



**Bull Run**  
TREATMENT  
PROJECTS

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

PORTLAND WATER BUREAU

## Bull Run Filtration Project

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# Site Advisory Group Meeting 4





# Project Update

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# Portland City Council Decisions

*Cryptosporidium*  
detections began  
**2017**

Bilateral Compliance Agreement  
with the Oregon Health Authority  
**DECEMBER 2017**

**AUGUST 2017**

City Council Resolution No. 37309  
**chose filtration as the selected  
treatment option**

**DECEMBER 2018**

City Council Resolution No. 37402  
**decided on location, technology,  
capacity, procurement method**

City Council Resolution No.  
37460 **adopted priority values,  
expectations, recommended option**

City Council Ordinance No.  
189778 **authorized filtration facility  
design services contract**  
**DECEMBER 2019**

# Leading with values



## **WATER QUALITY**

safe, reliable drinking water



## **RESILIENCE**

provide a more resilient system



## **COST & VALUE**

best value for customers



## **COMMUNITY & ENVIRONMENT**

sensitive to potential impacts



# Current activities

## Filtration Facility

- ✓ City Council Resolution
- ✓ Preliminary design
- ✓ Evaluations and studies
- ✓ Outreach to neighbors
- ✓ Site Advisory Group



## Pipelines

- ✓ Outreach to neighbors
- ✓ Surveying
- ✓ Geotechnical evaluations
- ✓ Environmental studies
- ✓ Cultural resources assessments
- ✓ Accessing easements



# Conceptual Pipeline Route Study Area

We're looking at:

- ✓ Community considerations
- ✓ Maintaining gravity flow
- ✓ Seismic stability
- ✓ Constructability
- ✓ Environmental impacts
- ✓ Meeting regulatory timeline
- ✓ Property rights





## Facility Tours

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# Tours

**November 8, 2019**

**Wilsonville's Willamette  
River Water Treatment Plant**

























# What do you want to see, hear, understand better?

## Tours

February 13, 2020

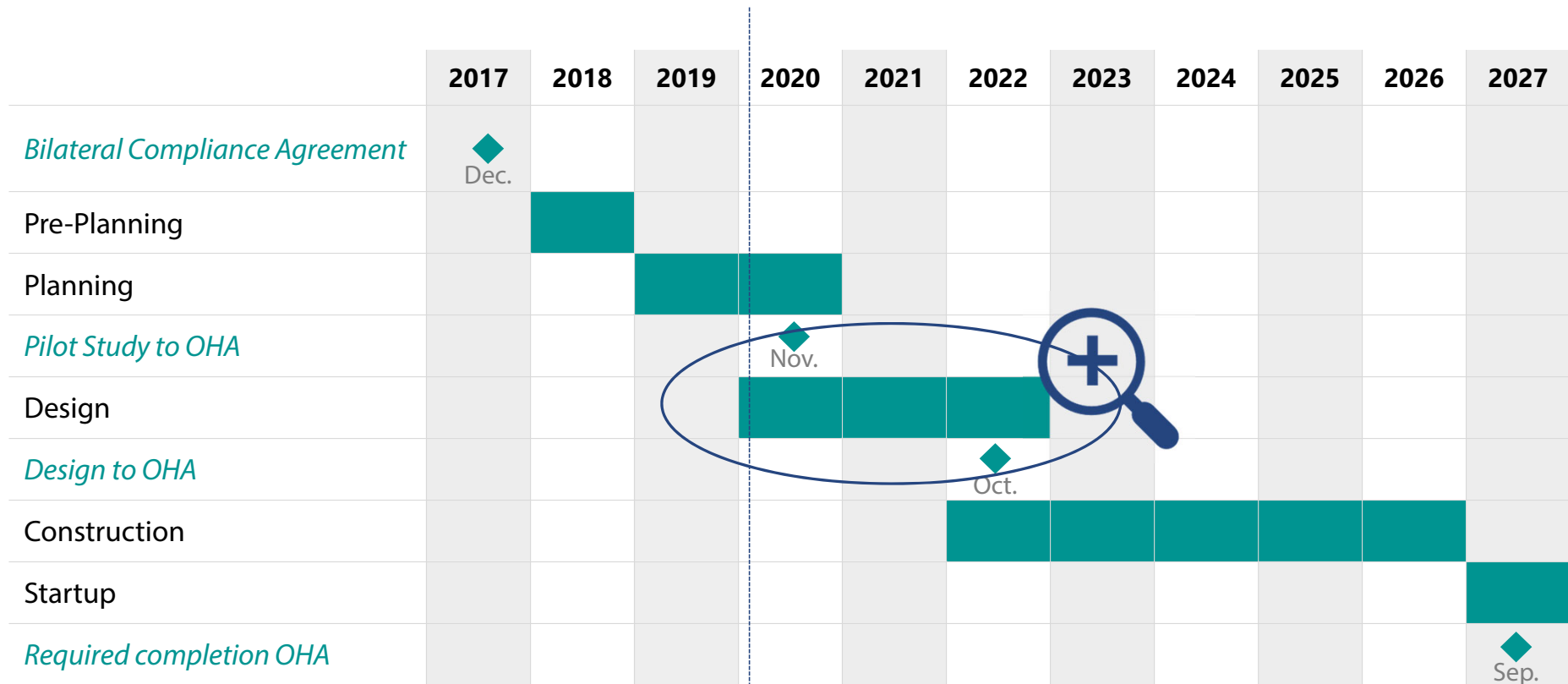
Joint Water Commission  
Water Treatment Plant





