



Alta Irrigation District Area Management Zone Pilot Study

Steering Committee Meeting

Alta Irrigation District
APRIL 18, 2019



MEETING AGENDA

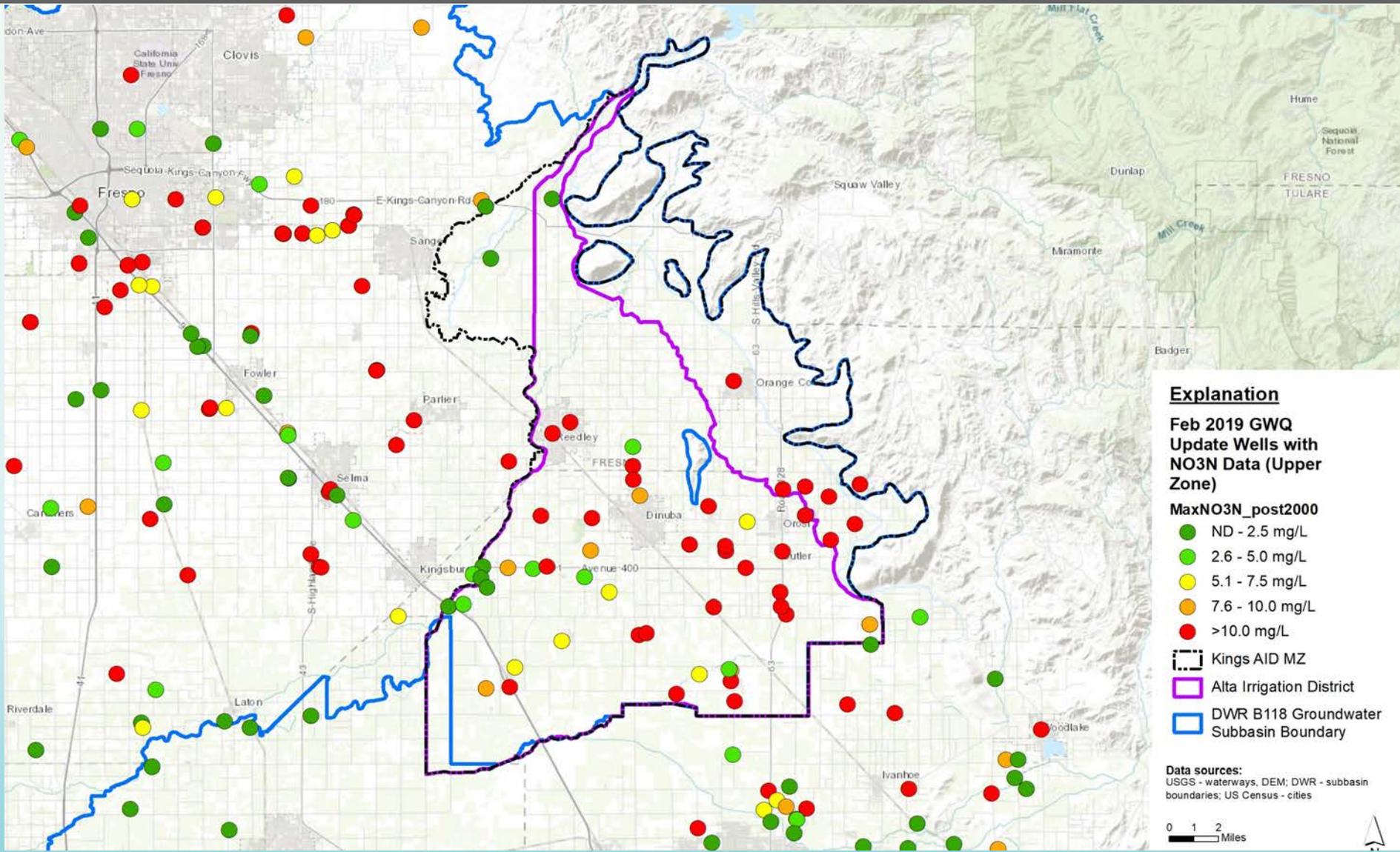
- Introductions/Agenda Review
- Status of State Board Approval of Basin Plan Amendment/
Nitrate Control Program Adoption Update
- Initial Groundwater Quality Assessment - Update
- Refinement of Areas with Potentially High Nitrate – Update
- Early Action Plan
- Identification of Permitted Dischargers in Kings River East/AID MZ
- Public Education & Outreach Opportunity
- Project Schedule
- Posting Pilot Study Materials
- Review Action Items
- Schedule Next Meeting



