

Wastewater Treatment Division Systemwide Comprehensive Plan

Presentation to MWPAAC

January 24, 2018

“The main question for policy-makers and utility managers is whether the increased rate of infrastructure spending that utilities must face over the next 20 years can be financed by utilities themselves at rates that customers can afford.” -- American Water Works Association, 2001.

“Extensive and efficient infrastructure is critical for ensuring the effective functions of the economy.” -- World Economic Forum, The Global Competitiveness Report 2013

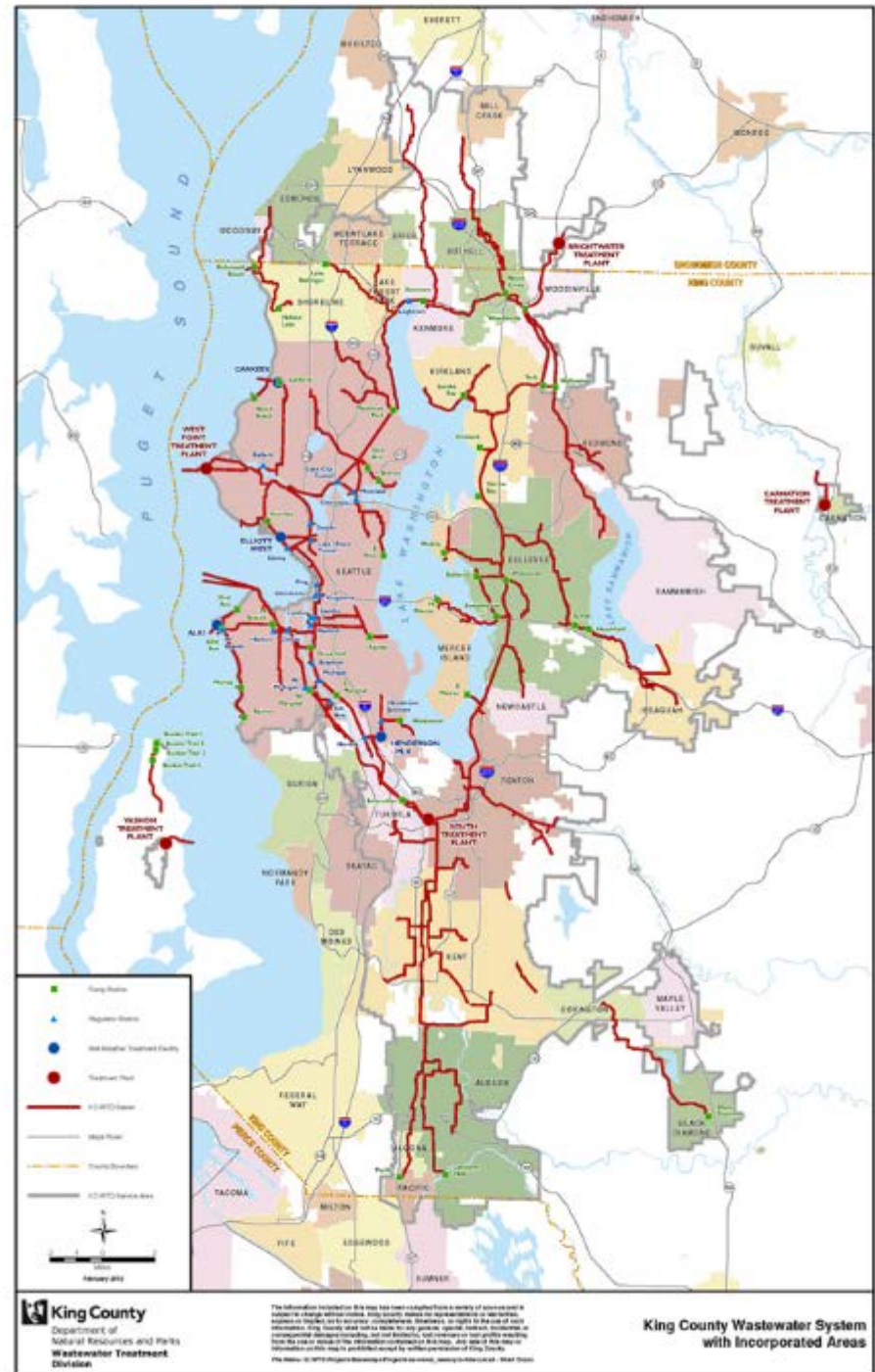


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King County Provides Wholesale Wastewater Service to 34 Local Agencies

