boundary. To the east,

SW/SE 185th Avenue is generally treated as the study area boundary for the Public Facility Plan. (Added by Ord. No. 5102/1-02.)

(III) Policies.

- (A) The extension of a public facility, utility or service outside the urban area shall occur only in conjunction with an expansion of the Urban Growth Boundary and shall be provided at a level consistent with the intended density and designated land use for the area. (Amended by Ord. No. 5102/1-02.)
- (B) (Deleted by Ord. No. 3433/12-83.)
- (C) (Deleted by Ord. No. 3433/12-83.)
- (D) Public facilities and services shall be provided at a level sufficient to create and maintain an adequate supply of housing and service an increasing level of commercial and industrial activity.
- (E) The ability of residents to pay for public facilities and services at varying densities of development should be a prime consideration in determining appropriate densities and land uses in the planning area.
- (F) (Deleted by Ord. No. 5102/1-02.)
- (G) The location of schools should be used as a tool in directing future growth within the planning area.
- (H) (Deleted by Ord. No. 5102/1-02.)
- (I) When possible, government offices should locate in the vicinity of the County courthouse to form over time a public buildings complex and civic center.
- (J) The City shall work with the school districts to develop a facilities plan designed to meet enrollment increases and population growth.
- (K) Utilization of schools and other public facilities as multi-purpose facilities should be encouraged to help meet the education, recreation and civic needs of the community.
- (L) Citizens' should assist in the development of funding methods and programs for public facility and service projects. (Amended by Ord. No. 5102/1-02.)

(M) The City shall promote coordination among the City and other governmental and interested parties including special districts to facilitate the most effective uses of public facilities serving the planning area. (Added by Ord. No. 5102/1-02.)

(IV) Airport. (Deleted by Ord. No. 5102/1-02.)

(V) Implementation Measures. (Added by Ord. No. 3107/4-80 and Amended by Ord. No. 5102/1-02.)

(A) COORDINATION OF SERVICES.

(1) The City of Hillsboro shall coordinate with applicable special districts and other intergovernmental entities and enter into agreements to facilitate the most effective uses of public facilities serving the planning area.

(2) Intergovernmental agreements to which the City of Hillsboro is a party shall acknowledge the City as coordinator for the Hillsboro Public Facilities Plan.

(3) The City's Public Facilities Plan shall be updated at each Periodic Review and as needed to reflect major changes in service provision. As a supporting document to the Comprehensive Plan, updates to the Public Facilities Plan are not Comprehensive Plan amendments.

(4) The future urban service boundary has not been finalized between Hillsboro and Beaverton. When the boundary is determined it may lie to the west of 185th Avenue, but will not lie to the east. Using 185th as a study area boundary ensures that the PFP contains an analysis of all areas between Hillsboro and Beaverton that could become part of the Hillsboro urban service area.

(Added by Ord. No.5102/1-02.)

(B) TRANSPORTATION.

(1) Comprehensive Plan goals, definitions, policies, and implementation measures related to transportation are provided in Section 13, Transportation, of the Hillsboro Comprehensive Plan.

(Added by Ord. No. 5102/1-02.)

(C) WATER SYSTEM.

- (1) The water system shall be coordinated with the Land Use Map in the provision of public facilities, especially sanitary sewers and fire protection.
 - (a) The City shall coordinate with applicable special districts and other intergovernmental entities and enter into agreements to ensure adequate water for planned growth.
 - (b) The City and water related districts and entities shall coordinate master planning for the water systems in the planning area. Master Plans shall include deficiencies and needed improvements. Master Plans may require changes to the City's Public Facilities Plan.

(Added by Ord. No. 5102/1-02.)

- (2) Consistent with the adopted UPAA and other agreements with service providers the City shall require properties in the urban area to annex to the City prior to the provision of water service by the City or Tualatin Valley Water District (TVWD). (Amended by Ord. No. 5102/1-02.)
- (3) Territory within the TVWD service boundary, when annexed to the City, shall maintain TVWD as the full service provider unless otherwise agreed by TVWD. (Amended by Ord. No. 5102/1-02.)
- (4) Regarding areas presently within both the Hillsboro city limits and the TVWD service boundary and that are served by the TVWD, except for the territory served by the TVWD north of Oregon Highway 26 and east of Cornelius Pass Road, Hillsboro may annex the territory within the planning area and withdraw retail water distribution services as provided by law, including assumption of debts and liabilities, and become the retail service provider within that area. (Amended by Ord. No. 5102/1-02.)
- (5) (Deleted by Ord. No. 5102/1-02.)