## **What to Expect During Design**

# Bull Run Filtration Projects Schedule



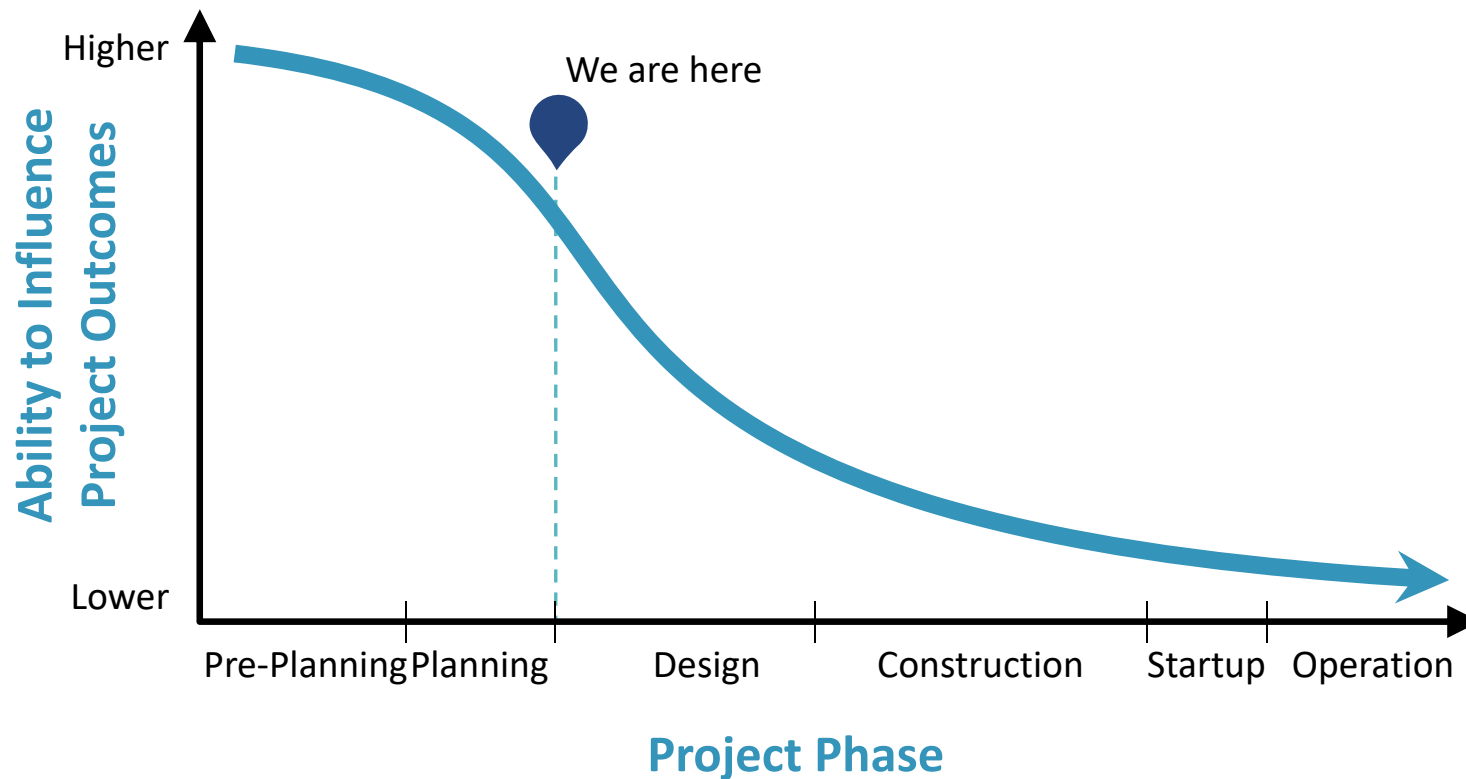
\*Oregon Health Authority (OHA)



