Providing Water Service to Brooks-Hopmere Community Water District

Policy Question

Should the City of Salem provide drinking water to the Brooks-Hopmere Community Water District?

Background and Summary

The City of Salem provides drinking water to nearly 200,000 individuals, businesses, institutions, and other customers through approximately 56,000 water service accounts. In addition to Salem customers, the City provides water to the city of Turner and several special service districts (Suburban East Salem Water District and Orchard Heights Water Association). For municipal and district customers, the City delivers water through bulk meters and there are interagency agreements establishing roles and responsibilities. All of Salem's water customers are located within, or in close proximity to the Salem-Keizer Urban Growth Boundary (UGB).

The Brooks-Hopmere Community is an unincorporated community located approximately four miles from the Salem's northern limits. The Marion County Board of Commissioners function as the District's officers. The District currently receives its water from a well operated by Chemeketa Community College. The Community is developing a strategic plan to address, among other things, its long-term water needs. A report completed in October 2021 (Attachment 1) notes:

> *Given the capacity of the current system, including its inability to meet fire flow requirements, widely variable water quality, uncertain ownership and water rights status, and other related issues and challenges, a new water system is needed to meet the vision of the community's future, regardless of the growth scenario. A new water system would consist of a community well (or wells) as its source, or installation of a water storage and distribution system with a neighboring municipality as a wholesale water source.*

Based on documents publicly available, the District is pursuing a phased approach to addressing its long-term water supply needs (Figure 1). Additional information is provided in the attachments and online at: https://www.brooks-hopmere.com/project-docs.

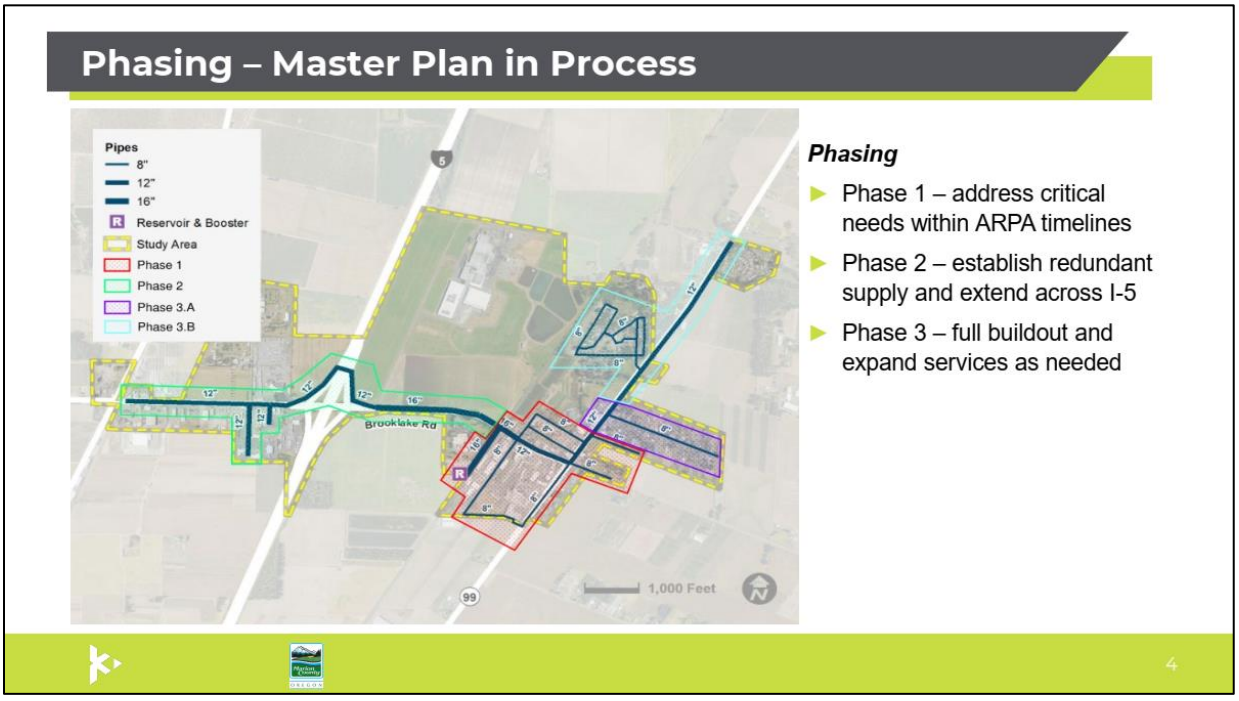

Figure 1. Presentation Slide Showing Master Plan for Phasing (see Attachment 4)

Phase 1 is to address its critical needs using ARPA (American Rescue Plan Act) funding within the ARPA timeline. Phase 2, the start date of which has not been identified, is to establish a redundant supply by installing a community well network with capacity to serve its customers and to meet fire flow requirements. Phase 2 is a long-term proposition as it involves negotiating for use of others' water rights. It also requires using existing wells and/or constructing new productive wells. The preferred long-term option for the District per its plan is to use water from wells within the area as its primary source and the water from the City's system as a redundant resource. Earlier this year and as part of Phase 1 of its strategic plan, the Brooks-Hopmere Community Water District requested to become a City wholesale customer. The District's intentions are to pay for all costs associated with connecting its system to City water, including construction, permitting, and acquisition of easements.

At issue is whether the City should add a bulk metered customer—in this case the Brooks-Hopmere Community Water District—whose service area is well outside Salem's corporate limits *and* the UGB.

Discussion

1. Capacity. Table 1 summarizes the current and projected water demand for the Brooks-Hopmere Community. Also included in Table 1 is an approximation of the potential impact of the District's Maximum Daily Demand on the City's overall delivery capacity. For discussion purposes, this impact is based on the maximum treatment capacity of the City's ozone treatment plant of 60 MGD.

Table 1. Brooks-Hopmere Impact on City Capacity (60 mgd)

Year	2024	2029	2034	2039	2044
Population	795	853	914	960	1005
Avg Daily Demand (MGD)	0.378	0.383	0.389	0.394	0.398
Max Daily Demand (MGD)	0.523	0.539	0.559	0.569	0.582
Max Daily Demand/60 MGD Capacity	0.9%	0.9%	0.9%	0.9%	1.0%

2. Policies and Regulations. *Salem Revised Code* (SRC) Chapter 72 and Council Policy X-4 address water service to properties beyond Salem's corporate limits. Both require that the applicant consent to annexation and that City Council approve the request, requirements that would not be applicable to a municipal or district connection. If the City chose to pursue making a connection with the District, both Code and Council Policy should be amended to establish criteria and procedures for this and potential future connections.

3. Considerations. The City can establish the terms for the District to become a City customer in an interagency agreement. By way of illustration but not limitation, these terms could include:
   a. Requiring the District to be responsible for: all capital costs (material, installation, construction, connection, life cycle, etc.), permitting, easement acquisition, and any other expenses associated with establishing the service.
   b. Requiring the District to be responsible for all ongoing operations, maintenance, replacement, rehabilitation, emergency response, and related activities for the infrastructure between its connection to the City-owned bulk meter to the connection with the requesting entity's system.
   c. Requiring the District to abide by all state and City of Salem rules, regulations, policies, and standards, including billing, customer service, backflow prevention, construction specifications, water conservation, leak detection, reporting, and curtailment.

4. Long-term Considerations.
   a. Urban growth will continue to be regulated under statewide planning goals and land use statutes.
   b. Using Brooks-Hopmere as a precedent, there may be requests from other municipalities and districts wanting to connect to Salem water. The City is under no obligation to agree to future requests.
   c. Providing water to Brooks-Hopmere may encourage development in that service area, which could benefit the region.
   d. Providing water to Brooks-Hopmere may result in development that otherwise would have been located within the Salem-Keizer UGB to be in the District's service area instead.
   e. Assuming success in connecting City water to the Brooks-Hopmere District, there is then no guarantee that the District will expend resources on Phase 2 to develop its own, local source of drinking water, which would allow the City's service to function as a secondary resource.
   f. If the City determines that the connection to the District must *only be* an interim measure to support the District's Phase 1, an obligation by the District to pursue Phase 2 must be incorporated into the IGA implementing the bulk service.

Options and Recommendations

Among the options:

Option #1. Deny the request. Regardless of the circumstances underlying the request and independent of our capacity, establish a policy that the City *will not* provide drinking water to other jurisdictions or special service districts beyond those we currently serve.

This sets a clear policy and, as the no-change-option, has the least risks for the City.

Option #2. Pilot a connection to Brooks-Hopmere Community Water District. Obtain concurrence from City Council to collaborate with the District (and Marion County). Establish terms and conditions. Craft the agreement and, subject to City Council approval of the agreement, establish the connection. Using lessons learned from this experience, draft a detailed set of policies and procedures for any future connections..

Depending on our experiences and the success—or otherwise—the City will be better informed regarding the pros, cons, risks, and benefits of similar connections, and will be better able to develop a rules and procedures to govern any future request to connect..

Additional Information and Considerations

The policy question of providing water services to another jurisdiction or special service district outside of the UGB is separate and distinct from any policy issues related to providing water services to an individual property located outside the UGB. The former applies to a state regulated entity; the latter is specific to a single property.

Attachments

1. Future Report: Brooks-Hopmere Community Plan (October 2021)
2. Fact Sheet: Brooks-Hopmere Community Water and Wastewater Systems Planning Update (Undated)
3. Technical Memorandum: Water and Wastewater Future Infrastructure Summary (February 10, 2020)
4. Presentation: Water Feasibility Presentation (January 16, 2024)

Attachment 1

Future Report

Brooks-Hopmere Community Plan

October 2021

Marion County OREGON

KELLER ASSOCIATES

20 Years APG

Brooks-Hopmere Future Report

Prepared by Angelo Planning Group and Keller and Associates

October 2021

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The following appendices include previous memoranda and analyses prepared for the Brooks-Hopmere Community Plan Future Report. The appendices are included in Volume II of this report.

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Appendix B. Economic Development Conditions

Appendix C. Transportation Existing Conditions Summary

Appendix D. Existing Demand for Rail Service

Appendix E. Water and Wastewater Existing Infrastructure Summary

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Appendix L. Brooks-Hopmere Community Plan, July 2000

I. EXECUTIVE SUMMARY

The Brooks-Hopmere Community represents two adjacent areas (Brooks & Hopmere) connected by Brooklake Road, a county roadway. The area is the largest unincorporated community outside of an urban growth boundary in Marion County and plays an essential role in the economy of the County and region. The area boasts a wide range of businesses and the total employment in the area rivals that of many of the County's incorporated cities. Key assets of the community include:

- ***Location*** – the Brooks-Hopmere connection to Interstate 5 provides a direct connection to points north and south in the Willamette Valley, including ready access to Salem, Portland and other communities, as well as surrounding agricultural operations.
- ***Freight Hub*** – access to Union Pacific and Portland & Western railroad facilities, as well as May Trucking and the Pilot Truck Stop give the area ready access to freight services and facilities. Potential development of the proposed intermodal (truck to rail) Port of the Willamette facilities would further elevate the area's importance for movement of agricultural and other goods throughout the state.
- ***Education*** – Chemeketa Community College provides several vocational training programs, as well as training facilities for fire protection and emergency service providers from throughout western Oregon. The campus also serves as an important resource for local residents and businesses.
- ***Agricultural produce processing, storage and distribution*** – Oregon Potato (dba as NORPAC) is a central hub for processing, storing and distributing produce from throughout the Willamette Valley. Curry and Company and several other businesses in the community also support this economic sector.
- ***Employment*** – In addition to the businesses and institutions already mentioned, several other large companies call Brooks-Hopmere home and employ a significant workforce, including Pacific Stair, Red Steer and others.
- ***Tourism –*** Antique Powerland hosts events throughout the year and draws thousands of visitors each year to its annual "Great Oregon Steam-Up" event.

Corner of Brooklake Rd. NE & Huff Ave. NE – Looking West

A Vision for the Future

Business and property owners, as well as local residents envision a vibrant future for the community. Brooks-Hopmere will continue to be a thriving business community, with employment opportunities and community services that include:

- A hub of jobs and services that support the local and regional agricultural industry and economy.
- Improved, well-designed and functioning roads, rail and other transportation facilities, that continue to serve local businesses, travelers, and the surrounding area.
- A stronger sense of community and the ability for local businesses and residents to advocate for future improvements that support the community's vision.
- Reliable, resilient, and sustainable infrastructure that serves businesses and residents in a cost-effective manner and provides opportunities for desired growth and expansion in the future.
- Continued emphasis on serving, supporting and preserving surrounding agricultural land and enterprises by focusing non-resource based development within the community boundary.

This vision is expected to translate into continued growth and expansion of existing businesses and potential start-ups of new businesses.

Achieving the Vision

Although Brooks-Hopmere is a unique community with strong assets and opportunities, it is not without challenges. A number of improvements will be needed to allow the community to continue to grow and thrive. Some of the most important initiatives include:

- **Enhancements to the I-5 interchange.** While proximity to I-5 is cited by most people in Brooks-Hopmere as one of the area's key assets, it is in need of significant improvement. The on and off-ramps suffer from serious congestion at peak travel times and getting on and off those ramps can be challenging from a safety and delay perspective. Working with the Oregon Department of Transportation on planning for future improvements to the interchange is crucial to the area's success. Ultimately, enhancements to the interchange also must be coupled with improvements to Brooklake Road and its intersections with Highway 99E and Highway 99W.
- **Improved water and wastewater service**. Groundwater is the primary source of drinking water in the Brooks-Hopmere Planning Area. While several businesses have private groundwater wells for employees and customers, the only public community system in the area is the Brooks Community Service District (BCSD), managed through an intergovernmental agreement with Marion County. Existing water service is not adequate to meet existing and projected future needs. The area is served by wells which do not provide enough pressure to support fire protection requirements, making expansion of existing businesses and location of new businesses problematic and costly. Similarly, the community wastewater system is expensive to operate and maintain and makes development and redevelopment of larger properties challenging. Development of community water and wastewater systems is essential to the long-term economic health and resiliency of the area.
- **Community Organization and Advocacy**. As an unincorporated community, Brooks-Hopmere lacks a governing body or an organized group that can advocate for the essential improvements needed in the community. Creating some type of formal structure to serve this purpose is necessary to help make the Brooks-Hopmere Future Report a reality.

