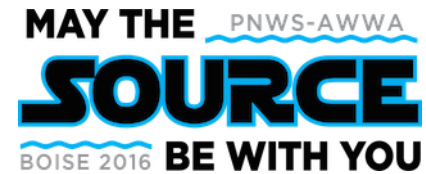


Willamette Water Supply

Our Reliable Water



FINDING THE RIGHT ROUTE: Planning a Large-Diameter Transmission Pipeline Route Through Six Communities (and Two Counties)

May 5, 2015

Todd Perimon, PE (Program Delivery and Real Estate Manager)

WHAT IS THE WWSP

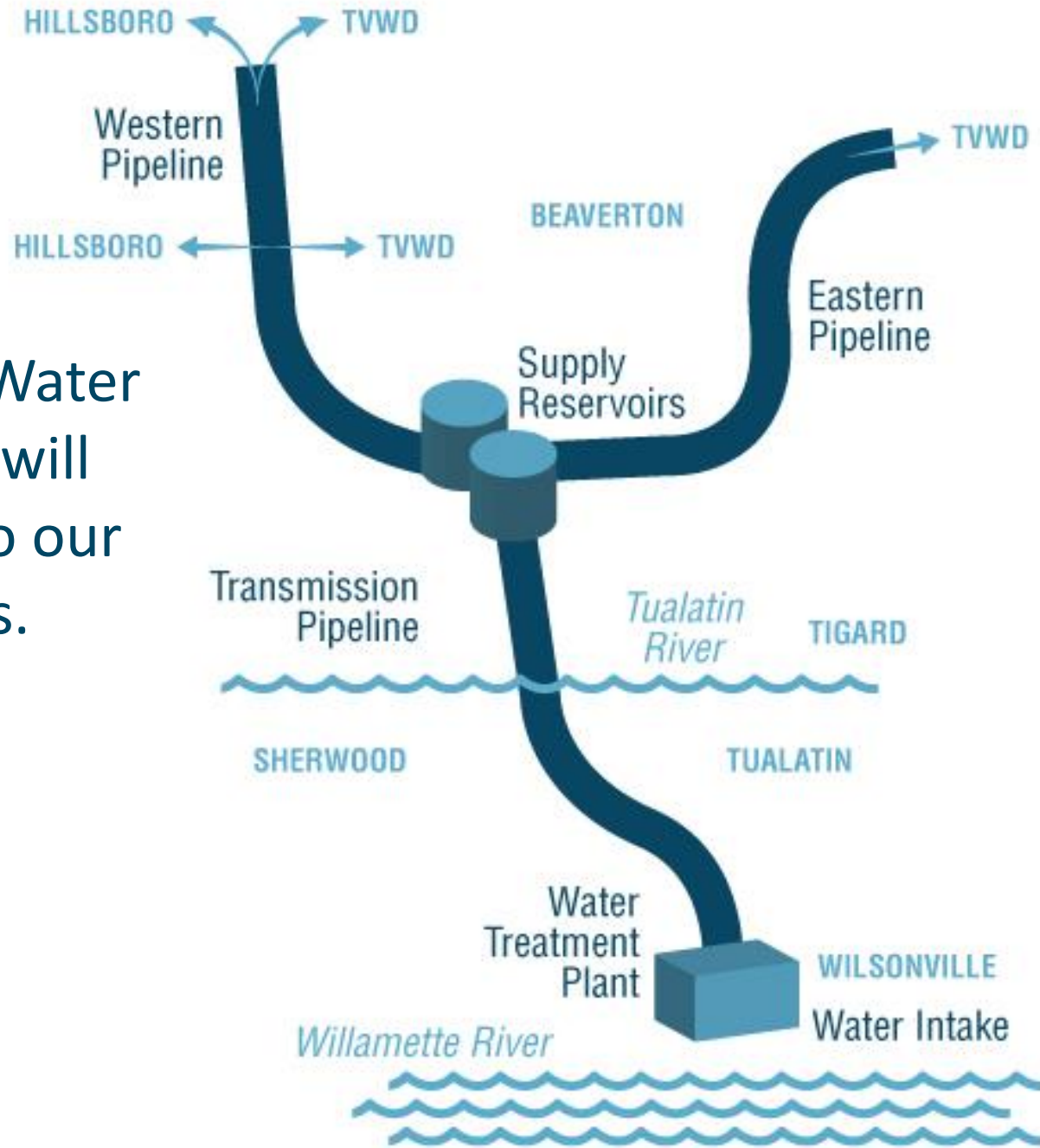
Willamette Water Supply Program Mission Statement

*To provide a **cost-effective, reliable and resilient water supply system** by 2026, that benefits current and future generations of the communities we serve and supports a vibrant local economy.*

“Washington County is one of the economic engines for the State, and that engine runs on water”

–Washington County Chair
Andy Duyck, May 2013

The Willamette Water Supply system will provide water to our communities.

