



**Bull Run**  
TREATMENT  
PROJECTS

*Our water: Safe and abundant  
for generations to come*

PORTLAND WATER BUREAU

## Bull Run Filtration Projects

# Multnomah County Land Use Application Public Hearing

June 30, 2023



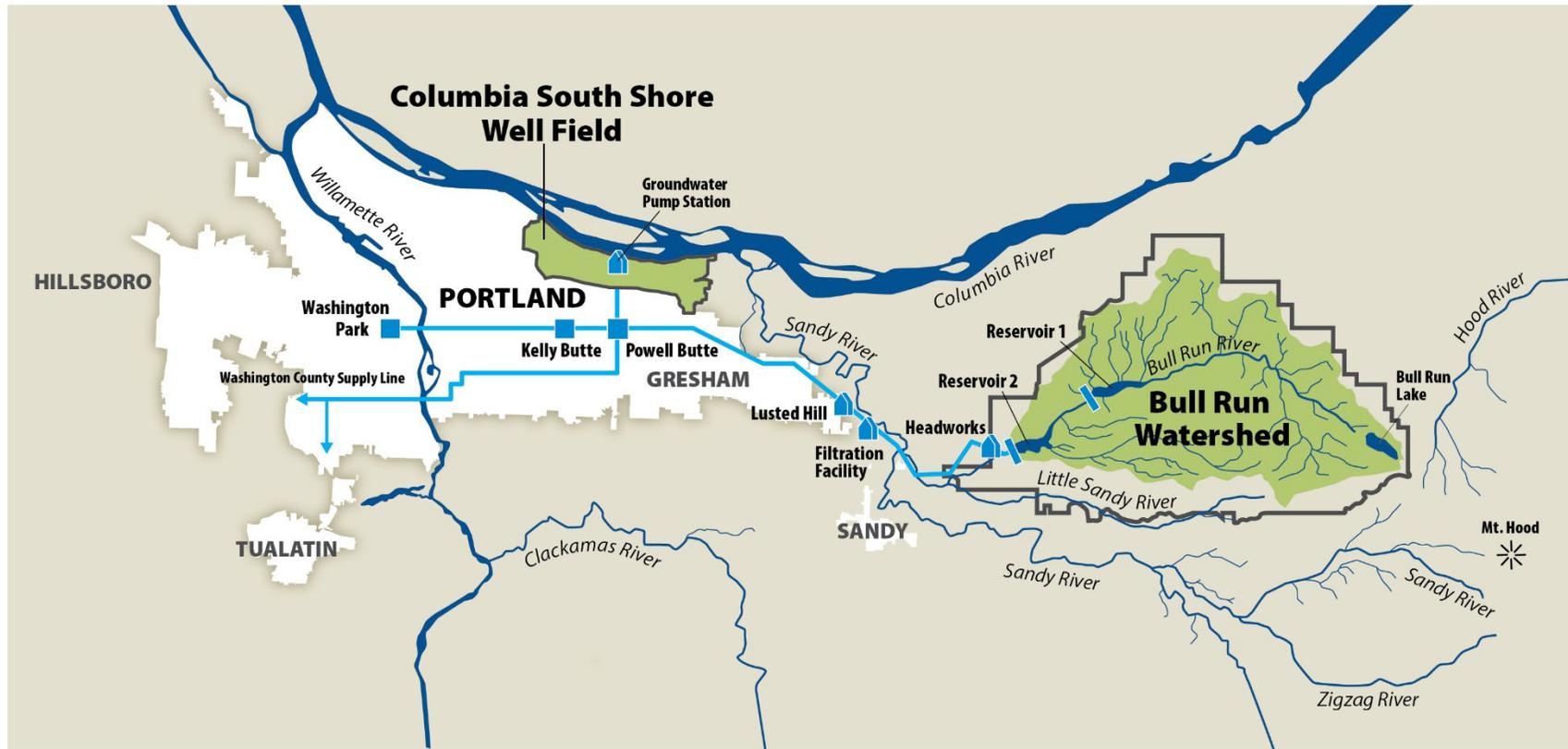
Exhibit H.42

# Agenda

1. Introduction
2. Design Overview
3. Key Issues in Land Use Approval Criteria



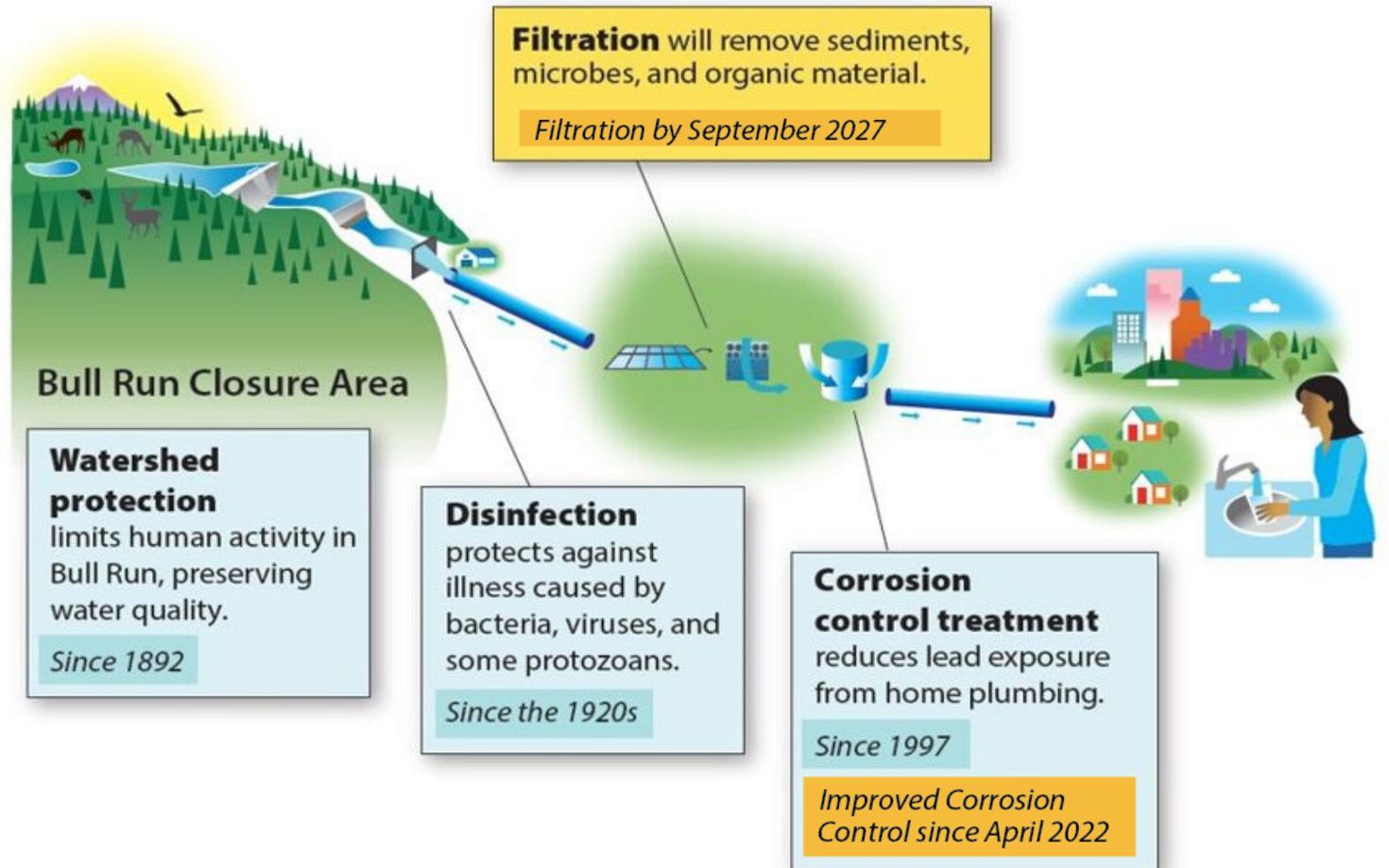
# Portland's water system has been a source of excellent water since 1895



- Currently serves almost 1 million people
- Uses 100 million gallons of water on an average day
- Serves the City of Portland and 19 wholesale customers, including Pleasant Home Water District