Brooklake Rd. NE – Directly West of I-5 Interchange – Looking South

Corner of River Rd NE & Brooklake Rd. NE – Looking South

A Plan for Action

The Brooks-Hopmere Future Study report includes an extensive list of actions needed to propel the community into its desired future. A few primary strategies stand out as essential short and medium term steps towards this end:

- **Participate in the Interchange Area Management Planning (IAMP) process** and advocate for the community's needs. The Oregon Department of Transportation (ODOT) is in the process of planning for future I-5 interchange improvements. The IAMP process began in October 2020 with the intention for completion of the planning process in Spring 2022. Strong, effective participation in this process by members of the Brooks-Hopmere Community (BHC) is essential to ensuring that any proposed recommendations will support this long-term plan for the Brooks-Hopmere community. Community members should advocate for the following objectives:
    - Improvements should enhance accessibility and mobility for local businesses.
    - The project should not result in significant or unreasonable costs for local property owners or businesses.
    - To the extent that improvements make the area more attractive for future residential development, such development should not adversely impact traffic levels and associated mobility for local businesses and institutions.
- **Conduct a Community Water and Wastewater System Feasibility Study**. The BHC Future Study evaluated the existing water wastewater systems and recommends a number of actions to improve them. The first step in that process will be to assess the feasibility and cost of development of new water and wastewater systems. A new water system would consist of a community well (or wells) as its source, or installation of a water storage and distribution system with a neighboring municipality as a wholesale water source. A new wastewater system would be a more traditional gravity-based collection system. The feasibility study will evaluate these components, their costs, and the process for implementing them in more detail.
- **Create a structure for community advocacy and representation**. In the long-term, some type of formal governance structure will be needed to fully implement the BHC vision. This may include incorporation as a separate city, annexation to another city (Keizer or Salem), or creation of a County Service District. In the shorter term, members of the community should

work with the County to establish some type of local committee or other group that can collectively advocate for the area's future.

II. INTRODUCTION

The Brooks-Hopmere Community (BHC) is a designated Urban Unincorporated Community[1] located in Marion County a few miles north of Keizer and Salem. The Brooks-Hopmere Community represents two adjacent areas (Brooks & Hopmere) connected by Brooklake Road, a county roadway. The area is the largest unincorporated community in Marion County and is home to a wide range of commercial and industrial businesses. Additionally, the area includes residential uses and several institutional uses, such as the Willamette Valley Christian School, Marion County Rural Fire District Station, and Chemeketa Community College Brooks Campus.

Brooklake Rd. NE west of intersection of Pueblo Ave. NE – Looking South

The Brooks-Hopmere Community Plan, adopted in 2000 (see Appendix L), inventoried existing conditions, created comprehensive plan policies, and established the community boundary. Now, twenty years later, conditions in the area have evolved, and there is a need to better understand current conditions and plan for the future of the community. Although this plan does not represent an update to the 2000 Brooks-Hopmere Community Plan, it presents a review of community outreach and vision and an updated list of recommendations to move the community towards its vision.

The purpose of this future report is to identify opportunities and a plan for capitalizing on the opportunities and resources in the BHC. This future report describes the future of the BHC based upon a cohesive community-driven vision developed through an understanding of existing conditions and communications with community stakeholders. The future described here is intended to guide decisions for the next 15-20 years, but within the context of an even longer horizon (e.g., 50 years or beyond). The plan also is intended to help the community and the County proactively prepare for and address a process led by the Oregon Department of Transportation (ODOT) to identify improvements and associated planning recommendation for the Brooklake Road / Interstate 5 Interchange, particularly impacts on access to local businesses, potential impacts on future residential development, and mobility within and in and out of the area for local residents, workers and visitors.

[1] Definition and standards for Urban Unincorporated Community are found in Oregon Administrative Rules (OAR) Chapter 660, Division 22. For more information regarding the state requirements for an Urban Unincorporated Community and its implications for the BHC, see Appendix A.

The project included public engagement at various stages in order to receive feedback from the local community, and other stakeholders, such as local service districts. In addition the project worked to understand existing conditions in order to plot a course for the future of the community. These efforts engaged more than 100 stakeholders of the Brooks-Hopmere community throughout the process.

III. EXISTING CONDITIONS SUMMARY

Currently, Brooks-Hopmere has a strong business community with several notable public and community facilities (i.e., Chemeketa Community College, Brooks-Hopmere Fire Station, Willamette Valley Christian School, Antique Powerland and the Covanta waste-to-energy plant). The community is driven by its businesses, boasting approximately three times as many jobs as residents. Agri-business and freight are the primary industries in the community. The area is home to a significant number of large employers, several of which employ hundreds of people. These include Oregon Potato (d.b.a. NORPAC), Pacific Stair, May Trucking, and Curry and Co., among others. A growing residential area is also present in the community, with about 500 people living in the area. Additionally, in Brooks, the percentage of residents with college degrees (40%) is twice that of the Marion County (19%), indicating a notable level of human capital within the workforce. While statistics related to employment, value of gross products and payroll by industry are not available for the BHC area, interviews with a number of local companies indicated significant local employment numbers, including NORPAC / Oregon Potato (400 jobs[2]), Curry and Co. (66 permanent and about 200 seasonal jobs), May Trucking (150 employees), Covanta (46 employees), Belke Farms (14 full and part time jobs), Pilot Truck Stop (95-100 jobs) and Chemeketa Community College (98 employees). These jobs, as well as revenues from payroll and property taxes, and services procured by other local businesses have a significant impact on the local economy. For more information on the economic conditions of Brooks-Hopmere Community (BHC), see Appendix B.

These conditions, particularly the large and varied number of businesses and workers in the area, make Brooks-Hopmere a unique unincorporated community, given the level and density of development in more typical unincorporated areas.

Brooklake Rd. NE Near intersection of Portland Rd. NE – Looking South

Land Use

As a designated Urban Unincorporated Community (UUC), the BHC is subject to the state requirements of the Unincorporated Communities Rule adopted in the Oregon Administrative Rules (OAR) Chapter 660, Division 22. These requirements limit the potential development of the BHC to the existing boundary, and new development must occur on existing vacant lots of through infill /

[2] All employment numbers are based on local interviews conducted in 2019 and are approximate.

redevelopment of existing lots. New development must also be consistent with state requirements for the size and type of residential, commercial, or industrial uses. Based on these requirements, there are limited circumstances / types of development that would meet all criteria. Any desired development that is not consistent with the regulations would require changes in administrative rules or statutes and / or an exemption to statewide planning goals. These statutes and their implications for the Brooks-Hopmere area are detailed in Appendix A.

Transportation

Union Pacific Railroad, Portland & Western Railroad, and I-5 are some of BHC's greatest economic and transportation assets. However, they present unique challenges in the form of east-west travel barriers due to costs to modify facilities that cross over, under, or through railroads and interstates. Many businesses and developments rely on the only east-west arterial street in BHC, Brooklake Road, to access I-5 and the larger transportation network. As improvements are made, many developments will need to find alternate access to Brooklake Road in order to avoid future conflicts with interchange ramp traffic. Currently, Brooklake Road and the I-5 interchange are prone to roadway capacity issues and becoming bottlenecks. For a detailed review of the transportation infrastructure for the BHC, see Appendices C & D.

Water

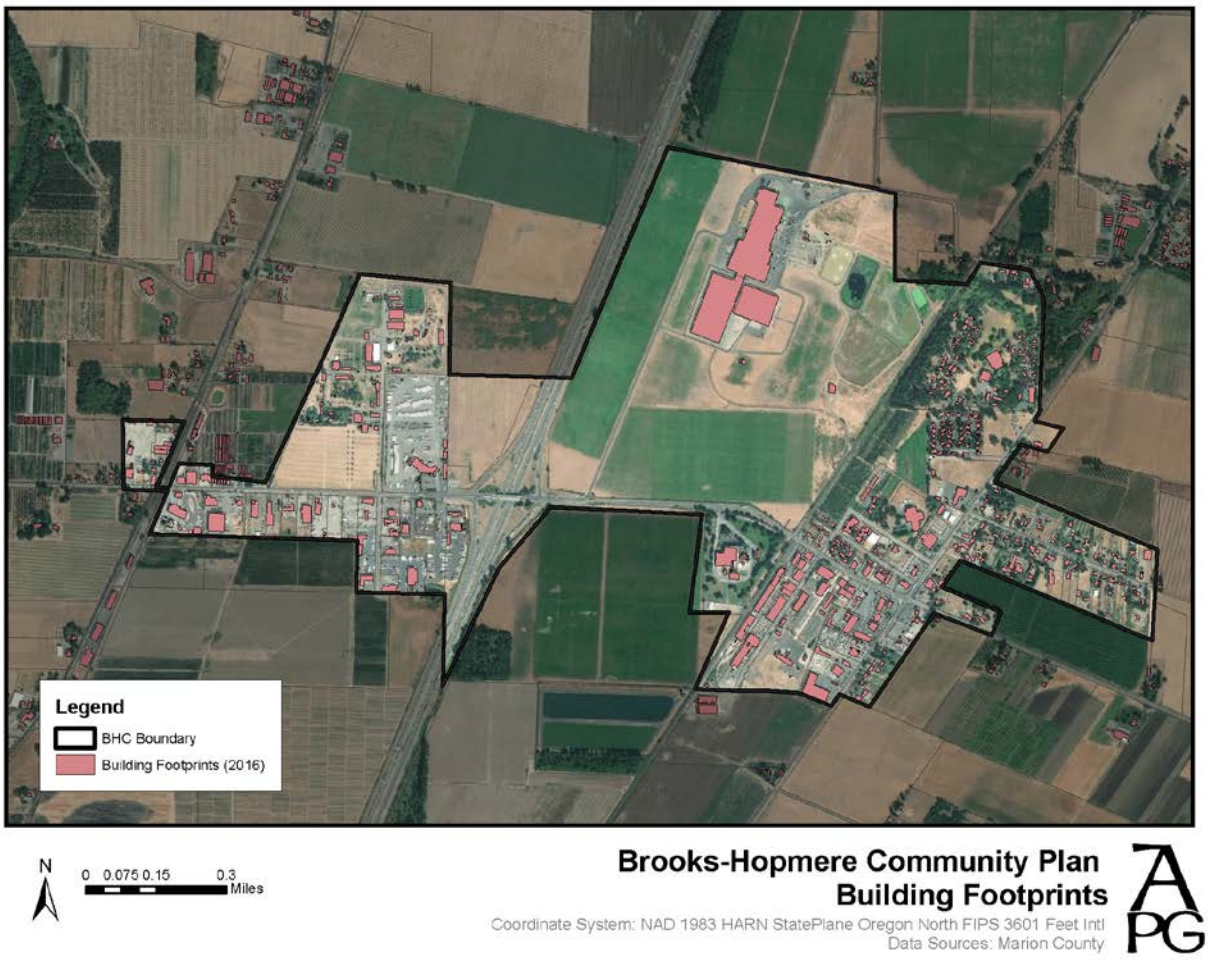
Groundwater is the primary source of drinking water in the BHC. While several businesses have private groundwater wells for employees and customers, the only public community system in the area is the Brooks Community Service District (BCSD). The district is managed by Marion County under an intergovernmental agreement with Chemeketa Community College (CCC). The infrastructure of the BCSD is in joint ownership between CCC and Marion County, in that CCC owns the well and Marion County owns and maintains the distribution system. The agreement between CCC and Marion County notes that the County is prohibited from allowing new water users to connect to the BCSD, causing requests from local property owners for service to be declined. Although existing capacity may be sufficient for current consumptive demands, fire flow demands can not be met. The system is compliant with Oregon Health Authority (OHA) water quality requirements. Several unknowns about the system, including the number of unmetered users, legal state of the water rights, and actual well yield make this assessment uncertain. Additionally, the temporary agreement between CCC and the County and moratorium on new users connecting to the system suggests that while the existing system may have capacity to serve community members, the County's access to the well in the future is unclear. For a detailed review of the water and wastewater infrastructure, see Appendix E.

Huff Ave. NE north of Brooklake Rd. – Looking East

Wastewater

Marion County maintains wastewater conveyance and treatment infrastructure for the BCSD, via a Septic Tank Effluent Pumping System (STEP). There are approximatly 250 STEP tanks in service, which require high maintenance by the County public works staff for regular pumping and maintenance and tanks are often located on private land such as residential backyards. Although both water and wasewater systems are maintained by Marion County, the wastewater district is independent of the water service district and customers may or may not overlap. The BCSD is the only public wastewater in the area. In addition to the BCSD, private septic tanks and drain fields exist. For a detailed review of the water and wastewater infrastructure, see Appendix E.

Figure 1. Brooks-Hopmere Community Boundary



A summary of the assets and challenges of the community are summarized below:

Assets / Opportunities

- Proximity to Interstate-5, Salem, and Portland.
- Access to two railway systems, Union Pacific and Portland & Western Railroad, which creates an opportunity to have an intermodal facility in the community.
- Availability of developable land within the community and its direct vicinity.
- Presence of public services facilities, such as Chemeketa Community College and Covanta Waste Management.
- Presence of business clusters - agricultural services and freight - with various large businesses, such as May Trucking, NORPAC, Pilot Travel Center, and Pacific Stair.

Constraints / Weaknesses

- Lack of centralized sourcing, treatment, or management of infrastructure (i.e., water, wastewater, stormwater), which reduces reliability, consistency, and the ability to increase capacity as the community grows.
- Lack of social infrastructure – no formal community gathering spaces in the community and lack of connection between residents and employees of community businesses, particularly between the two areas (Brooks & Hopmere).
- Substandard roads and lack of pedestrian / bicycle infrastructure (sidewalks, road shoulders, etc.) in some part of the community.
- Transportation infrastructure is unable to handle current demand, resulting in congestion, especially when carrying overflow traffic from I-5 to Hwy 99. The road system also is lacking connectivity which is further hampered by barriers created by existing rail lines.
- Concerns about the waste management facility and its effects on the surrounding community.
- Lack of local authority or decision-making body – Brooks-Hopmere is among several unincorporated communities in the County. The BHC does not have any direct local representation in County decision-making processes made by County staff, or the County Board of Commissioners.
- Lack of dedicated or direct resources and funding - although it is a designated community, there is no dedicated or direct public funding source for construction or maintenance of most facilities in Brooks-Hopmere in the same way that there would be for an incorporated city. Funding comes from a larger pool of resources that must address all unincorporated areas in Marion County, as well as from funding administered by the Salem Keizer Area Transportation Study (SKATS) which is the Metropolitan Planning Organization (MPO) for the area and which manages federal funds which can be used in the Salem / Keizer / Turner area, including potentially for projects in the Brooks-Hopmere area.