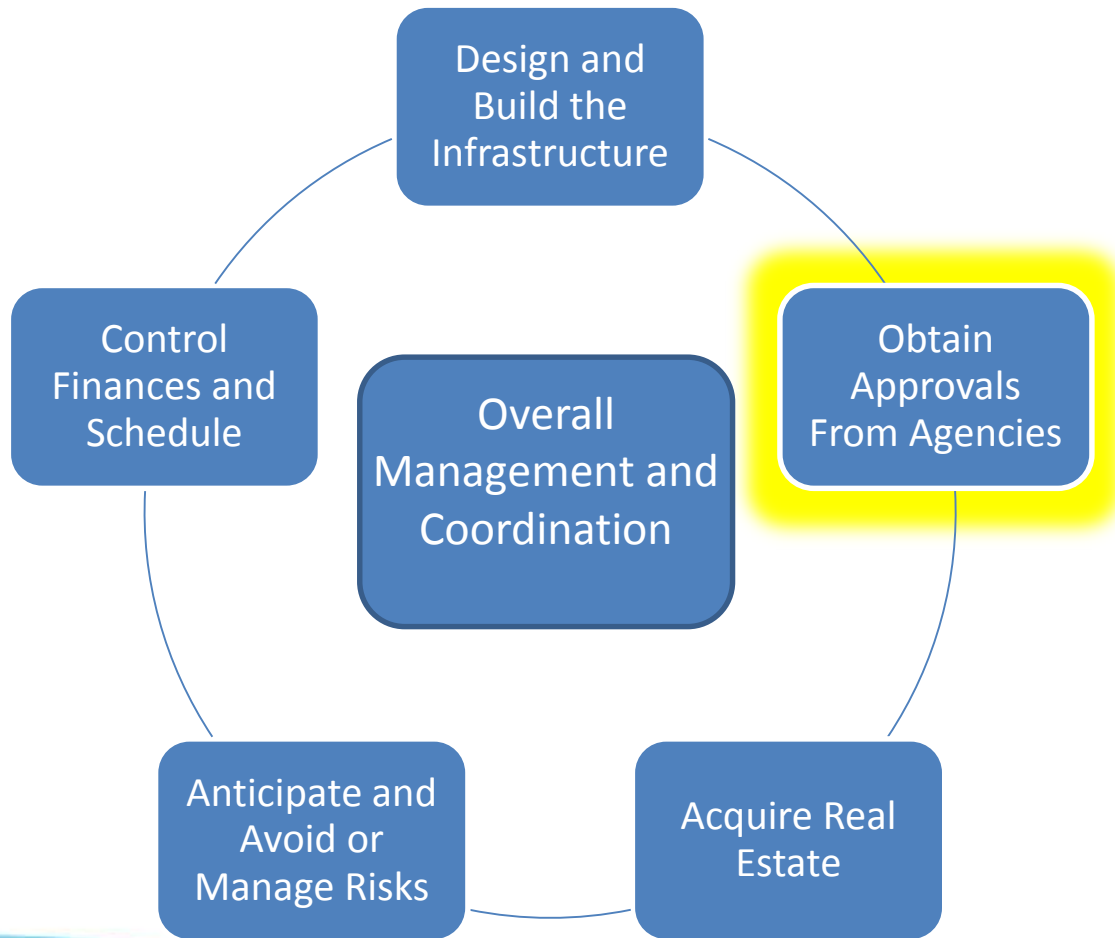




On November 12, 2015 TVWD and Hillsboro celebrate groundbreaking for the first piece of Willamette Water Supply Program water pipeline.

MODUS OPERANDI

Completing the Program = completing and managing interrelated tasks



Early coordination with stakeholders results in better outcomes for communities, the environment and the Program.



