CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MEETING OF MAY 16-17, 2018
BISHOP

ITEM 3
PROPOSED SCOPE OF WORK AND DEVELOPMENT OF A SALT AND NUTRIENT MANAGEMENT PLAN, FREMONT BASIN REGIONAL WATER MANAGEMENT GROUP

CHRONOLOGY	
September 2011	Fremont Basin Regional Acceptance Process approved by Department of Water Resources
November 2014	Fremont Basin Regional Water Management Group (RWMG) approved by the Department of Water Resources
February 2017	Department of Water Resources awarded an $841,030 planning grant to the Fremont RWMG

BACKGROUND

Representatives from the Fremont RWMG will present the scope of work and status of development of a Salt and Nutrient Management Plan (SNMP) for the Fremont Valley groundwater basin. In 2017, the RWMG received an $841,030 planning grant from the Department of Water Resources to develop both an Integrated Regional Water Management Plan (IRWMP) and a SNMP, both of which are currently being developed. The SNMP will be a component of the final IRWMP.

ISSUES

Long-term, water quality-related issues of primary concern for the Fremont Basin are (1) maintaining groundwater sustainability while allowing for continued economic growth and diversity and (2) future degradation of water quality. The Water Board will have an opportunity to provide input on the development of the SNMP and to discuss how the plan may be used to protect water quality in the Fremont Basin.

DISCUSSION

The SNMP will analyze salt and nutrient loading from surface activities such as:

- Agricultural inputs (fertilizer, applied water);
- Residential inputs (septic systems, fertilizer, applied water); and
- Irrigation water (potable water, recycled water, and groundwater).

Assumed parameters for loading factors are being further refined with information from members of the RWMG. A mixing model will be used to analyze the potential impacts and trends in the groundwater basin due to the inputs.

Water quality constituents being addressed include nitrate as nitrogen and total dissolved solids (TDS).

Model Assumptions: Land use in the watershed will be categorized into groups and typical concentration values will be assigned for applied water, percent irrigation, applied nitrogen, applied TDS, and soil type. Salt and nutrient loading will be estimated for agricultural, urban residential, wastewater, septic system, urban landscape, golf courses, and other sources. Water quality management goals will then be selected for the nitrate and TDS and will represent the standard necessary to protect either Municipal and Domestic Supply (MUN) or Agricultural Supply (AGR) beneficial uses.

Model Approach: A mixing model will be applied to evaluate assimilative capacity over a 25-year planning period, which will be calculated as the difference between the water quality management goal and the baseline water quality concentration for a given constituent. Best management practices will be developed with stakeholder input, as needed.

Because groundwater in the greater Fremont Basin is generally of good quality, and assimilative capacity is expected to be maintained for all constituents throughout the 25-year planning period, it is anticipated that changes to water quality objectives will not be proposed.

The RWMG plans to have a final Fremont Basin SNMP prepared for Water Board approval in late 2018.

PUBLIC OUTREACH/INPUT

Representatives of the Fremont Basin RWMG have been working with stakeholders on the scope of work and development of a SNMP. Water Board staff will solicite comments from the RWMG and interested parties for the final Fremont Basin SNMP.

PRESENTERS

- Jan Zimmerman, Senior Engineering Geologist, Lahontan Water Board, will introduce the item (see Enclosure 1).
- Brian Dietrick, Senior Environmental Engineer of Woodard and Curran and representative of the Fremont Basin RWMG, will present an overview of the scope of work and development of a SNMP (see Enclosure 2).

RECOMMENDATION

No action requested; however, Water Board members may give input and direction on the next steps for this project.

ENCLOSURE	ITEM	BATES NUMBER
1	Water Board staff presentation	**3-3**
2	Fremont RWMG presentation	Will be submitted separately as a late addition

ENCLOSURE 1

Item 3
Fremont Basin Salt and Nutrient Management Plan

Jan Zimmerman, PG
Senior Engineering Geologist
Lahontan Regional Water Quality Control Board

May 16, 2018
Bishop, California

Overview

- Integrated Regional Water Management (IRWM)
- Lahontan Funding Area
- Fremont Basin Region
- Associated Planning Documents
- Timeline and Next Steps

IRWM Program

- IRWM Planning Act of 2002
- Collaborative process for resource management
- Funding opportunities

3

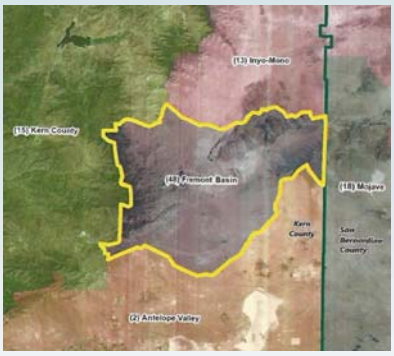
Lahontan Funding Area

- (6) IRWM Regions in Lahontan Funding Area
- Eligibility criteria must be met to receive funding

4

Fremont Basin

- Fremont Basin Region Acceptance Process September 2011
- Fremont Basin Regional Water Management Group (RWMG) November 2014
- Awarded $841,030 Planning Grant February 2017



Planning Documents

- IRWM Plan
- Groundwater Management Plan
- Salt and Nutrient Management Plan (SNMP)

Timeline

May 2018	• SNMP Scope presented to Water Board
June 2018	• Draft SNMP submitted to Water Board staff • IRWM Stakeholder Meeting
August 2018	• Final SNMP submitted to Water Board staff
Sept/ Nov. 2018	• Final SNMP accepted by Water Board • Implementation of SNMP

Fremont Basin SNMP

Up Next…

Brian Dietrick, Woodard and Curran, on behalf of the Fremont Basin RWMG, to present the scope of work and development of the SNMP for the Fremont groundwater basin

Request for Water Board Input on…

- Model scenarios: agriculture, storm water capture, septic to sewer conversions
- Climate change adaption and mitigation
- Planning horizon: 20 years vs. 25 years

Questions