- Collects and conveys wastewater:
 - 390 miles of sewer pipe
 - 47 pump stations
 - 25 regulators stations
- Treats wastewater at:
 - 3 regional plants
 - 2 community plants
- Operates wet weather facilities:
 - 4 treatment
 - 9 peak flow storage



Our Challenge

Achieve the rate of infrastructure spending that is currently planned and anticipated over the next 20 years at an affordable rate in light of the following:

- Aging infrastructure and asset management
- Current and future regulatory requirements
- Management of stormwater in combined system and inflow/infiltration in separated system
- Steeply growing population leading to increase in solid and organic loadings
- Need for resiliency in system



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Systemwide Comprehensive Plan

Purpose- Update the WTD Comprehensive Plan using an approach that addresses :

- protecting and improving water quality
- plans for population growth
- ensures resiliency for an aging system
- addresses climate change
- establishes a financing and rate structure that is reasonably affordable



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Anticipated Contract Value and Schedule

- Two contracts
 - Planning, Economic, Financial and Engineering Technical Services
 - Strategic Communications and Regional Leaders Forum Management
- Value: \$2-4 million
- Schedule
 - Advertise 2018
 - Notice to Proceed – Q3 2018



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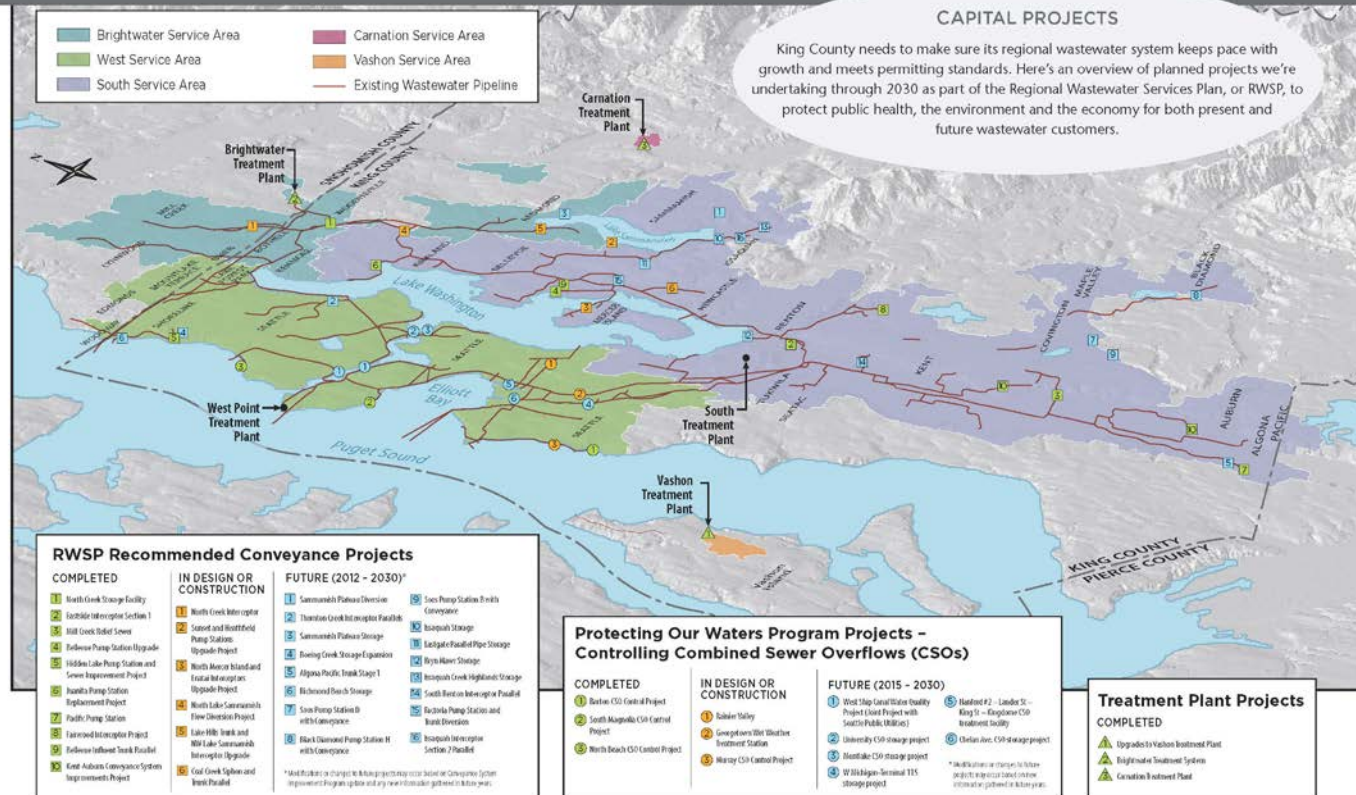
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Existing WTD Plan – 1999 Regional Wastewater Services Plan (RWSP)

