



Basin Planning Priorities Task 2 Kickoff – Recycled Water Policy Requirements

August 24, 2021

Agenda

- The Regional Board Ask for Addressing Groundwater Monitoring and Ambient Water Quality Methods
- Approach
- Today's Workshop: Recycled Water Policy Overview
 - Recycled Water Policy Background
 - 2019 Recycled Water Policy Amendments
 - Salt and Nutrient Management Plan Requirements
- What's Coming Next

New Basin Plan Requirement (Draft)

- Groundwater Monitoring Program

No later than August 1, 2022 ... [the Task Force Members] ... shall submit to the Regional Board for approval, an updated watershed-wide TDS and nitrogen monitoring program that will provide the data necessary to implement the TDS/nitrogen management plan. Data to be collected and analyzed shall address a minimum

- (1) determination of current ambient quality in groundwater management zones;
- (2) determination of compliance with TDS and nitrate-nitrogen objectives for the management zones;
- (3) evaluation of assimilative capacity findings for groundwater management zones;
- (4) assessment of the effects of recharge of surface water POTW discharges on the quality of affected groundwater management zones; and
- (5) ***any other requirements specified in the State Water Board's Recycled Water Policy*** (Resolution No. 2018-0057)

New Basin Plan Requirement (Draft)

- Ambient Water Quality

The determination of current ambient quality can be accomplished using the method consistent with that employed by the N/TDS Task Force (20-yr running average) to develop the TDS and nitrogen water quality objectives included in the Basin Plan, **or an alternative method approved by the Executive Officer of the Regional Board**. The determination of current ambient groundwater quality throughout the watershed must be reported by October 1, 2023, and, at a minimum, **every five years thereafter** unless the Regional Board revises this schedule.

Purpose of the Ask

- Monitoring program hasn't been updated since 2005
- Past recommendations to revise ambient water quality methods
- 2019 Recycled Water Policy (Policy) Amendments
 - Requires the Regional Board and Task Force to address more than just the monitoring program and ambient water quality methods
 - Monitoring program and ambient water quality are elements program identified as an early target for the RB in complying with the 2019 Policy amendments

Objectives and Approach

Our objective is to develop monitoring and reporting specifications that:

- Create compliance with applicable regulations
(Basin Plan objectives; Recycled Water Policy)
- Leverage regulations to create flexibility in assessment methods
- Leverage regulations to reduce frequency and cost of future assessments
- Are clear and actionable, with a time-certain schedule to perform compliance actions

Our approach is to start with the end in mind → compliance with 2019 Recycled Water Policy

Workshop Approach

Date	Workshop Topic
August 2021	Overview of Recycled Water Policy – SNMP Monitoring and Analysis Requirements
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2019 Recycled Water Policy

Recycled Water Policy

- Adopted in 2009 by the State Board
- Not all basin plans include ***adequate implementation procedures*** for achieving or ensuring compliance with the water quality objectives for salts or nutrients
- Regional Board Basin Plans are intended to include the implementation procedures to enable permitting of waste discharges (including recycled water use for irrigation) that:
 - comply with water quality objectives of receiving waters
 - are protective of the beneficial uses

Recycled Water Policy

Section 6.1.3 of Policy

- All groundwater basins are different in size, hydrogeologic complexity, and loading factors, which necessitates:
 - Stakeholder engagement to develop appropriate plans
 - allowing variable levels of analysis and management efforts in developing and implementing SNMPs

Recycled Water Policy

What does an adequate implementation plan look like?

- Not explicitly defined in the Policy
- SNMPs as framework for stakeholders to define implementation procedures
- Guidelines for what an SNMP should contain
- Santa Ana Region SNMP as an early model!