Tualatin River

Coordination with diverse stakeholders

Resource Agencies



And others!

Interest Groups

Business

Economic Development

Conservation

Transportation

Agriculture

Land Use

Recreation

Resilience

Academic

Construction

Local Government Agencies

Tualatin Valley Water District

Hillsboro

Beaverton

Tualatin

Tigard

Sherwood

Wilsonville

Washington County

Public Interests

Property owners

Business owners

Facility neighbors

Ratepayers

General public

Proactive outreach keeps the public, key stakeholders, and elected officials informed

- Collaborate with each community
- Recognize our stakeholders have stakeholders
- Present a consistent message
- Inform the Program of key stakeholder needs and concerns



Joelle Bennett, PE (Program Coordinator)

ROUTING PROCESS

Preferred pipeline route selected through in-depth analysis

Started with 117 route options.

Received feedback from policymakers, staff, community, and a technical advisory committee.

Questions answered:

- ✓ Is the route acceptable & constructable?
- ✓ Will the pipeline route be resilient?
- ✓ Are there cost-saving opportunities to coordinate with road or utility projects?
- ✓ How can we manage costs for ratepayers?



Boeckman Road in Wilsonville, looking east

PROCESS

Desktop Review

- GIS mapping
- Resiliency Review
- Environmental and Cultural resource mapping

Preliminary List of Viable Routes

- Field reconnaissance
- Agency input
- Evaluation criteria

Technically Feasible Routes

- Elected official input
- Public open houses
- Stakeholder interviews
- Regulatory review