6

System Investments



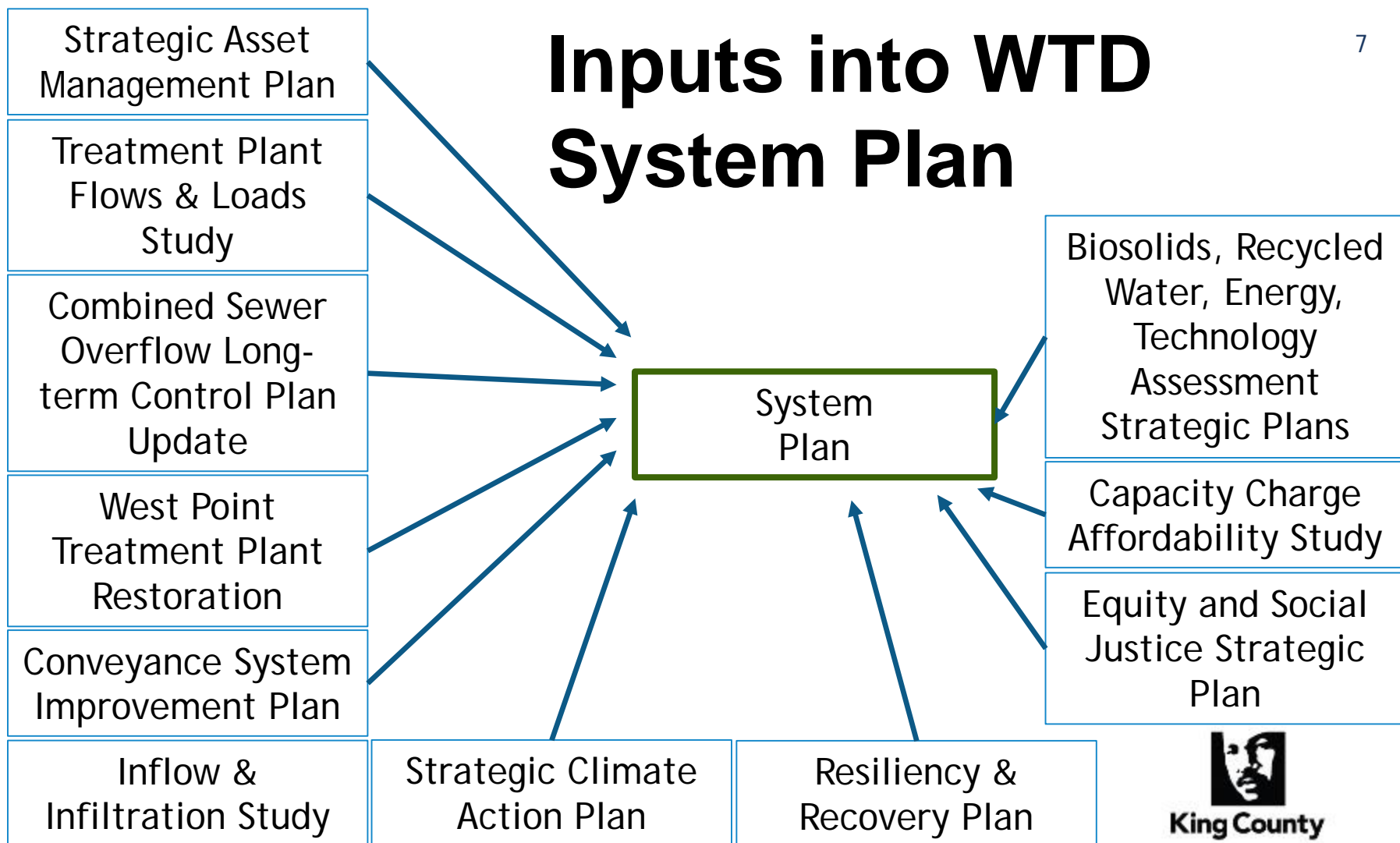
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Inputs into WTD System Plan