SNMP Components - Section 6.2.4 of Policy

- A basin- or subbasin-wide monitoring plan

- Water recycling use goals and objectives

- Salt and nutrient source identification, basin or subbasin assimilative capacity and loading estimates, together with fate and transport of salts and nutrients

- Implementation measures to manage or reduce the salt and nutrient loading in the basin on a sustainable basis and the intended outcome of each measure

- An antidegradation analysis

Declaration of Conformance – Santa Ana Basin Plan Approach

California Regional Water Quality Control Board Santa Ana Region

RESOLUTION NO. R8-2010-0012

Declaration of Conformance with the State Recycled Water Policy

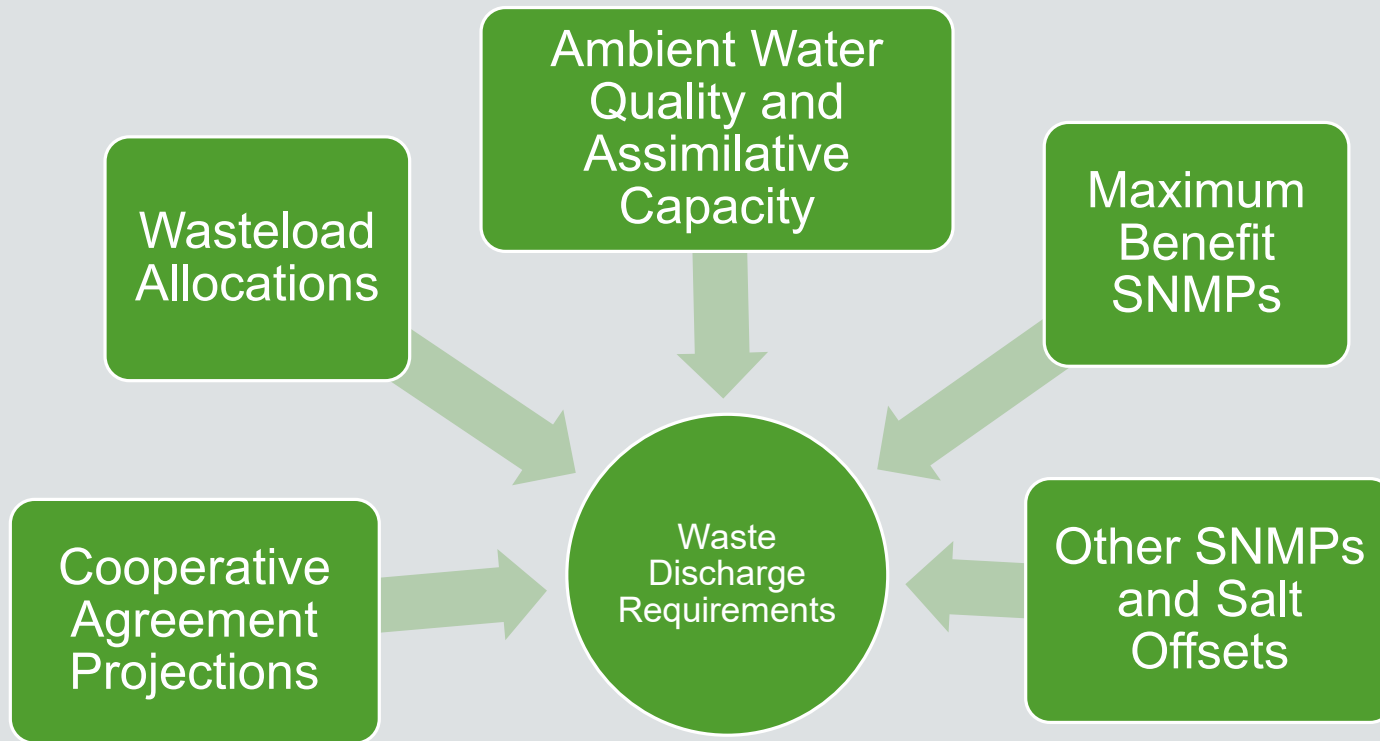
To ensure attainment of water quality objectives and protection of beneficial uses, it is the stated intent of the RWP that “salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis”¹. To that end, the RWP requires all Regional Water Quality Control Boards to take the following actions:

- 1) Develop and enact a Salt and Nutrient Management Plan through a locally-driven and controlled collaborative process.²
- 2) Establish an appropriate water quality monitoring program to implement the Salt and Nutrient Management Plan.³
- 3) Streamline the permitting process to facilitate increased use of recycled water wherever possible⁴ and especially for landscape irrigation projects.⁵

The Regional Board has adopted plans and programs that fully conform to the requirements set forth in the RWP.