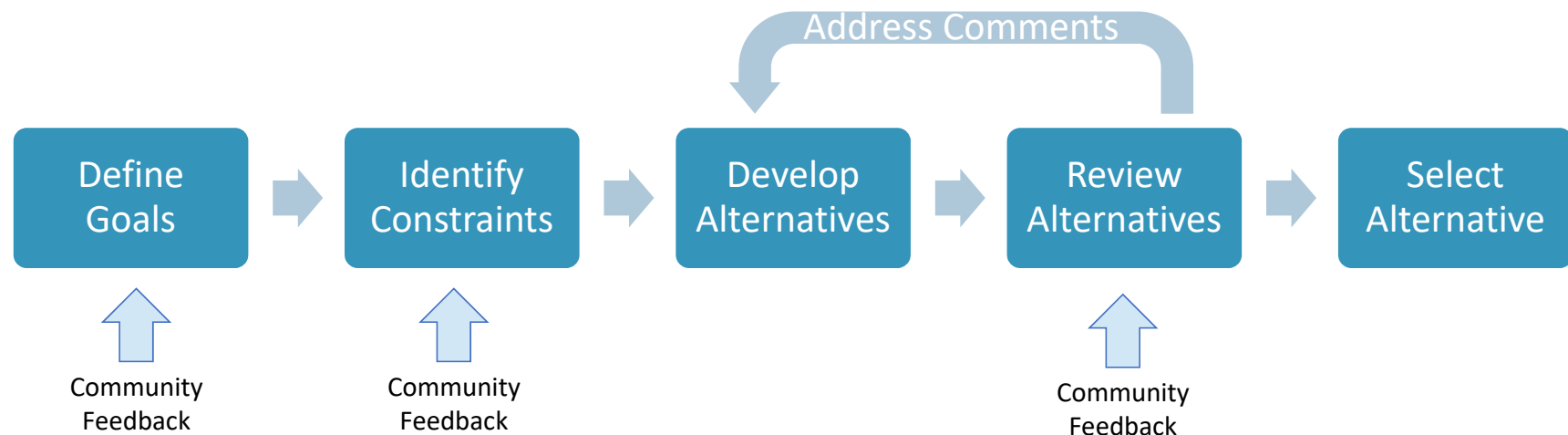
# What we heard from you

|   | Advisors | Community | Total |
|---|----------|-----------|-------|
| Traffic                                 | 14       | 18        | 32    |
| Light and Noise                         | 11       | 11        | 22    |
| Chemicals                               | 10       | 12        | 22    |
| Wildlife and Environment                | 11       | 7         | 18    |
| Facility Size and Appearance            | 12       | 2         | 14    |
| Landscaping                             | 7        | 2         | 9     |
| <i>New: Communications</i>              | 3        | 2         | 5     |
| <i>New: Property and Infrastructure</i> | 1        | 2         | 3     |

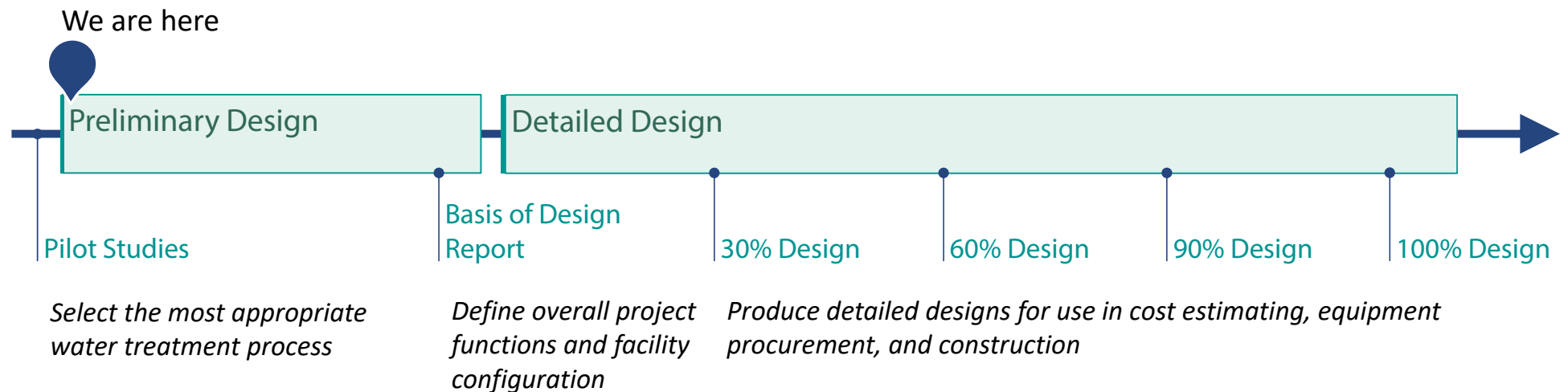
# Early guidance provides the greatest opportunity to influence project outcomes



