



Turlock Management Zone Pilot Study

Steering Committee Meeting

Turlock Irrigation District

June 12, 2019



MEETING AGENDA

- Introductions
- Status of State Board Approval of Basin Plan Amendment/
Nitrate Control Program Adoption Update
- Formalization of Steering Committee
- Early Action Plan – Preliminary Draft for Discussion
 - Identification of Potentially Affected Residents
 - Temporary Water Provisions
 - Implementation Schedule
 - Preliminary Cost Assessment
- Brief Project Status Updates
- Other Business
- Schedule Next Meeting



FORMALIZATION OF THE STEERING COMMITTEE

- Process to Establish Leadership and Roles
- Consultant Support

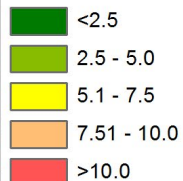


EARLY ACTION PLAN

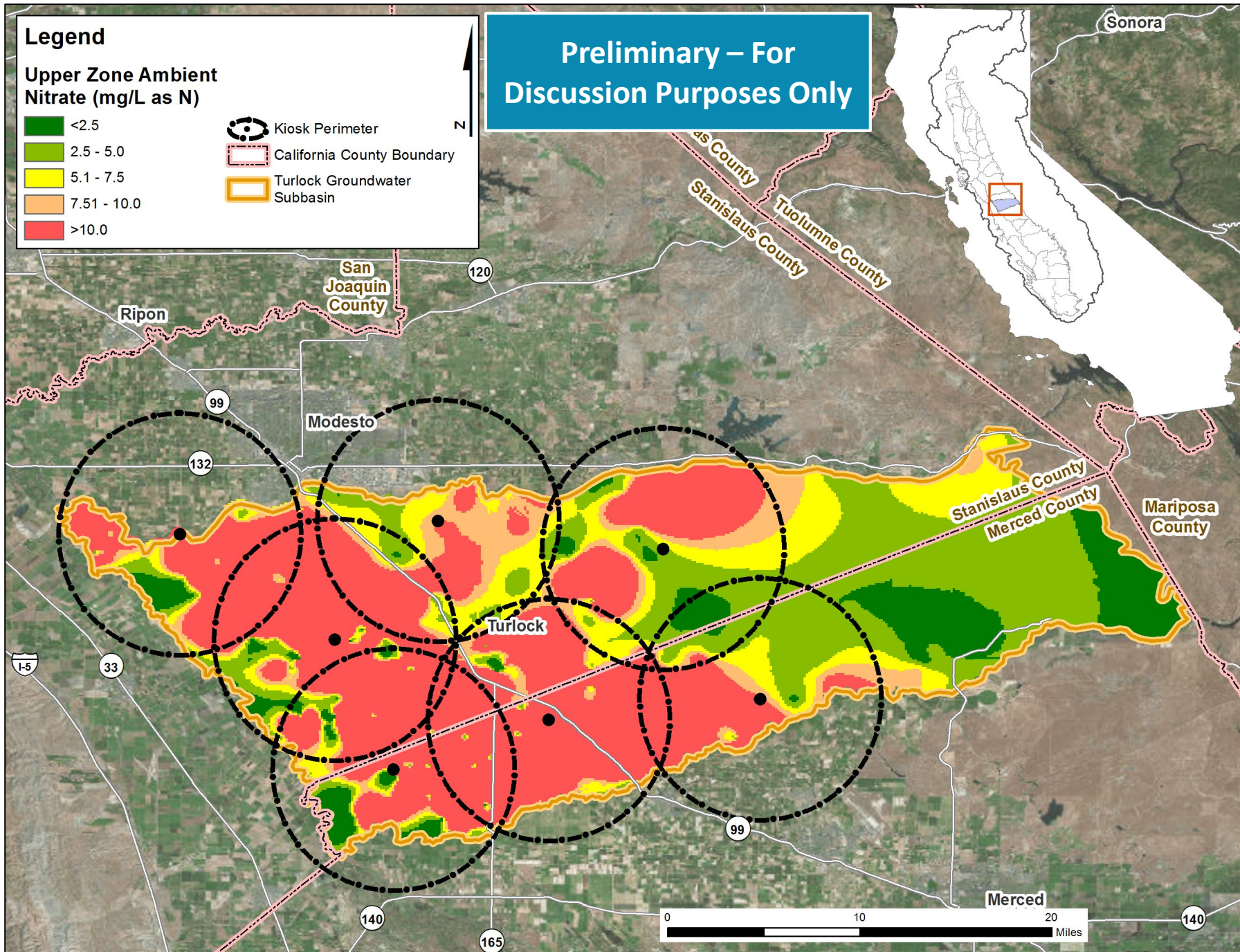
- Preliminary Draft – June 11, 2019

Legend

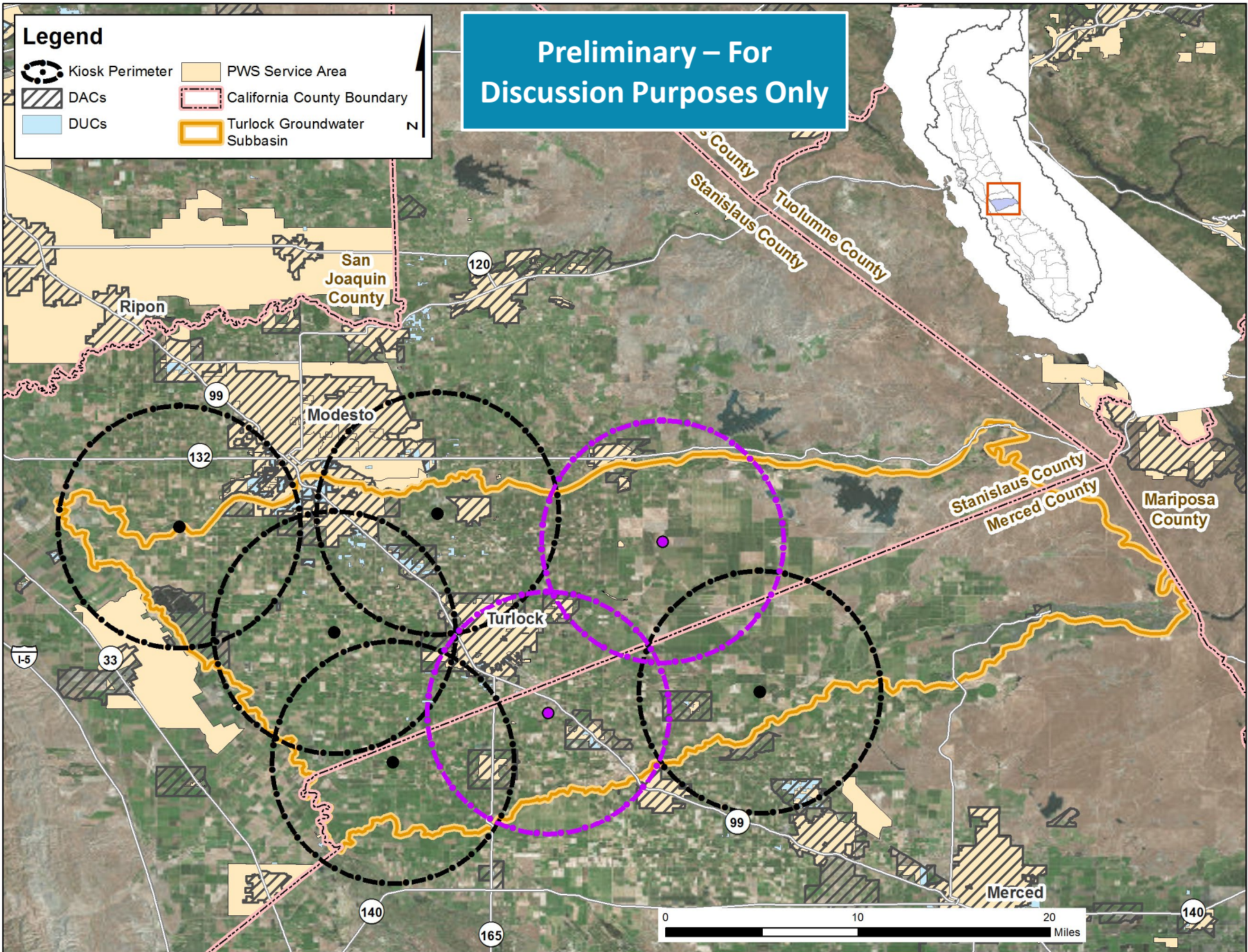
Upper Zone Ambient Nitrate (mg/L as N)