(D) SANITARY SEWER.

- (1) The City shall cooperate with Clean Water Services (CWS) for the provision of service in the urban area consistent with the Comprehensive Plan policies and maps.

- (a) The City and CWS will maintain an intergovernmental agreement, for approving the installation of sewage collection lines, approving and inspecting new service connections, and for operation and maintenance of the collection system. CWS is responsible for the construction and operation on the conveyance system (pipes over 24 inches and force mains) and the sewage treatment plants. CWS is responsible for adhering to CWS construction and design standards for private development. While interconnected, each entity owns its components. (Added by Ord. No. 351 1/12-84 and Amended by Ord. No. 5102/1-02.)
- (b) Consistent with the adopted UPAA and other agreements with service providers within Urban Area "A" the City shall require properties to annex to the City prior to the provision of sanitary sewer service. (Added by Ord. No. 3511/12-84 and Amended by Ord. No. 5102/1-02.)
- (c) Within Urban Area "B" as defined by the Urban Planning Area Agreement, the City may require properties to annex to the City prior to the provision of sanitary sewer service. The City shall negotiate with service districts currently providing urban services to properties in Area B, and will address service provision issues on an individual basis upon receipt of petitions for annexation. (Added by Ord. No. 3511/12-84 and Amended by Ord. No. 5102/1-02.)
- (d) The City and CWS shall coordinate Master Plans for the sanitary sewage system. Master Plans shall identify deficiencies and needed improvements. Master Plans may require changes to the City's Public Facilities Plan. (Amended by Ord. No. 5102/1-02.)
- (2) (Deleted by Ord. No. 5102/1-02.)
- (3) The City shall continue its program of sealing, repairing and replacement of sewer lines to further reduce infiltration. Most projects in the City's Capital Improvement Plan (CIP) involve the repair and/or replacement of installed components to address one of these conditions. (Amended by Ord. No. 5102/1-02.)
- (4) (Deleted by Ord. No. 5102/1-02.)
- (5) (Deleted by Ord. No. 5102/1-02.)

(E) STORM DRAINAGE.

- (1) The City and CWS shall coordinate Master Planning for the stormwater system. Studies shall also develop lists of needed improvements for the Urban Area. Master Plans may require changes to the City's Public Facilities Plan. (Amended by Ord. No. 5102/1-02.)
- (2) CWS plans significant investment in the stormwater management system to address both conveyance and water quality needs. A portion of this investment will address drainage deficiencies in areas where drainage elements are undersized for meeting the area's design storm service standard. Other improvements will serve a combination of new and existing residents. The most significant improvements are for water quality enhancement facilities. The drainage system includes a network of pipes, culverts, open channel stormwater facilities, and other natural drainage channels and stormwater facilities that eventually discharge into the Tualatin River. (Amended by Ord. No. 5102/1-02 and 5728/3-07.)
- (3) By intergovernmental agreement the City of Hillsboro assumes ownership and maintenance of public drainage facilities that are part of the City street system, natural waterways located in public easements and public water quality facilities. A separate intergovernmental agreement between the City and Washington County Land Use and Transportation Department establishes guidelines for transfer of ownership of county roads to the City after annexation of adjoining properties. (Amended by Ord. No. 5102/1-02.)
- (4) By intergovernmental agreement, the City of Hillsboro is responsible for inspection and approval of constructed drainage improvements, and for inspection and maintenance of the collection system within the Hillsboro Urban Service Boundary Area. CWS is responsible for planning and designing the regional conveyance system and regional storm water quality projects. The City and CWS are responsible for adhering to CWS construction and design standards for public and certain private improvements. (Amended by Ord. No. 5102/1-02.)
- (5) The City shall follow and enforce the Orders, Standards, specifications, work programs, and performance criteria promulgated by CWS, subject to program funding and to the extent the City may be lawfully authorized to act. (Added by Ord. No. 5102/1-02.)

- (6) All major land use actions shall provide for adequate storm drainage conveyance and treatment per adopted standards. (Amended by Ord. No. 5102/1-02 and 5728/3-07.)
- (7) Storm sewer improvements shall be coordinated with the implementation of the Transportation Plan where appropriate.

(F) GENERAL GOVERNMENT.