Brooklake Rd. NE – Directly West of I-5 Interchange – Looking South

Brooklake Rd. NE – Directly East of I-5 Interchange – Looking East

Corner of Portland Rd. NE & Rockdale St. NE – Looking Northeast

Corner of Brooklake Rd. NE & Huff Ave. NE – Looking West

Corner of River Rd NE & Brooklakd Rd. NE – Looking South

Corner of Brooklake Rd. NE & 50th Ave. NE – Looking North

Community Desires and Priorities

As part of the establishment of this future report, feedback was gathered through stakeholder interviews and online surveys. Details of these discussions, including an overview of participants and feedback received are provided in Appendices I, J, and K. Through all the discussion and input, several key themes for understanding existing and desired future conditions were prevalent. They are summarized below.

Community Identity and Future

- **The BHC is a unique community with many businesses providing substantial employment opportunities and the potential to provide more.** Although the Brooks-Hopmere community has various infrastructure limitations, it has grown to become a significant employment center within Marion County. Many see the opportunity for successful businesses and organizations in the community to continue and grow, along with opportunities for additional businesses in the community. Near- and medium-term opportunities include changes to the Oregon Potato (dba NORPAC) facility site and potential expansion of May Trucking facility.

> *We have enjoyed living in the area. Raised our children here, but would hate to see it become a city atmosphere. I think it is of the utmost importance to honor and protect our farmland while working on these upgrades.*
>
> *-Online Survey Response*

- **Continued economic vitality and low to moderate residential growth.** Generally, stakeholders support continued business growth, while protecting the community's rural qualities. Opinions about the desirability of more residential growth are mixed. Some community members favor more housing to provide affordable housing opportunities for local workers. Others preferred to keep the residential community small to maintain its "small town feel." However, relatively few people argued for substantial future residential growth.

> *Two areas [Brooks and Hopmere] are unrelated.*
>
> *-Online Survey Response*

- **There is a lack of social infrastructure in the community and the connection between Brooks and Hopmere**. Community members noted the lack of gathering spaces within the community, noting that currently, True Value Hardware is the community gathering place. A significant percentage of workers in BHC live elsewhere and few of them spend time in the area outside of work. Additionally, numerous community members said they see Brooks and Hopmere as two disconnected individual communities. While this was identified as a gap early in the project, the third online survey in the project showed mixed support for creation of a community gathering place. Relative support for this idea should be explored further in future planning phases.

> *The Brooklake / I-5 interchange is long overdue for improvement. At times the north bound exit is backed up all the way to the freeway, and it is near impossible to make a left turn onto Brooklake from the south bound exit. South bound Highway 99E also backs up every afternoon at the light on Brooklake.*
>
> *-Online Survey Response*

Infrastructure

- **Transportation issues are paramount.** Transportation problems in the community were the topic of almost every conversation with community members and stakeholders. Access, traffic congestion, and safety concerns associated with the I-5 interchange were the most significant concerns noted by stakeholders. At the same time, the community location directly off Interstate 5 is a significant asset for the community's businesses and residents.
- **Infrastructure – transportation, wastewater, stormwater, water, and broadband - are limiting factors to expansion.** In addition to the transportation concerns, community members within the Brooks-Hopmere boundary either have frustrations with the water infrastructure or have a limited understanding of the system. Several larger businesses in the community expressed the need for better internet access, such as broadband, to reliably serve their businesses. Of those with on-site septic wastewater treatment systems, and wells, some expressed dissatisfaction with various elements of those systems – water quality, flooding because of poor drainage, and the limited capacity of the systems, among others. Improvements to most of these types of facilities and services will help community businesses and institutions flourish.

> *Lack of infrastructure will limit growth. Update the water, sewer, and especially the roads and growth will naturally follow. - Online Survey Response*

IV. BROOKS HOPMERE'S FUTURE

In planning for the future of BHC, it is essential to understand and articulate the community's long-term vision and to place it in the context of even longer-term regional growth and development. The following vision represents the desired future of the Brooks-Hopmere community in the 20-year horizon and beyond, based upon the feedback gathered through stakeholder interviews and online surveys. Details of these discussions are provided in Appendices I, J, and K. Key issues and actions needed to achieve the vision – land use, water, wastewater, transportation, broadband access and social infrastructure – are then described in more detail.

The Vision

Brooks Hopmere will continue to be a thriving business community, with complementary public uses that provide employment opportunities and services to the residents of the Brooks-Hopmere community, the surrounding regions, and travelers along I-5. More specifically, the community will include:

- A hub of jobs and services that support the local and regional agricultural industry and economy.
- Improved, well-designed and functioning transportation facilities, which will provide adequate access to local businesses and allow them to continue to thrive and grow.
- Enhanced physical and community connections between Brooks and Hopmere.
- A more tightly woven community fabric, potentially including one or more community gathering places, governmental and community support for local businesses, and more community-oriented businesses that serve employees and residents.
- Reliable, resilient, and sustainable infrastructure that serves businesses and residents in a cost-effective manner and provides opportunities for desired growth and expansion in the future.
- Continued emphasis on serving, supporting and preserving surrounding agricultural land and enterprises by focusing non-resource based development within the community boundary.

Based on results of the project's third online survey, community members appear to generally support most elements of this vision. However, support is not universal, and some people are concerned about impacts of growth on traffic, the rural feel of the community, a possible reduction of high quality agricultural land, and the cost of infrastructure improvements. There is generally strong support for infrastructure improvements described in more detail in the following pages, particularly transportation and broadband internet improvements.

Future Conditions

The population growth in the community for the 20-year horizon is anticipated to be the average between 0.5% and 0.35% per year for the next 20 years, with more growth projected in the first 10 years. These estimates are informed by previous analyses for a natural rate of growth (see Appendix F - Scenario 1). The growth rates anticipate relatively modest residential growth and more significant growth in employment lands (commercial, industrial, institutional uses). Currently, there are approximately 543 residents and 1,567 employees in the Brooks-Hopmere community. The residential growth for the vision estimates 52 - 109 new residents, equivalent to approximately 19 - 40 new

households[3]. This level of growth is generally consistent with projected future population growth in the unincorporated areas of Marion County overall, reflects the majority of comments from community members, and maintains a high jobs / housing ratio, similar to current conditions. This Future Report includes an evaluation of several different scenarios for future development within the area, which are detailed in Appendix F. With the results of this analysis, there appears to be enough land in the community on vacant or partially vacant residential properties in the area to support this level of growth without any expansion of the community or large scale development.

Historically, business presence has continuously grown in the community, and this is projected to continue, growing by approximately 300 – 850 new employees by 2040. This estimate reflects employment projections for the region as a whole, as well as short and potential longer-term expansion plans of several key businesses (see Figure 2) as described below. However, it does not preclude other existing or new businesses from further developing or expanding in the community. Much of this expansion could occur on existing properties within the Brooks-Hopmere boundary. However, expansion of employment at selected facilities could require an expansion of the Urban Unincorporated Community (UUC) boundary or development on land outside the boundary as described in more detail in subsequent sections of this report.

Potential Expansion of Local Businesses and Organizations

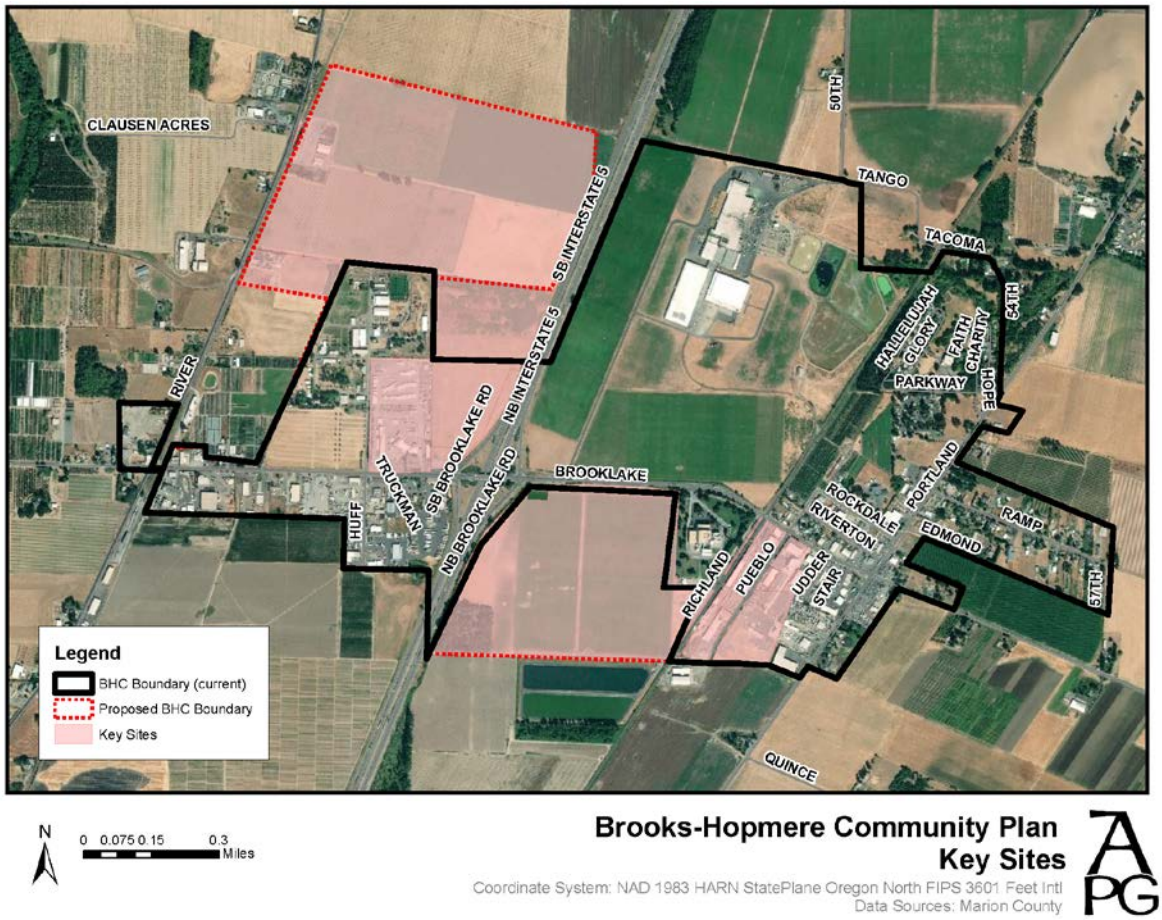
- *Oregon Potato, dba NORPAC* – Before filing for bankruptcy, the agricultural processing facility had over 400 employees. The site was purchased by Oregon Potato, and preliminary information indicates that the company plans to continue to operate and expand the facility's workforce, including shifting and consolidating operations from several other facilities to this site. In the near-term, employment at the facility could expand by about 150 workers. [4]
- *May Trucking* – The freight company continues to grow its 75-acre headquarters in Hopmere and has space available for growth on its site and neighboring parcels. Approximately 200 employees work at their headquarters. Improvements to the adjacent I-5 interchange, coupled with local access improvements, could allow for significant expansion in employment at the site.
- *Chemeketa Community College* – The community college has approximately 500 students and has seen continued success with its various programs. The Chemeketa Brooks campus is the home of the diesel technology education program, as well as the emergency services programs including criminal justice, corrections, law enforcement, fire suppression / prevention, and emergency medical service. The college has opportunities to work with BHC businesses and public entities such as the Marion County Rural Fire District #1 to continue to operate and enhance existing programs and to establish new programs. The site includes several acres of land that can serve potential future expansion needs. It is a core element of the community and has the potential to help further define and enhance the area.

[3] Based on the assumption that there are approximately 2.7 persons per household.
[4] This information has not been directly confirmed by Oregon Potato and may or may not reflect current plans or take into account recent impacts from the COVID-19 pandemic.

- *Curry and Company* – The company is a packing, distribution, and worldwide exporter of fruits and vegetables on an international level, and intends to continue to use their 6-acre facility for its highest and best use. Curry and Company has approximately 40 employees.
- *Pilot Travel Center* – The facility provides services for freight and is located directly off I-5. Their facility serves approximately 35,000 customers a week with about 100 employees.
- *** Note*: The Port of Willamette Group is in the process of developing plans and funding for a major intermodal facility currently set to be placed in Woodburn. During the planning stages of this future study, an opportunity for placement of the facility in the Brooks-Hopmere area was explored (as shown in Figure 5). An intermodal facility, either in Woodburn, or in Brooks-Hopmere, would provide an alternative shipping option for agricultural products and other exports of the area.

Other successful businesses in the community include, but are not limited to, Pacific Stair, Red Steer Gloves, and Beilke Farms. Many of the businesses in the community are focused on services for agricultural production and processing or freight distribution. The mid-Willamette valley is Oregon's number 1 producer of agricultural products and these key industries will continue to be essential to the region and are expected to continue to grow. Additionally, other potential economic growth in the community could include businesses within the existing key industries, such as commercial hemp production and cold storage for perishable agricultural products.