Improvements to the system are needed to meet national drinking water standards



# Bull Run water system has helped define character of the area for 125 years

- Bull Run water system was built in the late 1800s
- About 24 miles of pipeline were laid to create a gravity-fed supply of clean water
- Improvements to the original system have included building pipelines and the Lusted Hill Treatment Facility



# Facility is planned on property Portland purchased in the 1970s for future water facilities

- Hydraulically preferred to maintain gravity flow
- Proximity to other facilities
- Zoned by Multnomah County Land Use Planning as Multiple Use Agriculture (MUA-20)
- Use is allowed as a conditional use
- Filtration Facility not located in EFU zone
- Site can accommodate a buffer between the facility and its neighbors

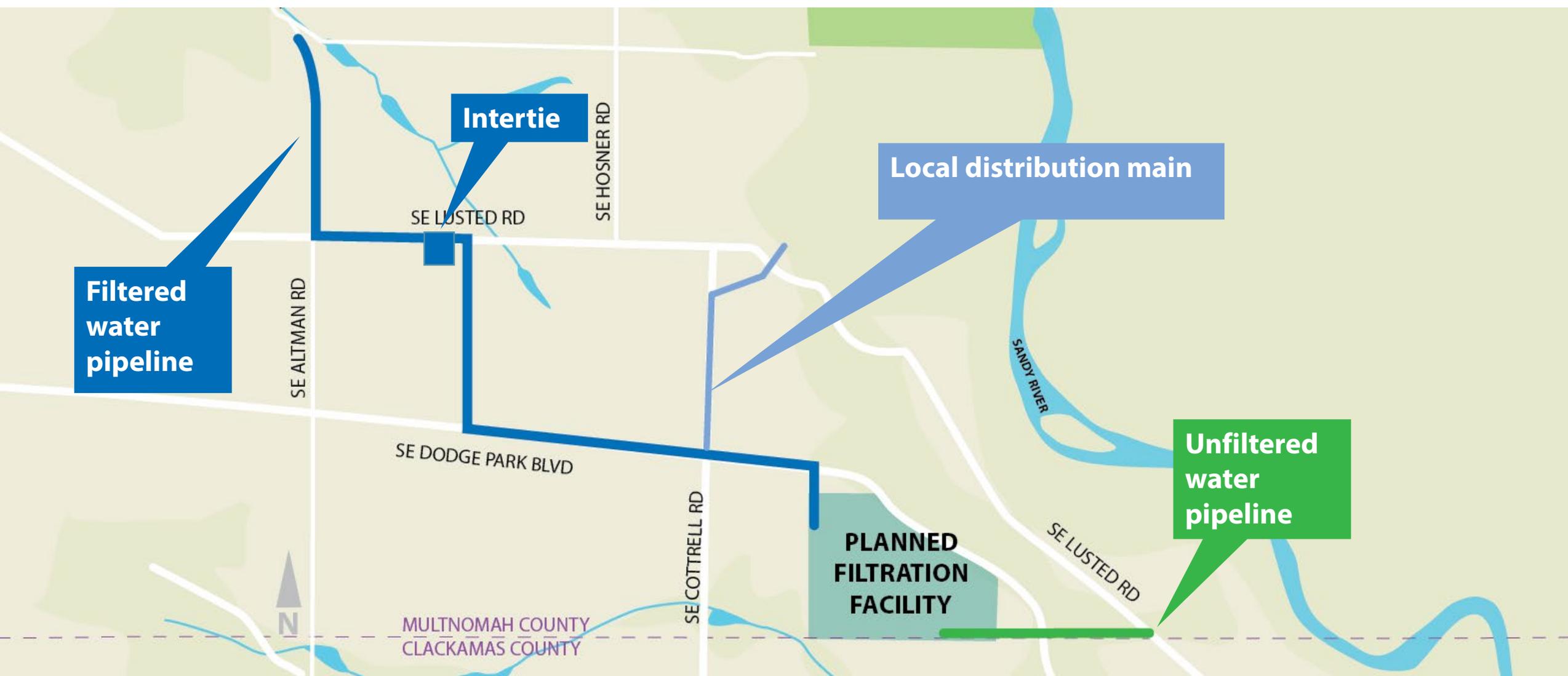


# Filtration facility location

- 135 million gallons per day
- Conventional granular media filtration

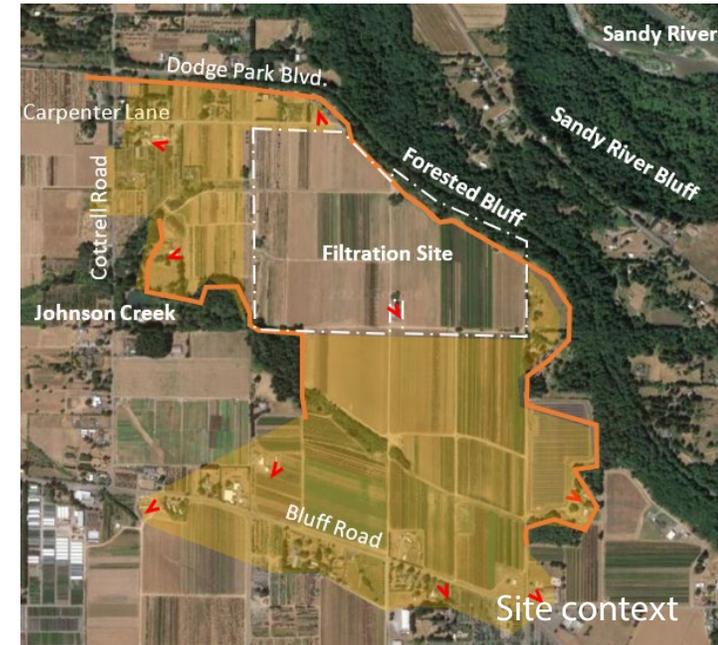


# Proposed pipeline routes



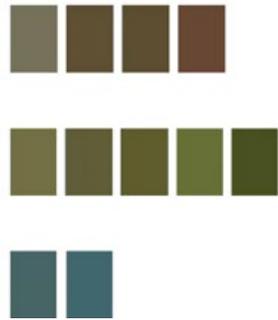
# Design approach

- Review facility types in local area
- Work with Site Advisory Group on preferences
- Use Columbia Gorge guidelines as reference
- Design to fit in with surroundings and blend
- Create a unified campus look and feel
- Use landscaping to control views in and sound out
- Respect habitat buffers
- Meet Dark Sky and noise standards

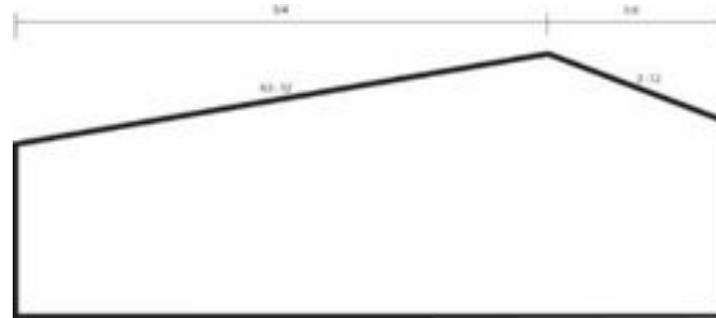


# Facility design

- Using only 45 of 90 acres for development
- Occupiable/office function: 13,012 sf
- Warehouse/storage function: 70,968 sf
- Non-occupiable/treatment function: 245,645 sf
- 35' max building height
- Resilient, dark-colored materials
- Familiar roof lines and simple forms