DATA ANALYSIS - UPDATE

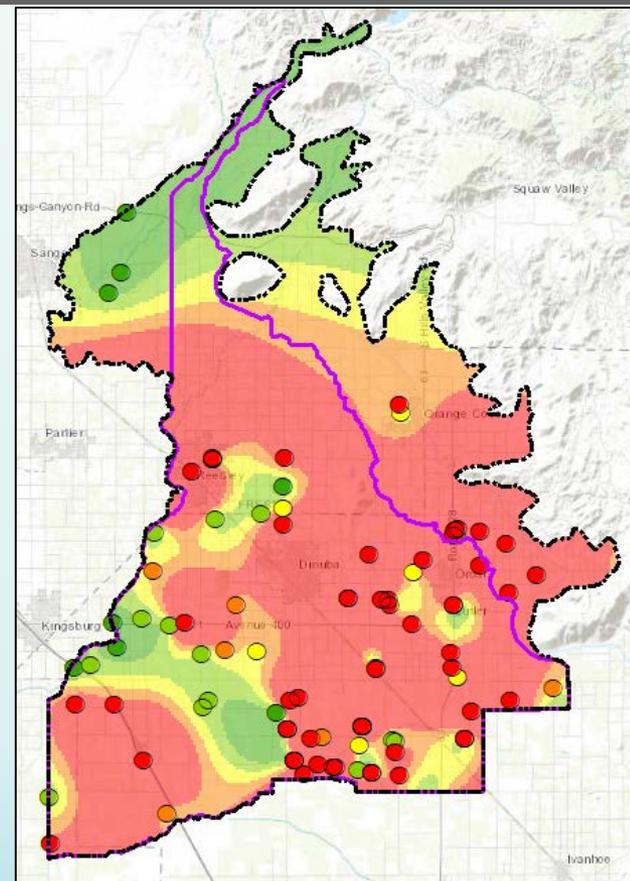
- Initial Groundwater Quality Assessment
- Wells Exceeding Nitrate Objective

PRELIMINARY UPDATED UPPER ZONE NITRATE (POST-2000 MAXIMUM)



NITRATE IN UPPER ZONE: UPDATED MAP

- Updated vs Original High Resolution CV-SALTS Upper Zone Nitrate Datasets
- Post-2000 average data



CV-SALTS, 2016 High Resolution

Upper Mean Ambient Nitrate Post 2000 (mg/L as N)

- <=2.5
- >2.5 - 5.0
- >5.0 - 7.5
- >7.5 - 10.0
- >10.0

Upper Zone Nitrate (mg/L as N)

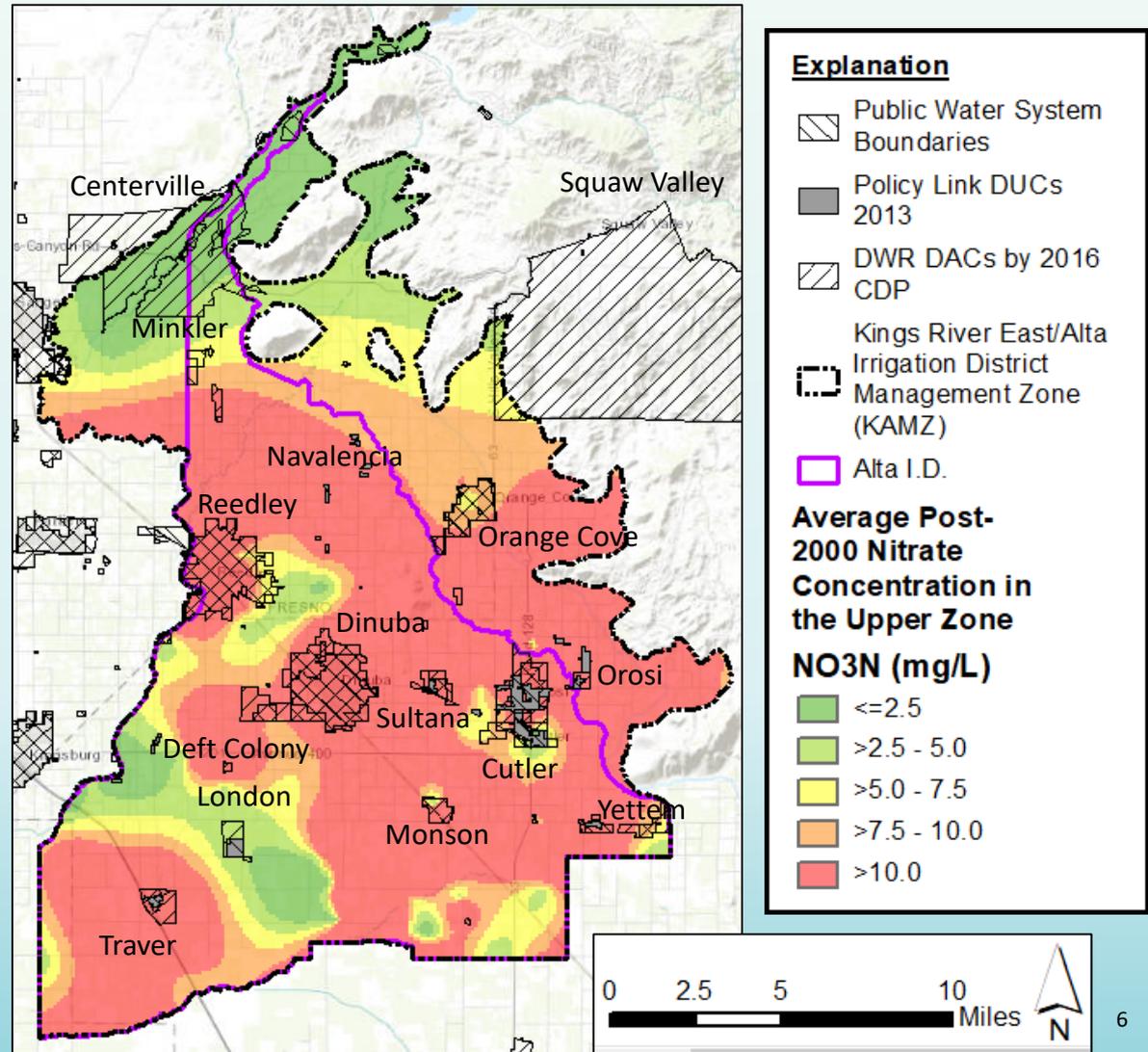
- <=2.5
- 2.6 - 5.0
- 5.1 - 7.5
- 7.5 - 10
- >10

