Kings River Water Quality Coalition

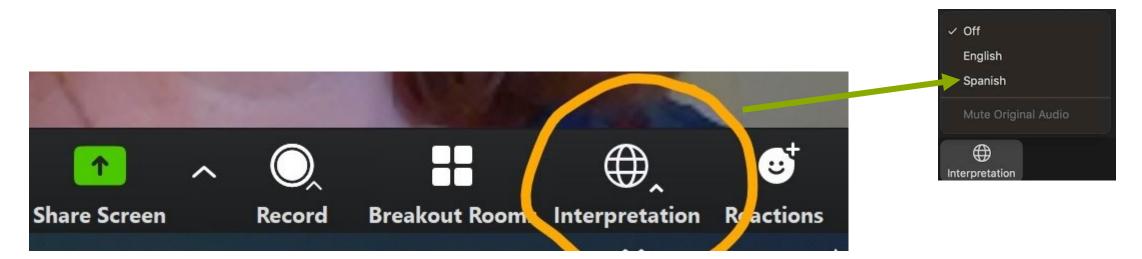
2021-2022 Annual Membership Workshop



- Zoom Webinar Details
 - Video and Audio Controls are OFF for participants
 - Questions & Answers (may be taken during or at the end of presentation)
 - \bullet Use the Q&A to type a question throughout the presentation
 - Use the Raise Hand button to ask a question verbally
 - Technical difficulties
 - Use the Chat feature for Zoom technical assistance
- Attendance Credit

- If you registered for the webinar and logged in with your same email address, you will be given appropriate attendance credit for the member accounts listed during registration.
- If you did not register or are logged in with a different email address, please either notify the Coalition via email (<u>info@kingsriverwqc.org</u>) or in the chat feature during the webinar with your Member IDs for appropriate attendance credit.
- In person credit when you check in. Please provide all Member IDs represented.

- Spanish Translation/Traducción Española
 - To listen to the presentation in Spanish, click the globe icon at the bottom of your screen and select Spanish.
 - Para escuchar la presentación en español, haga clic en el ícono del globo terráqueo en la parte inferior de la pantalla y seleccione Español.



- Outreach Presentations Available Online and In-Person
- Webinars (Live):

- January 13 9 AM
- February 1 1 PM
- In-Person (RSVP Required)
 - January 20: Kings County Fairgrounds, Hanford, CA 9 AM and 1 PM
 - January 27: Selma Portuguese Hall, Selma, CA 9 AM and 1 PM
 - February 3: CPDES Hall, Easton, CA 9 AM and 1 PM
 - February 9: Kerman Community Center, Kerman, CA 9 AM and 1 PM
- Webinar recording and other outreach materials is available online: <u>http://kingsriverwqc.org/account</u>

- COVID-19 Restrictions
 - KRWQC Office: Open to Public (by appointment only)
 - Masks Required
 - In-person by appointment only (No Walk-ins) 1 Hour
 - Virtual Appointment by appointment only 1 Hour: <u>https://kingsriverwqc.org/virtualappointment</u>
 - Paper Templates are Located Outside KRWQC Office (4886 E. Jensen Ave Fresno, CA 93725)
- March 1, 2022 Submittals
 - Irrigation and Nitrogen Management Plan (INMP) Summary Report for 2021 Crop Year
 - INMP Summary Report required to be submitted ONLINE through the Member Portal: <u>http://kingsriverwqc.org/account</u>
 - Paper submittals will not be accepted
- Coalition Contact Information
 - Please Include Member ID(s) in all communications
 - Email: <u>info@kingriverwqc.org</u>
 - Phone: **559-365-7958**

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• Member Portal Help Request

Outline

- March 1, 2022, Deadline
- General Order Reminders and Updates
- KRWQC Activities
- Templates
- Online Portal
- Best Management Practices\Groundwater protection

March 1, 2022, Deadline

- What to Complete and/or Submit by March 1, 2022
 - INMP Summary Report
 - Required for <u>ALL</u> members (high and low vulnerability areas) for previous crop year (2021)
 - Submitted to the KRWQC **<u>Online</u>** through the Member Portal
 - <u>http://kingsriverwqc.org/account</u>
 - Paper submittals will not be accepted.
 - A \$50 administrative fee assessed for late submittals (after March 1, 2022).
 - INMP Worksheet

- Pre-Season Planning, Excepted, and Recommended/Planned sections
- Kept On-Farm (Not submitted to KRWQC)
- Certification required if
 - Located within a high vulnerability area or
 - Located within low vulnerability area and identified as outlier
 - Please check Self-Certification Status
- Certification not required if
 - Located within low vulnerability area and not identified as outlier

- Two Options for Compliance with Water Quality Regulations
 - Coalition membership (lowest cost)
 - Individual Order (much higher cost)
- Enrollment
 - All irrigated farmland MUST be enrolled
 - Unless enrolled in Dairy Program
 - Includes Irrigated Pasture
 - Coalition/State Fees based on Irrigated Acres, not Parcel Acres
 - Newly purchased and/or leased land must be enrolled
 - Please provide information for
 - Owner
 - Lessor (if leased)

- Drinking Water Supply Well Monitoring
 - Members required to monitor drinking water supply wells on enrolled parcels for nitrates (Nitrate + Nitrite as N) annually
 - Defined as a well that actively provides water for human consumptive use (drinking or cooking)
 - Year 1 Sampling Window, January 1 December 31, 2020, and <u>annually</u> thereafter unless
 - N results are less than 8 mg/L for 3 consecutive years
 - Sample every 5 years
 - N results are above 10 mg/L
 - Member must provide notice to users using nitrate notification template; and
 - Send copy of completed template to the Regional Board
 - Have N results for well for up to 5 years prior from ELAP certified laboratory
 - N results of equal to and between 8 to 10 mg/L require annual sampling.
 - ELAP certified laboratory

- Drinking Water Supply Well Monitoring Resources
 - Environmental Laboratory Accreditation Program (ELAP) labs list:
 - <u>https://www.waterboards.ca.gov/drinking_water/certlic/labs/</u>
 - Drinking Water Member Information Form
 - <u>https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/drinking_water/dw_member_info.pdf</u>
 - Drinking Water Notification Template
 - <u>https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/drinking_water/dw_notification_temp.pdf</u>
 - Frequently Asked Questions
 - <u>https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/drinking_water/dw_faq.pdf</u>