- (1) Prior to the first major Comprehensive Plan revision, the City shall study general government services and assess the adequacy of existing facilities and project future facility requirements. (Amended by Ord. No. 5102/1-02.)
- (2) Prior to the first major Comprehensive Plan revision, the City shall review the Community Development Code and determine if the existing zones adequately address the location of such public facilities as: churches, schools, utilities, and government agencies. (Amended by Ord. No. 5102/1-02 and Ord. No. 6096/9-14)
- (3) The City shall periodically convene a Technical Advisory Committee consisting of representatives from the Public Works, Water, Finance and Planning and the appropriate service provider districts to coordinate long term public facilities and to plan for public facilities. (Added by Ord. No. 5102/1-02.)

(G) POLICE SERVICES.

- (1) The City shall maintain, within the funding available, the current level of police protection in relation to the crime rates and calls for service. The crime rates and calls for service shall be monitored annually, so that the funding level of police services can be evaluated in relation to the needs of the community.
- (2) The City shall, within the funding available, continue its efforts to reduce the incidence of reported crime. These efforts include maintaining manpower commensurate with the population, an ongoing training program for police personnel, and pursuing a community-wide program of crime prevention.

(H) FIRE PROTECTION.

- (1) The City shall maintain, within the funding available, the current level of fire protection, emergency medical and fire related services.

- (2) Prior to the first major revision, the City shall study future fire station locations and major equipment needs. The study shall establish station locations or locational criteria and identify the needs for major equipment acquisition.
- (3) The City shall continue to coordinate fire protection efforts, including station locations, with Washington County RFPD #2, to assure maximum effectiveness and efficiency.
- (4) Fire flows should be analyzed to assist in determining the location of new lines to improve water pressures in areas that may be deficient. (Amended by Ord. No. 5102/1-02.)

(I) LIBRARY FACILITIES.

- (1) Library needs and activities shall be monitored in the future to determine the need and optimum time for physical improvements.

(Amended by Ord. No. 5102/1-02.)

(J) SCHOOLS.

- (1) Public Facilities planning and projections shall be maintained in five year increments and shall be coordinated with the joint City/County urbanization studies.
- (2) The City shall coordinate with the school districts located in the Urban Area to help assure an adequate level of educational services. Areas of coordination shall include:
 - (a) Location of school site;
 - (b) Reservation of potential school sites during the development approval process;
 - (c) Provision of adequate pedestrian, bicycle and bus access from residential districts to school sites;
 - (d) Consideration of school capacities, school population, and district assessed value during the development approval process; and
 - (e) Provision of population projections.

(Amended by Ord. No. 5102/1-02.)

(K) PARKS AND RECREATION.

- (1) The City of Hillsboro shall complete a Park Master Plan. The plan shall identify park needs based on the level of service standards in the existing Master Plan for the planning area. The City shall also prepare a capital improvement program to address existing service deficiencies and anticipated park and recreation needs for the planning period.
- (2) The City shall address long term operation and maintenance of park and recreation facilities within available funding parameters.
- (3) The City shall examine strategic partnerships with local, state, and federal partners, especially for acquisition and shared-use facilities.

(Added by Ord. No. 5102/1-02.)

(L) ENERGY AND COMMUNICATIONS. (Deleted by Ord. No. 5102/1-02.)

(M) ALTERNATIVE TRANSPORTATION. (Deleted by Ord. No. 5102/1-02.)

(N) HILLSBORO AIRPORT. (Deleted by Ord. No. 5102/1-02.)

(VI) Public Facilities Plan

- (A)** In accordance with Goal 11 and OAR 660-011, the City completed a Public Facilities Plan (PFP) in 2001 which includes the following elements:
- (1) Interagency Coordination and Decision Making;
 - (2) Existing Conditions and Future Needs Analysis;
 - (3) Capital Improvement Project List and Financing Plan; and
 - (4) Maps that identify the Planned Improvements.
- (B)** The PFP is adopted as a supporting document to the Comprehensive Plan.
- (C)** The list of Capital Improvement Projects is a required element of the HCP in accordance with Goal 11. The following project list is an estimate of the infrastructure improvements needed to serve planned urban development in the Hillsboro urban growth boundary for the planning period.

(Added by Ord. No. 5102/1-02.)

Economic Development

Goals and Policies DRAFT – July 7, 2016

Review History

Date	Reviewed By
3.15.16 - 5.9.16	Internal Committee Meetings – <i>Comments Incorporated</i>
5.24.16	Economic Opportunities Analysis Subcommittee – <i>Comments Incorporated</i>
6.9.16	Technical Advisory Committee – <i>Comments included as tracked changes</i>
6.23.16	Citizen Advisory Committee – <i>Comments included as tracked changes</i>

GOAL 1 Diversify and expand the economy to give Hillsboro, the region, and the state a competitive advantage.