Columbia Gorge colors



Asymmetrical gable roofline



Chemicals facility

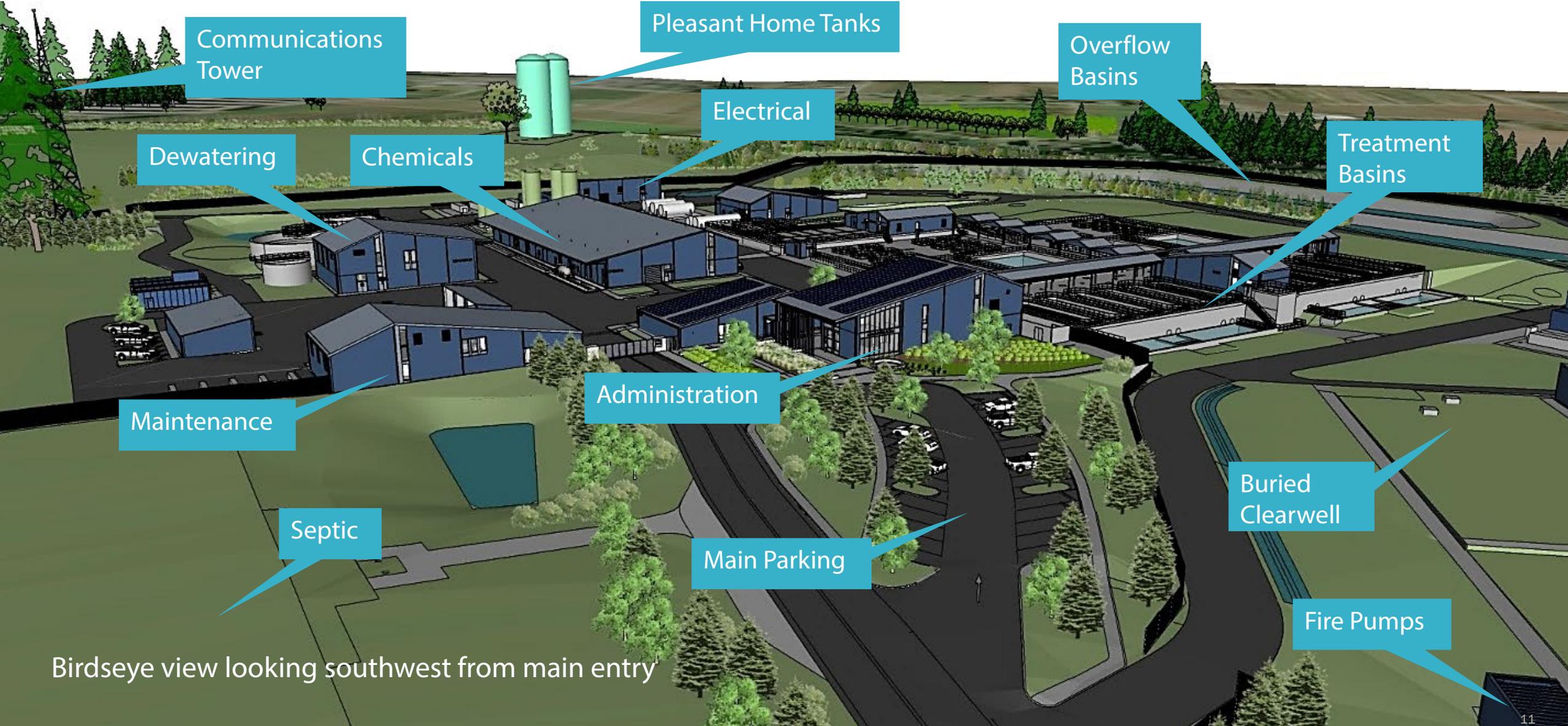


Water treatment basins



Administration facility

# Proposed filtration facility



Communications Tower

Pleasant Home Tanks

Overflow Basins

Dewatering

Chemicals

Electrical

Treatment Basins

Maintenance

Administration

Septic

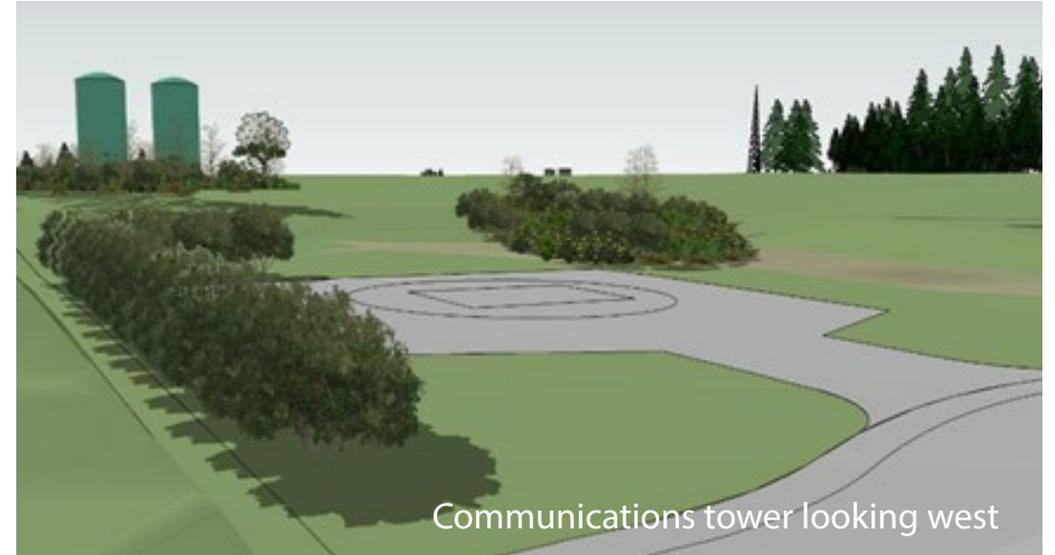
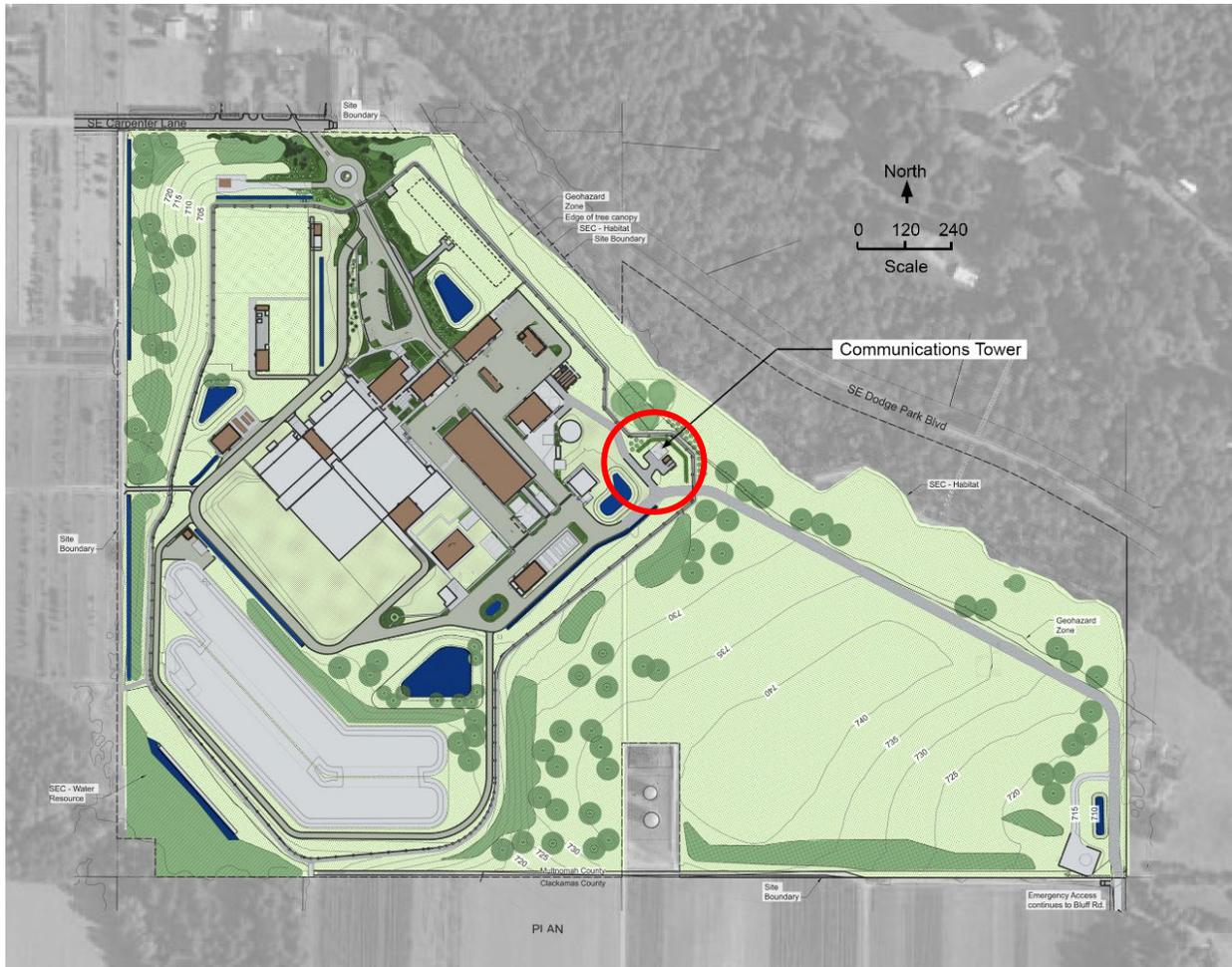
Main Parking