NITRATE IN UPPER ZONE: UPDATED MAP WITH PWS AND DAC/DUC BOUNDARIES

There are approximately 46 PWS, 17 DWR DACs, and 14 Policy Link DUCs in the MZ area.

Based on spatial location:

- 22 out of 46 PWSs,
- 12 out of 17 DACs, and
- 10 out of 14 DUCs overlay ambient Upper Zone NO₃-N >10 mg/L.

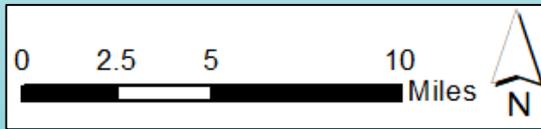
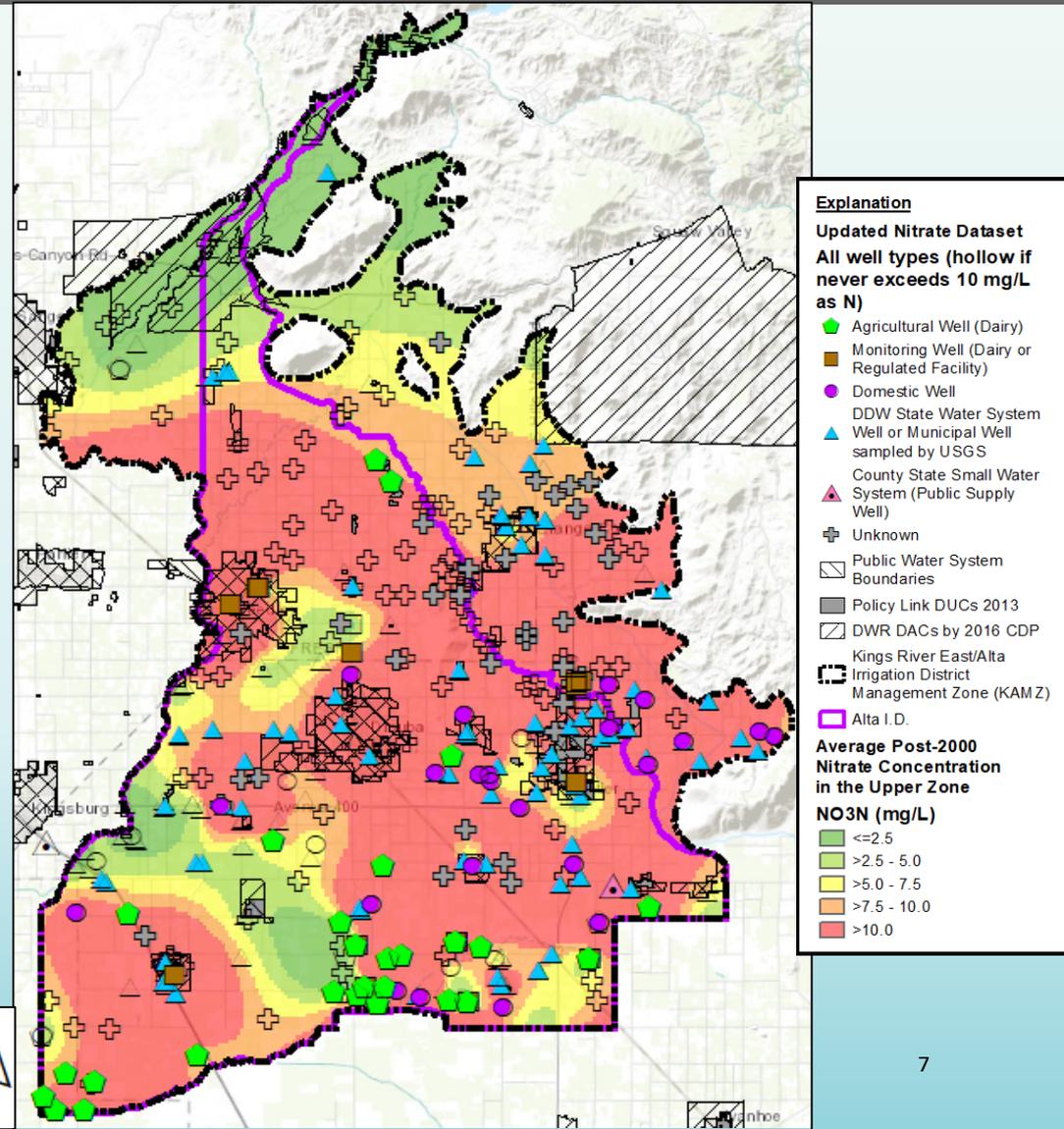


NITRATE IN UPPER ZONE: UPDATED MAP WITH WELLS THAT EXCEED NO3-N MCL (10 MG/L)

Approximately 453 wells in the KAMZ have measured nitrate concentrations.