Preferred Alternative

- Public outreach
- Presentations to City Councils

Route selection criteria guide decisions

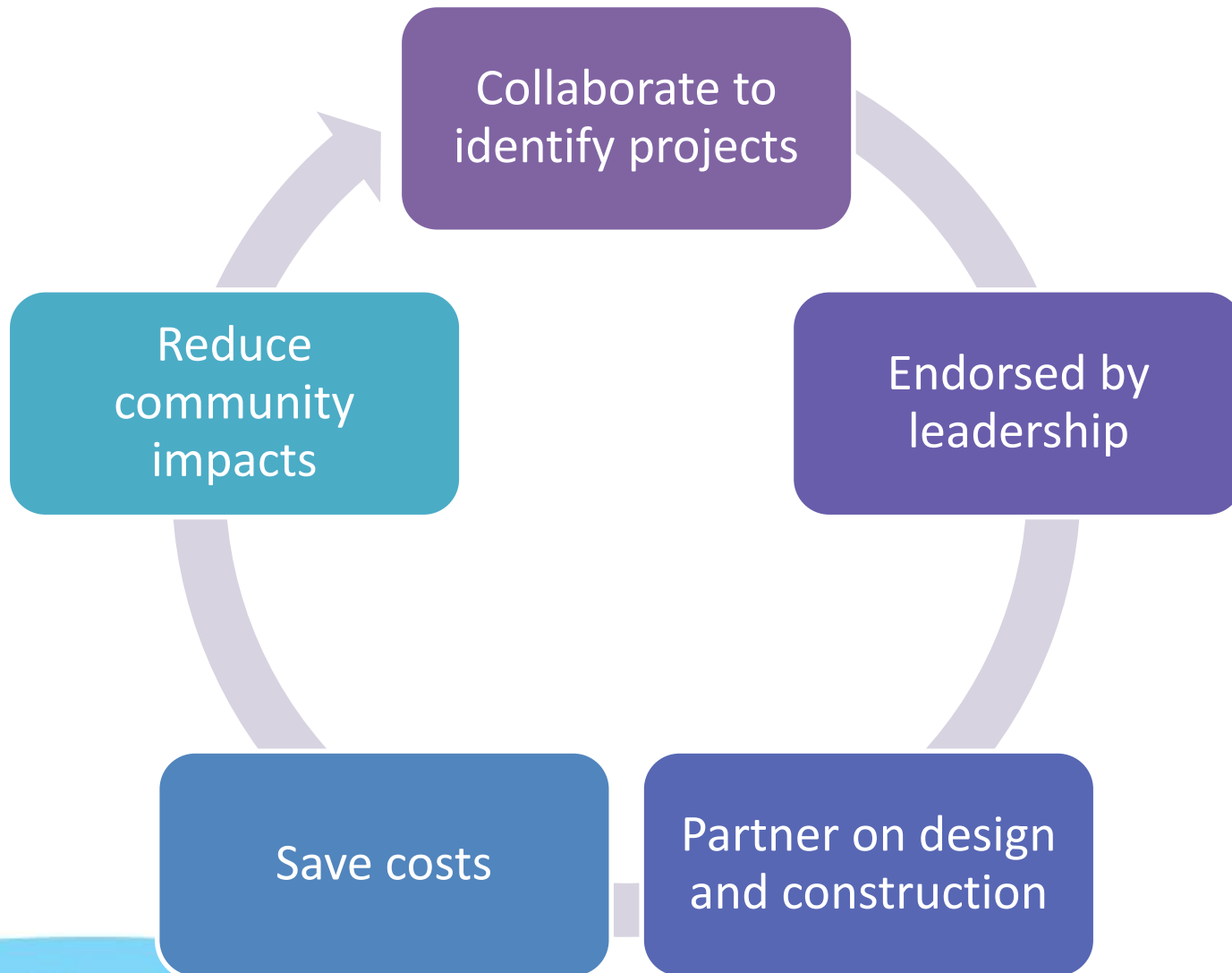
30+ Criteria / 8 Categories

1. Social/Community Impacts
2. Opportunities/Benefits
3. Environmental Impacts/Permitting
4. System Compatibility
5. System Resiliency
6. Constructability
7. Operation and Maintenance (O&M)
8. Cost

Table 1 – Alignment Selection Criteria

Criteria/Risk	Definition	Factors	
Social/Community Impacts			
Congestion/Community Impacts	Number of driveways, traffic volume, major intersections + = greenfield construction 0 = driveways that can be worked around with reasonable care during construction and provide multiple means of access to property and businesses - = numerous driveways with impacts to businesses and extensive restoration.	Numerous driveway crossings are a negative, high traffic areas are a negative If community safety is an issue downgrade rating.	
Impact Critical Facilities	Hospitals, fire stations, emergency services + = no impact to critical services 0 = critical services within impacted traffic area - = critical services directly on pipeline alignment	Need to maintain access, no disruption to utility service for critical facilities. It will be a negative to impact emergency vehicle flow.	
Community Facilities	Schools, churches, community centers, parks, large employers + = no impact to community facilities 0 = community facilities within impacted traffic area - = community facilities directly on pipeline alignment	Potential safety issues. Periodic high traffic periods. Potential construction work hour limitations.	
Opportunity for Community Enhancement	Add value or benefit to the community + = adds value or benefit 0 = neither adds nor detracts - = detracts from the community and significantly diminishes existing facilities	Incorporate trails, improve roadways, landscaping/community beautification opportunities, improve rural fire protection	
"No-cut" areas	Sensitive community areas that should not be impacted. + = alignment does not impact any sensitive community areas, typical surface restoration required 0 = NA - = alignment is within a "no-cut" area	Are there recently paved roads that have "no-cut" restrictions? Are there community enhancement areas that should be avoided that could prevent approval? Have recent projects already impacted a community that could be avoided so the community is not impacted again?	Ca ot
Opportunities/Benefits			
Proposed Road Projects	"Piggy back"/joint project opportunities		
Available Property	Properties currently for sale that provide key sites for staging/tunneling shaft	Are there road projects identified within the project window that allow for joint project, cost sharing, or right-of-way corridor allocation. Are there available strategic properties currently for sale that will facilitate construction of project, cost sharing, or right-of-way corridor allocation.	Pc Pc Pc di.
Proposed Development	"Piggy back"/joint project opportunities	Are there development projects identified within the project window that allow for joint project, cost sharing, or right-of-way corridor allocation.	Pc di, se