Buried Clearwell

Fire Pumps

Birdseye view looking southwest from main entry

# Communications tower located near treeline

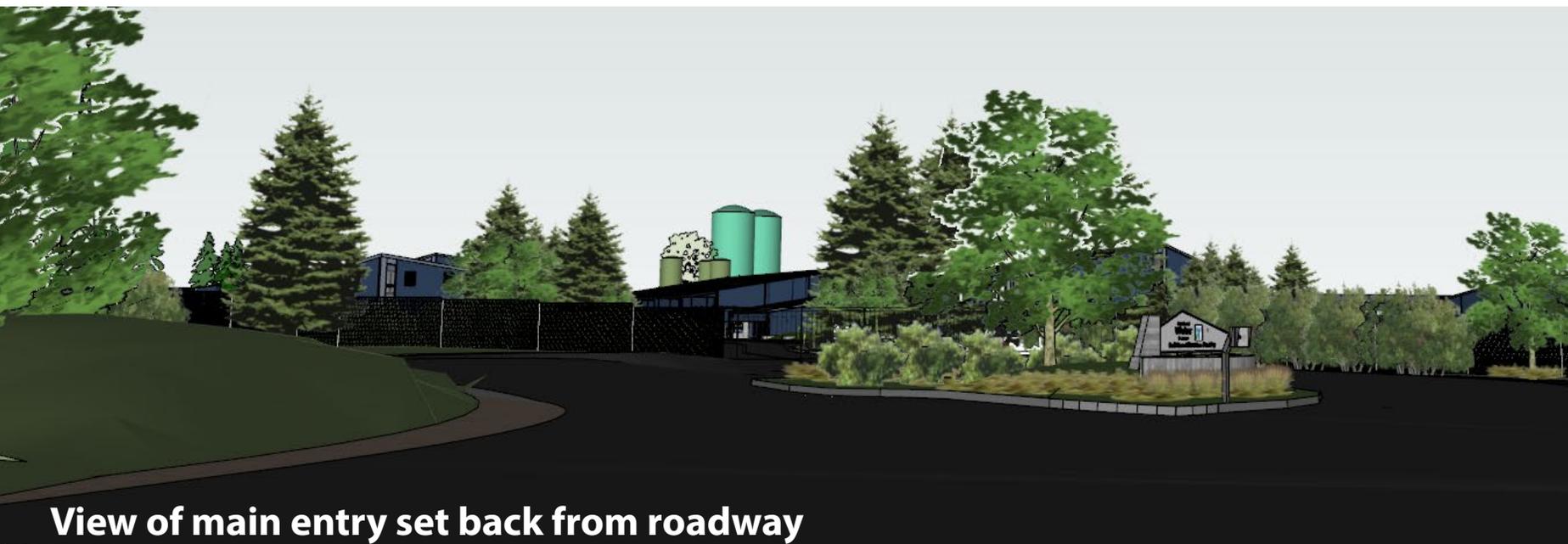


- Tower meets approved standards
- Painted to help blend in with tree and sky
- Against treeline to reduce visual impact
- Vegetative screening at base

# Proposed design includes a buffer between the water filtration facility site and neighbors

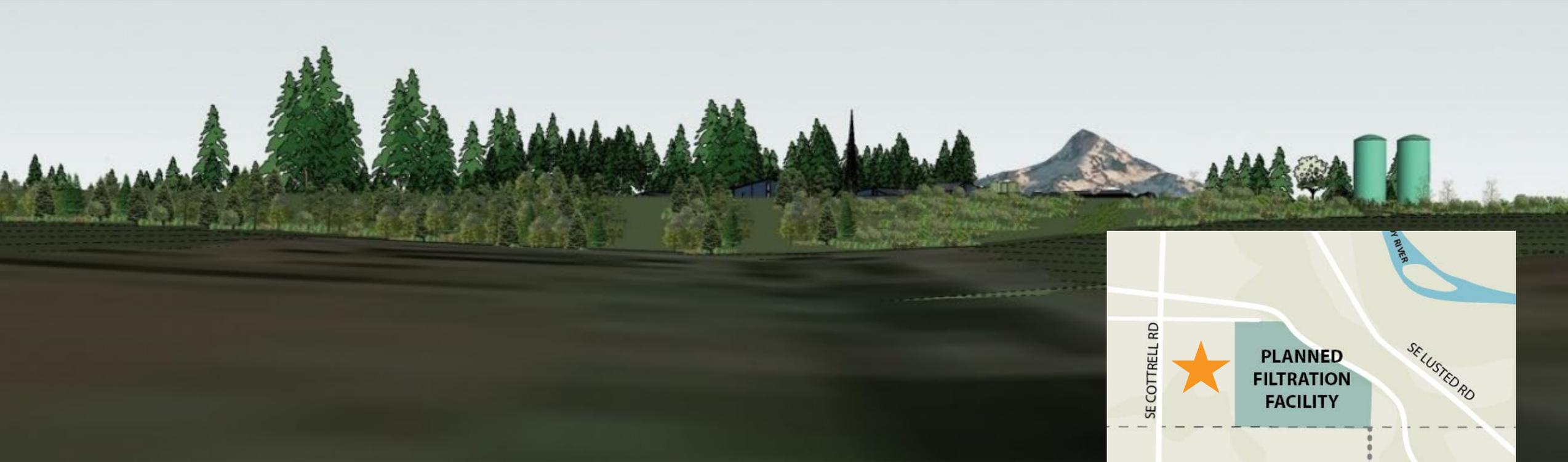


# Views toward facility from Carpenter Lane



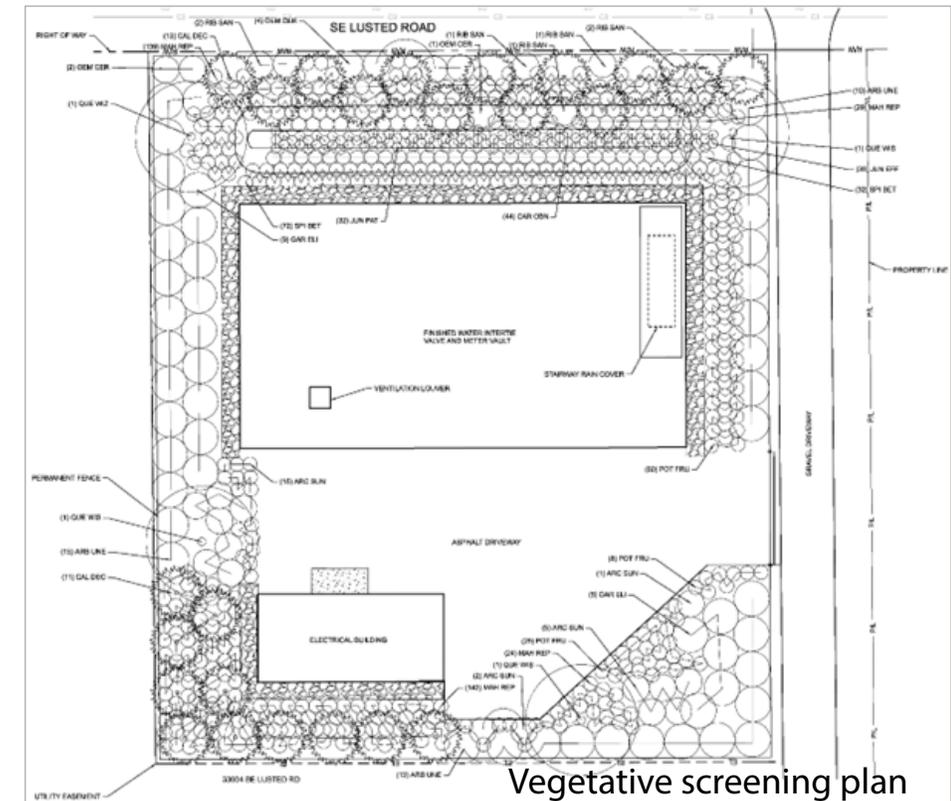
# View toward facility looking east

(Mount Hood location approximate)