# Filtration Facility Design Process



# Filtration Facility Design Process





# What to expect during... **Pilot Studies and Treatment Design**

Preliminary Design

Detailed Design



## Treatment Process

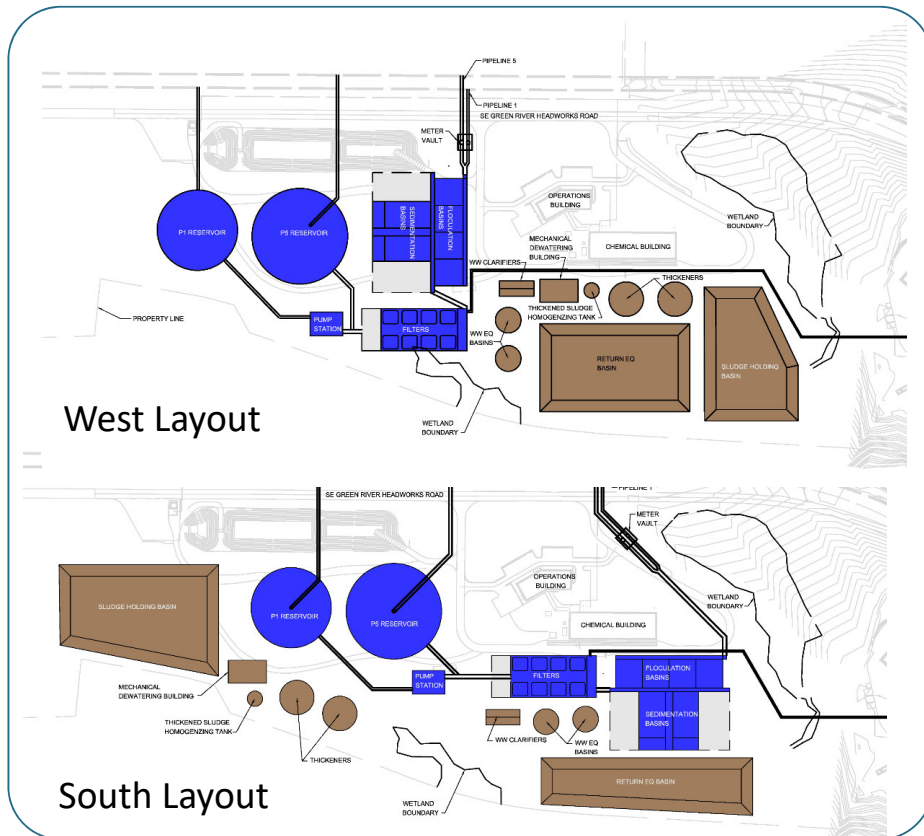
- Pilot Studies
- Treatment Process Selection
- Treatment Chemical Selection



# What to expect during... Preliminary Design

Preliminary Design

Detailed Design



## Facilities and Layout

- Building Footprint Sizes
- Facility Layout (2 or 3 options)
- Environmental Exclusion Zones

Examples of site layout alternative from Green River Filtration Facility Preliminary Design Report