- Salt Control Program
 - Notice to comply mailed early 2021 to Discharge Permit Holders
 - Path: Option 2 Alternative Option for Salt Permitting
 - Requires participation in the Prioritization and Optimization (P&O) Study
 - Objective: Evaluate existing conditions, policies, and engineering alternatives to identify salt management projects and actions to achieve salt sustainability in the Central Valley.
 - P&O Study began in 2021; completion 10 to 15 years
 - Participants must maintain current permit performance levels; deferment of more stringent and costly permitting requirements until after completion of Phase 1 P&O Study and Phase 2 is implemented
 - Annual Fee fees vary by Permit Type/Industry Category
 - Status Update:

- P&O Study Workplan approved March 29, 2021
- P&O Study Workplan Implementation: Integrated Scope of Services Outline submitted July 2, 2021
- Consultant Integrated Scope of Services approved October 14, 2021
- More information: <u>https://www.cvsalinity.org/salt-control-program</u>

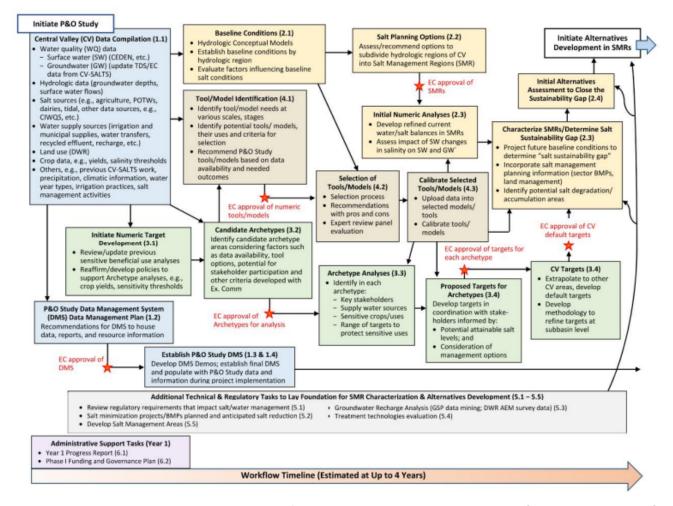


Figure 1. Integrated SOS, Interlinkages among Primary Workflow Pathways Associated with Tasks 1 through 6 (EC = Executive Committee).

• Nitrate Control Program

- Goals
 - 1. Provide safe drinking water supplies
 - 2. Reduce Nitrate impacts to water supplies
 - 3. Restore groundwater quality, where reasonable, feasible, and practicable
- Notices to comply 6/29/2020
- Path: Pathway B Local Management Zone
 - Kings Water Alliance: <u>https://kingswateralliance.org/</u>
 - Non-profit formed August 2020 by dischargers: agriculture, dairy, poultry, wastewater treatment facilities, food processers, wineries, packing facilities, etc.
 - Submitted Documents (March 2021):
 - Preliminary Management Zone Proposal
 - Comments expected January/February 2022
 - Early Action Plan
 - Conditional Approval May 2021
 - Short-term drinking water solutions
 - Well sampling: 223 as of December 29, 2021
 - Bottled water: 139 households as of December 29, 2021
 - Fill Stations



2 IN 5 DOMESTIC WELLS ARE IMPACTED BY UNSAFE LEVELS OF NITRATE IN THE KINGS WATER ALLIANCE*.

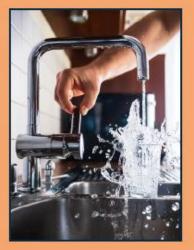
Kings Water Alliance

Solving the Nitrate Problem

An Early Action Plan (EAP) to address drinking water with unsafe nitrate levels has been developed. The EAP identifies nitrate-impacted areas and proposes short-term, immediate drinking water sources for residents like bottled water.

Drinking Water Solutions

The Kings Water Alliance will provide safe drinking water at **no cost** to those impacted by unsafe nitrate levels. Two key options for impacted residents includes bottled water (delivered or non-delivered) and local fill station kiosks.



Kings Water Alliance

Think you might qualify for free drinking water solutions? Here's how you can check:



Confirm you live within the Kings Water Alliance boundary Visit <u>www.kingswateralliance.org/map</u> to check that your address is in the Priority 1 area on our interactive map. Or call us at (559) 549-6747 for assistance.



Confirm your well has unsafe nitrate levels

The Kings Water Alliance is offering **FREE** water quality testing for nitrates. Visit <u>www.kingswateralliance.org/welltest</u> or call us at (559) 549-6747 for details.



Be willing to sign an agreement with a service provider The Kings Water Alliance is committed to providing excellent safe drinking water solutions at **no cost** to eligible residents via service providers who deliver bottled water.

Kings Water Alliance

Explanation

Upper Zone Well with Average Post-2000 Nitrate





- >2.5 5.0
- >5.0 7.5
- >7.5 10.0
- >10.0
- △ Upper Zone Control Point Outside MZ

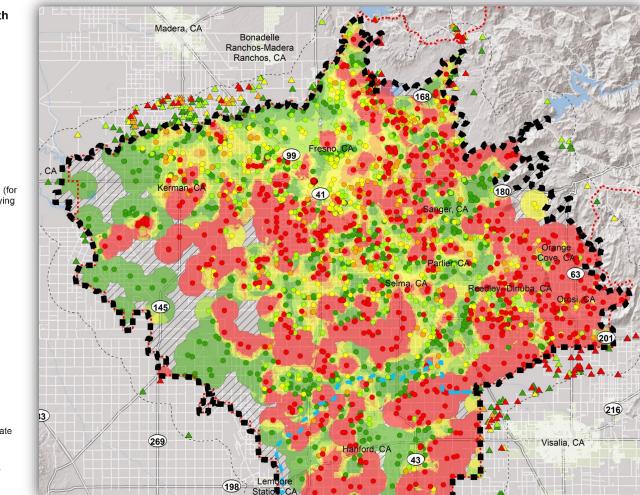
MZ Area Delineation (for reporting and displaying