Figure 2. Brooks-Hopmere Community Plan Future Report Key Sites



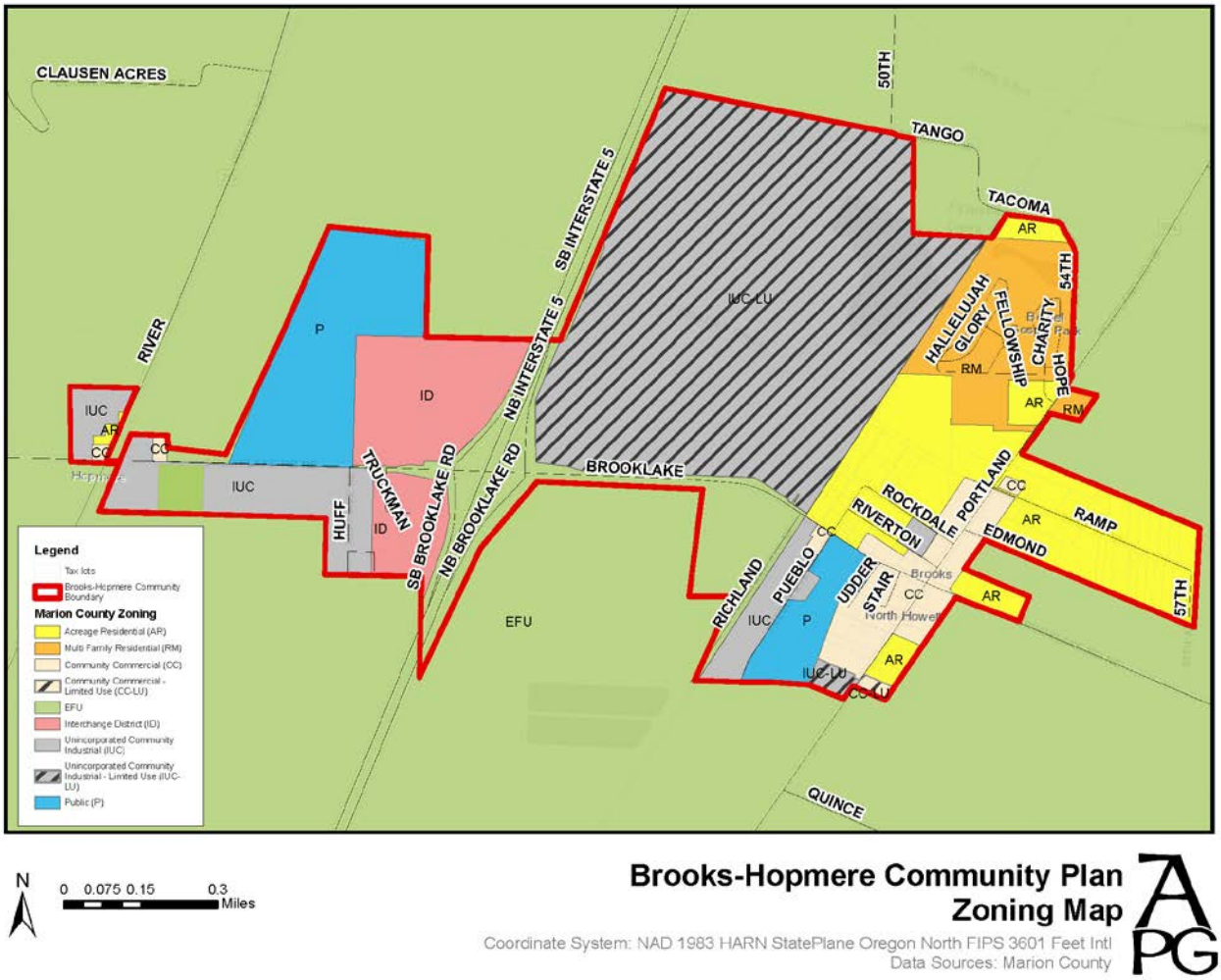
Land Use

Any changes in current land use designations are expected to focus primarily on employment land, which includes areas zoned for commercial, industrial, and public facility or service uses. The completion of this future study included an analysis of several different scenarios for future development based on estimated growth rates, an evaluation of existing conditions, state and local regulations, and conversations with community stakeholders. More information about zoning regulations, the types of limitations they entail, and the review of development scenario impacts can be found in Appendix F – Land Use Development Scenarios, and in the following pages. Residential land is expected to grow at a gradual rate (see Appendix F) and there is adequate land and appropriate allowed uses and development standards to allow for this level of growth. To the extent that future improvements in water and wastewater infrastructure allow for more residential growth, the County could pursue changes in allowed residential development densities or standards; however, that is not the primary focus of future uses based on community feedback.

Potential changes to land use regulations and designations should allow businesses to expand operations on current sites or develop new facilities with limited barriers for permitting and development. At the same time, regulations must continue to ensure that existing or planned and funded water, wastewater, stormwater and transportation facilities are adequate to serve proposed growth and development. Specific types of land use changes to consider include the following:

- Changes to land use overlay zones to remove restrictions on certain properties through the Limited Use (LU) overlay, if the restrictions are not required by state law and do not reflect current conditions or infrastructure capacity in the area. The Limited Use Overlays in the community are shown in Figure 3. If infrastructure updates recommended are built, some performance criteria for LU properties could be removed. Additionally, infrastructure improvements could allow for conditions which would support eliminating the use restrictions on LU properties (i.e. grocery store, offices, warehouses).
- Potential statewide goal exceptions to allow for development on land adjacent to the existing Urban Unincorporated Community (UUC) boundary. A potential boundary expansion could include the Port of the Willamette property and other properties bordering intensive commercial or industrial, is shown in Figure 3.
- Potential statewide goal exceptions to allow extension of public facilities either to adjacent properties or from adjacent municipal systems to BHC.
- Targeted changes to local zoning designations or standards as needed to allow for development of specific uses. Some survey responses recommended more business development be focused on Hwy 99E, rather than residential development. Additionally, maximum building size could be increased to allow more space for businesses in the community.

Figure 3. Brooks-Hopmere Zoning (Current)



Community Spaces

Brooks-Hopmere currently lacks connections between residents, employees of local businesses, and organizations in the community. Community stakeholders have noted that the community would benefit from facilities that improve the social infrastructure of the community and serve the local community – both residents and employees. Examples include a park, community center, or other multifunctional space. The community should work together to identify appropriate locations for one or more such facilities and develop an implementation and funding plan in coordination with County staff. While stakeholders identified this need early in the BHC planning processes, support for this recommendation was mixed among participants in the project's third online survey. Relative support for and specific plans for community facilities should be explored further in subsequent planning phases.

We lost our community when public school sold and left. The only community space where you run into neighbors is the hardware store.

- Stakeholder Interview Response

Figure 4. Examples of Community facilities. Left – Pleasant Hill Community Center, Pleasant Hill, OR. Right - Thatcher Community Park, Forest Grove, OR

Transportation

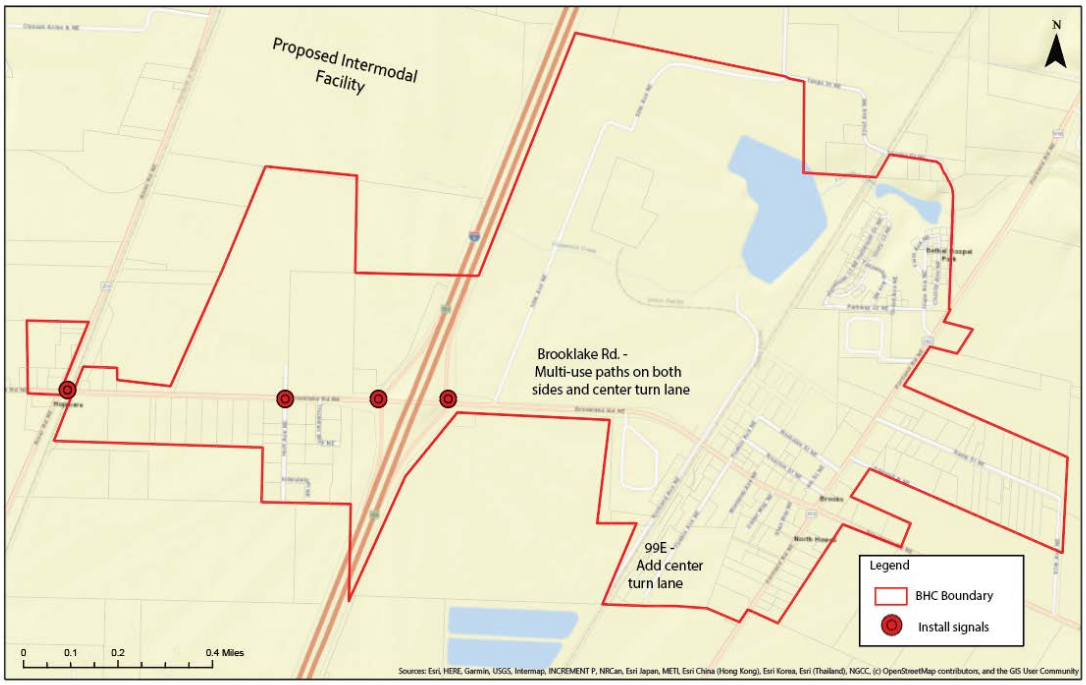
Transportation is at the forefront of community discussion related to changes for the future of the Brooks-Hopmere Community. This future study effort included an analysis of the impacts of various development scenarios on transportation infrastructure in the BHC. More detailed information about traffic forecasts, impacts of growth, and mitigation strategies see Appendix H. Ultimately, the transportation improvements in the community are intended to:

- Improve the function of the I-5 interchange, allowing more efficient and safe access to and from I-5 and Brooklake Road.
- Provide non-vehicular connections (i.e., bicycle and pedestrian) between the Brooks and Hopmere areas and within the individual communities.
- Reduce congestion along major roadways in the community.
- Improve access to properties along Brooklake Rd.

The Oregon Department of Transportation (ODOT) is in the process of planning for future I-5 interchange improvements. The Interchange Area Management Plan (IAMP) project for the Brooks Interchange began in October 2020 and is scheduled to be completed by spring 2022. The ODOT Statewide Transportation Improvement Plan (STIP) does not include funded improvements to the

interchange for 2018-2021 or 2021-2024 but subsequent planning periods may include such improvements.[5] Marion County will continue to work with ODOT and other community partners on the plans for the interchange based on information gathered in this process (i.e., BHC Future Report). The recent Brooklake Road / I-5 Interchange Transportation Study, completed in 2019, recommended the interchange-related improvements shown in Table 1. These recommendations may be superseded by the upcoming I-5 Interchange Area Management Plan (IAMP).

Figure 5. Brooks-Hopmere Recommended Transportation Improvements



[5] Schedule as of August 2020, and is subject to schedule changes in the future.

Table 1. Proposed Interchange-Related Improvements[6]

Intersection	Mitigation
Existing	
Brooklake Road/River Road	Signalize intersection Add northbound and southbound left turn lanes
Brooklake Road/I-5 SB	Widen southbound ramp to allow for two approach lanes Signalize Intersection
Brooklake Road/I-5 NB	Widen southbound ramp to allow for two approach lanes Signalize Intersection
Phase 1 – 2020	
Brooklake Road/Huff Avenue	Add northbound and southbound left turn lanes
Phase 2 – 2022	
Brooklake Road/River Road	Add eastbound and westbound left turn lanes
Brooklake Road/Huff Avenue	Signalize intersection Add westbound and eastbound left turn lanes
Brooklake Road/I-5 SB	Add eastbound right turn lane
Brooklake Road/I-5 NB	Add westbound right turn lane
Phase 3 - 2023	No additional mitigation identified
Phase 4 - 2024	No additional mitigation identified
Phase 5 - 2025	
Brooklake Road/Huff Avenue	Add a second southbound left turn lane
Brooklake Road	Add a second eastbound lane starting at Huff Avenue and dropping off as a right turn only lane at the I-5 southbound ramp

In participating with in the IAMP planning process, it will be important for community and County representatives to consider how any proposed recommendations will support this long-term plan for the Brooks-Hopmere community. The following questions should be addressed as part of the IAMP study:

- Will improvements enhance accessibility and mobility for local businesses?
- Will improvement result in significant or unreasonable costs for local property owners or businesses?
- Will improvements make the area more attractive for future residential development and will this adversely impact traffic levels and associated mobility?

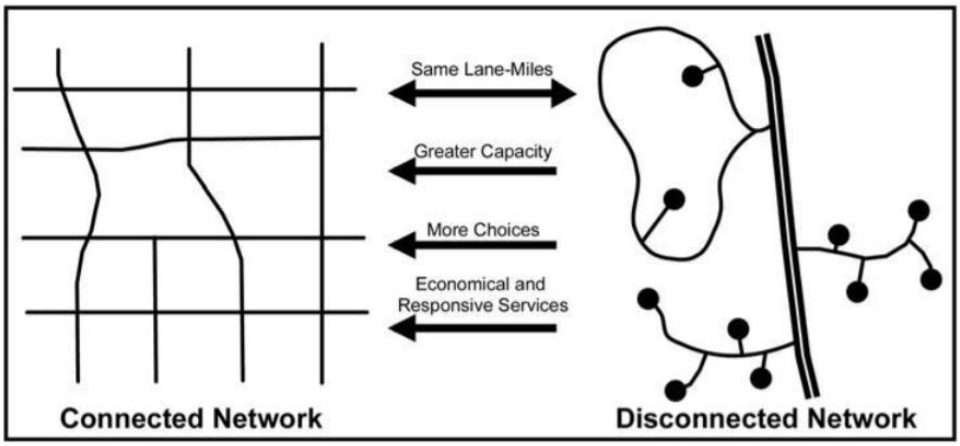
In addition to the Interchange improvements, other transportation improvements are recommended to provide a better functioning transportation system in the future. Those improvements include building a better network of collector streets off of the main thoroughfares of Brooklake, Hwy 99E, and River Rd. for locals to have alternative routes to travel. There are several benefits to a more connected network of the streets in the community (shown in Figure 6), including fewer local trips on major roads and higher overall capacity of the system. Additionally, Brooklake Rd. - the major primary route through the community - should include additional traffic signals and a center-turn lane to allow better access to properties (primarily of businesses) from both directions (east and west). Improvements also should

[6] Source: 2019 Brooklake Road / I-5 Interchange Transportation Study

include enhancements to bicycle and pedestrian facilities, as well as a consistent design for the road through both Brooks and Hopmere to provide a more cohesive visual identity for the entire community.

A comprehensive list of recommended transportation improvements is found in Appendix H. Many of the transportation issues and recommendations meet short-term needs in the community. However, these facilities should be designed and built to serve the community (current and future) for an extended future. For more information see the Appendix H. Development Scenarios Impacts on Transportation memorandum.

Figure 6. Benefits of Street Connectivity [7]



Water

Given the capacity of the current system, including its inability to meet fire flow requirements, widely variable water quality, uncertain ownership and water rights status, and other related issues and challenges, a new water system is needed to meet the vision of the community's future, regardless of the growth scenario. A new water system would consist of a community well (or wells) as its source, or installation of a water storage and distribution system with a neighboring municipality as a wholesale water source. The advantages and disadvantages of each are described in Table 2.

A community water system feasibility study is recommended to provide further direction on the proposed components of the system and associated cost estimates for future improvements.