POLICY 1.1 ~~Diverse range of employment opportunities.~~ Foster a diverse range of employment opportunities to benefit Hillsboro, the region, and the state. **Competitive advantage.** Maintain and strengthen the city’s competitive economic advantages including access to a highly-skilled workforce, **robust local workforce development**, business diversity, competitive business climate, quality educational institutions, a **diverse** supply of developable employment land of varying sizes, and globally-competitive **infrastructure utilities, public facilities and services.**

Commented [DR1]: City staff edit to move this language to Policy 1.2.

Commented [DR2]: CAC member input.

POLICY 1.2 ~~Diverse range of employment opportunities.~~ Foster a diverse range of employment opportunities to benefit Hillsboro, the region, and the state.

Commented [DR3]: City staff edit to be consistent with Goal 2 policy language terminology.

POLICY 1.3 ~~Employment-land supply.~~ Pursue an **ample** employment land supply to benefit Hillsboro, the region, and the state.

Commented [DR4]: CAC member input to elevate the importance of land supply.

~~Policy 1.4~~ **POLICY 1.4** **Traded-sector and target industry retention, expansion and recruitment.** Sustain the ongoing vitality of the city’s traded-sector* and targeted industries by aligning plans and investments to retain, expand, and recruit employers and investment in Hillsboro.

~~Policy 1.2~~ **POLICY 1.5** **Business Innovation.** Facilitate scale-up* and business innovation opportunities where new or incubating companies* can create a sense of place and benefit from co-location, proximity to transit, affordable space, mentorship, and shared services.

~~Policy 1.3~~ **POLICY 1.6** **Partnerships.** Leverage program and resource partnerships with local, regional, and statewide stakeholders, such as governments, **educational institutions**, economic development and business organizations, and major employers, to attract and retain employment and investment.

~~Policy 1.4~~ **POLICY 1.7** **Economic resiliency.** Pursue collaborative and innovative approaches to strengthen **and sustain** Hillsboro, the region, and **the** state’s economic resiliency*, ~~such as by addressing energy and climate change challenges.~~

POLICY 1.8 **Energy, water, and climate change challenges.** Reduce the vulnerability of Hillsboro, the region, and the state’s economies to energy, water and climate change challenges.

GOAL 2 Catalyze economic development through infrastructure investments supporting high-quality utilities, public facilities and services.

POLICY 2.1 ~~Public facilities~~High-quality utilities and services. Maintain existing public utility assets and expand invest in the expansion of high-quality public utilities* and services to serve existing and future employment to catalyze economic development.

POLICY 2.2 ~~Water supply.~~ Plan for the water supply needs of high volume industrial water users. High-quality community public facilities and services. Maintain and invest in expansion of high-quality community public facilities* and services* to catalyze economic development.

POLICY 2.3 **Multi-modal transportation.** Develop safe, well connected, and efficient multi-modal* transportation infrastructure facilities that improve access to employment areas while facilitating freight movement capabilities.

POLICY 2.4 **Hillsboro Airport.** ~~Ensure~~Facilitate the long-term viability of the Hillsboro Airport facility.

POLICY 2.5 ~~Public facility planning coordination~~Coordination of investments and supporting services utilities, public facilities and services. Coordinate the type, design, timing, and location of public facilities and infrastructure investments and supporting services-utilities, public facilities and services with other public agencies, utilities, the private sector, and property owners to move employment land closer to development-ready* status.

POLICY 2.6 ~~Financing of infrastructure investments and supporting services~~utilities, public facilities and services. Adopt additional funding methodologies, as needed to ensure that new development and redevelopment adequately contribute to fund the necessary extension of infrastructure investments and supporting services-utilities, public facilities and services.

Commented [DR5]: City staff edit to be consistent with policy language terminology below.

Commented [DR6]: City staff edit to be consistent with Goal 2 policy language terminology.

Commented [DR7R6]: Added word "facilities"

Commented [DR8]: City staff edit to be consistent with Goal 2 policy language terminology.

Commented [DR9]: City staff edit based on concern from Hillsboro Economic Development that this language comes off as punitive and makes no mention of publicly funding strategies.

Commented [DR10]: City staff edit to be consistent with Goal 2 policy language terminology.