# What to expect during... **Preliminary Design**

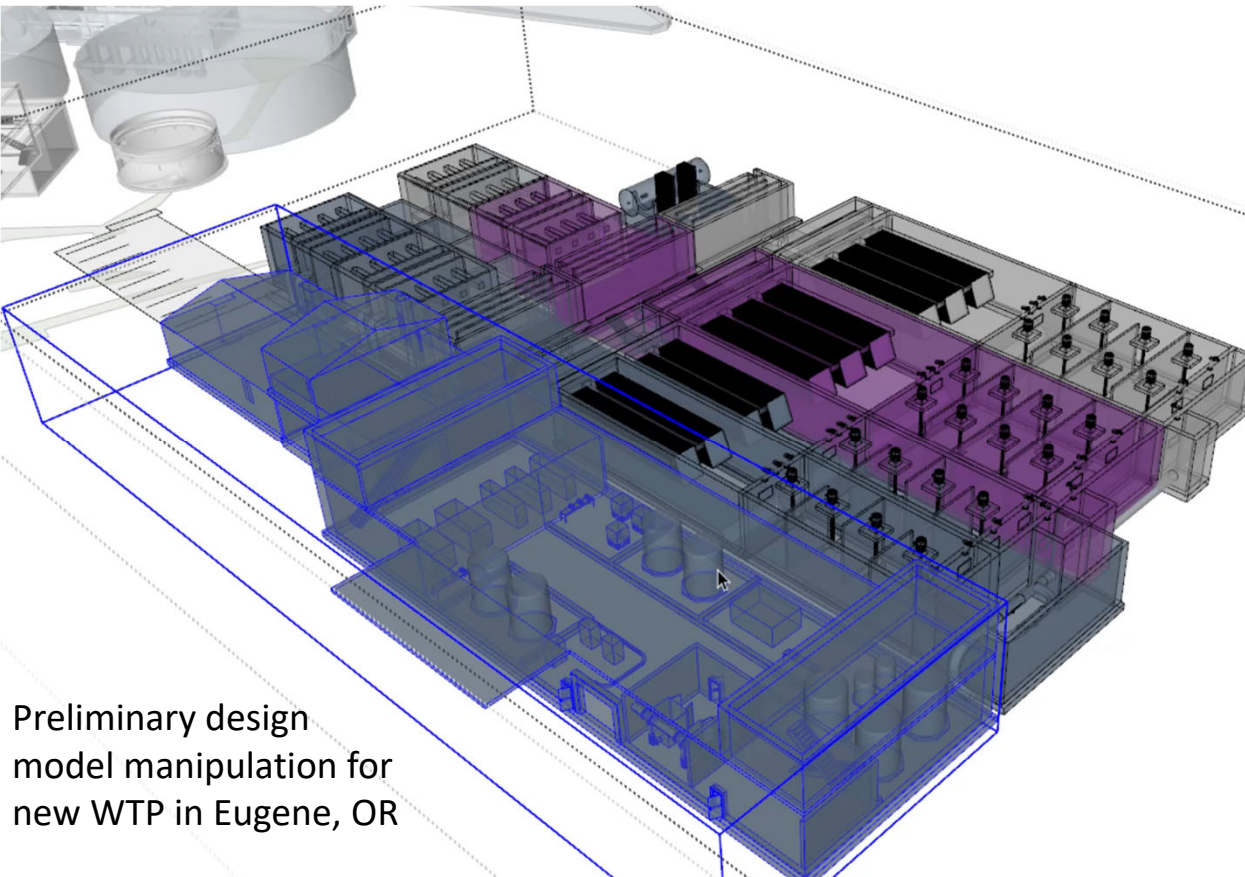
Preliminary Design

Detailed Design



## Facilities and Layout

- Building Sizes
- Building Heights
- Site Grading
- Light and Noise Mitigation Strategies
- Landscaping Concepts
- Architectural Style Options



Preliminary design  
model manipulation for  
new WTP in Eugene, OR



# What to expect during... Preliminary Design

Preliminary Design

Detailed Design

## Documents

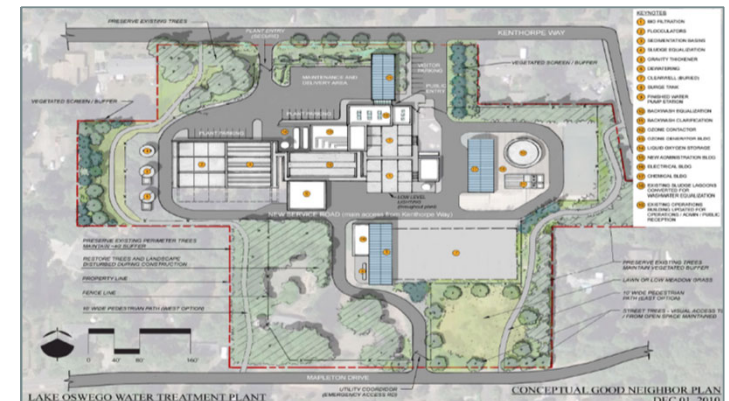
- Basis of Design Report
- Preliminary Site Layouts
- Visualizations
- Sustainability Commitments