Ambient Nitrate in the Upper Zone





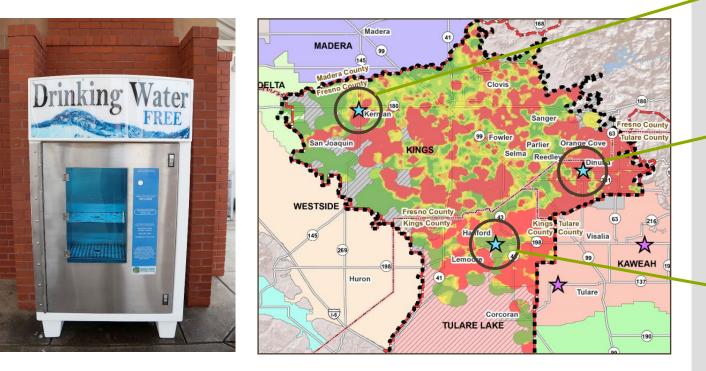
1/18/2022



Remember: >10 mg/L as N (red areas) means that the water is potentially unsafe to drink, and you may be eligible for free drinking water solutions

Kings Water Alliance

You can access safe drinking water NOW!



15101 W Kearney Blvd Kerman, CA 93630

DINUBA 517 W El Monte Way Dinuba, CA 93618

HANFORD

KART Transit Center 504 W. 7th Street Hanford, CA 93230

For more info: www.kingswateralliance.org/fillstations

Kings Water Alliance WE ALL HAVE INFLUENCE: SPREAD THE WORD!



Community Stakeholder

Resident/Domestic Well Owner



• Groundwater Protection Formulas

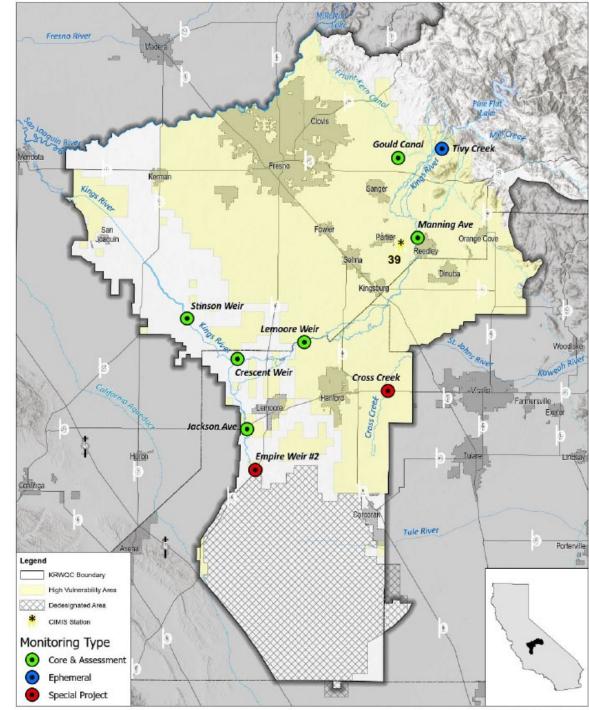
- Conditionally approved on January 19, 2021
- Purpose
 - Nitrate-N load numbers or concentrations of nitrate in water
 - Reflecting influence of
 - Total applied nitrogen
 - Total removed nitrogen
 - Recharge conditions
 - Other relevant and scientifically supported variables
- Parcel level
- SWAT (Soil Water Assessment Tool) Model Runs to Account for Physical Factors

- Groundwater Protection Values
 - Conditionally approved the GWP Values on October 27, 2021
 - Calculated in Townships with > 10% Irrigated Acreage classified as High Vulnerability and/or
 - Calculated if Township has Disadvantaged Community within
 - Values reflect discharge estimates from the bottom of the root-zone
 - Values do not consider post-root-zone processes (e.g., groundwater recharge, vadose zone attenuation) that may affect the concentration of leachate that reaches groundwater
 - To be considered during GWP Targets

• Groundwater Protection Targets

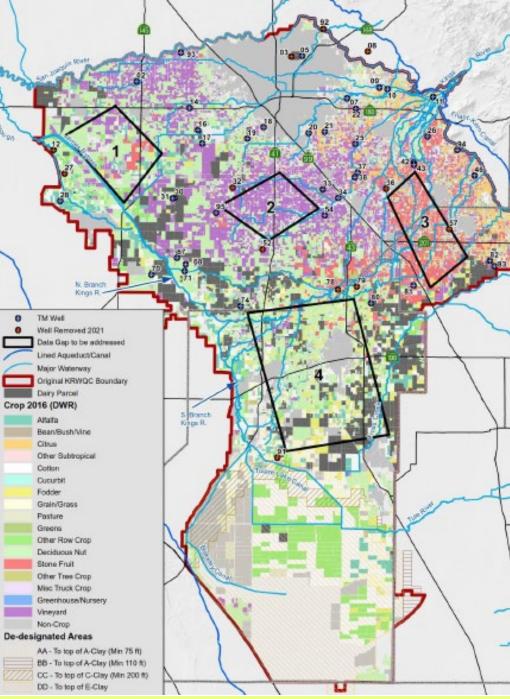
- Objective: Desired loads and/or concentrations that are necessary to achieve compliance with receiving water limits for groundwater and need to be informed by available data and information
- To be submitted July 19, 2022

- Surface Water Monitoring
 - 6 of 8 Surface Water Sites Monitored in 2021
 - 33 sets of Water Quality Data Collected
 - + 527 individual samples
 - Another Year without Agricultural Material Detections
- Monitored Sites represent changes in local conditions
 - Changes in Cropping Patterns
 - Changes in Soil Characteristics
 - Chemistry Testing based on local use patterns