- Defines management areas, beneficial uses and water quality criteria (objectives) required to protect beneficial uses
- Defines the methods and metrics that should be used to assess compliance with the objectives (current AWQ)
- Defines how RW discharge and use will be permitted with specific protocol for WDRs based on AWQ
- Requires periodic assessment of current AWQ (defined frequency) and requires monitoring to support analysis
- Enables basin-specific SNMPs for areas seeking to maximize recycled water use in areas where no assimilative capacity and RW TDS > antidegradation objectives. These plans consider the management actions necessary to manage salt and nutrient loading
- Encourages water quality projections in areas with imported water recharge (Cooperative Agreement)

Santa Ana Basin Plan SNMP



SNMP Development

The following chart gives an update of SNMP progress by region (as of March 21, 2018)

Region	Number of Priority Basins ¹	Number of Priority Basins		Percentage of Priority Basin Area	
		Stakeholder Group	SNMPs Accepted by Region	Stakeholder Group	SNMP Accepted by Region
North Coast	16	1	0	11%	0%
San Francisco Bay	12	5	3	41.54%	30.98%
Central Coast	31	10	0	52.37%	0%
Los Angeles	27	19	12	90.91%	60.85%
Central Valley	41	41	41	100%	100%
Lahontan	18	17	4	98.05%	49.25%
Colorado River	27	26	12	98.81%	18.75%
Santa Ana	13	13	13	100%	100%
San Diego	21	18	0	79.08%	0%

¹Includes subbasins, if separate SNMPs are in progress.



2019 Recycled Water Policy Amendments to Address Lesson Learned, New Conditions

- Administrative challenges with SNMP Development
 - Tie to recycled water use resulted in limited coverage of plans and stakeholder involvement
 - Agencies that developed SNMPs often lacked the regulatory or administrative authority to implement the management actions listed in the SNMPs
- Technical challenges with SNMP Development
 - Limitations of data used for SNMP analyses: limited data available and data not always representative of the full aquifer system
 - Methods used for SNMP analyses: simplification using mass-balance approaches for current and projected ambient water quality. These methods could over or underestimate basin concentrations of TDS/N & ignore hot spots
 - Inadequate monitoring and reporting plans to support SNMP implementation

New requirements of the 2019 Recycled Water Policy

- Provides direction to Regional Boards on approving plans
- Monitoring program must be representative – designed to address SNMP
- Monitoring data must be submitted every year
- Analyze monitoring data every five years
- The Regional Board must review each SNMP to determine if it should be updated based on five-year assessment results

Five-Year Assessments

Section 6.2.6 of Policy

The regional water boards, in consultation with stakeholders, shall assess and review monitoring data generated from [the SNMP] every five years, unless an alternate timeline has been established in a basin plan amendment. The assessment shall include an evaluation of:

- 1 Observed trends in groundwater salinity with the predicted trends from the SNMP
- 2 The ability of the monitoring network to adequately characterize groundwater quality in each GMZ and
- 3 Potential new data gaps
- 4 The ability of any relied-upon models to adequately simulate groundwater quality
- 5 Available assimilative capacity based on observed trends and the most recent water quality data
- 6 The impact of new projects that are reasonably foreseeable at the time of the assessment

Five-Year Assessments

Section 6.2.1.3 of Policy

Salt and nutrient management plans adopted as a Basin Plan amendment or accepted by the regional water board prior to April 8, 2019 shall be evaluated pursuant to 6.2.6 and 6.2.7 by **April 8, 2024**