[7] *Source: http://www.ci.kearney.mo.us/pdf/Attach-to-11-2-15-Agenda-Street-Connectivity.pdf*

Table 2. Analysis of Water Systems

	Community Well(s)	**Connecting to Neighboring Jurisdiction**
Description	Installation of a new well (or network of wells) has the potential to serve a community water system and provide adequate fire flow. A surface water source was not pursued here due to the planning area's distance to local surface water bodies.	A nearby existing municipal water system could provide a water source for a community system. Connection to the City of Keizer's water system appears to be feasible based on preliminary conversations with the City, system capacity, and proximity to infrastructure and the Urban Growth Boundary. There is also the potential to connect to the City of Salem's infrastructure. However, contact was not made with City of Salem staff at this time.
Advantages	• Water source and infrastructure owned by the County / District and not another agency • Capacity to meet fire flow requirements • Capacity to serve BCSD users and additional community members • Enable development or growth in the area • Interconnection with a private system could benefit both systems by providing redundancy	• Allows for a community water system with a source that the County does not have to maintain • Capacity to meet fire flow requirements • Capacity to serve BCSD users and additional community members • Enable development or growth in the area
Disadvantages	• A community well requires initial feasibility investigation, including hydrogeologic investigation, water rights availability, and well siting. • Initial capital investment for new water infrastructure (well(s), pumps, pipeline, meters, valves) • Potential for existing water quality issues to perpetuate with new well if accessing the same aquifer as the CCC well.	• Connection may require incorporation into Salem / Keizer's UGB or going through a statewide goal exception, pending potential increases in density for the area or city policies regarding extension of services. • The County does not own the water source • Initial capital investment for new water infrastructure (pump station, pipeline, meters, valves, potential connections fees to for City of Keizer)

Completion of the recommended feasibility study would provide the County with a better understanding of whether pursuing a community well system or connection to a neighboring system would be best moving forward. For more information on the evaluation of development scenarios and their impact on water infrastructure, including evaluation of alternatives, see Appendix G.

Wastewater

The existing wastewater system serving much of the Brooks-Hopmere community appears to have adequate water to provide for the current system’s demand. However, the existing Septic Tank Effluent Pumping (STEP) system and individual tanks represent a high maintenance cost to the County through

pumping and replacement of aging tanks. This increased maintenance cost is passed on to the community through sewer service rates. This is important to consider when assessing growth to the system and its impact on public works staff and budget. An alternative to maintaining and continuing to expand the existing STEP system is to develop a new gravity-based wastewater collection system. A gravity-based system essentially would be a system of pipes that convey wastewater using gravity from individual homes and businesses to a community wastewater treatment facility. The advantages and disadvantages of gravity system integration are found in Table 3.

A wastewater facility planning study is recommended to fully assess the existing conditions of the system, treatment capacity, and thresholds, as well as to provide cost estimates for future infrastructure alternatives. This study could also evaluate the future expansion of a gravity system that would displace the STEP system. Infiltration and inflow were not accounted for when projecting flows, largely because it is not currently an issue in the pressurized system. It should be considered in planning any gravity-based upgrades to the system in an area with the potential for high groundwater.

Table 3. Analysis of Wastewater Systems

	Gravity-Based Additions	**New Gravity System**
Description	The existing wastewater system could be maintained while any new infrastructure expansion could be through gravity-based infrastructure. Additional infrastructure would include new sewer mains and laterals, with the likely need for lift station(s) or deep pipe placement.	A new gravity wastewater system could be installed to replace the existing STEP system. Infrastructure requirements would include new sewer mains and laterals, lift station(s) or deep pipe placement, and modifications to the wastewater treatment plant.
Advantages	• Avoids the maintenance of additional STEP tanks added to the system • Reduced capital investment required when compared to a new gravity system	• Eliminating STEP tanks would reduce long-term maintenance costs • New businesses or homes would be able to connect directly to the new system, rather than installing and maintaining their own individual STEP tanks.
Disadvantages	• Requires maintenance of a dual system (STEP tanks and gravity) • Without STEP tanks for new connections, influent solids and BOD loading would likely increase, which would necessitate upgrades to the wastewater treatment plant	• Influent solids and BOD loading would increase due to the removal of STEP tanks and likely require expansion of the treatment system • High initial capital investment for new infrastructure

For more information on the evaluation of development scenarios and their impact on wastewater infrastructure, including evaluation of alternatives, see Appendix G.

Broadband Internet Service

Community members have indicated that improved broadband service is needed in the area and is important to the operation and success of their businesses. Marion County is currently engaged in a county-wide initiative to improve broadband in the county to enhance economic development, access to education, public safety, access to healthcare, and overall quality of life through improved livability. The County does not intend to be a broadband provider but rather to help identify barriers to accessible, reliable, and affordable broadband, and to help convene broadband providers to enhance broadband services to underserved areas. As part of this effort, the County is conducting an Economic Broadband Study and has contracted with Magellan Advisors, a broadband consultancy firm, to conduct a study to identify the level and capacity of existing broadband internet throughout the county. Data obtained through the study will be used to identify unserved and underserved areas and to produce a county-wide broadband strategy to improve broadband access, reliability, and affordability, particularly in rural communities. These recommendations will be applicable to the Brooks-Hopmere area and to the implementation of the Brooks-Hopmere Community Plan (see Appendix L) and the community's future. Broadband service providers in the area have indicated a desire to work with the County to determine how to meet enhanced broadband needs in the area.

V. IMPLEMENTATION AND FUNDING

The following is a summary of recommendations to implement the improvements identified previously in this document. These recommendations were determined through evaluation of existing conditions, determination of needs through community outreach initiatives, and the analyses for economic development, land use, transportation and infrastructure as detailed in the appendices and discussed above. The ability and timeline to complete recommendations will primarily depend on available funding and staffing capacity.

Transportation

- Solutions to transportation issues are the highest priority for residents and stakeholders. Existing traffic congestion should be mitigated before allowing, or as part of, new development.
- Participate in the ODOT Interchange Area Management Planning process and its implementation. Recommended actions include:
    - Work with ODOT to appoint one or more community representatives to serve on project advisory committees; participate on committees and other project activities to advocate for improvements that will meet local needs and are consistent with this updated BHC Plan.
    - Ensure that proposed improvements help local businesses maintain adequate access to the interchange and Brooklake Road and create opportunities for future business expansion.
    - Advocate for the inclusion of interchange improvements in the next STIP cycle.

    - Identify a process for continued County and community participation in implementing improvements.
- Consider improvements to Brooklake Road and other County roads in the area as part of the County's Capital Improvements Program (CIP) for transportation projects. In anticipation of constructing future improvements to Brooklake Road, conduct a conceptual design process to identify a proposed cross-sectional design and intersection improvements beyond those identified in the ODOT IAMP process. Incorporate community branding and placemaking strategies in the design process.
- Work with developers and property owners to continue to evaluate improvements needed to support future development. Investigate public / private partnerships to help pay for and implement those improvements.
- Continue to investigate opportunities and apply for other state and federal funding for local improvements.
- Continue to work with the Salem Keizer Area Transportation Study (the regional Metropolitan Planning Organization (MPO) for transportation planning) to coordinate transportation analysis and funding, including opportunities for funding through MPO funded projects.
- Build out the Collector network on all four quadrants of the interchange (at ¼ to ½ mile spacing) to allow alternate access for businesses and developments and to support future access management efforts along Brooklake Road. This will involve utilizing or upgrading existing railroad crossings to relieve pressure on the River Road and OR-99E (Portland Road) intersections with Brooklake Road. Also, expanding the collector and local street connections can enhance local connectivity, particularly as part of the future development of larger properties in the area. Enhance block length and / or pedestrian connectivity standards to meet those objectives, as needed.
- Utilize Union Pacific Railroad and Portland & Western Railroad for freight and passenger transport whenever feasible. Continue to evaluate and potentially pursue rail improvements, including freight improvements that could serve the proposed intermodal freight facility in the area, as well as potential commuter rail facilities.
- Plan for Brooklake Road to be a five-lane section at a minimum, with right-of-way to accommodate 10-foot multi-use pathways on both sides. The future roadway section will be further defined in the upcoming Interchange Area Management Plan (IAMP) and will be aided by the latest traffic forecasts provided by the Salem-Keizer Area Transportation Study (SKATS).
- Install traffic signals and appropriate turn lanes at the following intersections:
    - River Road & Brooklake Road
    - Huff Avenue & Brooklake Road
    - I-5 Southbound Ramps & Brooklake Road (reevaluate when the interchange is reconstructed)
- I-5 Northbound Ramps & Brooklake Road (reevaluate when the interchange is reconstructed). Encourage (with guide signage) east-west pass-through traffic to use the I-5 overpasses at Quinaby Road to the south, or Waconda Road to the north, instead of Brooklake Road.
- A center turn lane on Brooklake Road and OR-99E would improve access for businesses and provide a median refuge for business traffic turning into and out of driveways.

- Minimize impediments to truck travel between I-5 and businesses / developments along Brooklake Road.

Water and Wastewater Systems

- Conduct a feasibility study for the creation of a community water system. At a minimum, the study will need to provide an estimated schedule, the study's goals, and how these goals will be achieved. Beyond this, the study could include the following:

1. Water source
    a. Community Wells
        i. Desktop hydrogeologic survey
            - Research available well pump data
            - Assessment of local aquifers
            - Investigate available water rights through Oregon Water Resources Department (OWRD)
        ii. Establishment of test wells for assessment of water availability and quality
            - Permitting through OWRD
            - Easements as needed
        iii. Water storage
            - Comparison of above ground versus below ground storage
            - Easements as needed
        iv. Water treatment requirements
            - Dependent on groundwater quality
        v. Cost estimate for recommendations
    b. Connection to a Neighboring System
        i. Communication with neighboring cities on viability, receptivity
        ii. Assessment of neighboring systems capacity to provide
        iii. Assess infrastructure required to convey and store water in Brooks-Hopmere
        iv. Identification of path forward in the context of statewide planning goals
        v. Cost estimate for recommendations
2. Distribution System
    a. Estimate population to be served
        i. User demands to be used as basis of design
        ii. Anticipated growth in demands
    b. Extent of infrastructure needed to serve community
        i. Cost estimate for recommendations

- Pending the results of the Water Feasibility Study described above, conduct the following activities:
    - Establish a community water system and infrastructure needed to support it.
    - Identify a funding source to implement the system

  - Establish a schedule for creating the needed funding source and implementing the system

- Conduct a facility planning study for creation of a gravity-based wastewater collection system. The Clean Water State Revolving Fund provides loans for public wastewater system planning. The study results would provide the County with a better understanding of the existing facilities, as well as the best way to transition or upgrade infrastructure. Similar to a water system feasibility study, if the County were to seek funding externally, it would need to communicate the study's objectives and goals. A scoping meeting should occur with County / District staff to better define the objectives and goals of the facilities planning study and whether the study should meet all of the requirements of DEQ's guidance related to a facilities planning study, or define it as a master plan to meet the County / District's own criteria. The study should include information about the following:

  1. Assessment of existing collection system and wastewater treatment plant
     a. Analysis of flows
     b. Condition assessment
     c. Capacity assessment
  2. Anticipated growth
     a. Establish system flows for the basis of design. Use the DEQ method and system specific data to determine existing planning criteria and projected planning criteria.
  3. Alternatives analysis / transitioning to a gravity-based system
     a. Assessment of new infrastructure needed (i.e. lift stations, gravity mains)
     b. Ability to phase a transition
     c. Upgrades needed at the wastewater treatment plant
  4. Development of a capital improvement plan
     a. Long-term plan for infrastructure changes
     b. Establishment of system development charge (SDC)
     c. Assessment of user rates
     d. Evaluation of staffing impacts

- Pending the results of the Wastewater Planning Study described above, conduct the following activities:
  - Determine path forward in establishing a gravity-based wastewater collection system based on relative costs and benefits and potential viable funding sources and administrative capacity.
  - Identify and pursue a funding source to implement the system.
  - Establish a schedule for creating the needed funding source and implementing the system.

For more information see Appendix G. Water and Wastewater Future Infrastructure Summary memorandum.

Land Use / Community Facilities

Short and Medium Term (5-20 years)

- Conduct a land development scenario economic opportunities analysis and / or feasibility study to help assess the feasibility of expansion of existing uses and the creation of new uses within the study area, as well as potential opportunities and impacts associated with any future additional residential development. Study will serve to assist in process to determine opportunities for expansion of the Urban Unincorporated Community (UUC) boundary. Coordinate this work with the water and wastewater feasibility studies identified previously.
- Work with business owners to establish a local business owner's organization to provide a way to easily check-in with the business community as the community vision moves forward. Schedule regular meetings with this group and County Economic Development staff.
- Amend the Limited Use Overlays on several properties to allow a wider variety of uses on those sites; these efforts must still be consistent with state requirements and restrictions on selected land uses.
- Pursue land use actions such as statewide planning goal exceptions to allow some of the major properties to house new or expanding businesses. For these properties to develop to the proposed capacity, they would need to be included in the BHC boundary or rezoned to commercial or industrial use designations. Specific actions would include:
    - Evaluate the potential to expand the BHC boundary if permissible by state law through a goal exception process, or annex into a neighboring City (most likely Keizer due to the proximity of the two areas).
    - Rezone and allow infrastructure to be extended to the added Exclusive Farm Use (EFU) properties through a goal exception process, including exceptions to Goals 3, 11, and 14, assuming those goal exceptions would be required to extent or expand infrastructure facilities or services.
- To the extent that there is a demand for more housing or higher density forms for housing and community water and wastewater systems are adequate to accommodate it, the County should consider allowing increased residential density on residentially zoned parcels in the BHC through the revision of the minimum lot sizes permitted.
- Work with community members to further assess the demand for the creation of one or more publicly or privately owned and maintained gathering spaces, and appropriate location through evaluation of both the Brooks & Hopmere areas. If there continues to be strong support this type of facility, develop a plan for its creation, including strategies related to ownership, funding, and maintenance through public or private community-based efforts or some combination thereof. Potential opportunities could include:
    - Use of a section of the southern portion of the Antique Powerland site (close to Brooklake Road) for a small neighborhood park.
        - Discuss opportunities with Antique Powerland staff and board members.
        - Discuss site needs and County and state grant funding opportunities.

        - If discussions result in a plan to move forward, prepare a site Master Plan, and pursue further implementation as funding becomes available.
    - Partner with Chemeketa Community College to create a small public plaza on their campus.
        - Determine whether Chemeketa Community College has an interest and ability to partner in this effort.
        - Identify site planning needs and funding opportunities, including in-kind funding from local businesses.
        - If there is interest in a proceeding, prepare a site plan, and pursue further implementation as funding becomes available.
- Identify other possible sites where vacant portions of sites could meet this need; examples of large sites include the NORPAC and Covanta facilities, as well as the former elementary school site in Brooks.