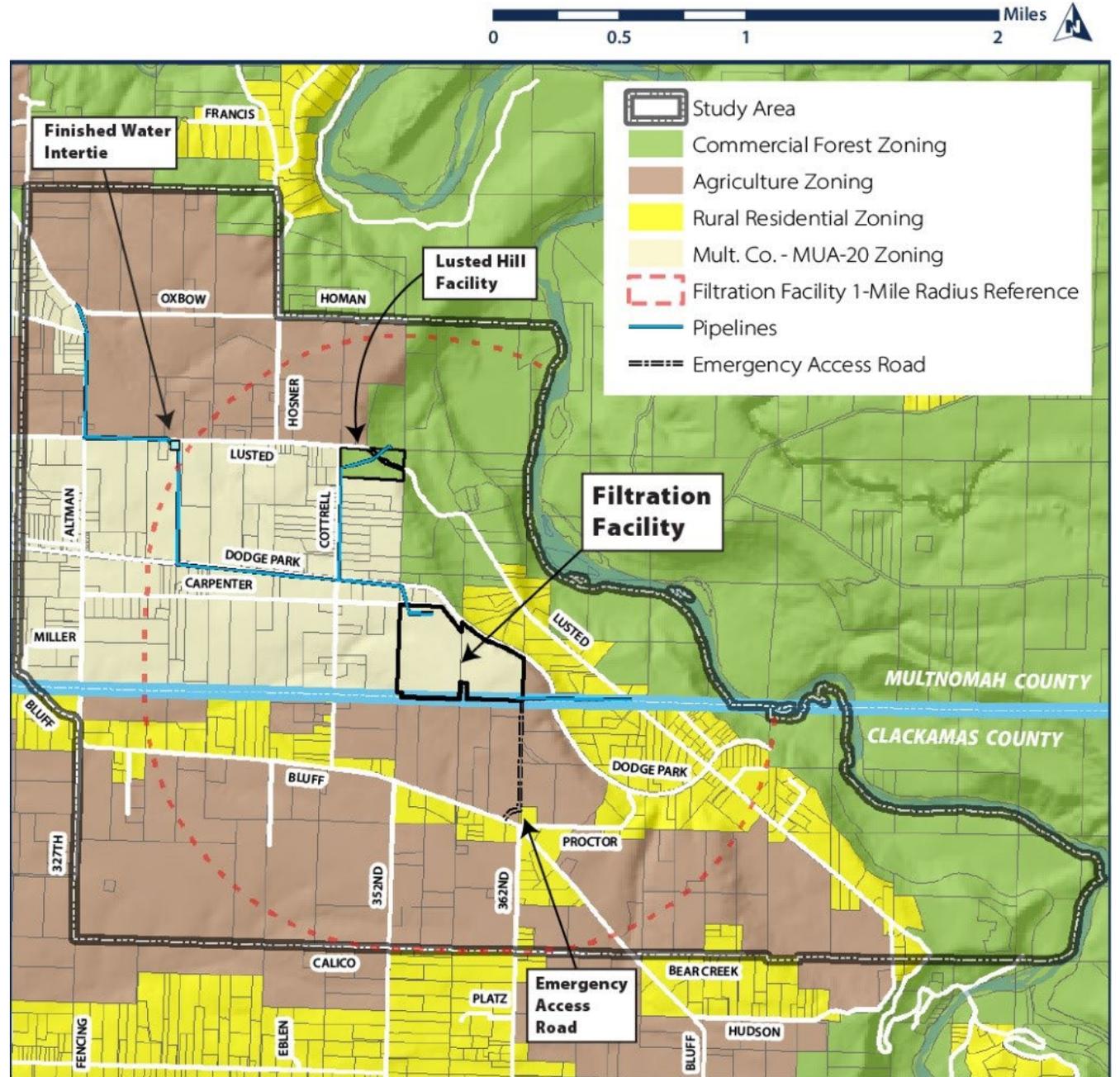


# Intertie site and screening

- Small above-ground structure
- Screened with landscape
- Venting systems similar as existing



# Key Approval Criteria Issues



*Is consistent with the Character of the Area*

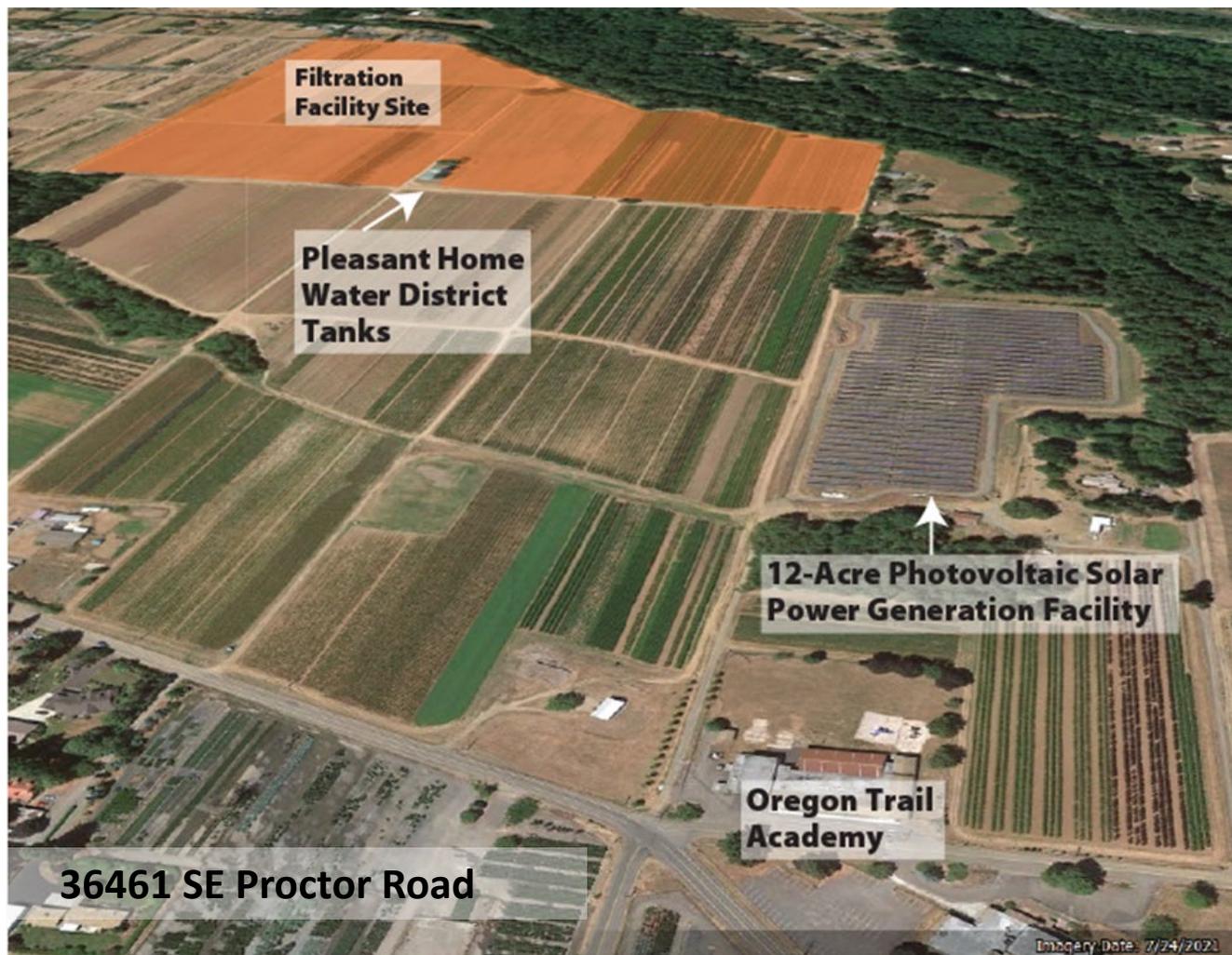
# Lusted Hill Treatment Facility



6704 SE Cottrell Road

- Forested screening of secured operating area
- Green surge tank near entrance
- Operations building
- Two 50 ft tall white silos
- One communications tower (green at base)
- Employee parking spaces