Section 6.2.6 of Policy

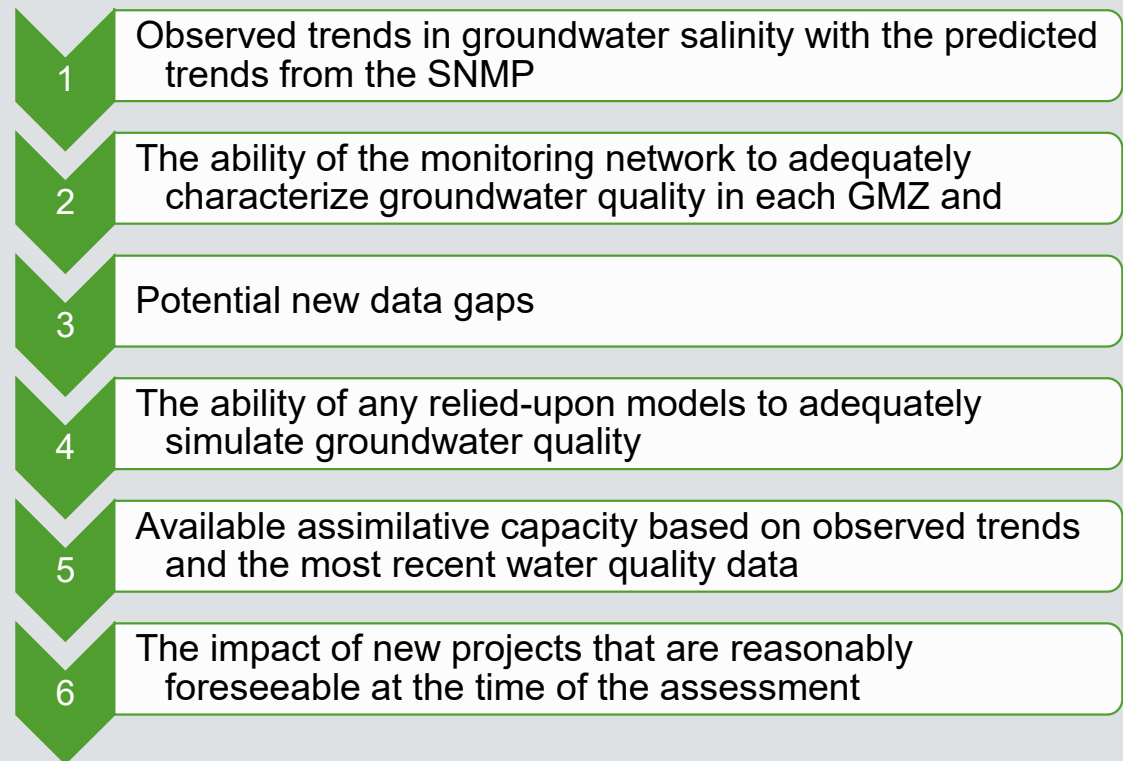
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Five-Year Assessments