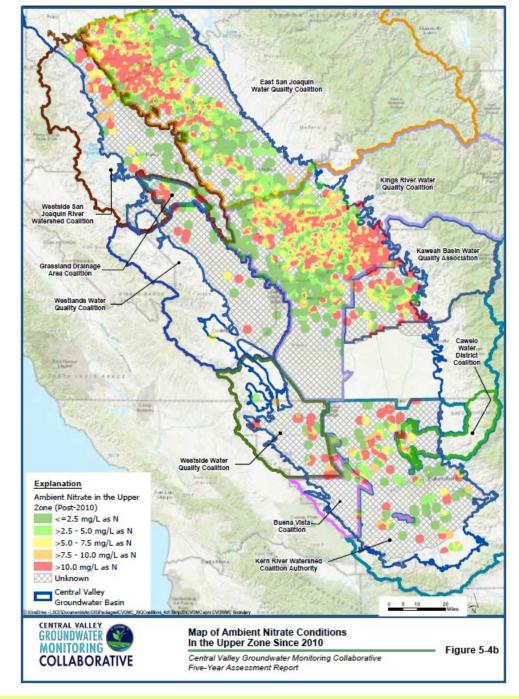


- Groundwater Quality Trend Monitoring
 - Network of Shallow ag and domestic wells
 - Monitors changes in uppermost fraction of aquifer
 - Samples collected June of each year
- Additional Cooperators Needed
 - Fill gaps in basin coverage
 - No charge to cooperator
- Requirements
 - Well Construction Report
 - Need to know depth and screen locations
 - Located in Underserved Areas
 - Not adjacent to non-irrigated ag dischargers
- Data shared with Cooperators

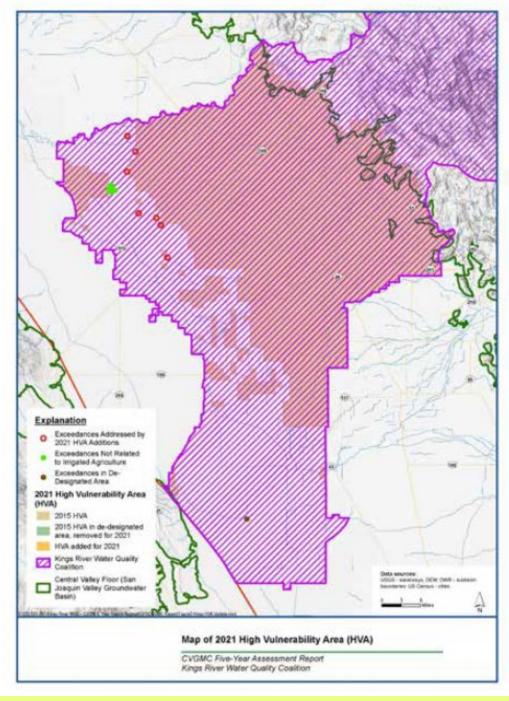
- Groundwater Quality Trend Monitoring
 - Network of upper aquifer wells
 - Samples collected June of each year
- Additional Cooperators Needed
 - Fill gaps in basin coverage
 - No charge to cooperator
- Requirements
 - Well Construction Report
 - Need to know depth and screen locations
 - Not adjacent to non-irrigated ag dischargers



- CVGMC Five Year Assessment Report
 - Submitted November 30, 2021
 - Collaborative effort from ten ILRP coalitions
 - Coordinated monitoring plan
 - Quality control
 - Reporting requirements
 - Analyze nitrate concentration and other groundwater quality data for the southern Central Valley



- CVGMC Five Year Assessment Report
 - Five-Year High Vulnerability Area Update (Proposed)



- State Water Resources Control Board Fees
 - Water Quality Fees for ILRP increased 15.6% for FY 2021 2022
 - Fees cover Staff Time/Number of Personnel at State and Regional level
 - Permitting Programs are to be "self-sufficient"
 - No support from General Fund
 - KRWQC Outreach Committee established
 - Coordinate efforts
 - Member participation

Templates

- Information Due March 1, 2022
 - All member submittals are required to be submitted ONLINE through the Member Portal: <u>http://kingsriverwqc.org/account</u>
 - Paper submittals will not be accepted
- <u>One</u> Template for 2021 Crop Year
 - Irrigation and Nitrogen Management Summary Report
 - Farm Evaluation and Management Practices Implementation Report if not received in 2021
- Paper Templates
 - Self-serve available outside KRCD Office (4886 E. Jensen Avenue)
 - Templates Available at <u>www.kingsriverwqc.org/resources/#templates</u>
- Grower to Complete <u>Planning</u> Section of INMP and Retain On-Farm

- Applies to All Growers
- Planning Portion Should Already be Completed for 2021 Crop Year
- Collects Critical Information Regarding Management Practices
 - Crop Age
 - Irrigation Efficiency Practices
 - Nitrogen Efficiency Practices
 - Amount of N applied by Category
 - Yield
- Encourages Growers to Consider All Nitrogen Sources
 - Irrigation Water
 - Compost/Manure
 - Existing Soil Nitrate levels
 - Commercial Fertilizer

1. Was this Management Unit Identified as a Statistical Outlier by the Coalition Last Year? (Y/N)

Crop Year (Harvested):

Parcel Management								
Management Unit (MU) or Field	APN	County	Crop	Crop Age (years)	Irrigated Acres			
				Total Acres				

30 1/18/2022 KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

IRRIGATION AND NITROGEN MANAGEMENT PLAN (INMP) WORKSHEET

Member	ID-
IVICIINCI	10.