Commented [DR11]: CAC member asked about including a policy here about the downtown government cluster's role in economic development. Staff responded we would look into what existing plans said about this. Here's the summary:

While the Downtown Framework Plan identifies that government is one of the primary sources of jobs in the downtown area and that the Hillsboro Civic Center, together with the historic County Courthouse and other county offices, comprise the government center "anchor" at the western end of the core downtown area, the Plan has no Goals, Policies, or Actions around governmental institutions. The Hillsboro 2035 Community Plan also has no Economy and Infrastructure section Initiatives or Actions involving governmental institution. The Downtown Urban Renewal Plan, in Objective 2G, does involve promoting key employment clusters in the commercial district including the Health/Education and Government clusters.

Commented [DR12R11]: Ec Dev confirmed no need for this additional policy.

Commented [DR13]: City staff edit to be consistent with Goal 2 policy language terminology.

GOAL 3 Manage land supply and capacity to meet short and long-term economic development needs of Hillsboro, the region, and the state.

POLICY 3.1 **Supply of developable employment sites, capacity, and flexibility.** Sustain a supply of developable employment sites, capacity, and adequate flexibility to meet the short and long-term needs of Hillsboro, the region, and the state.

POLICY 3.2 **Employment land designation.** Designate Adopt land use designations in a manner that accommodates projected employment growth.

POLICY 3.3 **Employment land lot sizes.** Manage employment land to provide a range of available and developable lot sizes to accommodate a variety of uses, industry clusters*, and emerging market opportunities.

POLICY 3.4 **Higher-density employment land.** Pursue the development of higher employment -density densities employment land in areas with planned or existing enhanced transportation connectivity, access to transit, and utilities. public facilities and services infrastructure.

POLICY 3.5 **Health and education campuses.** Promote the stability and growth of health and education campuses* as essential service providers, centers of innovation, workforce development providers, and major employers that can also provide

amenities to the surrounding neighborhoods.

POLICY 3.6 **Revitalization and reinvestment.** Support additional investment in existing Employment Areas*, Regional Centers*, Town Centers*, and along targeted Corridor* areas, ~~including such as~~ assembly of existing small employment parcels for redevelopment, programs supporting adaptive reuse, and identification of options to mitigate and/or redevelop sites and structures.

POLICY 3.7 **Employment-land supply.** ~~Obtain Pursue~~ additional employment land ~~for urbanization~~ when the Hillsboro Planning Area* will not accommodate the 20-year projected demand ~~for employment~~ to meet local, regional, and state needs.

Commented [APR14]: CAC suggestion was to also address this topic in Goal 1. See Policy 1.3.

GOAL 4 Promote economic development opportunities for individuals and small and emerging businesses to ensure equitable access to resources.

POLICY 4.1 ~~Workforce development~~**Individual training.** Encourage collaboration between local K-12 schools, trade schools, colleges, and employers to ~~facilitate~~ facilitate ~~individuals'~~ individuals' access to cutting-edge career development, workforce programs, technology, and other high-quality educational opportunities.

POLICY 4.2 **Entrepreneurial opportunities.** Expand opportunities for small business and business development across our diverse community.

POLICY 4.3 **Mitigating gentrification.** Create strategies to mitigate the effects of gentrification* on individuals, small and emerging businesses, and neighborhoods.

GOAL 5 Develop and sustain a vibrant city to support economic development.

POLICY 5.1 **High-quality public realm.** Plan, develop, and enhance a high-quality public realm* that ~~interacts with~~ complements adjacent development and uses.

POLICY 5.2 **Development impacts.** Ensure architectural and site designs that limit impacts on surrounding neighborhoods and that respect the fundamental characteristics of applicable Hillsboro design type designations*.

POLICY 5.3 **Innovative architecture and site design.** Facilitate innovative architectural and site designs that complement and enhance the public realm, particularly at the edges of development sites, to enhance their integration into adjacent uses.

POLICY 5.4 **Distribution of commercial areas.** Disperse the types and sizes of commercial opportunities throughout the city in proportion to the needs of the area.

POLICY 5.5 **Shopping, dining, and entertainment, and recreation options.** ~~Facilitate and disperse~~ Facilitate and disperse an array of shopping, dining, ~~and~~ entertainment, and recreation options ~~throughout the City to benefit the community and that~~ help attract and retain major employers.

POLICY 5.6 **Locational compatibility.** Focus economic development in Employment Areas, Regional Centers, Town Centers, Neighborhood Centers*, and along Corridors.