Opportunity Projects

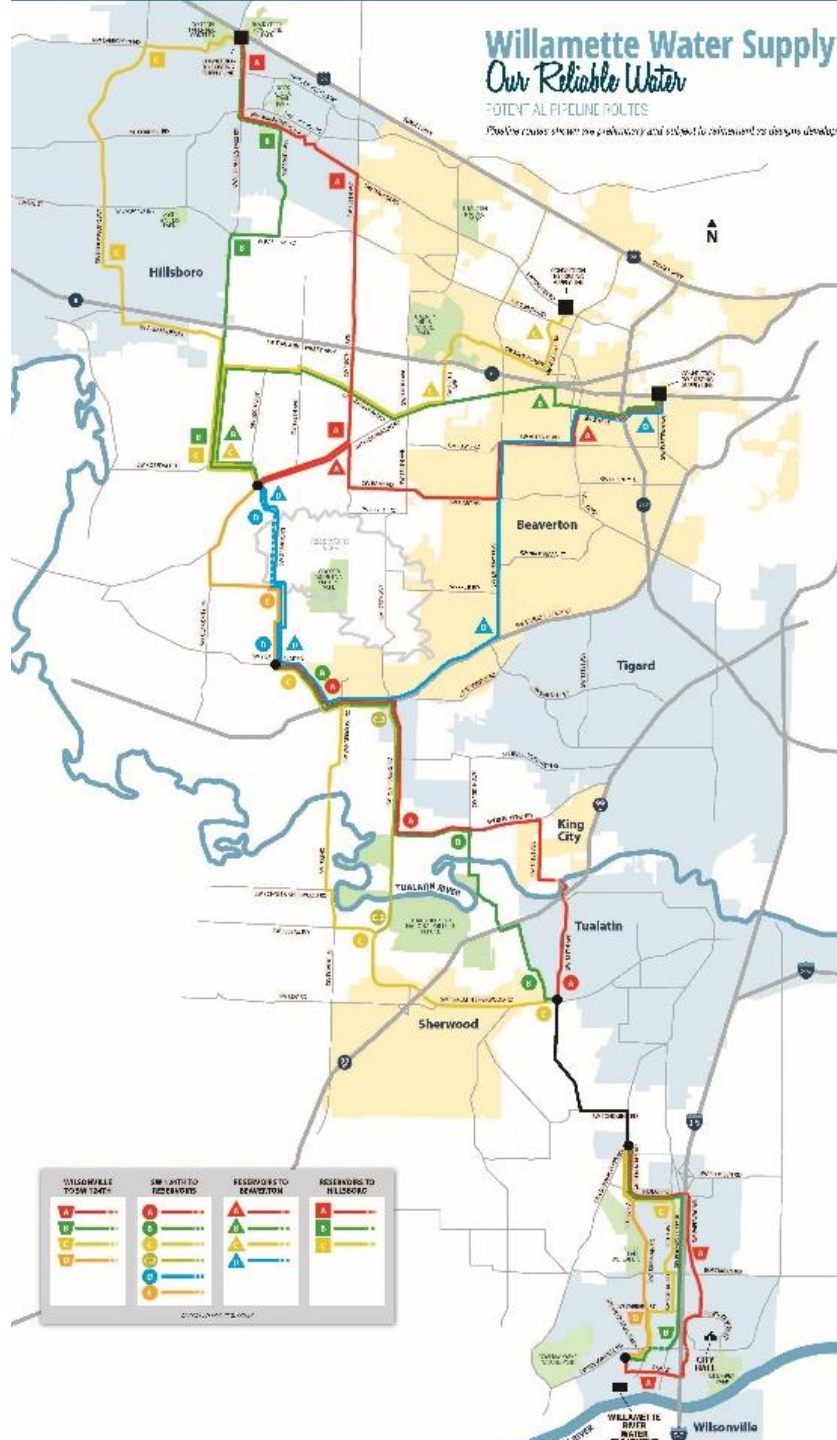


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POTENTIAL PIPELINE ROUTES

Pipeline routes shown are preliminary and subject to refinement as design develops.