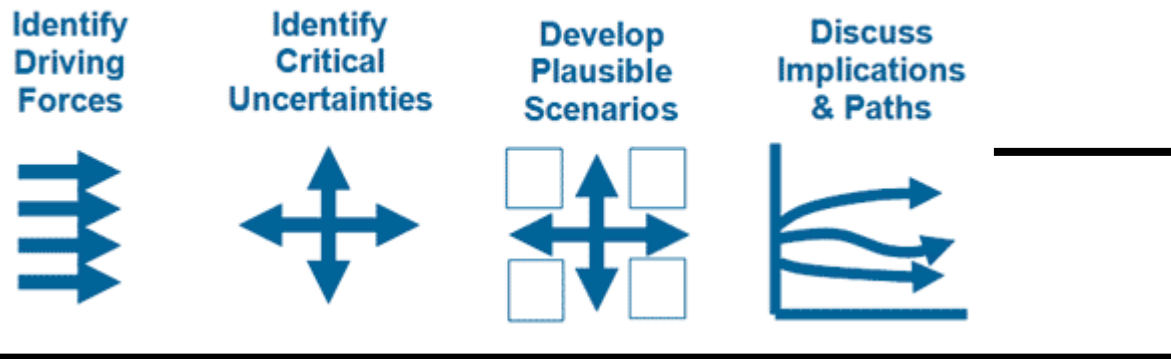
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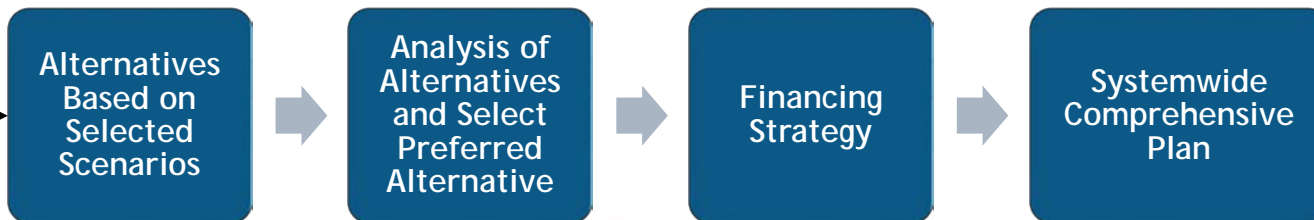
Plan Approach

Use scenario planning and traditional infrastructure concepts

Part 1: Scenario Planning - multiple stories that cover a variety of plausible futures



Part 2: Traditional Infrastructure Planning - analysis of alternatives to address a defined need



Scenario Planning: Analysis of Scenarios

- Feasibility analysis: First level of analysis to assess which concepts should move forward in process
- Outcome: Alternatives (2 or 3) for further development and analysis