# Photovoltaic Solar Power Generation Facility



- Includes passive solar panel modules on about 12 acres of EFU-zoned property
- Approved by Clackamas County in 2018 as a “commercial utility facility for the purpose of generating power for public use”
- Hearings officer did not require screening from adjacent homesites or farm and forest land

# Sester Farms nursery operations center

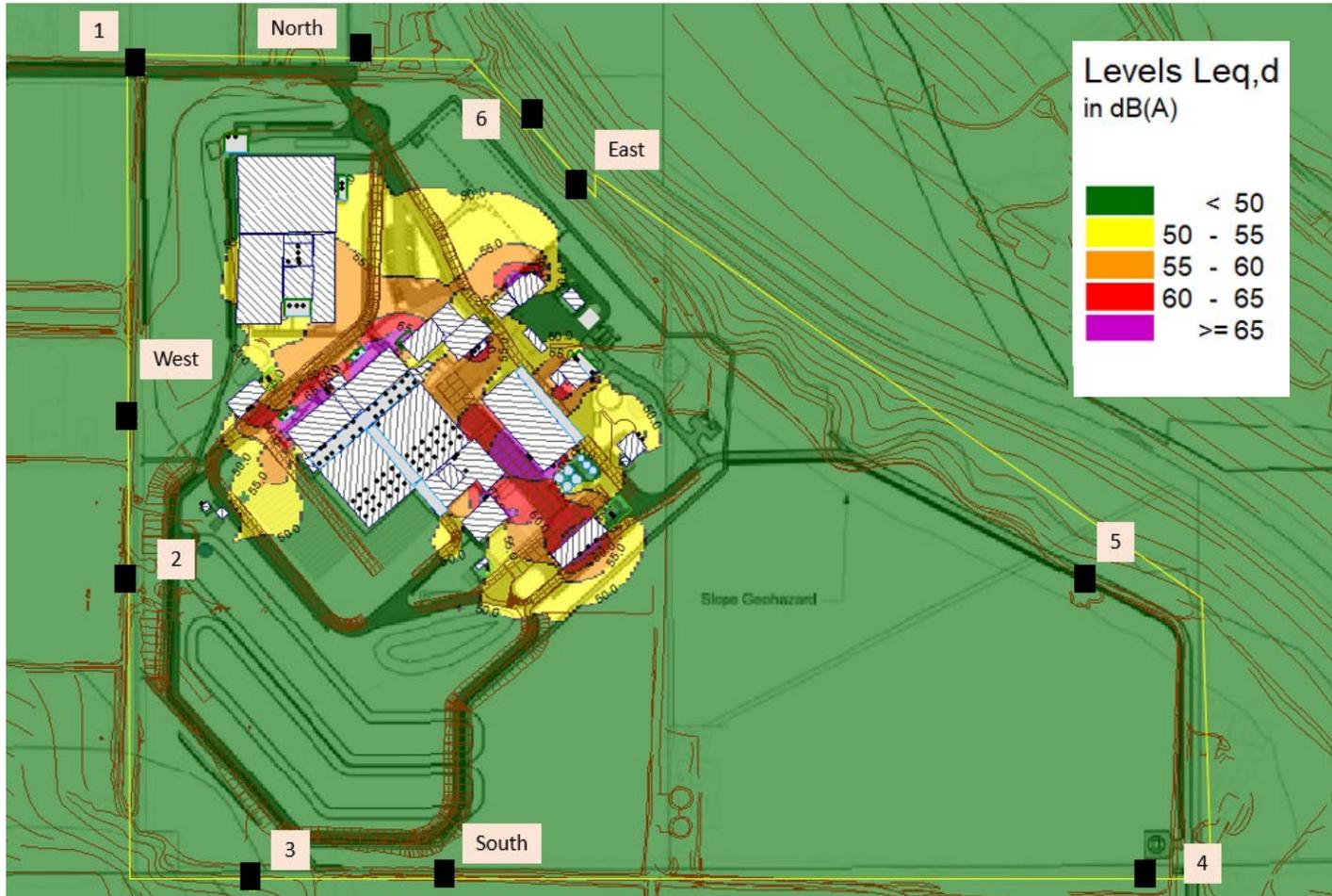


- Site is zoned EFU
- 9 warehouse and processing buildings
- 6 greenhouses
- Semi-trailer truck loading area
- About 109 parking spaces
- Combined building footprint of roughly 92,000 sf

# View of the facility seen from SE Bluff Road



# Noise levels from normal operations will be less than 50 dBA at the property line at all times

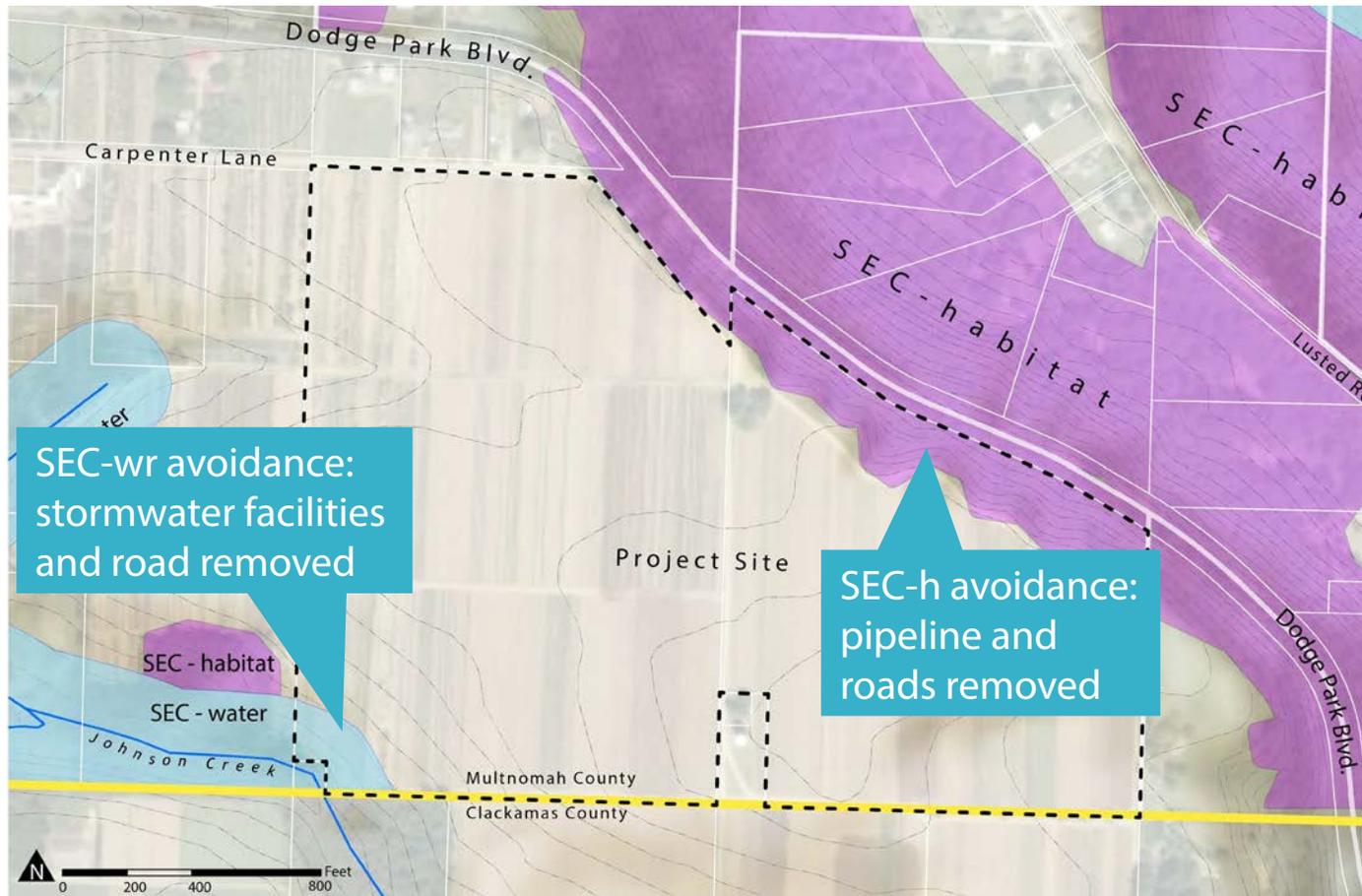


Numbered squares = noise analysis receiver locations

- Facility is clustered near center of site and buffered by landscape berms and plantings
- Design includes noise-attenuating features for equipment
- Facility complies with Multnomah County and Clackamas County noise codes