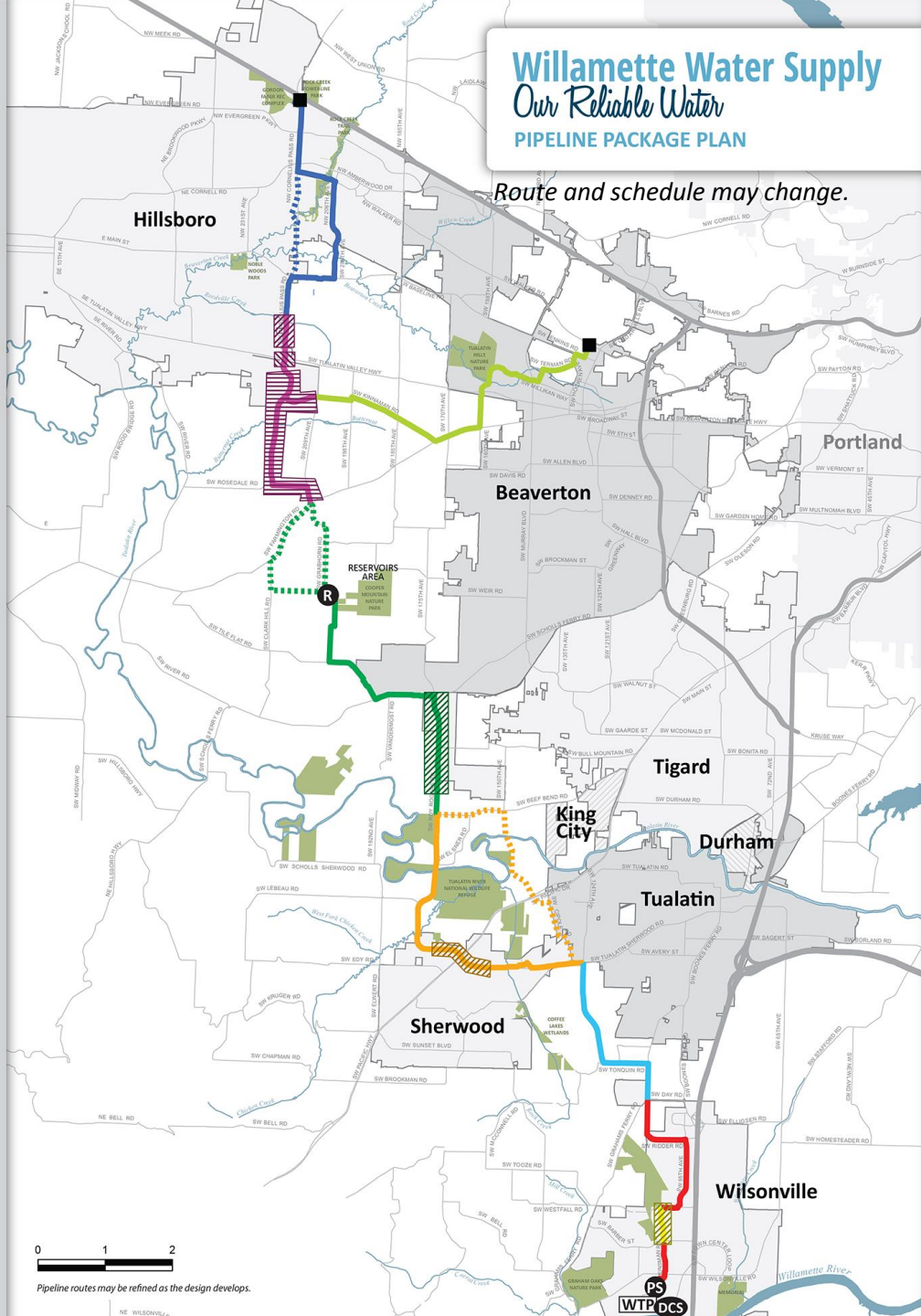
WILSONVILLE TO TUALATIN	SM - WINTHROP TO TIGARD	RESERVOIR TO BEAVERTON	RESERVOIR TO HILLSBORO
A	A	A	A
B	B	B	B
C	C	C	C
D	D	D	D
E	E	E	E
F	F	F	F

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PIPELINE PACKAGE PLAN

Route and schedule may change.



Pipeline routes may be refined as the design develops.

CORNELIUS PASS PIPELINE PROJECT

4.4 MILES

Willamette Water Supply Our Reliable Water PIPELINE PACKAGE PLAN

Route and schedule may change.

