



North Kern Water Storage District: Management Area Plan

December 18, 2019

Water Budget: KGA “Checkbook” Approach

- To reconcile the Subbasin’s C2VSim groundwater model (the Model) with the water budget components described by each of the individual management area plans, the KGA coordinated with its members to develop a “Checkbook” water budget which describes the baseline portion of water budget components for each of the plan areas.
- It is acknowledged that the Model is not fully calibrated, due to data gaps and will be continuously improved as SGMA is implemented.
- The baseline of the Model does not capture NKWSD’s recent (post-2015) activities with respect to increased groundwater banking in the Subbasin. These projects will be accounted for in the data provided to KGA for the annual reporting to DWR.
- The KGA Checkbook also considered the entire Rosedale Ranch Improvement District (RRID) area, rather than the Management Area described in this plan (which is approximately 55% of RRID’s total area). This is reflected in the differences between the irrigated acreage shown in the table below.

	NKWSD	Rosedale-Ranch ID
Water Budget Component	KGA “Checkbook”	KGA “Checkbook”
Irrigated Area (acres)	55,700	9,200
TOTAL INFLOW (AFY)	195,319	10,804
TOTAL OUTFLOW (AFY)	174,930	25,500
IMPLIED CHANGE IN GROUNDWATER STORAGE (AFY):		
	20,389	-14,696

Achieving Sustainability in 2040

The Projects proposed by NKWSD are anticipated to result in an increase in water supply (through increased imports or water savings) by an average of 27,580 AFY. These projects include additional in-District recharge, expanded recharge for the RRID management area, improvements to conveyance for recharge and recovery, and

increased beneficial reuse of oilfield-produced water.

Management Actions proposed by the District are projected to result in an average demand reduction of 21,850 AFY. Proposed Management Actions include land use conversion (for permanent recharge basins and spreading grounds), conversion of land from agricultural use to urban and industrial uses, urban water conservation (required by AB 1668/SB 606), and the detachment of urban RRID lands once it has been rezoned for urban uses and a tract map has been approved.

The combination of Projects and Management Actions for NKWSD is projected to result in average water budget surplus of at least 23,900 AFY by 2030 for the “Old District” management area and a budget surplus of at least 300 AFY for the RRID management area by 2030. By 2070, NKWSD’s projected average surplus is at least 15,200 AFY in the “Old District” and at least 30 AFY in the RRID management area. Projects for additional in-District recharge facilities and improvements to conveyance for banking and recovery are already underway in NWSD.

Sustainable Management Criteria

Groundwater level Measurable Objectives (MOs) for the representative monitoring sites are the projected groundwater elevations for 2030, based on the hydrologic trends for 2006 to 2016. The Minimum Thresholds (MTs) are the projected groundwater elevations for 2040, based on the same trends as the MOs.

Based on the results of the Subbasin Model, the District’s projects and management actions are projected to result in the groundwater levels at the representative monitoring sites above the MOs, thus complying with SGMA.



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Stakeholder Outreach

NKWSD engaged in the following outreach activities during the development of the Public Draft of its plan, and during the Public Comment period:

Monthly KGA Stakeholder Coordination Meetings	SGMA Update at Monthly NKWSD Board Meetings	KGA SGMA Open House (5/14/19 and 9/26/19)
Monthly NKWSD Landowner Advisory Committee Meetings		Quarterly SGMA Landowner Outreach Meetings
NKWSD- SWID Stakeholder Outreach Meeting (4/29/19)	NKWSD- SWID Stakeholder Outreach Follow-up (5/2/19)	NKWSD- SWID Stakeholder Outreach Meeting (10/8/19)

NKWSD, SWID, and their consultant also met with growers and representatives from the cities of Shafter (with Oildale Mutual Water Company (OMWC)) and Wasco, when requested. The Districts’ “Open Door” policy was conducive to communication and engagement with stakeholders in the plan area.

Comment Letters Received

NKWSD and SWID received eight comment letters during the 90-day Public Comment period pertaining to its management area plan. The Districts’ responses to these letters are summarized in their Comments Response matrix, included in the management area plan as an appendix. Some of the comments provided resulted in revisions to the Public Draft of the Management Area Plan.

Revisions Made to the joint NKWSD-SWID Management Area Plan

In response to the letters received by the District, clarification of the purpose of the water budget and definitions of the water budget components were made. Further clarification of the proposed projects and management actions was also provided in response to the comment letters. Comments received from the cities of Shafter (with OMWC) and Wasco resulted in:

- Revision of the projected future water budget for the RRID management area to more accurately reflect the projects proposed in the management area plan (Section 2.5.3),
- Clarification of Potential Causes and Potential Effects of Degraded Water Quality in the Plan Area (Section 3.2.3 of the plan), and
- Addition of two more wells in the City of Shafter and two more wells in the City of Wasco as a representative monitoring sites.

Revisions made to the plan that were not related to comment letters provided to the Districts include:

- Revision of Water Budget section (Section 2.5 of the plan) to include the coordinated KGA Checkbook budget, and
- The addition of two Management Actions (Refinement of Water Budget Components and Mitigation of Potential Impacts to Domestic Wells).