_____ INMP Field or MU: ______Crop: _____ Total Acres: _____

1. Irrigation Method*	Pre-Season Planning
(check one for Primary; if applicable one for Secondary) Primary Secondary ¹	, check 2. Crop Evapotranspiration (ET, inches)
Drip Micro Sprinkle Furrow Sprinkler Border Strip	(inches) 4. Irrigation Water N Concentration
Flood 5. Irric	(ppm or mg/L, as NO ₃ -N) gation Efficiency Practices* (Check all that apply)
 Laser Leveling Use of ET in scheduling irrigation Water application schedule to need Use of moisture probe (e.g. tension) 	Soil Moisture Neutron Probe Pressure Bomb Other

	ARVEST / YIELD INFORMATION		
Harvest / Yield	Expected (A)	Actual (B)	
6. Production Unit (lbs, tons, etc.)	7. Harvested Yield*		
	NITROGEN MANAGEMENT		
8. Nitrogen Efficiency Practices* (Check all that apply)	Nitrogen Sources	Recommended/ Planned N (A)	Actual N (B)
Split Fertilizer Applications	9. Soil – Available N in Root Zone (Annualized, Ibs/ac)		
 Irrigation Water N Testing Soil Testing 	10. N in Irrigation Water* (Annualized, Ibs/ac)		
Tissue/Petiole Testing Fertigation	11. Organic Amendments* (Manure/Compost/Other, lbs/ac estimate)		
Foliar N Application Cover Crops	12. Dry/Liquid Fertilizer N* (lbs/ac)		
Variable Rate Applications using GPS Other:	13. Foliar Fertilizer N* (Ibs/ac)		
☐ Other:	14. TOTAL NITROGEN (lbs/ac)		

- Supporting Information Available
- Crop Water Use
 - Coalition to Publish 10-Year Average Crop Water Use Values Each January
 - 10-Year Average Eliminates Yearly Variations
 - Use Value in Calculation of Nitrogen Uptake from Irrigation Water
 - <u>http://kingsriverwqc.org/wp-content/uploads/2022/01/10-yr-crop-water-use-2012-2021.pdf</u>
- Anticipated Crop Irrigation
 - Take Average Crop Water Use and Factor in Inefficiencies in Irrigation System
 - Drip/Micro Systems Typically 80% Distribution Uniformity (DU)
 - Higher if Newer, Well Maintained
 - Low DU means excess irrigation in majority of field
 - + Surface Systems (Furrow, Basin Flood) Typical DU of 65%
 - Assumes Short Runs, Leveled Ground
 - Include Any Water Applied Specifically to Leach Salts
 - Include Rainfall (estimate)

- Box 10: N in Irrigation Water
 - Take Nitrate-N (in ppm) and perform the following calculation:
 - ppm Nitrate-N x 0.227 x Annual Crop Water Use (ET, inches) = lbs N/ac
 - Example: Almonds Avg ET 41 inches/yr

10 ppm Nitrate-N x 0.227 x 41 inches = 93 lbs N/Ac

- Almost half of typical seasonal application
- Online Calculator Available
 - <u>https://agmpep.com/calc-irrn/</u>
- This Calculator Will Do the Following:
 - Convert ppm Nitrate-N to lbs N/ac Applied IF You Have ppm and Crop Water Use
 - Will Adjust If You Blend Two Sources (Groundwater + Surface Water, Well 1 + Well 2)
 - Must Know Split Between Sources
 - Must Know Nitrate-N ppm for Each Source

- Box 11: Organic Amendments (Manure, Compost)
 - Content is Highly Variable
 - Assuming 25 lbs Total N/ton and 3 lbs/Ton Ammonium-N, net content is 22 lbs Available Organic N/Ton
 - 17.5% of Available Organic N will be Available During Summer*
 - Assumes Immediate Incorporation into Soil after Application
 - Final Available N = 3 lbs/Ton Ammonium-N + (17.5% x 22 lbs/Ton Organic N) = 6.9 lbs N/Ton of Manure as Plant Available Nitrogen (PAN)
 - Remaining N Available for Soil Biota During Fall, Winter
 - Likely Gone by Next Spring

• *UC Davis data

- Box 12: Dry/Liquid Fertilizer N
- Proper Conversion of Product Required
 - Dry Product: Multiply Weight of Dry Product by Guaranteed Analysis Percentage
 - Example: 11-52-0 contains 11% N by weight.
 - 200 lbs/ac x 11% = 22 lbs N/ac applied
 - Liquid Product: Convert Gallons Applied to lbs N Applied. This Information Should be on the Product Label.
 - Example: 1 gallon of UN-32 Weighs 11 lbs/gal. As the Analysis is 32-0-0, it is 32% N by Weight. Therefore, 1 gallon Contains 11 lbs/gal x 32% = 3.52 lbs N/gal.
 - The product label may even state the pounds of N per gallon.
- Most Suppliers Provide Total Delivered on Invoice. Convert as Necessary to lbs Product/ac and then lbs N/ac
- Foliar N Handled the Same Way

Irrigation and Nitrogen Management Plan Summary Report

- This is the Data Reported to the Coalition
- All Values Reported on a <u>**Per Acre**</u> Basis
- Reports N Applied by Category
 - Irrigation Water N Applied
 - Organic Amendments N Content
 - Dry/Liquid Fertilizers
 - Foliar Fertilizers
- Yield + Production Unit Used
 - In your yield units/acre (lbs, tons, boxes, bins, bales, etc.)
- Yield Info (Non-Bearing, Crop Not Harvested, Type of Harvest (silage, grain).

ILRP PARCEL AND FIELD INVENTORY

STEP 1: GENERAL INFORMATION

Member ID: _____

Crop Year (harvested): _____

Name:

STEP 2: FIELD AND PARCEL INVENTORY

Populate the following table with parcels for which the INMP Summary Report is being submitted. You can define a field or a "Management Unit" as a parcel or parcels with the same crop, fertilizer inputs, irrigation management practices, and nitrogen management practices.

If you do not apply nitrogen fertilizer to your fields these forms are still required to be returned. Please enter a 0 (zero) for nitrogen applied on the INMP Summary Report.

Field ID or Management Unit (MU)	Not Farmed [*]	APN	County	Crop	Crop Age (Perennial only)	Irrigated Acres
				Anna Marana an Anna an		
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KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

IRRIGATION AND NITROGEN MANAGEMENT PLAN (INMP) SUMMARY REPORT

Refer to your Irrigation and Nitrogen Management Plan (INMP) Worksheet and Parcel Inventory for information to complete an INMP Summary. Report for each field or Management Unit.