SOUTH HILLSBORO AREA PIPELINE PROJECT

3.9 MILES

SOUTH BEAVERTON AREA WATER STORAGE TANKS

BEAVERTON AREA PIPELINE PROJECT

5.6 MILES

TUALATIN-SHERWOOD AREA PIPELINE PROJECT

4.7 MILES

SCHOLLS AREA PIPELINE PROJECT

7.2 MILES

124TH AVENUE PARTNERSHIP PROJECT

2.8 MILES

WILSONVILLE AREA PIPELINE PROJECT

3.1 MILES

WILLAMETTE RIVER WATER TREATMENT PLANT EXPANSION

APPROXIMATE START OF DESIGN

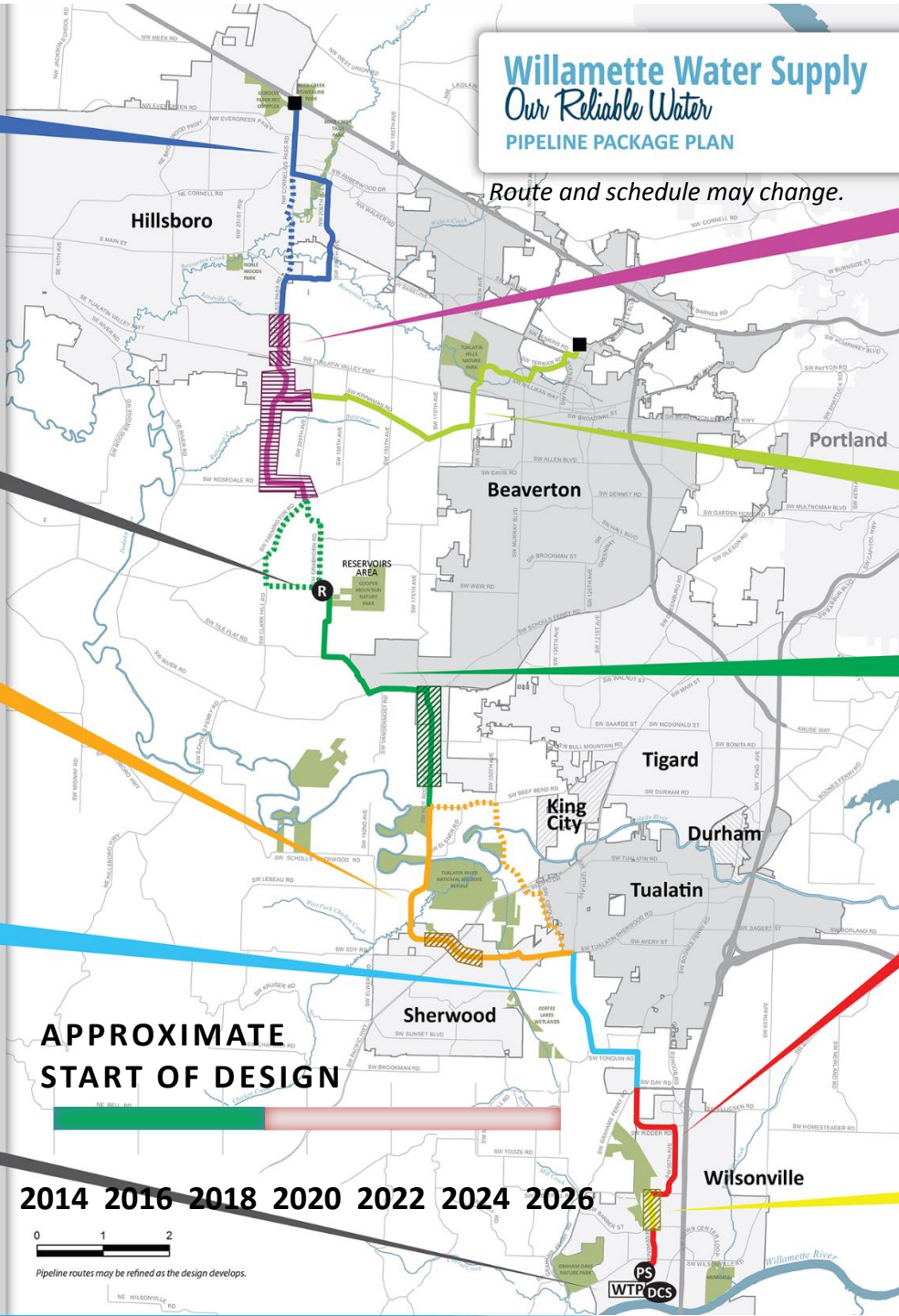
2014 2016 2018 2020 2022 2024 2026

KINSMAN ROAD PARTNERSHIP PROJECT

0.5 MILES



Pipeline routes may be refined as the design develops.





Questions?

THANK YOU!

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Todd Perimon, P.E.

Tualatin Valley Water District



Joelle Bennett, P.E.



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