Building Elevation from  
LO-T WTP Preliminary  
Design Report



Early rendering of a WTP  
concept in Eugene, OR

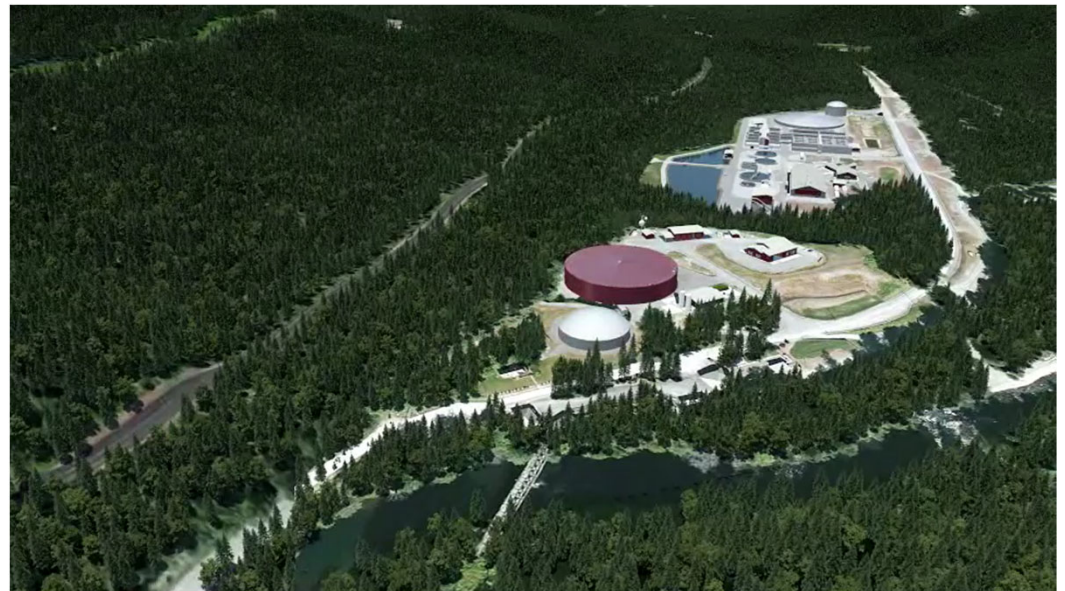


Site layout from LO-T WTP Preliminary  
Design Report

## What to expect during... **Detailed Design**

### Site and Facility Development

- Refinement of site layout and circulation
- Selection of equipment
- Design of interior spaces
- Architectural Design
- Landscape Design
- Lighting Design/Dark Sky Compliance
- Visual and Auditory Screening
- Traffic Impact Analysis
- Environmental Mitigation Measures



Virtual fly-over of Green River Filtration Facility, based on 60% Design Documents

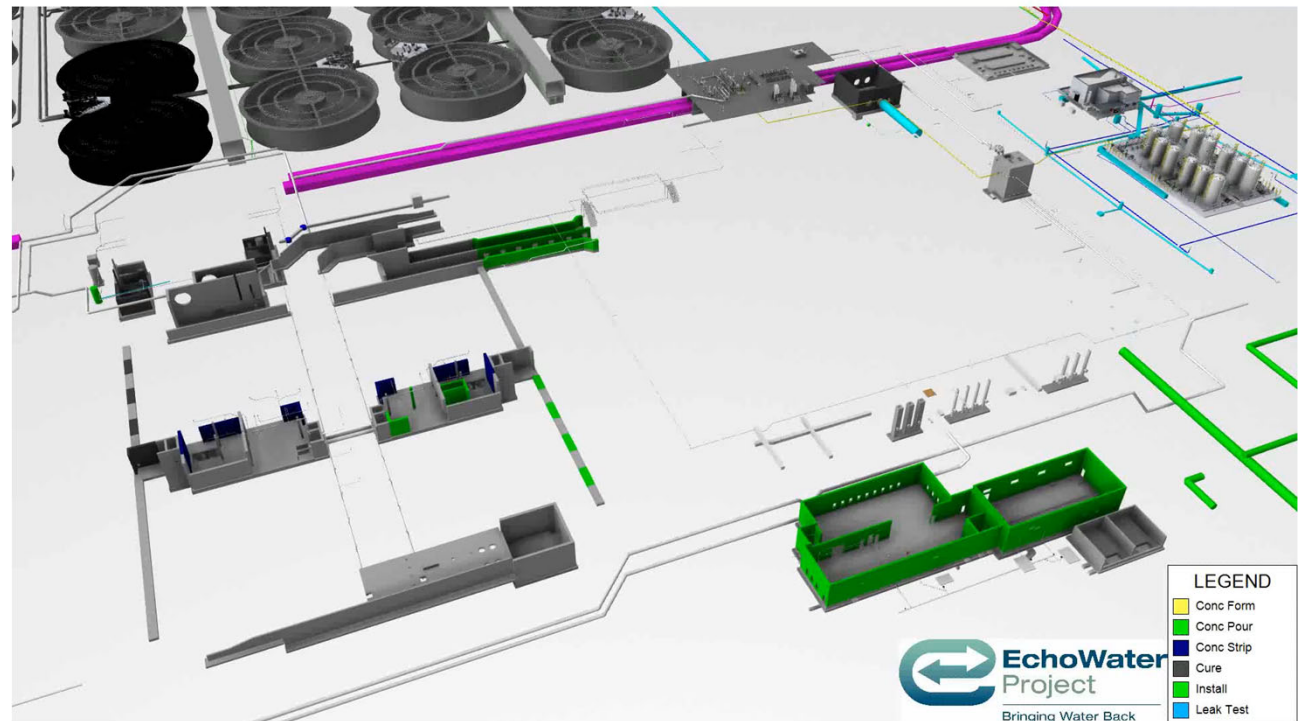


# What to expect during... **Detailed Design**



## Construction and Operations Planning

- Development of construction constraints, sequence, and schedule
- Construction Impact Analysis (traffic, noise, dust, stormwater, etc.)
- Definition of operations and maintenance practices



