

# CM/GC – Using Qualifications, Experience and Price to Select the Best Contractor



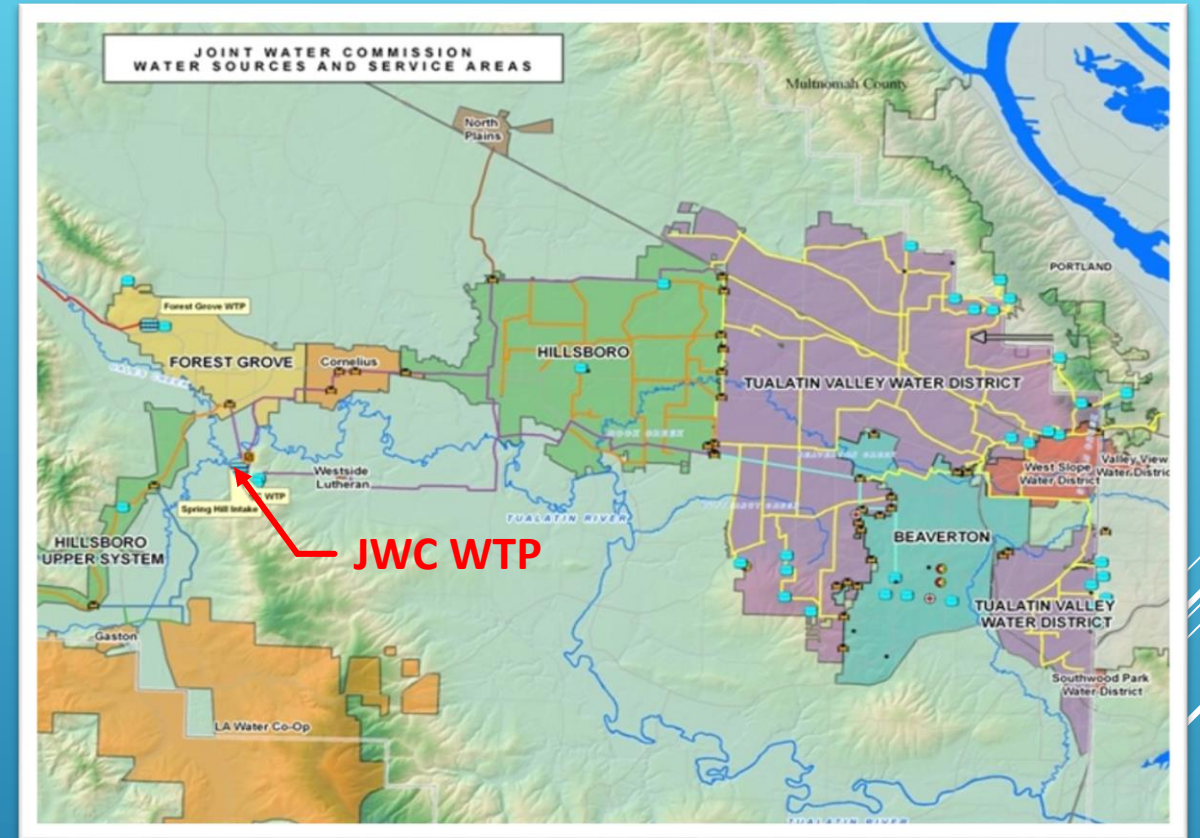
Erika Murphy – Carollo Engineers, Inc., Senior Engineer  
Kevin Meeuwsen – City of Hillsboro, Engineering Associate