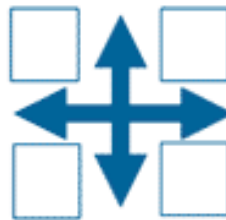
Identify
Driving
Forces



Identify
Critical
Uncertainties



Develop
Plausible
Scenarios



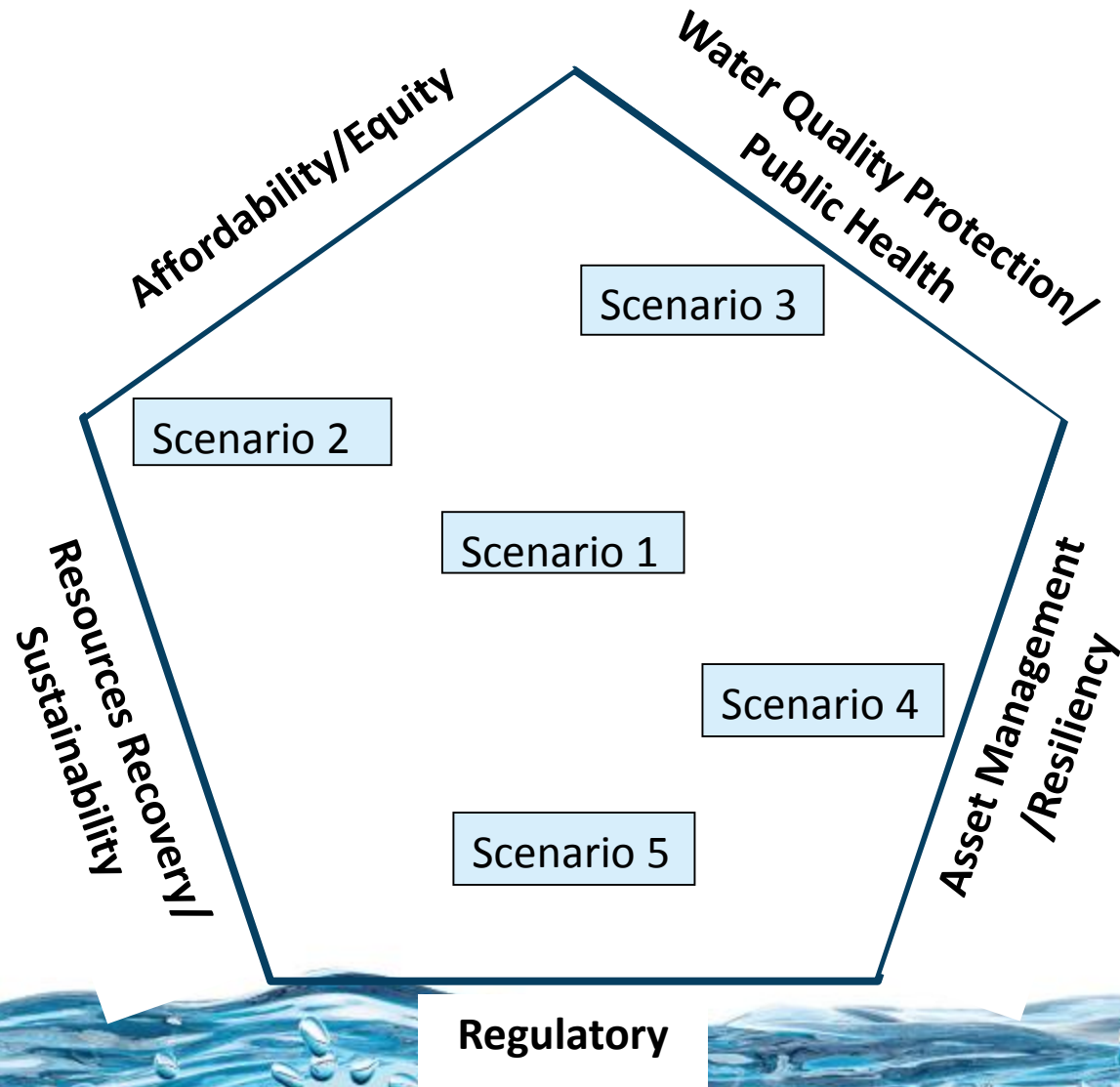
Discuss
Implications
& Paths



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Framing Plausible Scenarios



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Range of Concepts to be Considered¹¹ in Scenarios

- Baseline WTD plans
- Alternate approaches to CSO compliance
- Demand/capacity management
- Alternate financial models
- Alternate water quality protection approaches
- Asset management and resiliency
- Advanced resource recovery