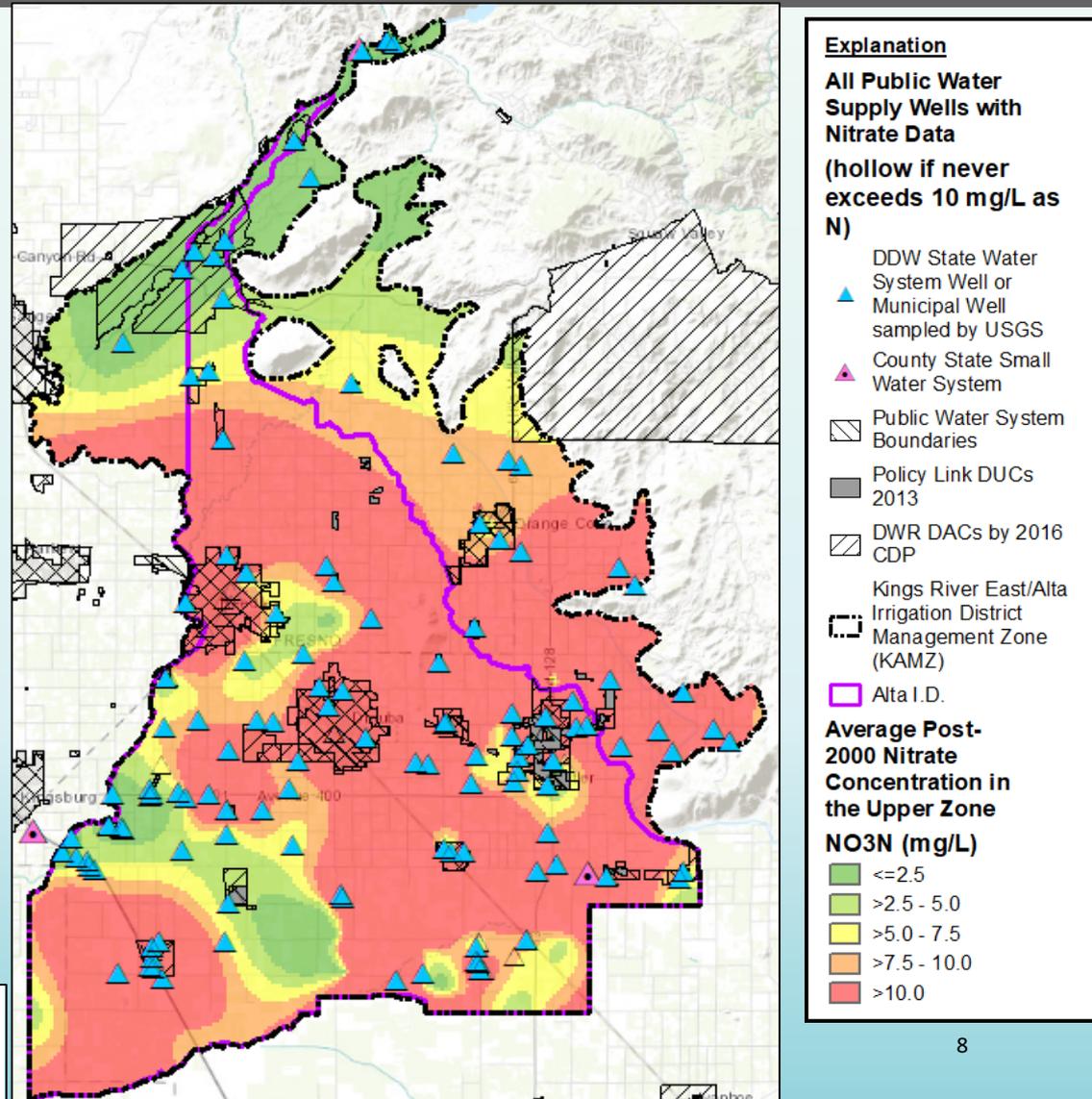
203 of 453 wells have exceeded the NO3-N MCL (10 mg/L) in the KAMZ:

- 79 Public water supply wells (out of 181)
- 1 County State Small WS Public water supply wells (out of 3)
- 33 Domestic wells (out of 45)
- 27 Ag wells (out of 31)
- 29 MWs from dairy/regulated facilities (out of 42)
- 34 Unknown well types (out of 151)