STEP 1: GENERAL INFORMATION	STEP 2: OUTLIER NOTIFICATION RECEIPT	STEP 3: INMP CERTIFICATION METHOD
Member ID:	On (Date), the Coalition provided information about this membership's	Certified INMP Specialist (e.g. certified crop
Forms Completed By:	nitrogen efficiency for the previous crop year and identified management units that were	adviser who has completed the CDFA training program)
	considered outliers compared to other Coalition members growing the same crop.	Self-Certified (CDFA training program)
Crop Year (Harvested):	Please check the box below if you were	Self-Certified (follows NRCS or UC
Submittal Date:	identified as an outlier by the Coalition.	Cooperative Extension site-specific recommendations)
		Self-Certified (No fertilizers applied)

STEP 4: INMP SUMMARY REPORT

Complete the table below for each field or management unit for this membership. All values should be on a per acre basis.

Field or Management Unit	Crop	Crop Age	Total Irrigated Acres			Applied acre		Yield	Prod. Unit	Yield Info*
Refer to Parcel Inventory		Perennial only (years)	(acres)	N in Irrigation Water (Ibs/acre)	Organic Amendments (Ibs/acre)	Dry/Liquid Fertilizers (Ibs/acre)	Foliar Fertilizers (Ibs/acre)	Harvested Yield (Ibs/acre or tons/acre)	(lbs or tons)	

*Use this column to provide information about yield i.e. nonbearing; crop not harvested; type of harvest (e.g. silage, grain). If you harvest straw, please contact your Coalition.

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IRRIGATION & NITROGEN MANAGEMENT PRACTICES

Complete the following tables for each field or Management Unit (refer to ILRP Parcel and Field Inventory Sheet).

		Prima	ry Irrig (Sele	ation M ct one)	ethod			Second		igation I ct one)	Nethod	I
Field or MU	Drip	Micro Sprinkler	Furrow	Sprinkler	Border Strip	Flood	Drip	Micro Sprinkler	Furrow	Sprinkler	Border Strip	Flood
												Π
									Π			

		Irrigati	on Efficiency	y Practices (Che	eck all that	apply)	
Field or MU	Laser Leveling	Use of ET in scheduling irrigations	Water application scheduled to need	Use of moisture probe (e.g. tensiometer)	Soil Moisture Neutron Probe	Pressure Bomb	Other
							· · · · · · · · · · · · · · · · · · ·

		Nitroge	n Effic	iency F	ractices	(Check al	I that a	apply)	
Field or MU	Split Fertilizer Applications	Irrigation Water N Testing	Soil Testing	Tissue/ Petiole Testing	Fertigation	Foliar N Application	Cover Crops	Variable Rate Applications using GPS	Other

KRWQC Member Portal



Member Portal

- Logging in
- Member Dashboard
- Member Information
- Requirements Checklist
- Maps
- Irrigation and Nitrogen Management Plan Summary Report
- Outreach
- Nitrogen Evaluation
- Member History

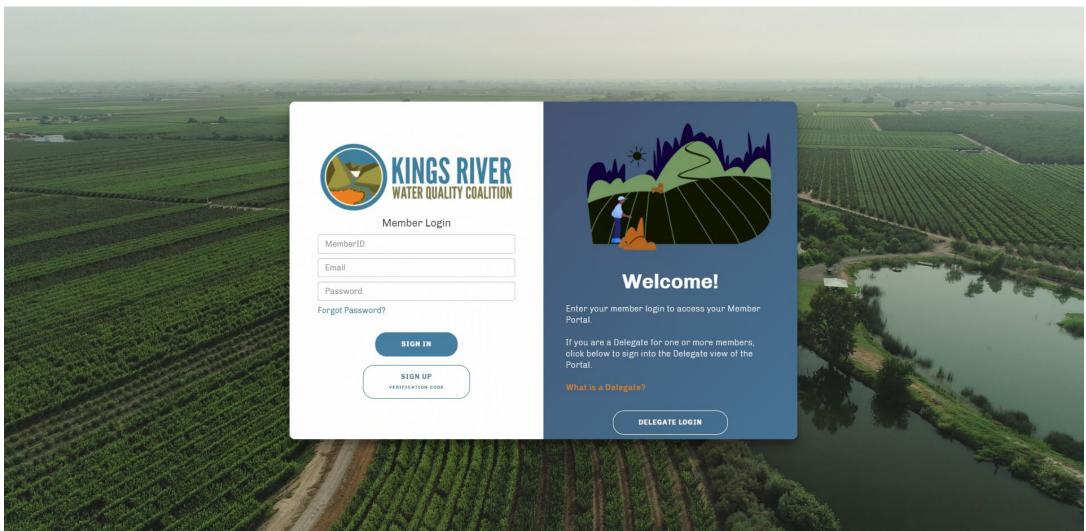
Logging In



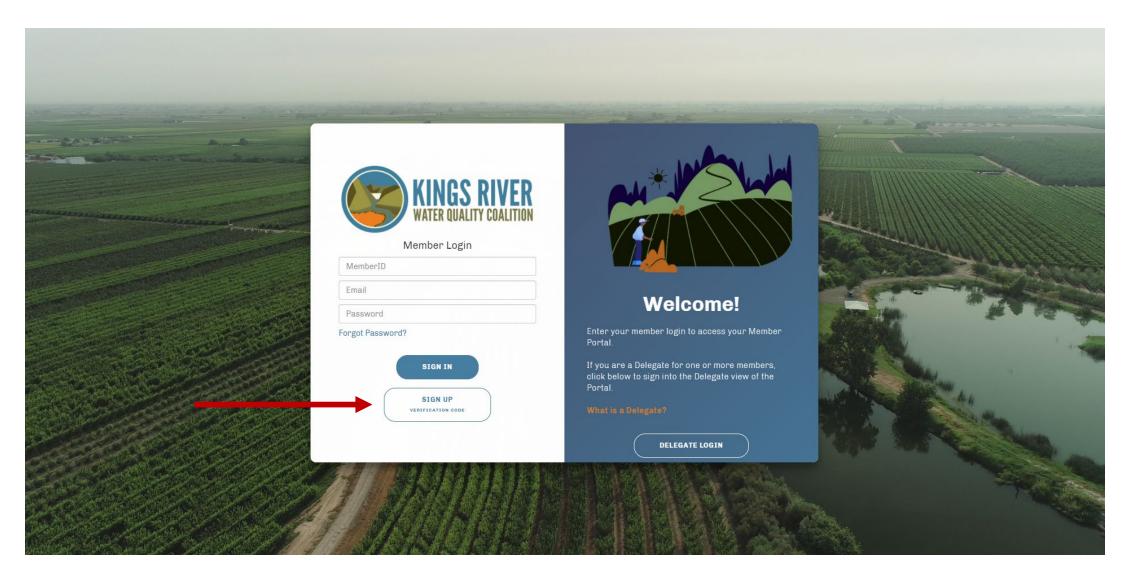
KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