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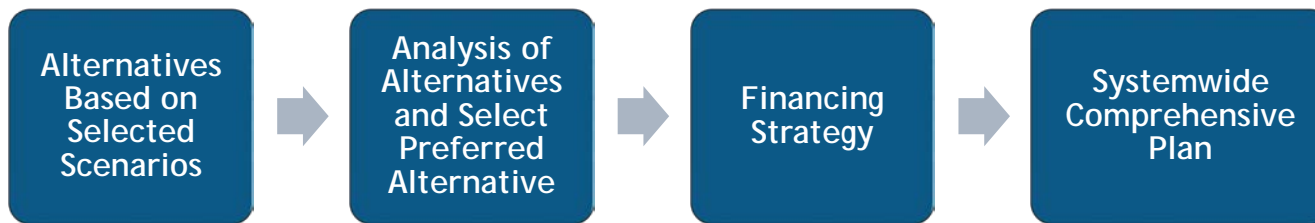
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Traditional Infrastructure Planning: Analysis of Alternatives

12

- Engineering analysis: Second level of analysis to determine which alternative to implement
 - Refinement and further definition of scenarios.
 - Multiple analyses including engineering, full social cost benefit analysis, environmental, policy
- Outcome: Recommended alternative with financing plan for prioritized strategy for regional water quality protection



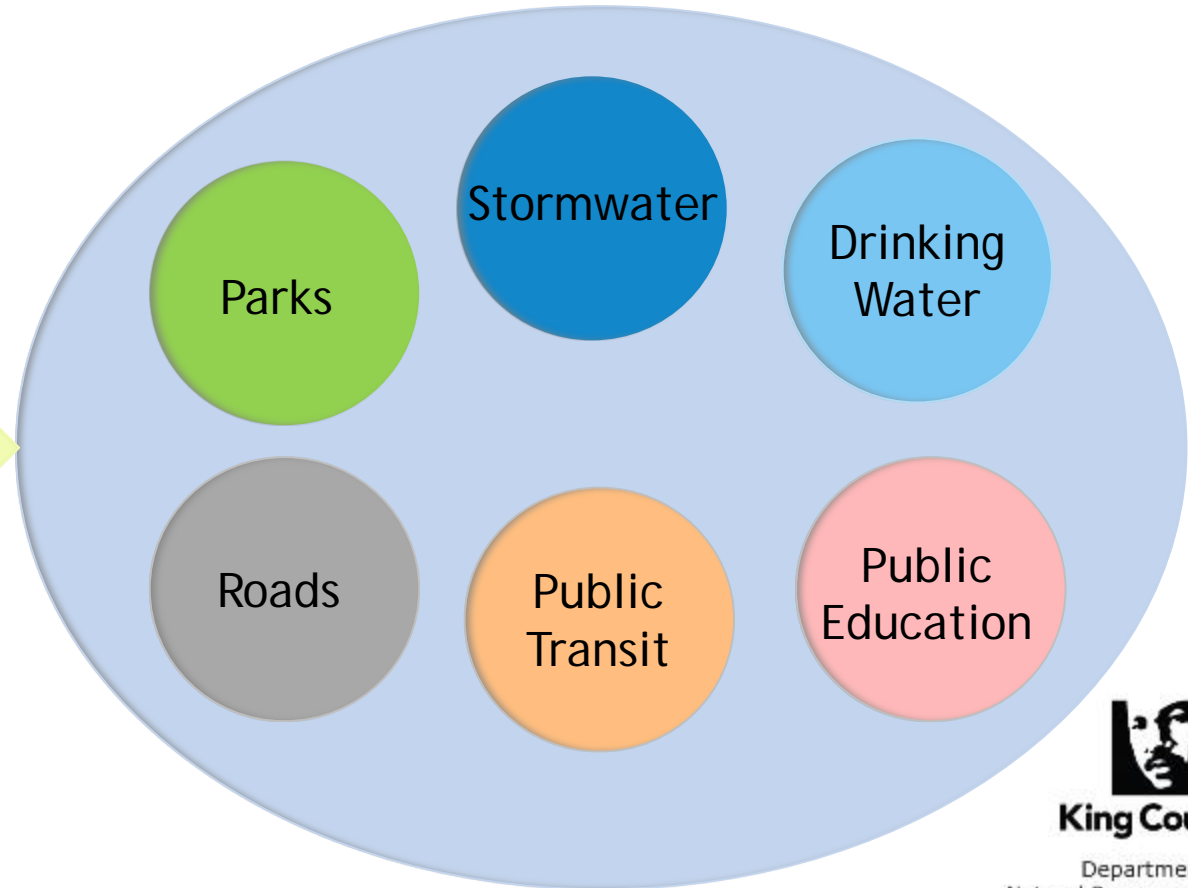
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Consideration of Regional Infrastructure Needs