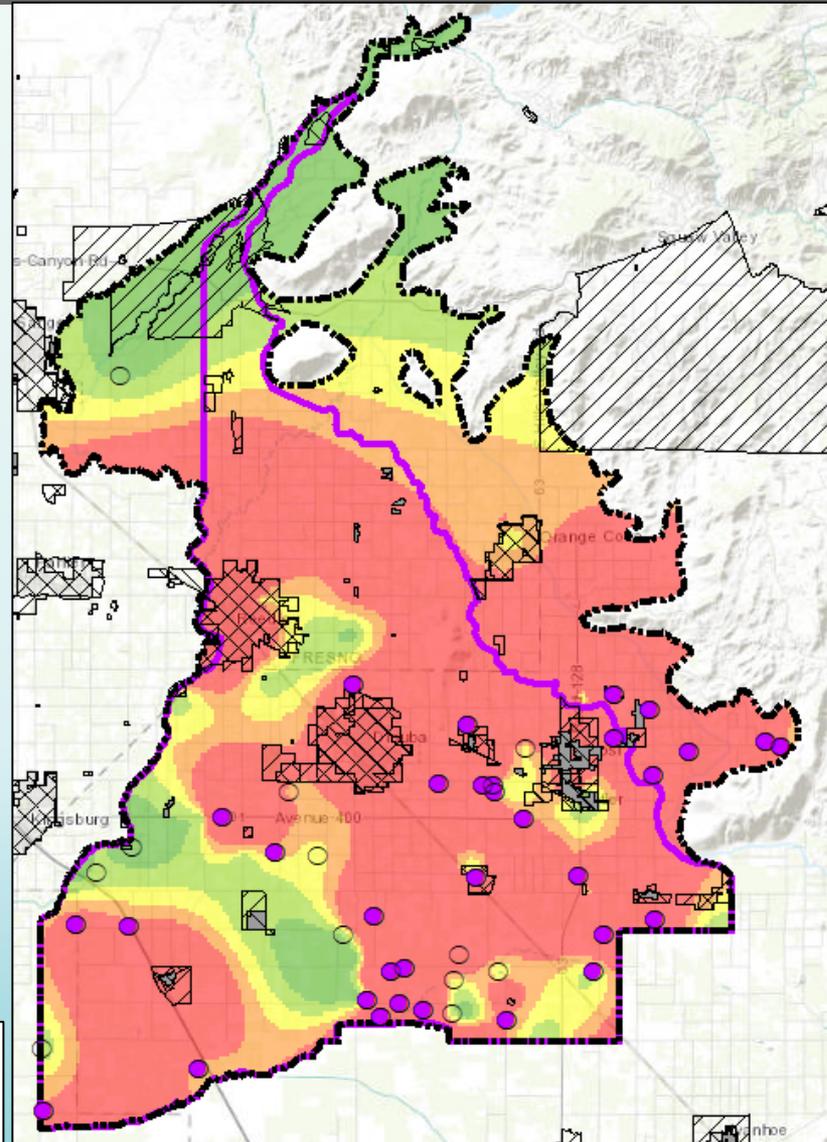
NITRATE IN UPPER ZONE: UPDATED MAP WITH PWS WELLS THAT EXCEEDED NO3-N MCL (10 MG/L)

80 public water supply wells (out of 184, or 43%) in KAMZ with measured nitrate data have exceeded the NO3-N MCL (10 mg/L).



NITRATE KRIGED WQ MAP UPDATE WITH SAMPLED DOMESTIC WELLS THAT EXCEED THE MCL (10 MG/L AS N)

33 Domestic wells (out of 45, or 73%) in the KAMZ with measured nitrate data have exceeded the NO₃-N MCL (10 mg/L).



Explanation

All Domestic Wells with Nitrate Data (hollow if never exceeds 10 mg/L as N)

- Domestic Well
- ▭ Public Water System Boundaries
- ▭ Policy Link DUCs 2013
- ▭ DWR DACs by 2016 CDP
- ▭ Kings River East/Alta Irrigation District Management Zone (KAMZ)
- ▭ Alta I.D.

Average Post-2000 Nitrate Concentration in the Upper Zone NO₃N (mg/L)