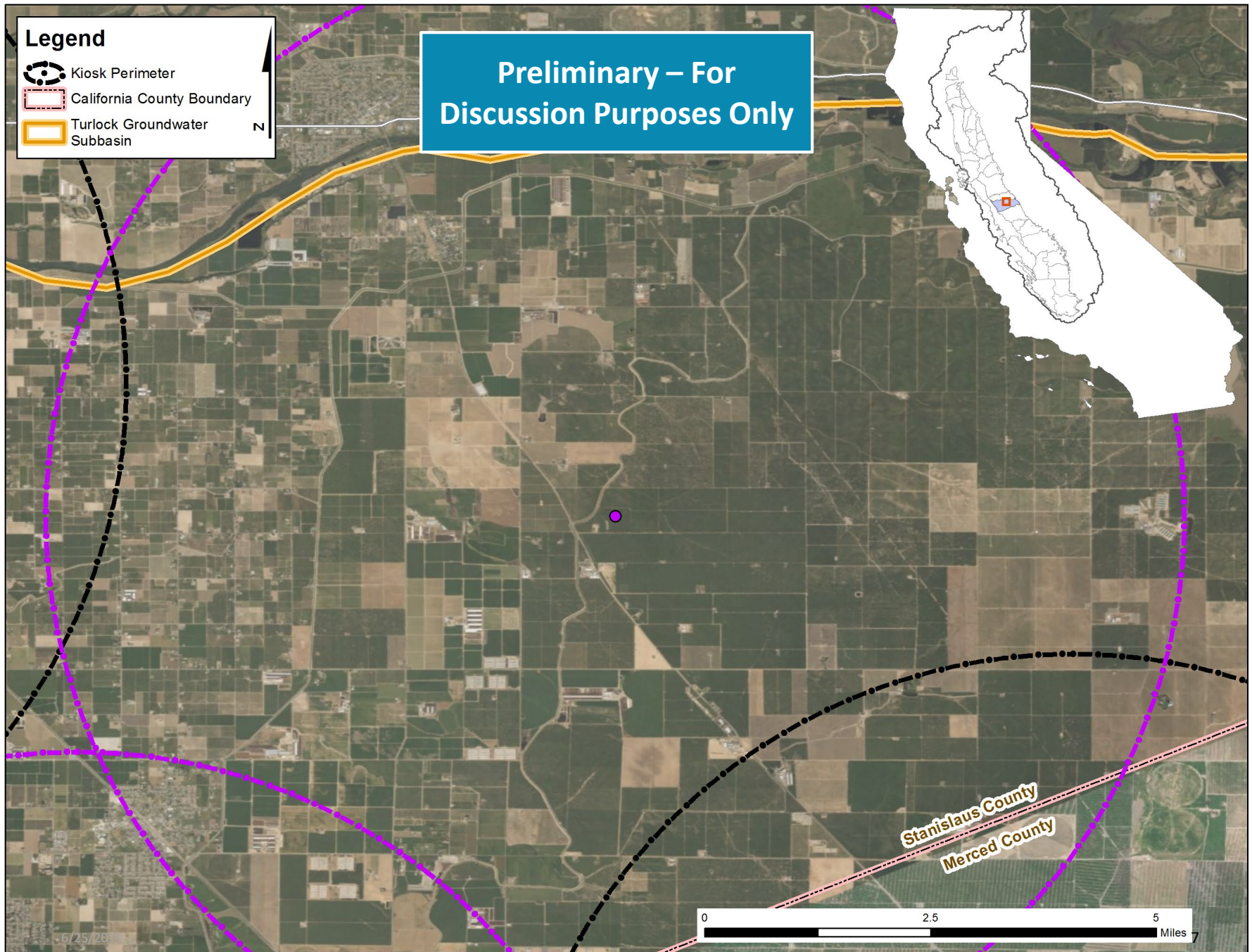


Preliminary – For Discussion Purposes Only



Preliminary – For Discussion Purposes Only





Preliminary – For Discussion Purposes Only

Legend

- Kiosk Perimeter
- California County Boundary
- Turlock Groundwater Subbasin

N

Turlock

99

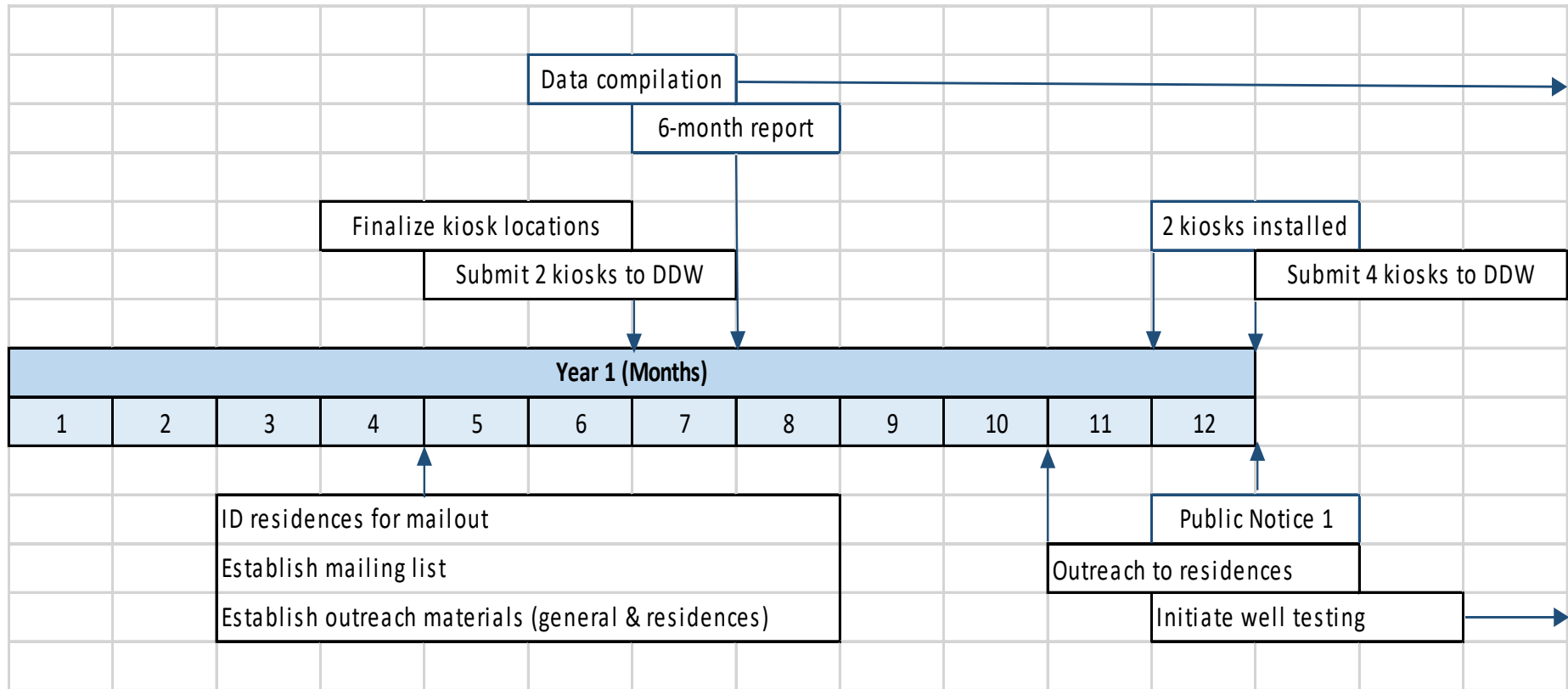
Stanislaus County
Merced County

165

99

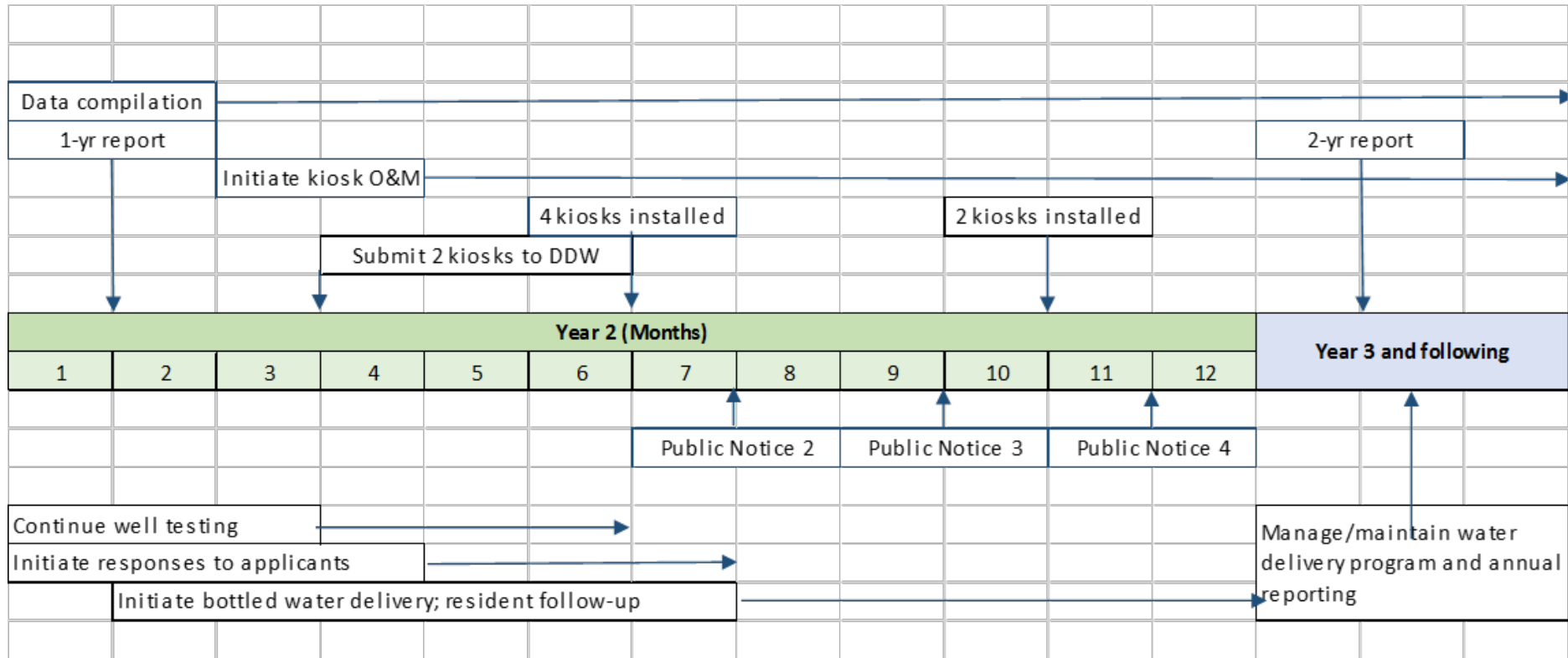
0 2.5 5 Miles

EARLY ACTION PLAN – YEAR 1 SCHEDULE



Preliminary – For Discussion Purposes Only

EARLY ACTION PLAN – YEAR 2 AND FOLLOWING SCHEDULE



Preliminary – For Discussion Purposes Only

Period	Key Activities	Estimated Cost
Startup – First Six Months	<ul style="list-style-type: none"> Identify Residents Outreach Materials Finalize Kiosk Locations Submit 2 Kiosks to DDW Reporting <div>Preliminary – For Discussion Purposes Only</div>	\$178,000
Second Six Months	<ul style="list-style-type: none"> Submit 4 Kiosks to DDW Install 2 Kiosks Alternative Water Delivery Program Implementation <ul style="list-style-type: none"> Mailout Water Testing (as needed) Initiate Program Reporting 	\$182,125