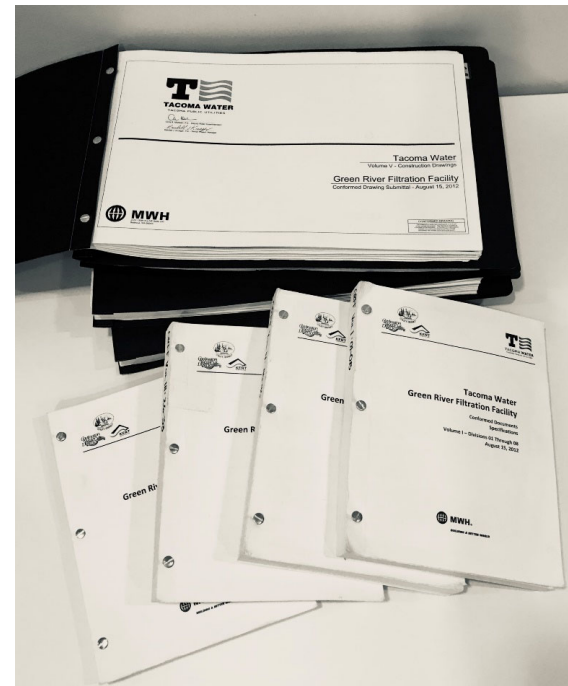
Design-phase construction sequence for filter project near Sacramento, CA

## What to expect during... **Detailed Design**



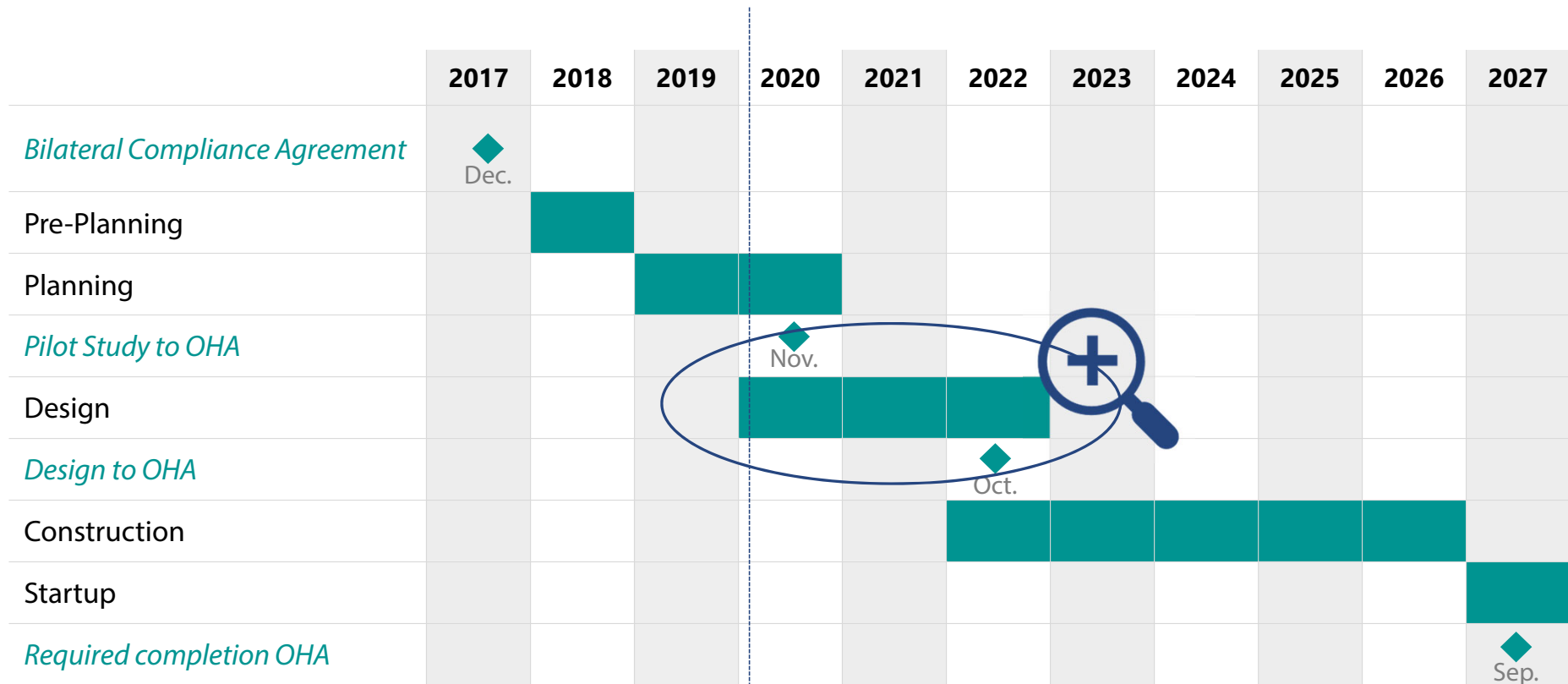
### Documents

- 30%/60%/90%/100% Drawings and Specifications
- Land Use Permit Application
- Building Permit Applications



Final Construction Documents  
for Green River Filtration Facility

# Bull Run Filtration Projects Schedule



\*Oregon Health Authority (OHA)



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# Building Design Objectives

- Structure locations and orientations to consider existing views
- Structure sizes, heights, shapes, colors, and exterior materials to blend with the surroundings and context
- Plantings and vegetation to screen buildings and equipment
- Grading to address views and noise related to vehicle traffic