- ≤2.5
- >2.5 - 5.0
- >5.0 - 7.5
- >7.5 - 10.0
- >10.0



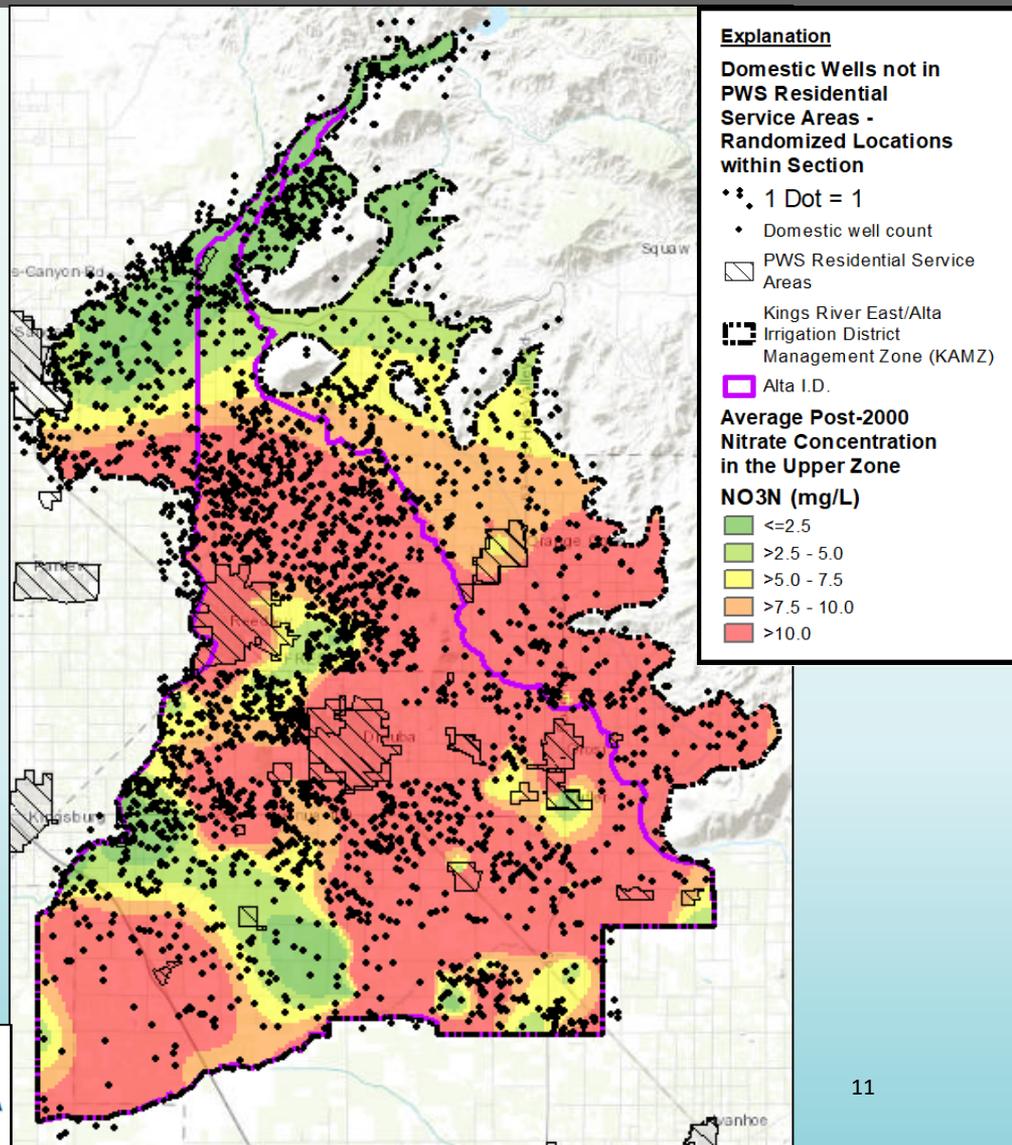
EARLY ACTION PLAN

- Process to Identify Residents with Impacted Domestic Wells
- Discuss Other EAP Elements

INTERSECTION OF PUBLIC WATER SUPPLY SERVICE AREAS, APPROXIMATE DOMESTIC WELL LOCATIONS AND MAPPED ELEVATED NITRATE IN UPPER ZONE DATASETS

Estimated number of Domestic wells located in areas where $\text{NO}_3\text{-N}$ concentrations (outside of PWS service areas) appear to be elevated