Year 2	<ul style="list-style-type: none"> Submit up to 2 Kiosks to DDW Install up to 6 Kiosks Alternative Water Delivery Program Implementation <ul style="list-style-type: none"> Water Testing (as needed) Ramp up to full Program implementation Reporting 	\$469,875
Annual Cost Post-Year 2	<ul style="list-style-type: none"> Kiosk Management (O&M) Manage AWD Implementation Reporting 	\$247,950

ALTERNATIVE WATER DELIVERY COSTS – BOTTLED-WATER DELIVERY

Household Size	No. of Bottles per Delivery	No. of Bottles per Month (2 deliveries /month)	Cost per Month (\$9.50/bottle)*
1-3	6	12	\$114
4-6	8	16	\$152
7+	10	20	\$190

* Delivery charge (~4%); \$6 credit for each bottle returned for recycling

- Per the above table, assumed the following:
 - 14 bottles/month (3-4/household on average)
 - Delivery charge of 5%
 - \$6 credit applied to all delivered bottles
- Other parameters:
 - No. of potential residences: ~2,600 at risk domestic wells identified; used 2,500 as base number
 - Participation rate based on Salinas bottled-water program experience:
 - 15% of residences contacted applied for delivery (used 20% for Turlock)
 - 47% tested above MCL (used 50% for Turlock)

ALTERNATIVE WATER DELIVERY COSTS – POINT OF USE SYSTEMS

- Several processes considered effective for removal of nitrate: reverse osmosis (RO), ion exchange, and electrodialysis.
Estimated costs for under-the-sink RO unit:
 - Example 1 (Self-Help Enterprises)
 - Equipment and installation is about \$800
 - Annual maintenance costs \$237
 - Example 2 (Dr. Hoon Hyung, LG NanoH₂O, Inc.):
 - Equipment and installation is about \$600 to \$700.
 - Annual maintenance cost is about \$100
- Other administrative costs to manage the program not included above



PROJECT STATUS UPDATES

- Groundwater Assessment
- Outreach to Permitted Dischargers



FINAL AGENDA ITEMS

- Other Business
- Next Meeting – Proposed: July 29

A wide-angle landscape photograph showing a vast, flat green field in the foreground, likely a crop field, with rows of plants stretching towards the horizon. In the background, a range of rugged mountains is visible, with their peaks covered in snow and illuminated by a warm, golden light, suggesting sunrise or sunset. The sky is a clear, pale blue.

Adjournment