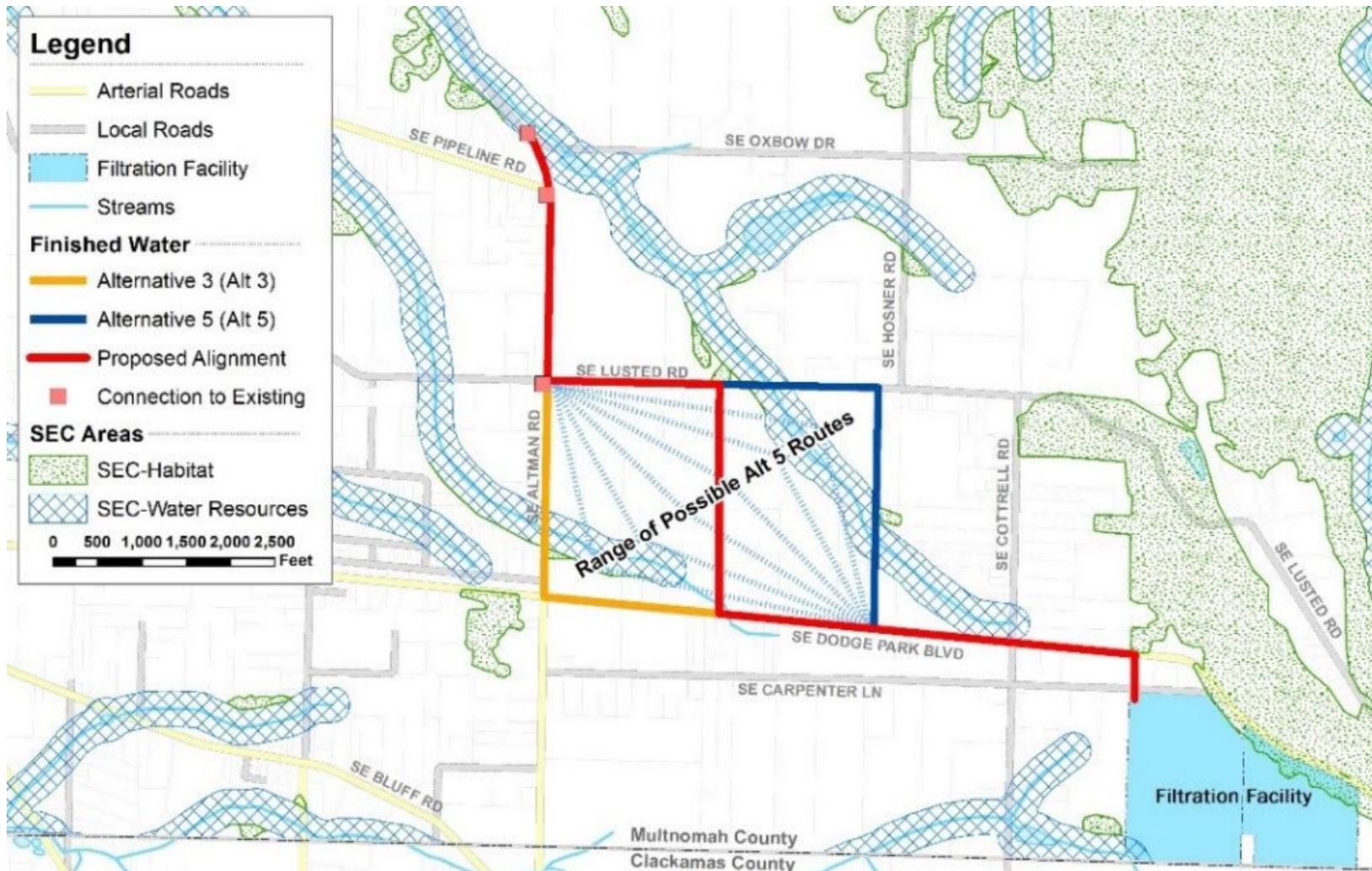
*Will not adversely affect natural resources*

# Filtration facility site with SEC overlays



- Development completely avoids the protected SEC-wr and SEC-h areas
- Native plantings are proposed on the exposed SEC slopes to enhance habitat in the 200 ft buffer along Johnson Creek

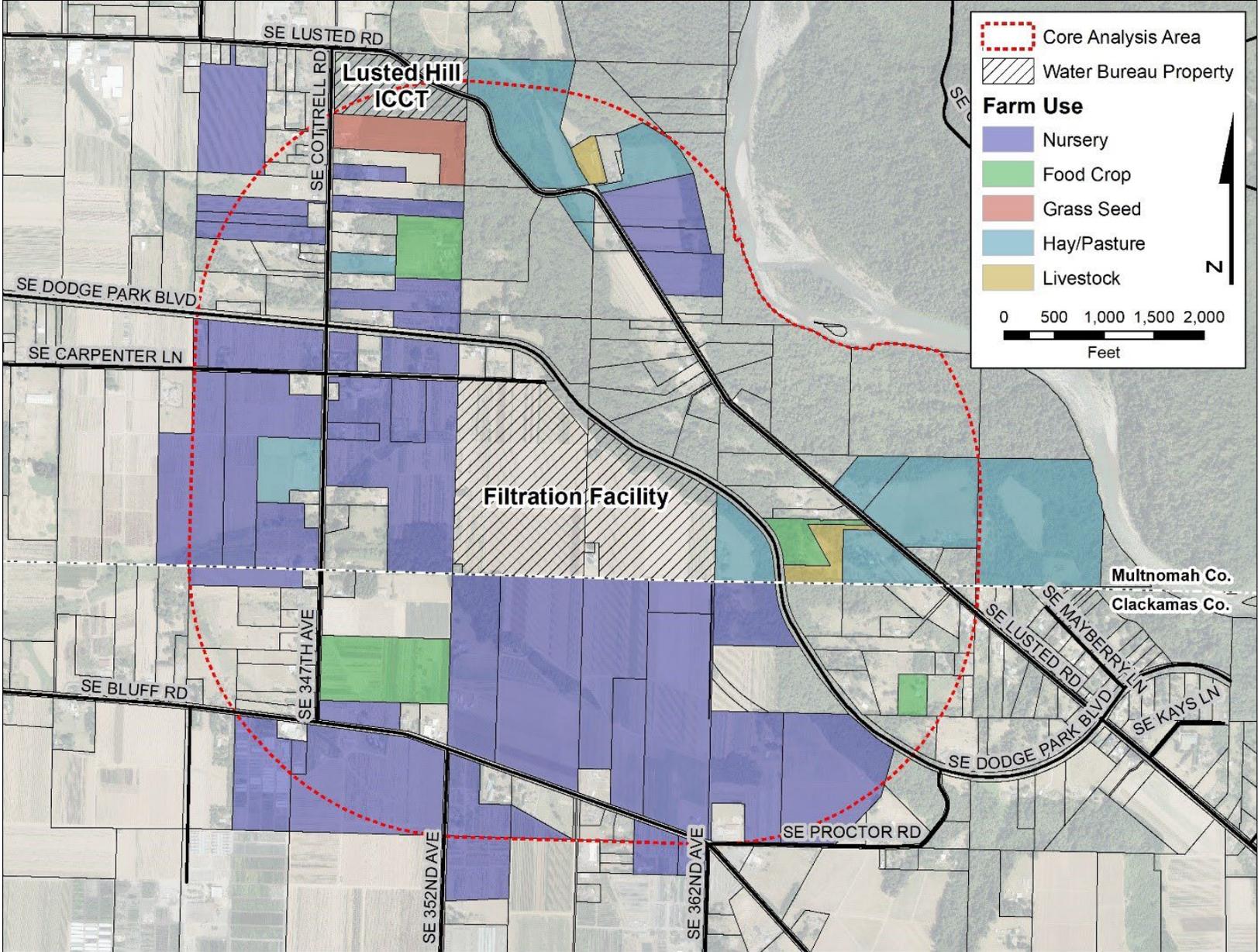
# Proposed pipeline route avoids SEC-wr overlay