13

Plan must
consider other
infrastructure
needs in the
region

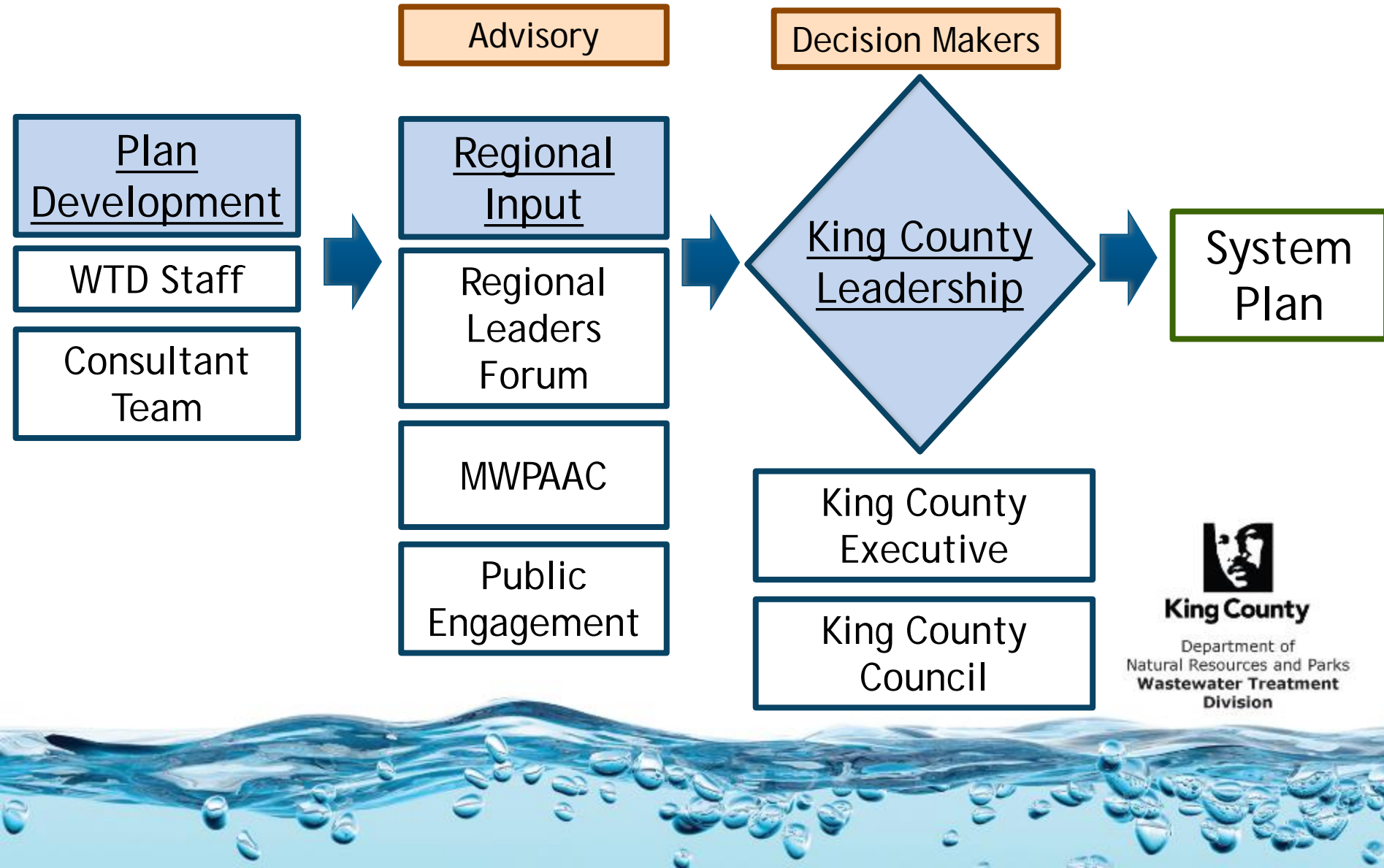


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Public and King County Leadership Involvement