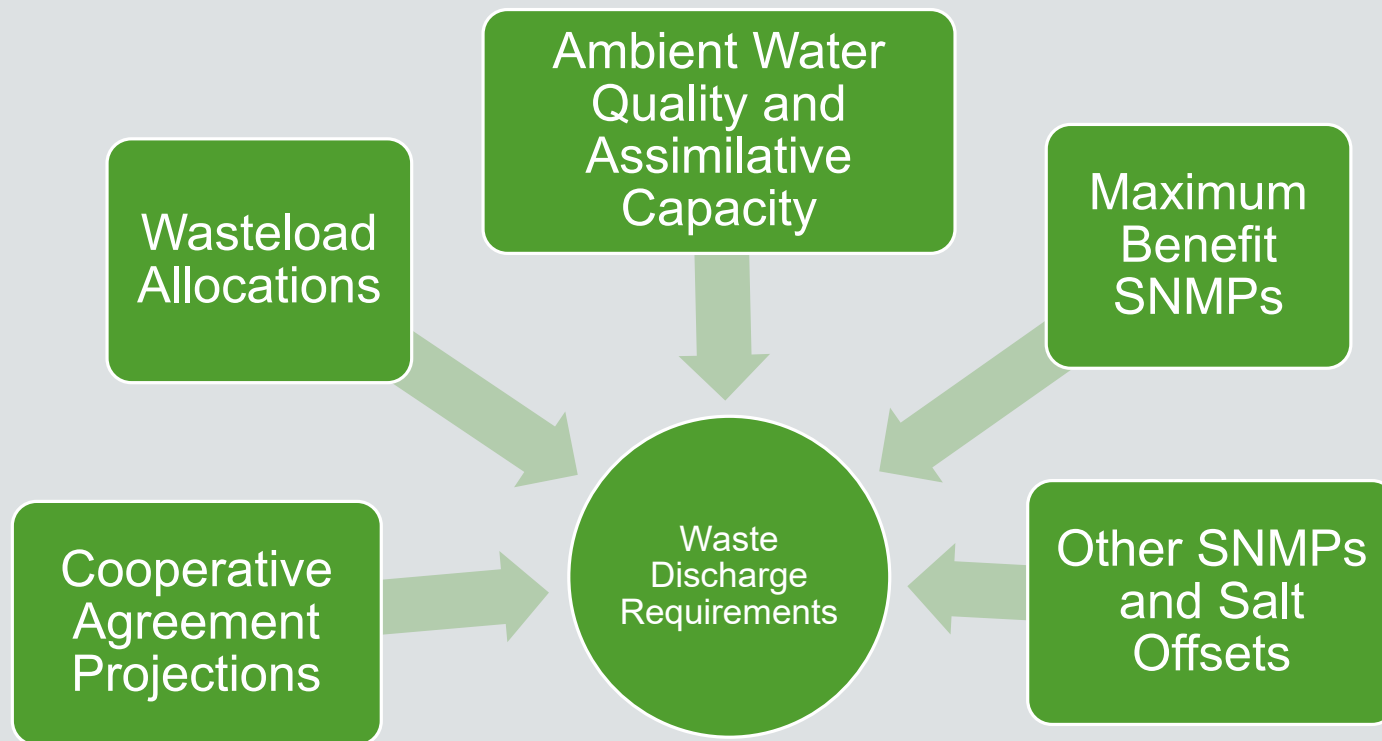
Section 6.2.6 of Policy

Section 6.2.7 of Policy

The regional water boards, in consultation with stakeholders, shall use the results of these periodic assessments to ...
determine whether potential updates or revisions to the salt and nutrient management plan may be warranted as a result of the data assessment or to make the plan consistent with the Policy



SNMP Requirements: How Does the Basin Plan Measure Up?



SNMP Requirements: How Does the Basin Plan Measure Up?

• Assess current assimilative capacity
• Identify loading sources and estimate loading
• Characterize fate and transport
• Assess future assimilative capacity
• Define implementation measures
• Monitoring program <i>tailored</i> to SNMP
• Periodic assessment of monitoring data

Triennial AWQ	Maximum Benefit SNMPS	Cooperative Agreement Modeling	WDR Salt Offset Programs
✓	✓		
	✓	✓	*For RW ✓
	✓	✓	
	✓	✓	
	✓		✓
	✓		✓
✓	✓		