- 1,778 Wells
- 250 Wells

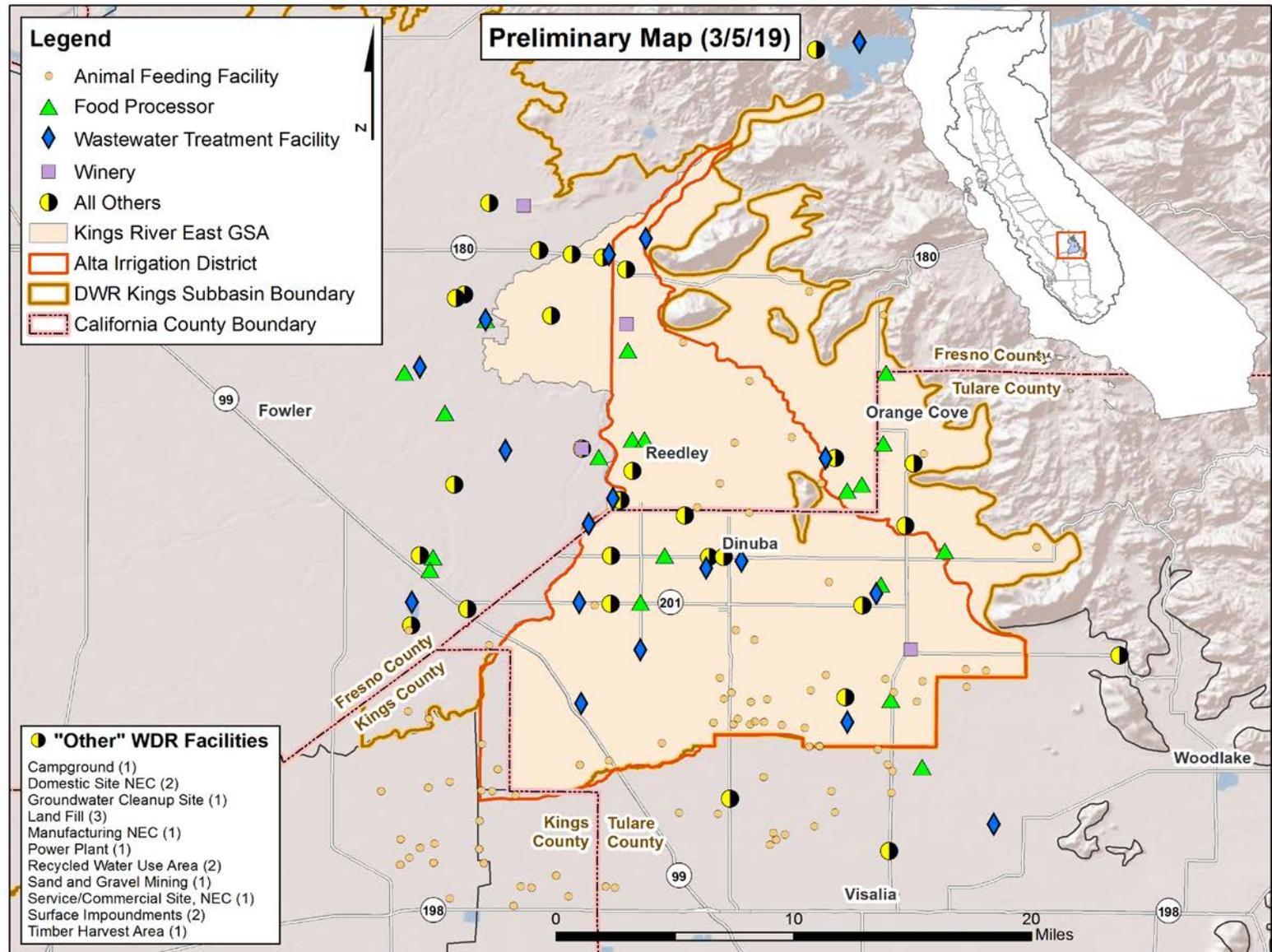




IDENTIFICATION OF PERMITTED DISCHARGERS

- Updated List
- Outreach Efforts
- Identification of Nitrate Management Practices

LOCATION OF KEY DISCHARGERS





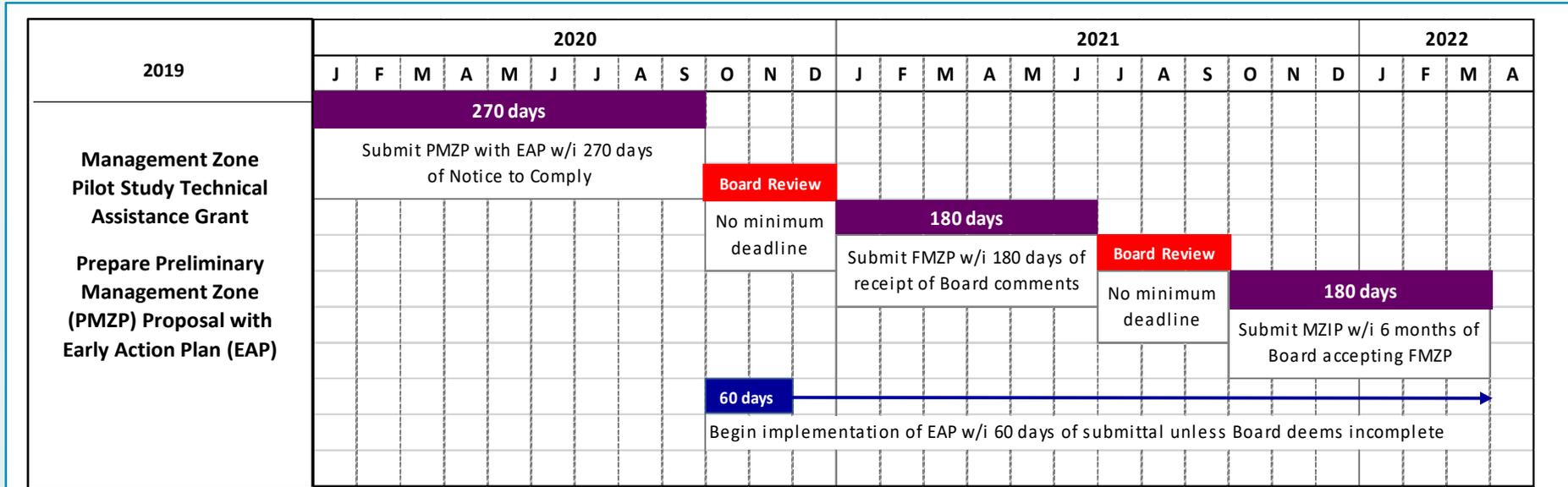
PUBLIC EDUCATION & OUTREACH OPPORTUNITY

- Overview of Related PEOC Efforts
- Discuss Potential Outreach Materials for MZ



PROJECT SCHEDULE

NITRATE CONTROL PROGRAM SCHEDULE



- Assumption – Notice to comply received by January 1, 2020
- Board Review of Deliverables – No minimum deadline in regulation

FMZP = Final Management Zone Proposal;
 MZIP = Management Zone Implementation Plan