AWWA PNWS Conference  
May 3, 2019

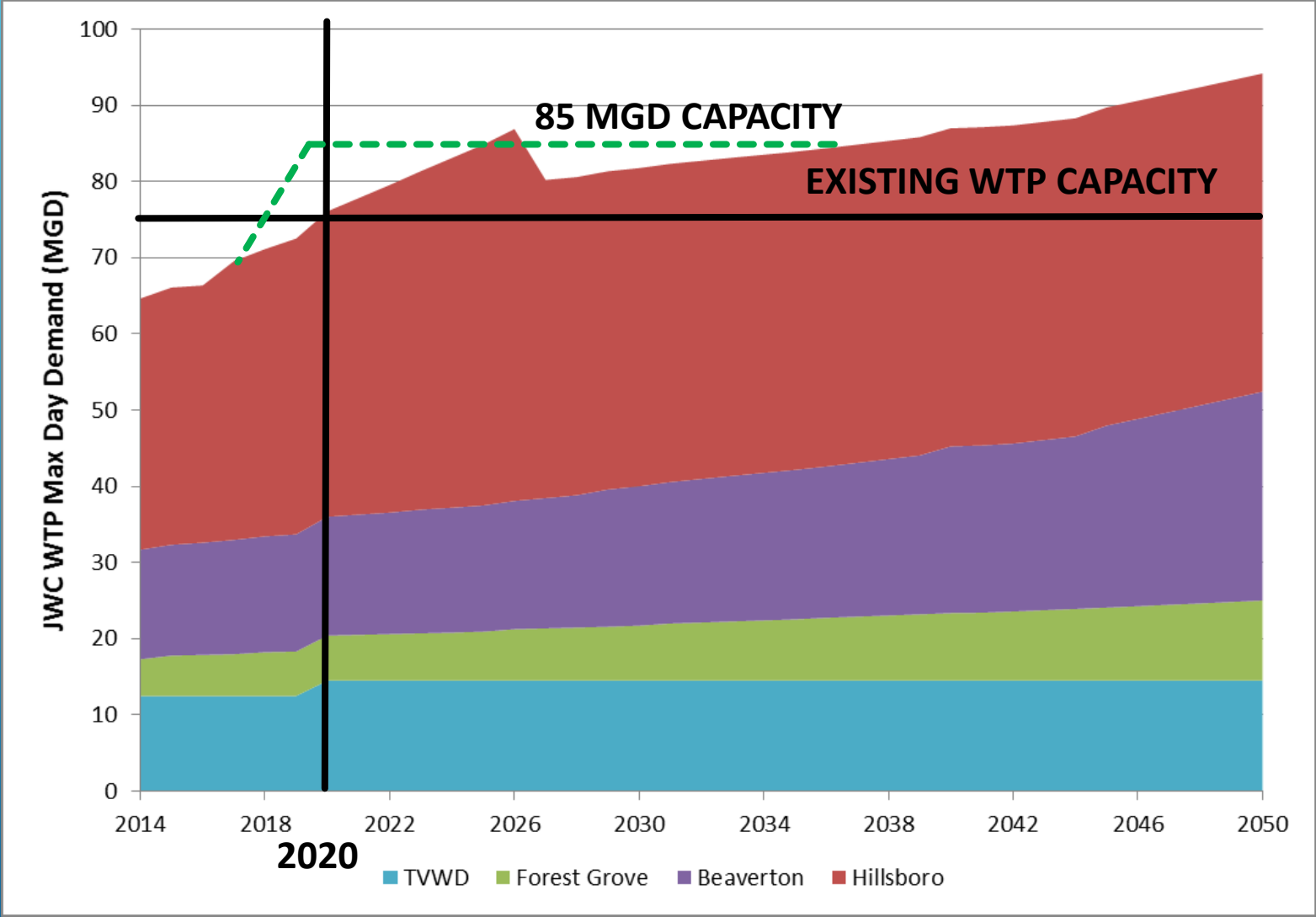
The Joint Water Commission (JWC) is a partnership agency between the cities of Hillsboro, Forest Grove, Beaverton and the Tualatin Valley Water District.