SNMP Monitoring Plan Requirements

Section 6.2.4.1 of Policy

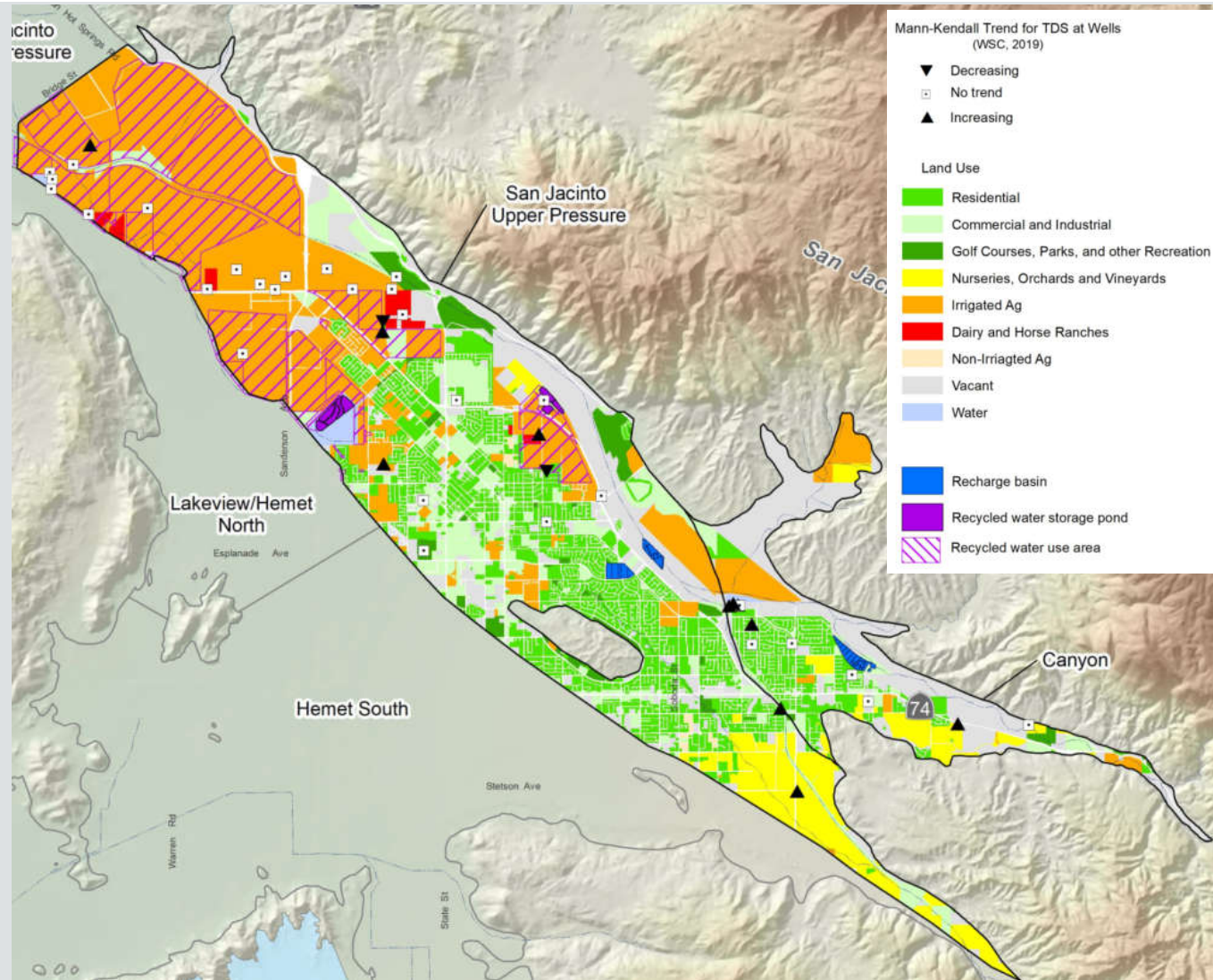
- The monitoring plan must be designed to effectively evaluate water quality in the basin. The monitoring plan must focus on:
 - water supply wells,
 - areas proximate to
 - large water recycling projects, particularly groundwater recharge projects, and
 - other potential sources of salt and nutrients identified in the salt and nutrient management plan.
 - Also, monitoring locations shall, where appropriate, target groundwater and surface waters where groundwater has connectivity with adjacent surface waters.

Five-Year Assessments: Do we have the information and protocols needed?

		Triennial AWQ	Maximum Benefit SNMPS	Cooperative Agreement Modeling	WDR Salt Offset Programs
1	Compare observed trends in groundwater salinity with the <u>predicted trends</u> from the SNMP		✓	✓	
2	The ability of the monitoring network to adequately characterize groundwater quality in each GMZ	✓			
3	Potential new data gaps	✓			
4	The ability of any relied-upon models to adequately simulate groundwater quality		✓	✓	
5	Available assimilative capacity based on observed trends and the most recent water quality data	✓	✓		
6	The impact of new projects that are reasonably foreseeable at the time of the assessment		✓	✓	

Advancements to Consider

- Mapping of loading factors
- Selection of key wells rather than all wells available
- Applying tiered AWQ analysis approach to focus higher-cost efforts in most critical areas and simplify in other areas
- Five-year reporting



Next Presentation

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WE ARE WATER FOCUSED

WE TAKE PRIDE IN WHAT WE DO

WE DO WHAT'S RIGHT

WE STRIVE TO BECOME OUR BEST

WE BELIEVE IN QUALITY

WE LISTEN

WE SOLVE HARD PROBLEMS

WE SEE THE BIGGER PICTURE

WE TAKE OWNERSHIP

WE COLLABORATE

WE HAVE FUN

WE ARE WEST YOST