MANAGEMENT ZONE (MZ) PROJECT SCHEDULE – PILOT STUDY VS. REGULATORY DELIVERABLES

2019	Pilot Study (Grant) Schedule	Regulatory Schedule
Feb	Steering Committee meetings; draft deliverables for review	Not applicable until Basin Plan Amendment (BPA) approved
Mar		
Apr		
May		
June		
July		
Aug	Submit Final Grant deliverables by end of August = Draft Preliminary Management Zone Proposal (PZMP)	Notice to Comply with Nitrate Control Program received after BPA effective date
Post- Aug 2019	Develop PMZP Templates for future MZs based on work in two Pilot Study areas	
		270 days to formally submit PMZP to Regional Board

Key Preliminary MZ Proposal (PMZP) Grant Deliverables

- MZ boundary
- Initial list of participants
- Initial assessment of groundwater conditions
- Current treatment and control efforts/mgmt. practices
- Initial identification of public water supplies or domestic wells with nitrate exceeding objective
- Early Action Plan



FINAL AGENDA ITEMS

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- Posting Pilot Study Materials
- Review of Action Items
- Schedule Future Meeting



Adjournment

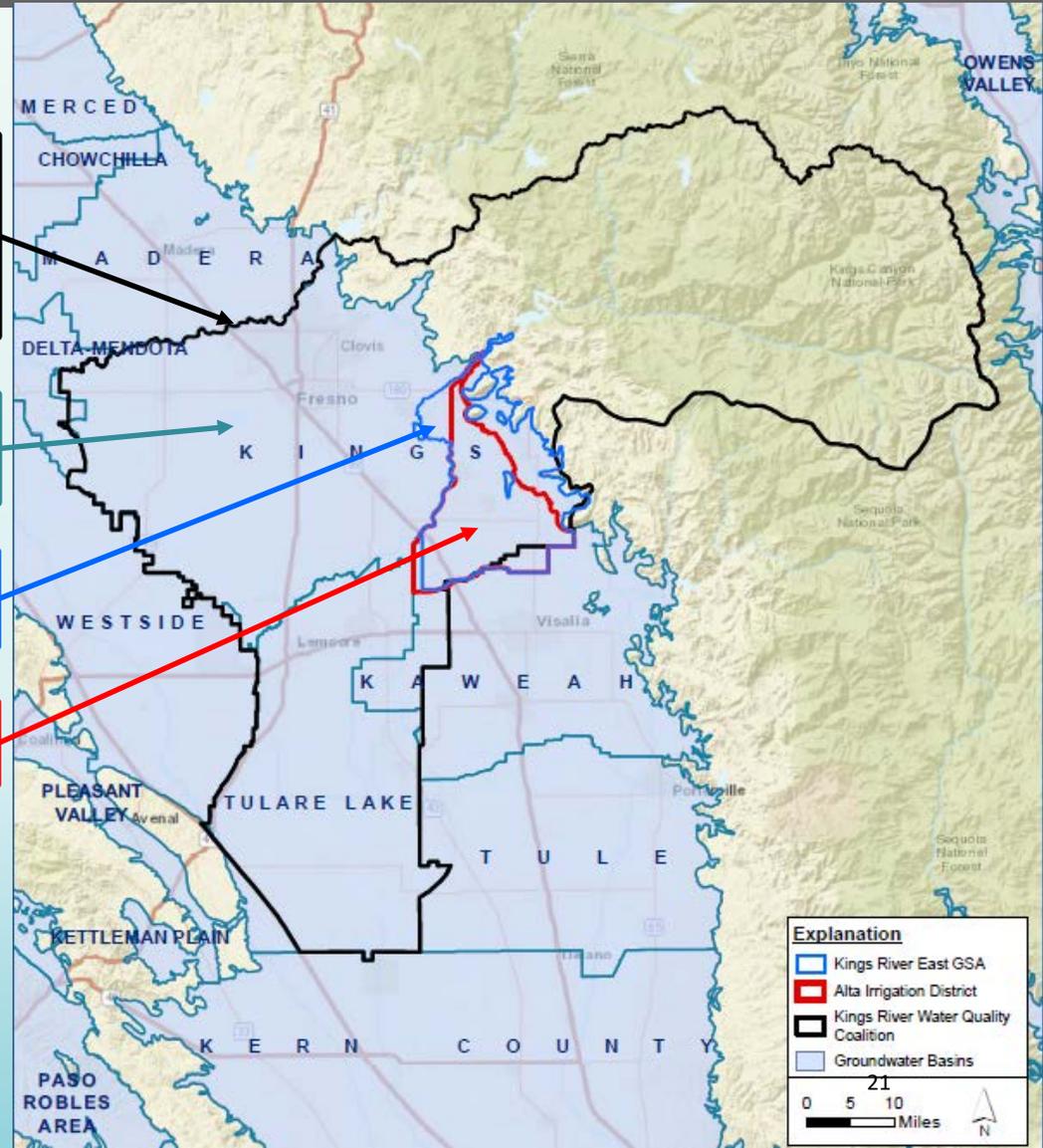
KINGS RIVER WATER QUALITY COALITION AREA

Kings River Water Quality Coalition Area

Kings Subbasin

Kings River East GSA

Alta Irrigation District



Explanation

- Kings River East GSA
- Alta Irrigation District
- Kings River Water Quality Coalition
- Groundwater Basins

21
0 5 10
Miles