Member Login

http://kingsriverwqc.org/account



Logging In For The First Time

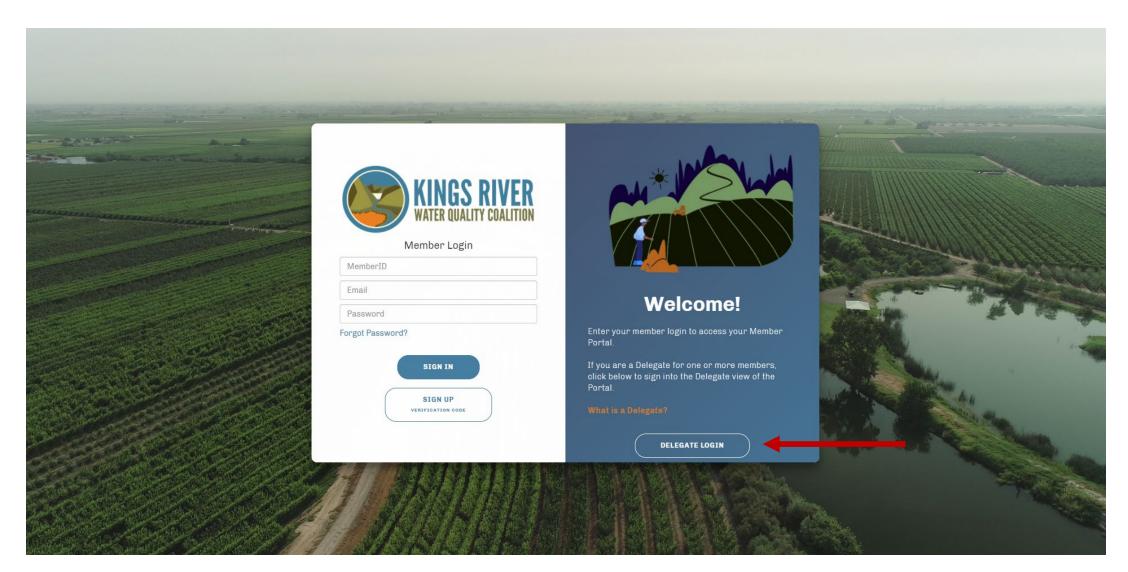


Logging In For The First Time



- Verification code was emailed to all members with an email address on file on December 8, 2020.
- Verification codes will be sent out again for those memberships that have not yet used one.
- Contact Coalition for verification code if you do not have one.

Delegate Login



Delegate Login



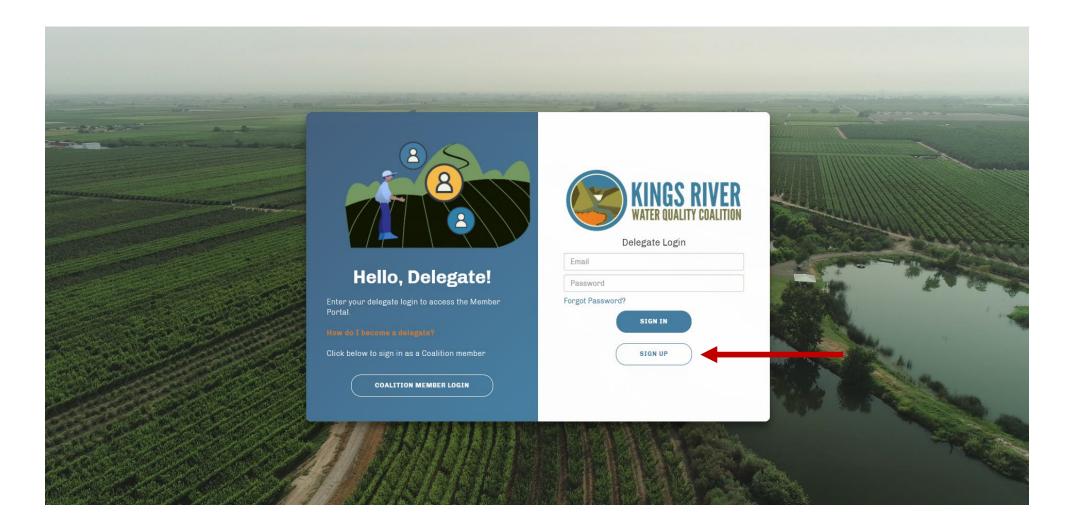
WHO IS A DELEGATE?

A DELEGATE is a person delegated the responsibility of turning in surveys for a member. Each member can have ONE delegate per survey type. Memberships with multiple growers should take steps to consolidate survey information to allow for all responses to be submitted at one time.

WHY ARE THERE TWO OPTIONS FOR LOGGING INTO THE PORTAL?

Logging in as a MEMBER gives you full access to all information for one membership. Logging in as a DELEGATE allows you to view information for multiple memberships on one screen. Members grant Delegates permission to access all or some of their information.

Delegate Sign Up



Sign Up As a Delegate

		Sign up as a	a delegate		
		our information belo a valid email addre			
Logi	n				
Email address (Userna	ume)	Email			
Password		New Password			
Confirm Password		Confirm Password	l		
Contact Info	ormation				
Company Name					
First Name			Last Name		
Street Address					
City		State		Zip	
County	optional		Phone		optional
		SIG	N UP		

- Once a delegate signs up, they can log-in and request permission to manage memberships.
- The request will be sent to the member's email to approve, if one is on file.
- If the member does not have an email on file, the request will go to the Coalition and the Coalition will contact the member for approval.