Longer Term (20+ years)

- Determine potential community support for and benefits of long-term changes in the governance structure of the area, such as incorporation, annexation or establishment of one or more County Special Service Districts (see Section VI for more information); if support is warranted, conduct the following steps:
    - Further document benefits, challenges, and actions needed to proceed.
    - Coordinate with other essential community partners (e.g., County Board, City of Keizer or Salem, etc.).
    - Identify and enlist the support of one or more local “champions."
    - Develop an action plan for proceeding with a given option.
    - Implement the action plan in coordination with local community members.

Funding

Paying for the infrastructure needed to support the vision described in this document will be a formidable task. This will include both paying for capital improvements and their continued maintenance, as well as operation and repair over the long term. It is unlikely that existing revenue sources or funding programs will be adequate to pay for the bulk of the improvements identified. In the long term, creating additional funding sources through new governance structures likely will be required. At the same time, the County and local community members should move forward to pursue the following funding mechanisms to create incremental improvements in the area that will move the community closer to achieving its vision. Those sources include:

- County funding for capital improvements, consistent with the County's Capital Improvement Plan (CIP) and other budgeting processes.
- Metropolitan Planning Organization (MPO) funding of transportation improvements through Salem-Keizer Area Transportation Study (SKATS).
- State funding for I-5 interchange improvements.
- State and federal grants for other transportation, wastewater, water, broadband, or park facilities.
- Engage with local broadband fiber internet providers to identify business opportunities.

- In-kind donations of materials and labor from local businesses and / or other organizations. For example, the Oregon National Guard provides labor to help construct public facility improvements in smaller communities around the state.
- Developer-funded improvements as needed to provide adequate public facilities or services to their sites.

VI. LOOKING EVEN FURTHER INTO THE FUTURE

The previous section of this report describes a variety of actions that can be undertaken within the next 10 to 20 years to achieve the vision for the community outlined in this study. Looking in the longer-term future, beyond 20 years, today's infrastructure and local governance systems are unlikely to effectively meet those demands, and significant funding is needed to achieve the vision. Several options to implement the vision, a description, and an evaluation of the opportunities and constraints for each are found in Table 4 below. Initial community feedback on these options, gathered as part of the project's third online survey, indicates that a majority of people who commented prefer the County Special Service District option described below. Further assessment of and recommendations about the most appropriate option should be part of subsequent planning phases.

Table 4. Potential Governance Structures for Brooks-Hopmere Community Infrastructure

	Incorporation	**Annexation**	**County Special Service Districts**
Description	Brooks-Hopmere could incorporate to become its own City with a tax structure, staff, and governing body (i.e., City Council).	Brooks-Hopmere could be annexed (added) into the neighboring cities of Keizer and / or Salem (most likely Keizer due to the proximity of the two areas). The community would be subject to the City's taxes and decisions from the City's decision-makers.	The County could establish one or more County Special Service Districts to create a funding mechanism to pay for the construction and maintenance of future infrastructure improvements in the area.
Advantages	• Provides consistent funding source from taxes instead of being coupled with all unincorporated areas in Marion County (for budgeting purposes). • Allows the community to govern themselves as they see fit.	• The process for annexation is established.[8] • Regulations and tax structures in place, and therefore doesn't require an extensive process to establish new tax rates, governing bodies, or administrative departments and associated procedures.	• Allows a similar governance structure as the current one to continue (limited local involvement, with County Board responsible for decision-making) while creating additional funding capacity for the community's infrastructure improvements (transportation, water, wastewater, or parks).
Disadvantages	• Long, complicated, and expensive process. • Subject to objections by neighboring cities. • Requires a vote from the majority of Brooks-Hopmere residents. • Requires creation of new tax rates, governing bodies, and administrative departments and associated procedures. • New city must provide for development at urban densities.	• With natural growth, it will take many years for neighboring jurisdiction boundaries to reach Brooks-Hopmere. • Subject to the existing city taxes and regulations. • Representation for the Brooks-Hopmere community would be incorporated into City decision-making process; however, it would have less ownership / stake in decisions than the alternative structures.	• Requires petition and vote by property owners within the boundary. • Requires preparation of one or more district master plans and budgets to guide future funding decisions. • County Board needs to support the establishment of district(s) and expanded duties to manage the district(s).

[8] Under the assumption that the annexation process follows the conventional processes that require adjacency to urban growth boundary / city limits.

VII. CONCLUSIONS

Brooks Hopmere is and should continue to be a thriving business community, with complementary public uses that provide employment opportunities and services to the residents of the Brooks-Hopmere community, the surrounding regions, and travelers along I-5. It plays a significant role in the economy of Marion County and the mid-Willamette Valley. However, the community is not without its challenges and a variety of strategies are recommended in this Plan to help the community address these issues and thrive well into the future. Among those recommendations, the four following strategies are anticipated to have the highest impact for the community.

- **Participate in the Interchange Area Management Planning process** and advocate for the community's needs. The Oregon Department of Transportation (ODOT) is in the process of planning for future I-5 interchange improvements. The Interchange Area Management Plan (IAMP) process began in October 2020 with the intention for completion of the planning process in spring 2022. Strong, effective participation in this process by members of the BHC will be essential to ensuring that any proposed recommendations will support this long-term plan for the Brooks-Hopmere community. Community members should advocate for the following objectives:
    - Improvements should enhance accessibility and mobility for local businesses.
    - The project should not result in significant or unreasonable costs for local property owners or businesses.
    - To the extent that improvements make the area more attractive for future residential development, such development should not adversely impact traffic levels and associated mobility for local businesses and institutions.
- **Conduct Community Water System and Wastewater System Feasibility Study**. The BHC Future Study evaluated the existing water and wastewater systems and recommends a number of actions to improve them. The first step in that process will be to assess the feasibility and cost of development of new water and wastewater systems. A new water system would consist of a community well (or wells) as its source, or installation of a water storage and distribution system with a neighboring municipality as a wholesale water source. A new wastewater system would be a more traditional gravity-based collection system. The feasibility studies will evaluate these components, their costs, and the process for implementing them in more detail.
- **Land Use Regulations and Boundary Review**: The BHC future study reviewed the county and state land use regulations impacting the BHC and recommends short and longer term actions to assist the community in meeting its vision. In the short term, land use overlay zones should be reviewed to remove restrictions on certain properties through the Limited Use (LU) overlay, if the restrictions are not required by state law. Into the future, a land development scenario economic opportunities analysis and / or feasibility study should be performed to help assess the feasibility of expansion of existing uses and the creation of new uses within the study area, as well as potential opportunities and impacts associated with any future additional residential development. Study will serve to assist in process to determine opportunity for expansion of the

Urban Unincorporated Community (UUC) boundary and / or opportunities for statewide goal exemptions. This work should be coordinated with the water and wastewater feasibility studies identified previously.

- **Create a structure for community advocacy and representation**. In the long-term, some type of formal governance structure will be needed to fully implement the BHC vision. This may include incorporation as a separate city, annexation to another city (Keizer or Salem), or creation of a County Service District. In the shorter term, members of the community should work with the County to establish some type of local committee or other group that can collectively advocate for the area's future.

Brooks-Hopmere Community Water and Wastewater Systems Planning Update

Marion County and its project team have evaluated options and prepared recommendations for how to best serve the existing and future water and wastewater service needs of the Brooks-Hopmere community as part of preparation of a Water Master Plan and Wastewater Facilities Planning Study.

Project Objectives

- Help support continued economic vitality.
- Create healthy, resilient water and wastewater systems.
- Evaluate different system alternatives and recommend a preferred approach.
- Protect community resources and interests.
- Engage the community in the planning process.

Water System

Two basic options were evaluated and considered:

1. **Connect to a neighboring community's water system**. This would involve purchasing water from that system and building a new water line from the neighboring community to Brooks-Hopmere, as well as constructing new local distribution lines. The County explored obtaining water from either the City of Salem or Keizer and determined that Salem is the most viable source. The County also has determined that this option is the only feasible approach that would allow the County to use available federal funds for the system within the federal funding timeline.
2. **Use water from wells within the Brooks-Hopmere area through new or repurposed water rights**. This would involve either negotiating for the use of other users' water rights or establishing new water rights, using existing wells and/or constructing new wells, and also constructing new local distribution lines. This option cannot be implemented in the short term, but it is identified as a preferred long-term option to create a higher level of flexibility, resiliency and redundancy for the community in the future.

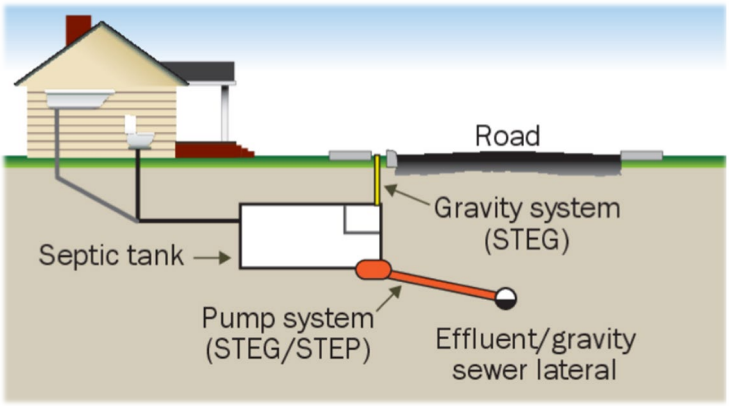
The project team conducted a variety of analyses to evaluate and plan for different aspects of the water system:

- ***Water rights analysis***. The team has evaluated options for acquiring water rights from existing property owners and/or establishing new water rights to create a long-term, independent, and stable supply of water for the area.
- ***Water storage***. The team identified and evaluated several potential sites for a water reservoir and pump station that would provide adequate storage and pressure to meet peak water demands.
- ***Distribution system and phasing***. The team has developed a proposed network of pipes to distribute water to properties in the area. This system would be constructed in phases.

Wastewater System

The project team also evaluated options for improvements to the community's wastewater system. The findings and recommendations included:

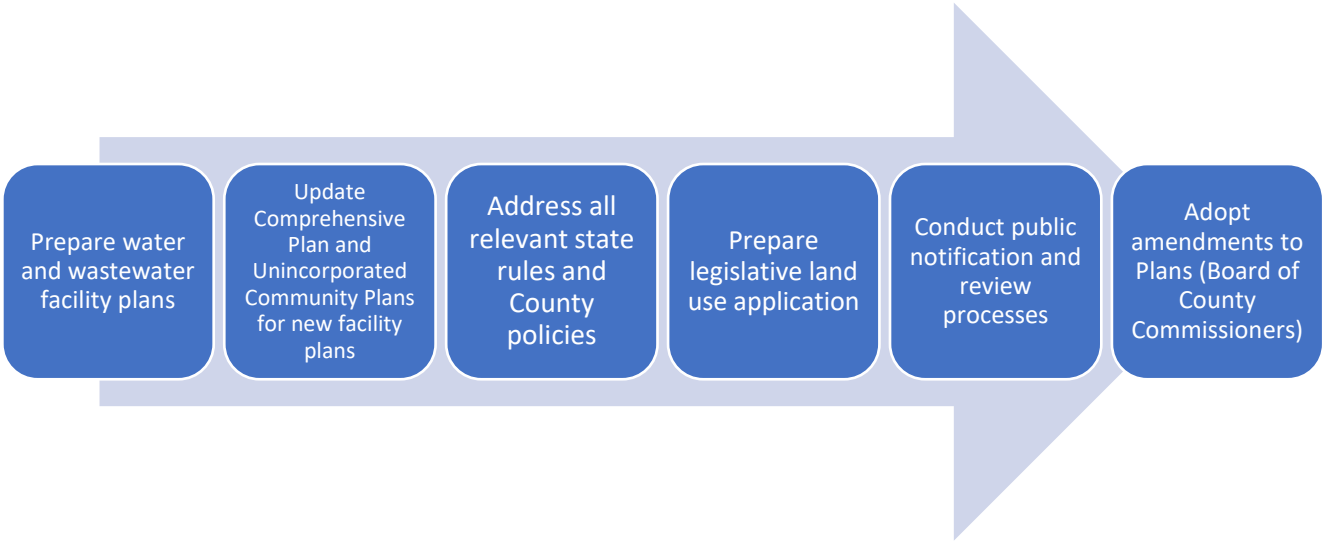
- No major changes to existing treatment facilities are anticipated other than some modifications for increased monitoring and security. Existing treatment facilities have the capacity to treat wastewater generated in the area over the 20-year planning period provided a new commercial or industrial user with high flows/loading does not connect to the system.



- The team recommends remaining with the existing Septic Tank Effluent Pumping (STEP) system and adding new users into the system as development occurs.

Land Use Planning and Permitting

Updating local water and wastewater systems will require consistency with state and County land use planning and permitting requirements. Steps in that process are shown below.



The County will continue to provide updates about this project through updates to the Brooks-Hopmere Advisory Committee, information posted on the project website (link), and other communications to community members. For more information, please contact Marion County Public Works, PWDirector@co.marion.or.us.

More information can be found in the documents and presentation materials on the project website: www.brooks-hopmere.com.

KELLER ASSOCIATES

Technical Memorandum

TO: Brooks-Hopmere Community Plan (Phase 1) Project Team

FROM: Peter Olsen, PE, Keller Associates
Liz Thorley, EI, Keller Associates

DATE: February 10, 2020

SUBJECT: Water and Wastewater Future Infrastructure Summary

1.0 BACKGROUND

As Marion County (County) evaluates future economic opportunities in the Brooks-Hopmere Planning Area, understanding projected water and wastewater infrastructure needs is integral to planning. The memorandum titled "Development Scenarios Outline" by Angelo Planning Group (APG) describes three potential scenarios of growth: As-Is, Moderate, and Strong. Each of these scenarios assumes increasing levels of growth for population and employment in the planning area. These scenarios were used as a basis to assess whether existing water and wastewater infrastructure could support potential growth, and if not, alternatives that could be pursued in the future. This memorandum provides population growth associated with each scenario, projections of water demand and wastewater flows, brief descriptions of water and wastewater infrastructure alternatives, and a summary of what infrastructure may be appropriate for each growth scenario. Existing water and wastewater infrastructure are discussed in more depth in the Keller Associates memorandum titled "Water and Wastewater Existing Infrastructure Summary" dated December 9, 2019.

2.0 DEMOGRAPHICS

As a part of their assessment of potential growth scenarios, APG provided the population and employment growth rates for the planning area as shown in Table 1. The planning period is 20 years and projections are based on a 2020 population of 543. For the purpose of the analysis presented here, the 2040 population was used as the main indicator for assessing infrastructure. Employment and commercial businesses are typically captured within water and wastewater data, while specific industries (existing or projected) are considered individually due to the potential for atypical contributions (i.e. higher demand, flow, and/or suspended solids loading).