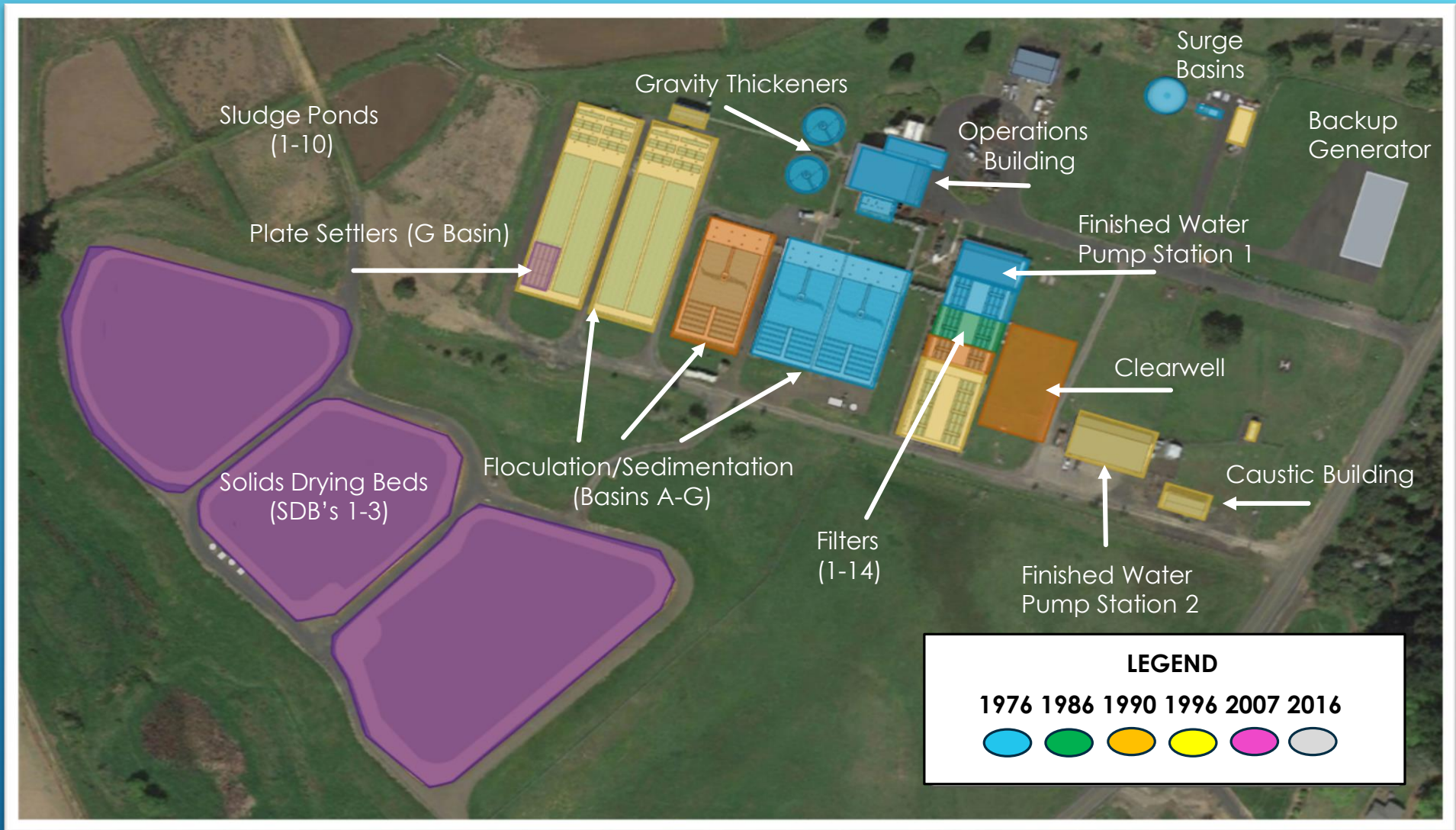
The JWC Water Treatment Plant...