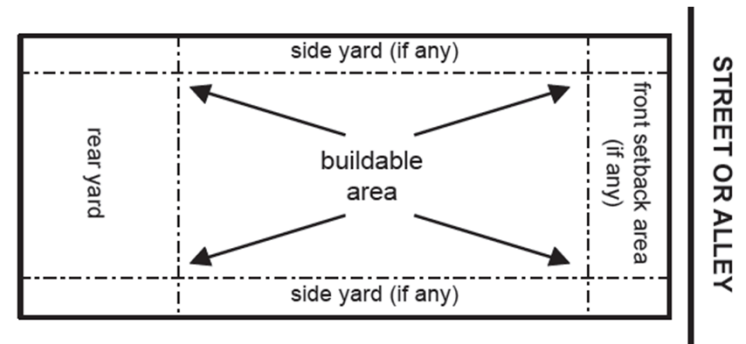
# County Building Setbacks and Heights

## Minimum Setbacks

- Front = 30 feet (Carpenter Ln & Dodge Park Blvd)
- Property Sides = 20 feet for one-story buildings  
= 25 feet for two-story buildings
- Street Sides = 30 feet
- Rear = 30 feet

## Heights

- Maximum Structure Height = 35 feet
- Exemptions for silos and water towers





# County Dark Sky Lighting Standards

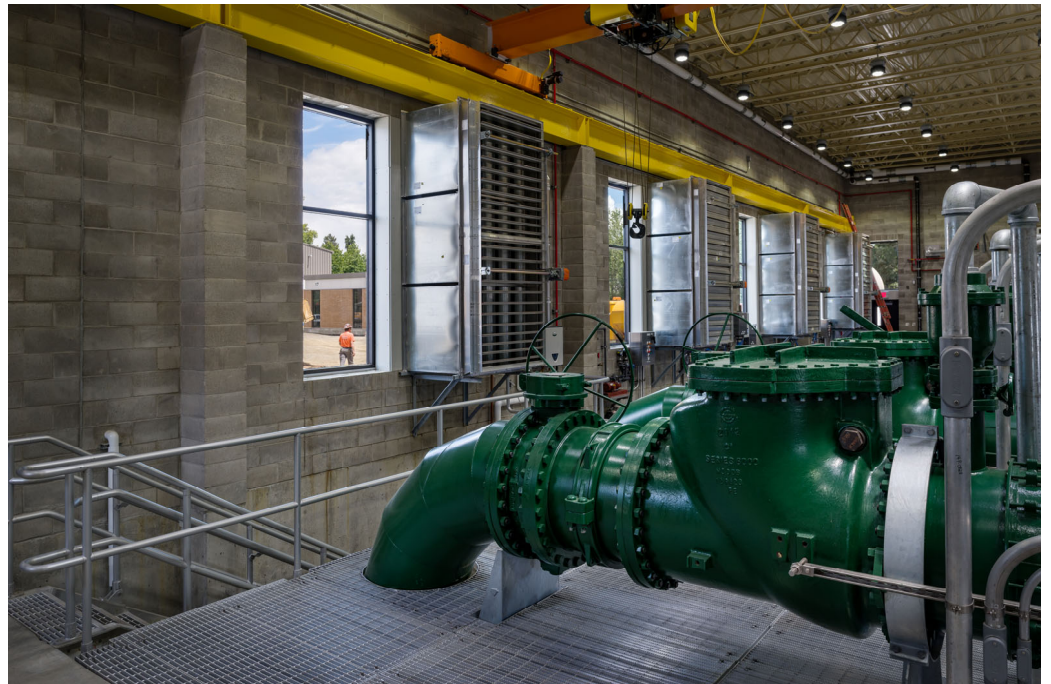
- Must be fully shielded (no light emitted above fixture shield)
- Must be directed downwards
- Must be contained within the boundaries of the lot
- Additional shielding may be required
- Some exceptions for safety and emergencies



# County Noise Standards

## Sound limits at neighboring property boundaries

- Day hours = 7am-10pm
- Night hours = 10pm -7am
- Daytime limits = 60 decibels
- Nighttime limits = 50 decibels



# Examples of Noise Mitigation

- Exhaust sound baffles
- Equipment enclosures
- Earthen berms







**Bull Run**  
TREATMENT  
PROJECTS

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

# Thank you!

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# Site Advisory Group

- East Multnomah County Soil and Water Conservation District
- City of Sandy
- Sandy River Watershed Council
- Johnson Creek Watershed Council

## BULL RUN FILTRATION PROJECT

A

B

L

K

J

I

C

G

H

D

F

E

SE COTTRELL RD

SE 352 AVE

SE LUSTED RD

SE PROCTOR RD

SE BLUFF RD

Cottrell

SE RIVER

Sandy River

SE BLUFF RD