Table 1. Proposed growth rates developed by APG and 2040 population projections.

Scenario	As-Is		Moderate		Strong	
Period	2020 – 2035	2035 – 2040	2020 – 2035	2035 – 2040	2020 – 2035	2035 – 2040
Population (AAGR[1])	0.50%	0.35%	1.00%	0.70%	1.40%	0.90%
Employment	12%		20%		20% and site-specific growth	
Projected 2040 Population	595		652		700	

[1]AAGR = Average annual growth rate

Using the projected populations shown in Table 1, 2040 water demand and wastewater flows were estimated for each scenario. Sections 3.1 and 4.1 below provide these projections, as well as other planning criteria considered. Note that these projections are high-level approximations based on the limited available data, comparing data from nearby communities in the Willamette Valley, and assumptions about connectivity to community systems.

3.0 WATER INFRASTRUCTURE

3.1 PROJECTED WATER DEMANDS

In projecting water demands, it was assumed that the entire permanent population in the planning area would be served by a community water system. This is a conservative approach based on the expressed desire for a community system to serve existing residents and business owners and enable future development, vocalized by stakeholders (i.e. Marion County Fire District #1 staff, private property owners, Chemeketa Community College). High water demand industries, such as NORPAC and Covanta, are currently on private well systems and it was assumed that this would continue in the future.

Table 2 below provides projected water storage needs and well pump flow rates based on a max day demand of 415 gallons per capita per day (gpcd) and average day demand of 140 gpcd. These values were estimated from available wastewater flow rates which reflects approximately 55% commercial and 45% residential contributors. It was assumed that growth would occur proportionally. Water master plan data for several nearby communities was accessed to help characterize demands. Planning criteria such as fire flow requirements and emergency storage were considered when projecting water storage needs.

Table 2. Projected storage needs and well pump flow rates for a community water system

Growth Scenario	**Existing**	**As-Is**	**Moderate**	**Strong**
	2020	2040	2040	2040
Population	*543*	*595*	*652*	*700*
Peak Storage[2]	0.03	0.04	0.04	0.04
Operational Storage[3]	0.07	0.07	0.08	0.08
Fire Storage[4]	0.54	0.54	0.54	0.54
Emergency Storage[5]	0.08	0.09	0.09	0.10
Total Storage Need (MG)	**0.72**	**0.73**	**0.76**	**0.76**
Well Flow Rate (gpm)[6]	**156**	**172**	**188**	**202**

[2]Based on estimated 15% of maximum daily demand
[3]Operational Storage: Assumes 10% of total storage
[4]Fire Storage: Assumes 3,000 gpm for 3 hours
[5]Emergency Storage: Assumes one day of the average day demand
[6]Assumes 415 gpcd which includes residential, commercial, and irrigation use

The required storage is within a range of approximately 4,000 gallons between the Existing and Strong scenarios. Storage could be in the form of a raised or below ground reservoir. Pumping needs would vary slightly depending on storage elevation. Pump and power redundancy are recommended. Interconnection of a community water system to a private well system (i.e. CCC) would benefit both systems by providing a backup water supply for a situation requiring pump(s) to be taken offline.

3.2 FUTURE WATER INFRASTRUCTURE ALTERNATIVES

Potential drinking water sources, infrastructure requirements, and capacity were among the considerations in developing alternatives for future water infrastructure. The following three alternatives were considered for future water infrastructure serving the planning area: no change to the existing system, installation of a new water system with a community well (or wells) as its source, and installation of a water storage and distribution system with a neighboring municipality as a wholesale water source. A description of water infrastructure alternatives and potential advantages and disadvantages are presented in Table 3.

Table 3. Future water infrastructure alternatives.

NO CHANGE	COMMUNITY WELL(S)	CONNECTION TO NEIGHBORING SYSTEM
Existing community water infrastructure serves approximately 17 commercial users within the Brooks Community Service District (BCSD). The source well is owned by Chemeketa Community College (CCC). Water users not served by BCSD are on private wells.	Installation of a new well (or network of wells) has the potential to serve a community water system and provide adequate fire flow. A surface water source was not pursued here due to the planning area's distance to local surface water bodies.	A nearby existing municipal water system could provide a water source for a community system. Connection to the City of Keizer's water system appears to be feasible based on preliminary conversations with the City, system capacity, and proximity to infrastructure (see attached Figure 1) and its Urban Growth Boundary. There is also the potential to connect to the City of Salem's infrastructure, however, contact was not made with City staff at this time.
Advantages • Minimal additional infrastructure for the County/District to maintain in the foreseeable future • No capital investment required	***Advantages*** • Water source and infrastructure owned by the County/District and not another agency • Capacity to meet fire flow requirements • Capacity to serve BCSD users and additional community members • Enable development or growth in the area • Interconnection with a private system could benefit both systems by providing redundancy	***Advantages*** • Allows for a community water system with a source that the County does not have to maintain • Capacity to meet fire flow requirements • Capacity to serve BCSD users and additional community members • Enable development or growth in the area
Disadvantages • Tenuous agreement between CCC and the County, and as a result, long-term uncertainty of the water source. Note that Oregon Health Authority prohibits the cessation of a community water source without providing an alternate source. • No new service connections are permitted, which limits development or growth in the planning area. • The system is unable to meet fire flow requirements, which has negative implications for safety and growth in the planning area • Continuation of serving unmetered customers without proper backflow protection.	***Disadvantages*** • Requires initial feasibility investigation, including hydrogeologic investigation, water rights availability, and well siting. • Initial capital investment for new water infrastructure (well(s), pumps, pipeline, meters, valves) • Potential for existing water quality issues to perpetuate with new well if accessing the same aquifer as the CCC well.	***Disadvantages*** • Political uncertainty as it requires going through the process of incorporation into Salem/Keizer's UGB or go through a statewide goal exception • County does not own water source • Initial capital investment for new water infrastructure (pump station, pipeline, meters, valves, potential connections fees to for City of Keizer)

4.0 WASTEWATER INFRASTRUCTURE ALTERNATIVES

4.1 PROJECTED WASTEWATER FLOWS

Daily wastewater flow data from 2018 to 2019 were used to project future wastewater flows for each growth scenario, as shown in Table 4 below. Industry expansion is

projected under the Strong growth scenario. It is assumed that influent wastewater composition (i.e. BOD concentration) will not change under this growth, and that any new industries to the area would treat wastewater onsite, similar to NORPAC's facility, and obtain their own NPDES discharge permit. However, existing BOD loading (120 lb/day) and TSS loading (50 lb/day) are well under the original design loads (279 lb/day for BOD and 140 lb/day for TSS), due to the efficacy of Septic Tank Effluent Pumping (STEP) systems at removing these constituents. The number of additional STEP tanks were estimated as they require a high amount of maintenance effort from County public works staff and should be considered as a part of any future wastewater evaluation and cost estimating.

Table 4. Project wastewater flow rates and STEP tanks per growth scenario

	Design Flow Rate (gpd)	2018-2019 Unit Flow Rate (gpcd)	2018-2019 Flow Rates (gpd)	2040 Projections		
				As-Is	Moderate	Strong
Population			Approx. 540	595	652	700
Average Dry Weather Flow	201,000	118	64,300	70,516	77,207	82,839
Peak Dry Weather Flow	226,000	182	99,000	108,571	118,873	127,544
Average Wet Weather Flow	220,000	112	61,000	66,897	73,245	78,588
Peak Wet Weather Flow	251,000	137	74,600	81,812	89,575	96,109
Estimated Number of STEP Tanks[7]			250	274	300	322

[7]Based on existing ratio of population to STEP tanks in system

When assessing capacity of the wastewater system, projected flow rates can be compared to design flow rates. There appears to be flow capacity at the wastewater treatment plant for all three growth scenarios. Based on the projected influent flows, velocities in the 4-inch and 6-inch collection system force mains would likely vary between 1 foot per second (fps) and 5 fps. The STEP tank estimates in Table 4 represent expansion based on the existing proportion of commercial and residential contributors to the system.

4.2 FUTURE WASTEWATER INFRASTRUCTURE ALTERNATIVES

When assessing viable options for future wastewater infrastructure, maintenance, additional infrastructure requirements, and feasibility were considered in developing alternatives for future wastewater infrastructure. The following three alternatives were considered for future wastewater infrastructure serving the planning area: no change, gravity-based additions to the existing STEP system, and a new gravity-based system to replace the existing STEP system. A description of wastewater infrastructure alternatives and potential advantages and disadvantages are presented in Table 5 below. Note that connecting to a neighboring wastewater system (such as to the Keizer-Salem system) is an additional option, but this alternative was not pursued for this memorandum due to the extent of the wastewater infrastructure currently serving the planning area.

Table 5. Future wastewater infrastructure alternatives

NO CHANGE	GRAVITY-BASED ADDITIONS	NEW GRAVITY SYSTEM
The existing community wastewater system serves much of the Brooks-Hopmere community. Existing infrastructure includes approximately 250 STEP tanks, pressurized piping, and a small wastewater treatment plant with a two lagoons.	The existing wastewater system could be maintained while any new infrastructure expansion could be through gravity-based infrastructure. Additional infrastructure would include new sewer mains and laterals, with the likely need for lift station(s) or deep pipe placement.	A new gravity wastewater system could be installed to replace the existing STEP system. Infrastructure requirements would include new sewer mains and laterals, lift station(s) or deep pipe placement, and modifications to the wastewater treatment plant.
Advantages • Lowest capital investment required • STEP tanks provide pretreatment before wastewater enters the treatment plant	***Advantages*** • Avoids the maintenance of additional STEP tanks added to the system • Reduced capital investment requirement when compared to a new gravity system	***Advantages*** • Eliminating STEP tanks would reduce long-term maintenance costs
Disadvantages • Does not improve upon existing maintenance requirements and will continue to increase maintenance costs and staff time with the addition of more STEP tanks to the system.	***Disadvantages*** • Requires maintenance of a dual system (STEP tanks and gravity) • Without STEP tanks for new connections, influent solids and BOD loading would likely increase, which would necessitate upgrades to the wastewater treatment plant	***Disadvantages*** • Influent solids and BOD loading would increase due to the removal of STEP tanks and likely require expansion of the treatment system • High initial capital investment for new infrastructure

5.0 RECOMMENDED INFRASTRUCTURE PER SCENARIO

5.1 WATER INFRASTRUCTURE

As described in Table 3 and in the existing infrastructure summary memo, there are several disadvantages to the current BCSD system served by CCC. A new water source should be established to serve (at a minimum) the BCSD water users and provide water storage and fire flow to the community, although ideally it would be able to serve other members of the community and future growth. It is recommended that regardless of the growth scenario, a new community water source should be established. A feasibility study would provide the County with a better understanding of whether pursuing a community well system or connection to a neighboring municipal system would be best moving forward.

5.2 WASTEWATER INFRASTRUCTURE

When assessing future projections, the existing wastewater system serving much of the Brooks-Hopmere community appears to have flow capacity based on the assumptions described above. However, the STEP tanks are a high maintenance cost to the County while a STEP system is in place, whether it is through pumping or replacement of aging tanks. This is an important consideration when assessing growth to the system and its impact on public works staff and budget.

For the As-Is scenario, the no change alternative is recommended due to the relatively low number of estimated STEP tanks added to the system (about 25).

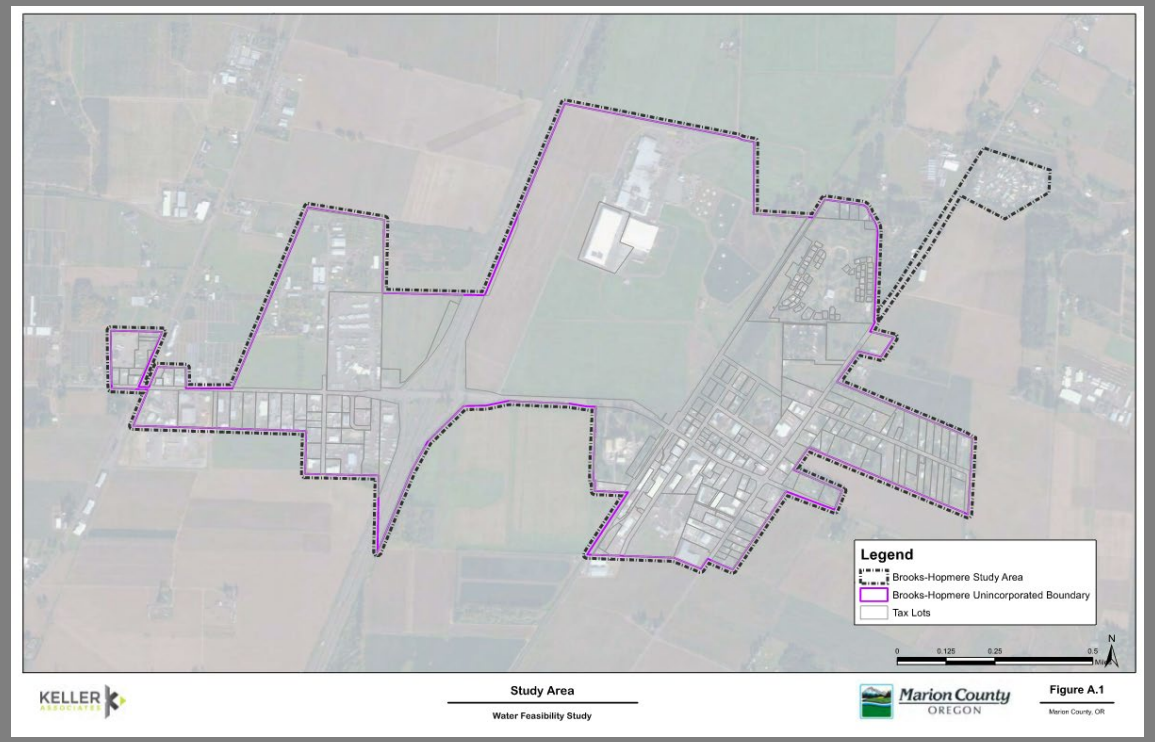
For the Moderate scenario, either the no change alternative or the gravity-based additions alternative could be appropriate to serve growth. A minimum of 50 additional STEP tanks could be added to the system, which is an increase of 20% from the current number of tanks. The cost to the County for adding these tanks to the system could be compared to the infrastructure required for small, gravity-based additions to the system. Gravity-based infrastructure will result in higher solids loadings to the treatment plant due to the lack of settling that a STEP tank provides, which could impact the treatment plant's treatment capacity. A wastewater facility planning study is recommended to fully assess the existing condition of the system, treatment capacity and thresholds, as well as to provide cost estimates for future infrastructure alternatives. This study could also evaluate the future expansion of a gravity system that would displace the STEP system. Infiltration and inflow were not accounted for when projecting flows, largely because it is not currently an issue in the pressurized system. It should be considered in planning any gravity-based upgrades to the system in an area with the potential for high groundwater.