- serves over 365,000 customers in Washington County
- treats water from the Tualatin River
- operates 24/7/365
- has a peak capacity of 75 million gallons of water per day (MGD)



# JWC Demand Projections





LEGEND					
1976	1986	1990	1996	2007	2016

# Construction Manager/General Contractor (CM/GC)

## Selection Process:

- Prepare findings for exemption to competitive bidding
  - Unlikely to encourage favoritism or substantially diminish competition for public contracting
  - Result in cost savings or other substantial benefits to the agency
- Obtain approval by contracting board
- Issue Request for Proposals (RFP's)
- Review Proposals and select qualified teams for interview
- Select best team based on:
  - experience | qualifications | safety record | project approach | price

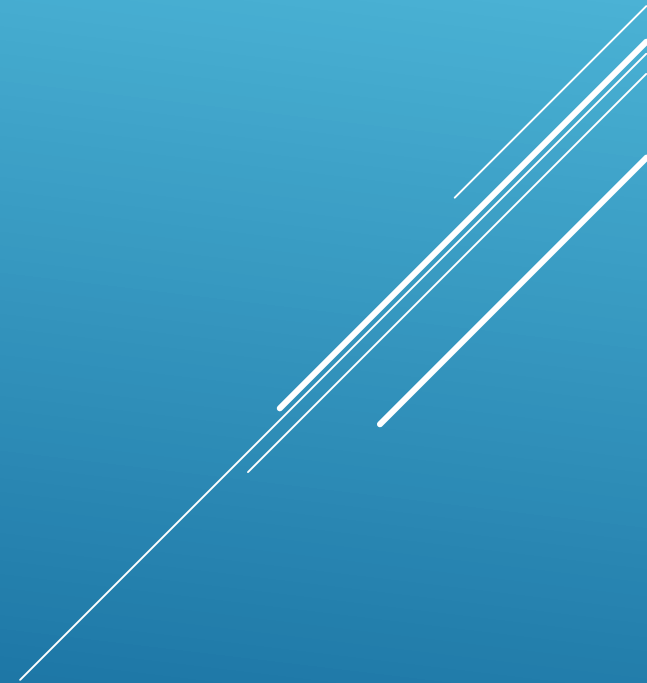
# Project Team

- Joint Water Commission partners
- Engineering Firm: Jacobs (formerly CH2M)
- Contractor: Slayden Construction Group



# Why CM/GC?

- Specialized expertise necessary for the public improvement



# Expansion to 85 MGD



Install four vertical turbine pumps (15,500gpm) and motors (400hp) at the raw water intake



# Why CM/GC?


- Specialized expertise necessary for the public improvement
  - Increase public safety – operator and contractor safety
- 

# Expansion to 85 MGD



Install 12" sludge line between existing sedimentation basins

# Why CM/GC?


- Specialized expertise necessary for the public improvement
  - Increase public safety – operator and contractor safety
  - Increase public safety – working on an essential public service
- 

# Expansion to 85 MGD



Rapid mix improvements including chemical feed/  
mixing upgrades and removing hydraulic restriction