14



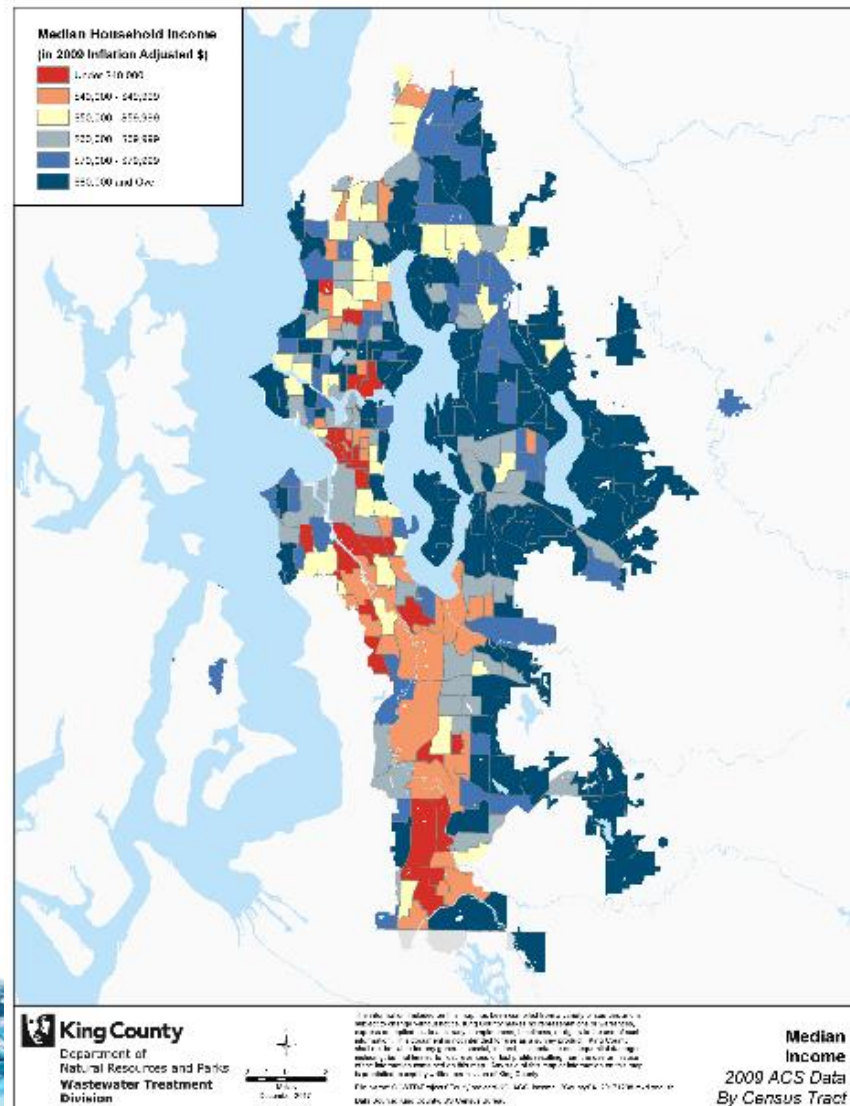
Public Affairs and Public Engagement

- Involve stakeholders to shape planning, advise the King County Executive
- Establish a Regional Leaders Forum
 - Forum will guide a parallel community engagement effort



Equity and Social Justice

WTD Service Area



Equity and Social Justice

System Planning

- Evaluate our system using Equity and Social Justice considerations, strategies, and goals will be components at every step of the process
- System Plan Team (Consultants and Staff) are expected to apply equity considerations and develop pro-equity alternatives



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Expected Outcomes of Systemwide Comprehensive Plan

- Strategic Plan to guide future investments
- Allocating the right dollars to the right projects at the right time
- Ensure core mission to protect water quality
- Achieving best water quality benefit for the investments made
- Prioritized list of activities WTD is going to undertake to protect water quality



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Next Steps

- Consultant procurement Q2 2018
- Initiation of planning work Q3 2018 →



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Questions

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