POLICY 5.7 **Innovation economy.** ~~Support Plan for~~ Support Plan for new and innovative economic trends, such as the sharing economy*.

POLICY 5.8 Environmental sustainability. Pursue environmental sustainability* actions that aim to preserve natural resources and reduce environmental impacts.

Commented [DR15]: CAC member input.

Commented [DR16]: CAC member input.

DEFINITIONS

(Notes in parentheses indicate definitions from CDC or other Comp Plan sections)

Corridors – Major streets that may accommodate higher densities and intensities and feature a high-quality pedestrian environment and convenient access to transit. Corridors provide critical connections to centers, and serve as major multi-modal transportation routes for people and goods. (Design & Development Design Type Definitions)

Development-Ready – Lands available for development within 180 days, with appropriate zoning to allow industrial or traded-sector uses. (Definition adapted from Business Oregon)

Economic Resiliency – Reducing the vulnerability of economies to crises and strengthening their capacity to absorb and overcome severe **economic** shocks while supporting strong growth.

Employment Areas – Areas that serve as hubs for regional commerce. They include industrial land for high tech, business parks, manufacturing, and other business uses. These areas should include limited supporting commercial and retail uses to serve employees. These areas should contain multi-modal commuting options and good connectivity to regional transportation facilities for the movement of goods and cargo. (Design & Development Design Type Definitions)

Environmental Sustainability – Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Gentrification – An under-valued area that becomes desirable, resulting in rising property values and changes to demographic and economic conditions of the neighborhood. These changes sometimes include a shift from lower-income to higher-income households, and often there is a change in racial and ethnic make-up of the neighborhood's residents and businesses.

Health and Education Campuses – Essential healthcare and education service providers in a defined geographic area that serve as a major sources of jobs, workforce development, and innovation.

Hillsboro Design Type Designations – See descriptions in Design and Development Goals and Policies.

Hillsboro Planning Area – Hillsboro city limits as well as unincorporated areas where the City is ultimately responsible for comprehensive planning and implementing regulations to govern future development per the urban planning intergovernmental agreement and other intergovernmental agreements with Washington County.

Incubating Companies – New and start-up companies that require an array of business support resources and service to develop, such as physical space, capital, coaching, common services, and networking connections.

Industry Clusters – Groups of similar and related firms in a defined geographic area that share common markets, technologies, worker skill needs, and which are often linked by buyer-seller relationships.

Multi-Modal – Transportation facilities or programs designed to serve many or all methods of travel, including all forms of motor vehicles, public transportation, bicycles and walking. (Metro RTFP)

Neighborhood Centers – Areas with a mix of retail and services to meet day-to-day living needs of the immediate neighborhood with less density and intensity than Regional or Town Centers. These areas have a high level of connectivity to the immediate neighborhood by walking or biking, with the potential for transit access nearby. (Design & Development Design Type Definitions)

Public Facilities and Services – Facilities and services provided by government agencies, service districts, or other public entities to meet the health, safety and welfare needs of the public, including but not limited to police and fire protection, recreation facilities and services, transportation system and services, energy and communication services, health and education services, zoning and subdivision control, and local government services.

Commented [DR17]: Ec Dev: Should we broaden this definition to include none industrial or traded sector development such as in health and education campuses?

Commented [DR18R17]: Ec Dev confirmed that definition should not be broadened.

Public Realm – ~~Publicly owned~~[The system of publicly-accessible spaces made up of streets, pathways, right of ways, parks, publicly-accessible open spaces and any public and civic buildings and facilities, and publicly-accessible spaces in private development \(including lobbies and courtyards\).](#)

Regional Centers – Compact hubs of high density housing, employment, and commercial uses supported by high quality transit, multi-modal street networks, and supportive amenities and services. (Design & Development Design Type Definitions)

Scale-Up – Companies looking to expand in terms of market access, revenues, added value or number of employees.

Sharing Economy – An economic model in which individuals borrow ~~or~~, rent, or trade goods ~~or~~, services, space, and other resources from each other typically via the internet.

Town Centers – Areas comprised of medium to high intensity mixed use development containing housing, commercial, retail and civic uses. These areas are well served by transit, have supportive amenities, and are accessible by the surrounding neighborhood by walking or biking. (Design & Development Design Type Definitions)

Traded Sector – Industries and firms that produce goods and services sold outside the region.

Utilities – [Fundamental services necessary to support community health, well-being, and economic function, including but not limited to electricity, natural gas, water, sewer, telecommunications, and waste management services.](#)