# Why CM/GC?

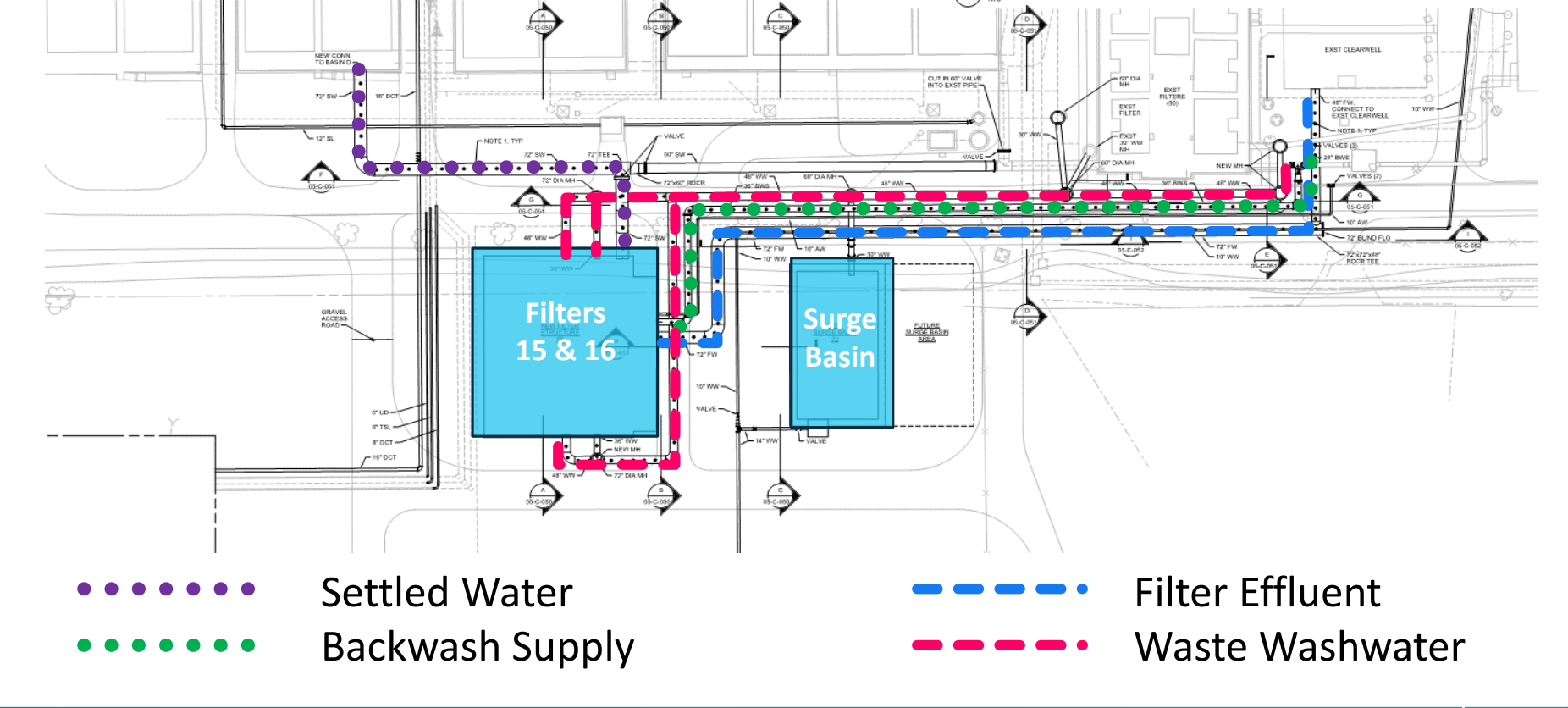
- Specialized expertise necessary for the public improvement
  - Increase public safety – operator and contractor safety
  - Increase public safety – working on an essential public service
  - Improves constructability
- 

# Expansion to 85 MGD



Tie into existing structures while maintaining operations

# Expansion to 85 MGD



Yard piping among existing utilities: finished water, settled water, backwash water, fiber, power, etc.

# Why CM/GC?

- Specialized expertise necessary for the public improvement
- Increase public safety
- Improves constructability
- Limiting disruption of existing plant operations
- Minimize risk of unplanned interruptions







Seismic life safety improvements –  
equipment bracing



Backwash pump replacement in kind




Operational WTP or construction staging area?

# Operator satisfaction



# Why CM/GC?

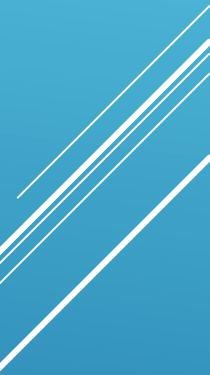
- Specialized expertise necessary for the public improvement
  - Increase public safety – operator safety, contractor safety
  - Improves constructability
  - Limiting disruption of existing plant operations
  - Minimize risk of unplanned interruptions
  - Value Engineering – opportunity for cost savings to partners
- 