For the Strong scenario, either gravity-based additions or a new gravity system is recommended. The minimum additional STEP tank estimate increases by almost 30% of the existing count. Location of growth would influence whether gravity-based additions are more feasible than a completely new system. A wastewater facility planning study is also recommended for this growth scenario for the same reasons described above.

6.0 NEXT STEPS

The next phase of water infrastructure planning should involve a feasibility study. This could include further research into the feasibility of water system alternatives, as well as more accurate estimates of demands based on the population to be served. Oregon Water Resources Department offers grants to assist in funding feasibility studies. Additionally, the Drinking Water State Revolving Fund as well as the Water Infrastructure Finance and Innovation Act program offer low-interest loans for water infrastructure planning projects.

The next phase of wastewater infrastructure planning should involve a facility planning study. The County would benefit from a more in-depth analysis of the existing system, including quantification of long-term data, a more in-depth inspection of facilities (including field testing), and an improved understanding of capacity moving forward. This would inform what additions, replacements, or modifications to the system would be appropriate for anticipated growth. The Clean Water State Revolving Fund provides loans for public wastewater system planning.



Brooks-Hopmere Water Feasibility

Management Update January 16, 2024

Timeline

Phase II: Water and Wastewater Feasibility Studies Preliminary Studies

		2023				2024			
		Sep	Oct	Nov	Dec	Jan	Feb	March	April
1	Existing Conditions and Future Projections								
2	Alternatives Evaluation								
3	Recommendations								
4	Draft Feasibility Studies								
5	Final Feasibility Studies								

Open House

Presentation to Board of Commissioners

Water System Feasibility Criteria

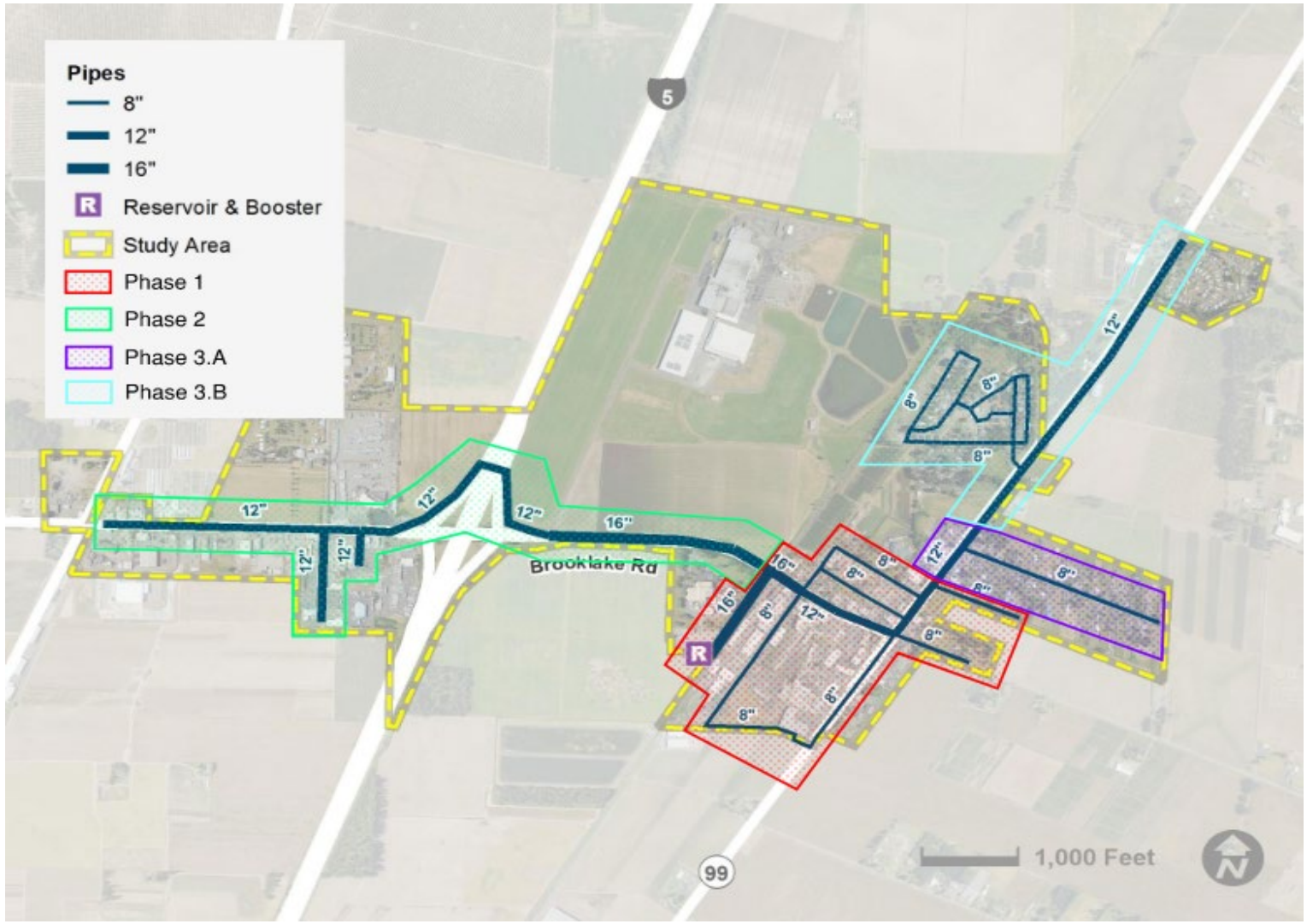
Objectives

- System resilience
- Fully addresses community needs – water demands & fire flow
- Constructable first phase within ARPA funding deadlines
- Future redundancy and flexibility
- Protect community interests

System Elements

- Water source
- Storage and pumping
- Treatment
- Distribution

Phasing – Master Plan in Process



Phasing

- Phase 1 – address critical needs within ARPA timelines
- Phase 2 – establish redundant supply and extend across I-5
- Phase 3 – full buildout and expand services as needed

Well Source

New water rights (potential new well locations shown):

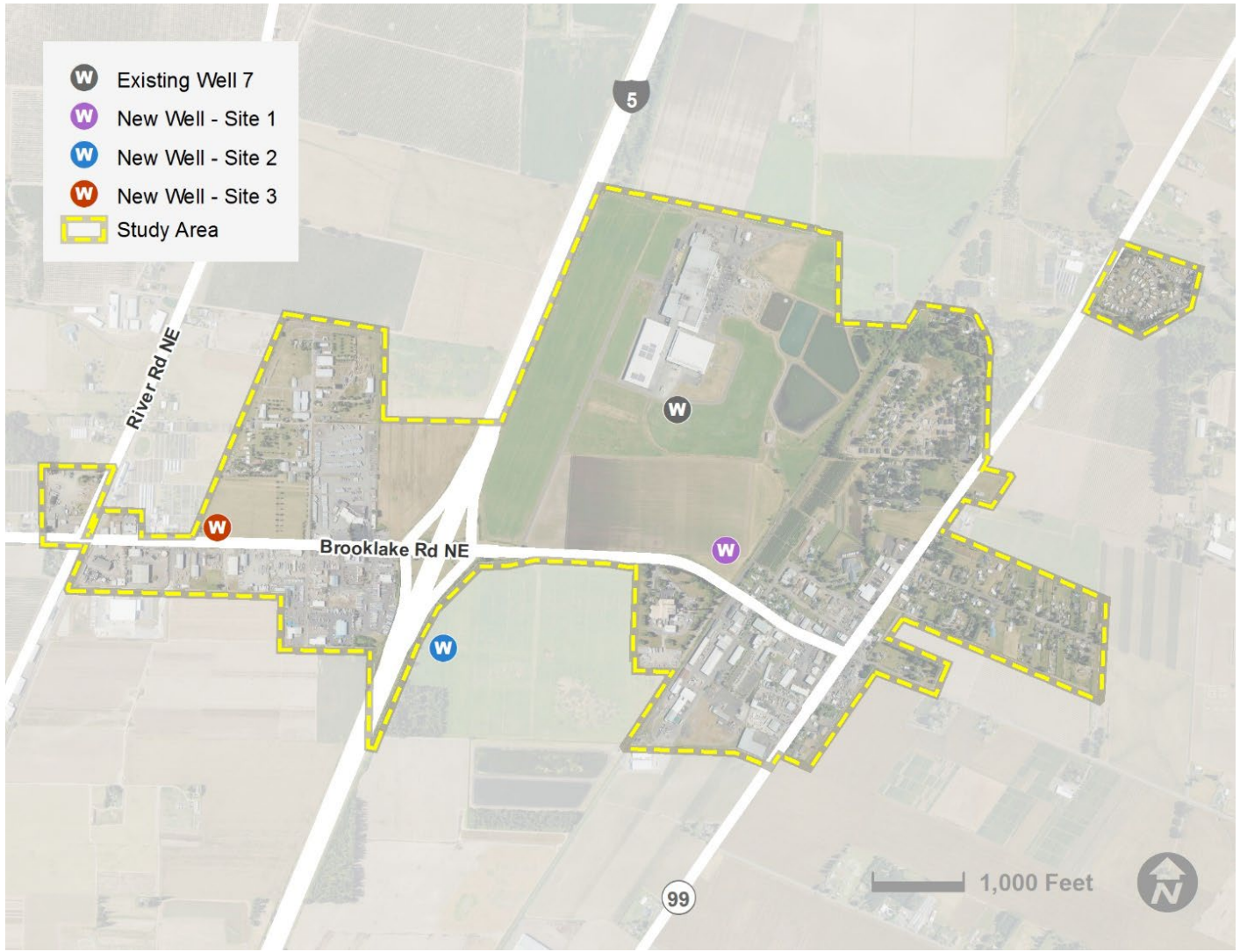
- Candidate well sites
- Groundwater modeling
- Approx. 2 years (risk of OWRD denial)

Contingency plan: purchase & convert existing water rights

- Lineage – willing seller but entangled in agreements w/ PNW Veg Co
- Otherwise, amalgamate enough quantity from multiple irrigation rights

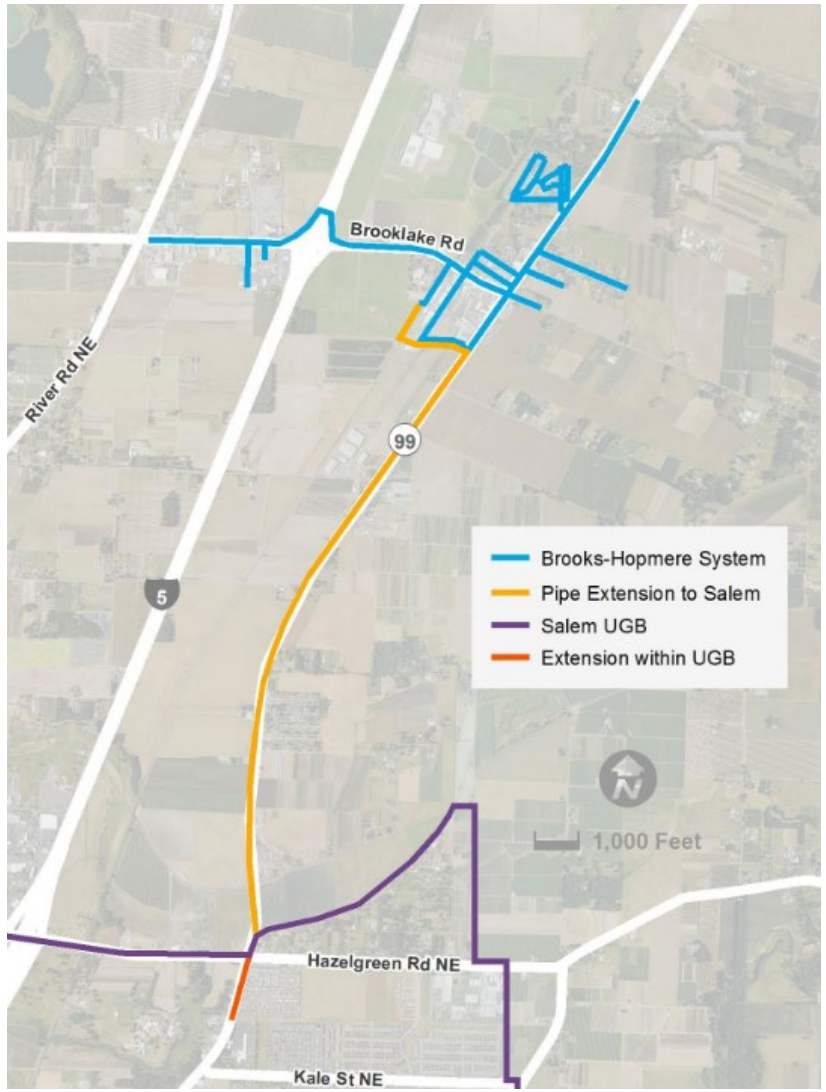
Pursuing all options simultaneously

Neither feasible within Phase 1 (ARPA)



Neighboring System Connection

- Phase 1 – Only feasible supply within ARPA timelines and budget
- Phase 2 – convert to a backup supply/interconnect for resiliency
- Salem: identified as the only nearby system with adequate capacity
  - Follow process akin to Turner supply agreement.
  - Connect from the existing 16” water line in Portland Rd North, 3.2 miles of 8-inch pipeline
- No goal exemption or UGB changes required
- County ordinance requires a land use action



Water Campus Location Alternatives

Hydraulic performance improved with a centralized location

Minimize length of supply lines

Other, more distant locations result in increased project cost

Land Use Planning and Permitting

State Requirements

- Wastewater Facility Plan
- Potable Water Facility Plan Study
- Update MC Comprehensive Plan
- Unincorporated Community Plan
- Public comment period

County Requirements

- Declare a public hazard will exist if water services are not addressed
- Adopt the state amendments
- Public review process