- Potential finished water pipeline routes were evaluated and modified to avoid impacts to protected resources in SEC zones
- Proposed route avoids crossing Beaver Creek

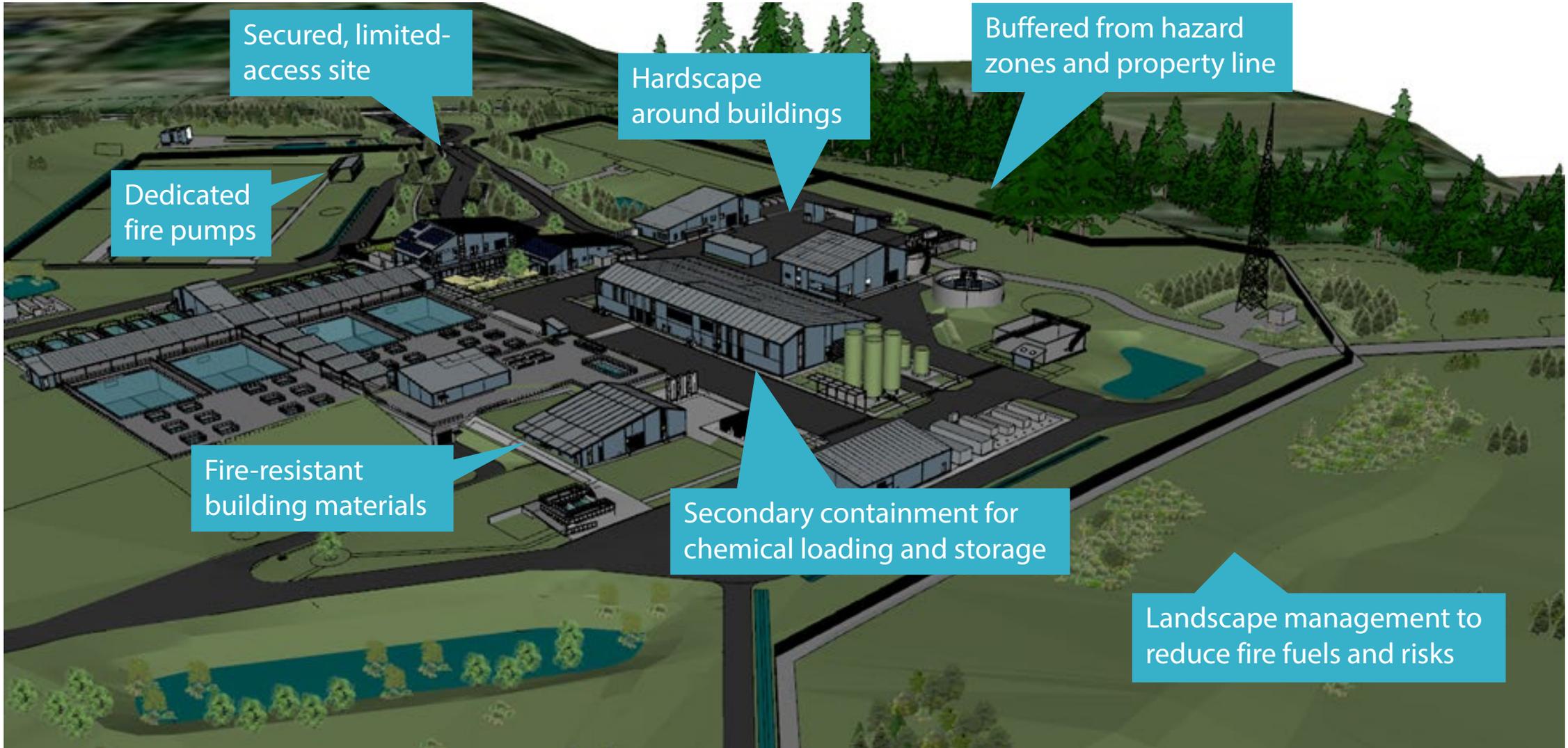
*The use will not: (1) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; nor (2) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.*

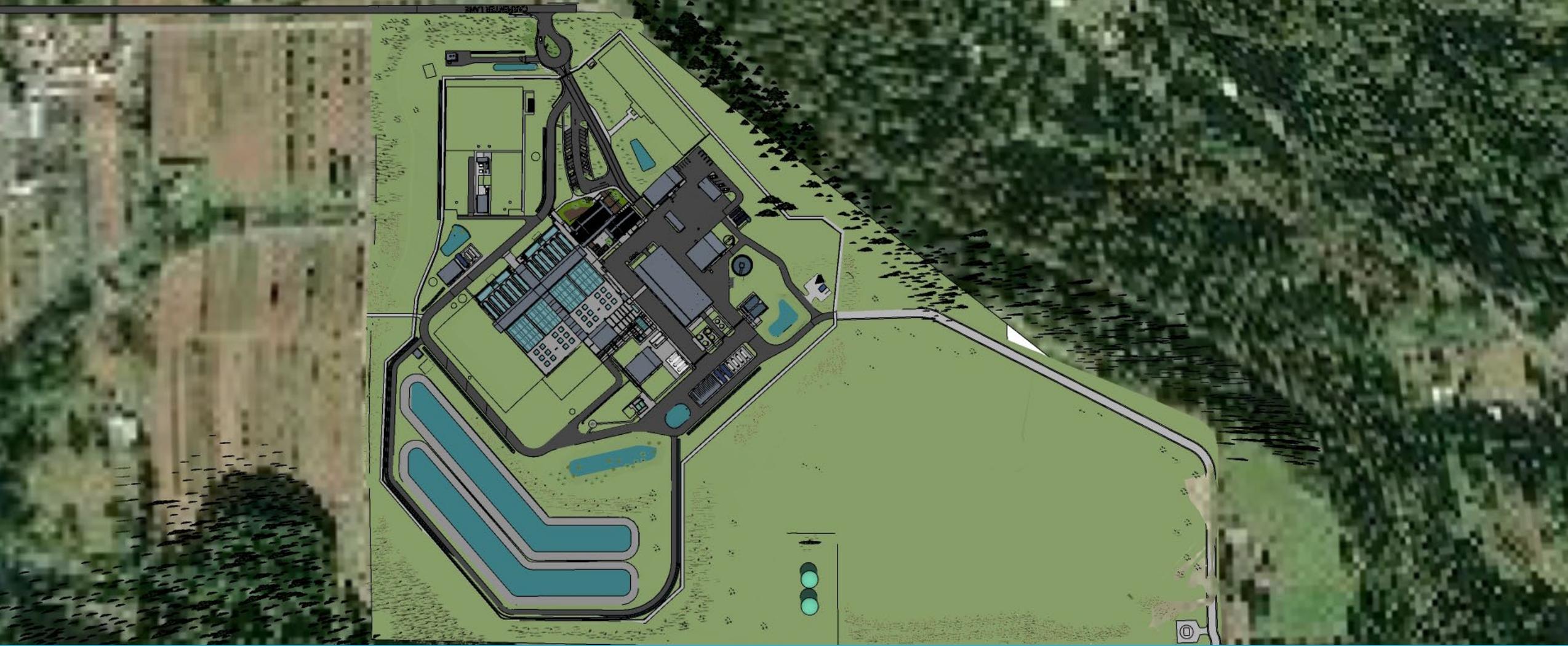
# Farm uses in agricultural core analysis area



*Will not create hazardous conditions*

# Code-compliance and other hazard mitigation





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*Our water: Safe and abundant  
for generations to come*

**Thank you!**

**Learn More** [portland.gov/bullrunprojects](http://portland.gov/bullrunprojects)