# Total Project Cost Estimate Progression

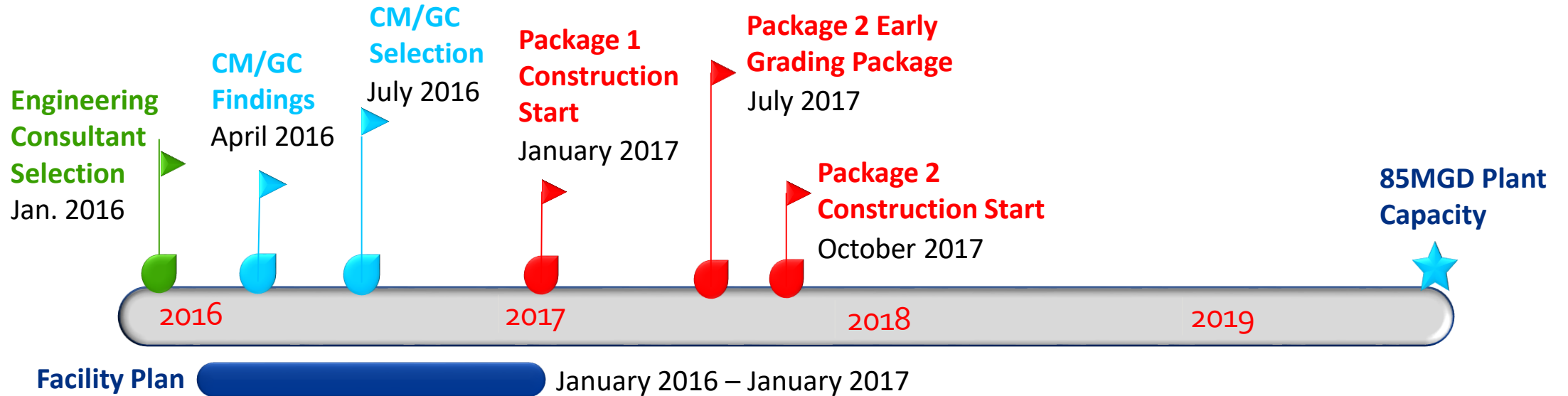
Description	January 2017	April 2017	June 2017	October 2017
CH2M (Jacobs) Engineering Services	\$ 5.32 M	\$ 5.32 M	\$ 5.32 M	\$ 5.32 M
CM/GC Preconstruction Services	\$ 0.185 M	\$ 0.185 M	\$ 0.185 M	\$ 0.185 M
GMP Package 1 and Early Work Packages	\$ 5.01 M	\$ 5.89 M	\$ 5.89 M	\$ 4.87 M
GMP Package 2	\$ 28.98 M	\$ 23.60 M	\$ 22.90 M	\$ 21.24 M
JWC Staff Time/Permitting/Misc.	\$ 0.70 M	\$ 0.70 M	\$ 0.70 M	\$ 0.70 M
<b>Total Estimated Project Costs</b>	<b>\$40.06 M</b>	<b>\$35.55 M</b>	<b>\$34.99 M</b>	<b>\$33.33 M</b>

# Why CM/GC?

- Specialized expertise necessary for the public improvement
- Increase public safety – operator safety, contractor safety
- Improves constructability
- Limiting disruption of existing plant operations
- Minimize risk of unplanned interruptions
- Value Engineering – opportunity for cost savings to partners
- Project schedule reduced as a result of overlapping design and construction phases and early determination of construction methods and phasing



# Project Schedule





# Thank You to the Project Team!

- Joint Water Commission partners
- Engineering Firm: Jacobs (formerly CH2M)
- Contractor: Slayden Construction Group



Questions?

[emurphy@carollo.com](mailto:emurphy@carollo.com)

[kevin.meeuwsen@hillsboro-oregon.gov](mailto:kevin.meeuwsen@hillsboro-oregon.gov)

# Alternative Project Delivery Panel Discussion

## Panelists:

Tom Paul – Mortenson

Arin Atiyeh – Emery & Sons

Tom Hickmann – City of Bend

Dave Anderson – City of The Dalles

## Panel Moderator:

Erika Murphy – Carollo Engineers, Inc.



May 3, 2019