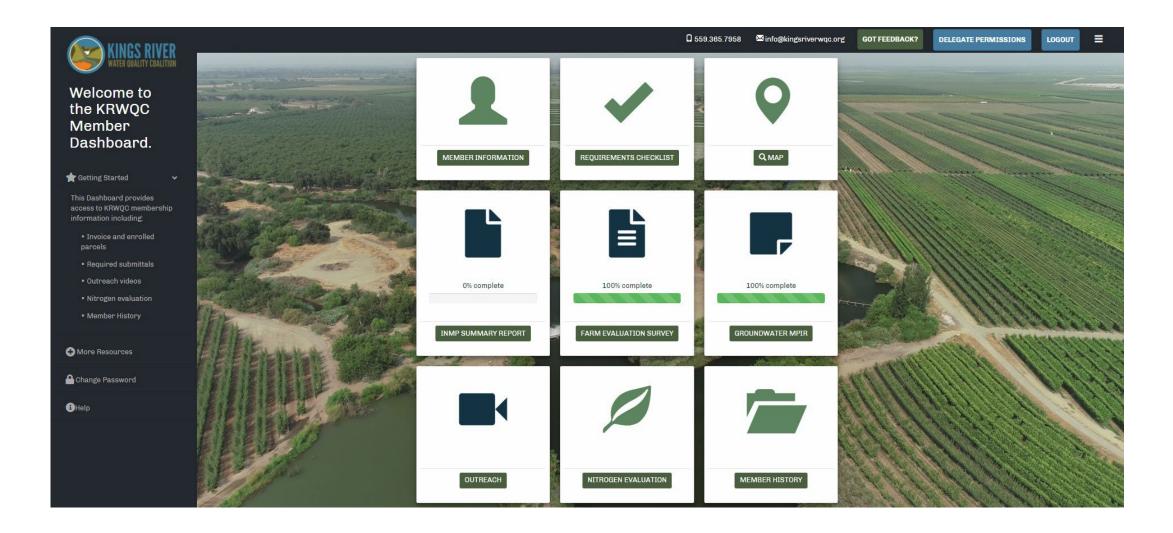
Dashboard



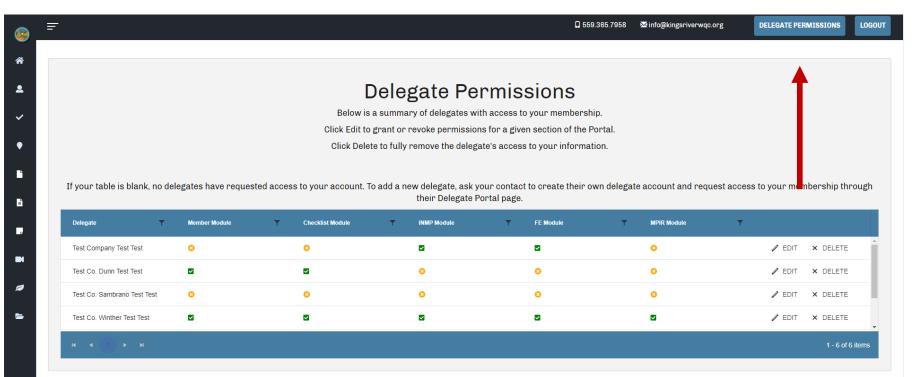
1/18/2022

KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

Member Dashboard



Set Delegate Permissions



- Members can approve a delegate's request under "Delegate Permissions"
- Access to each of the listed modules can be approved or denied.

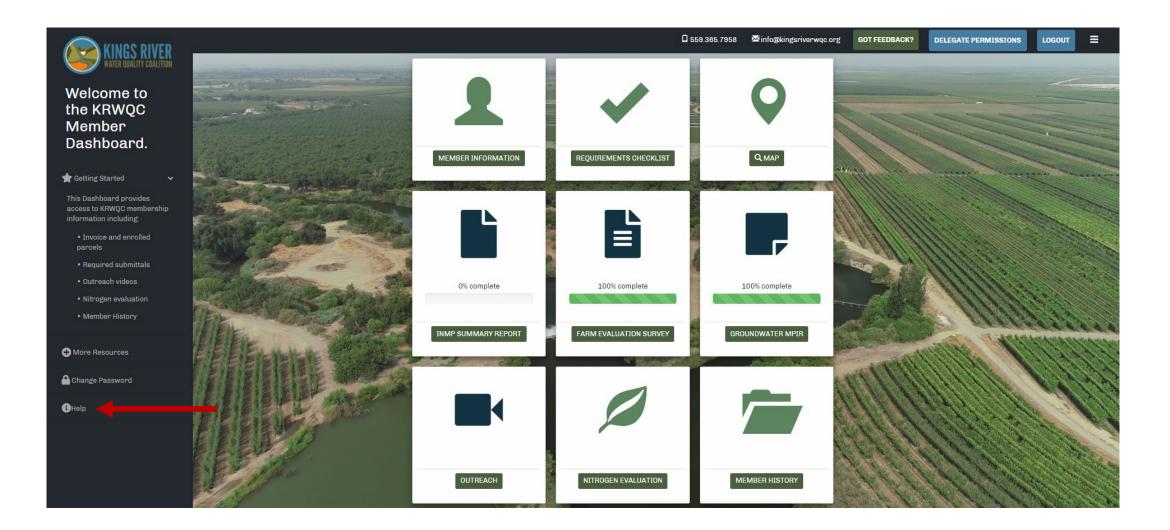
Left Menu

								_:						
				I	Dele	gate Pe	ermis	sions						
				Belowis	is a summa	ary of delegates w	with access to	your members	nip.					
				Click Edit to	o grant or	revoke permissio	ons for a give	n section of the	Portal.					
				Click Dele	ete to fully	remove the deleg	gate's access	to your informa	tion.					
If your table is bla	nk, no del	legates have reque	ested acces	ss to your account.	To add a n	new delegate, ask their Delegate		to create their o	own delegate	e account and req	uest access	to your mer	nbership th	irougi
If your table is bla Delegate	nk, no del T	legates have reque Member Module	ested acces	to your account. Checklist Module	To add a n Ţ			to create their of FE Module	own delegate	account and req	uest access T	to your mer	nbership th	irougł
	Ţ		ested acces		To add a n T	their Delegate			own delegate			to your mer	nbership th × DELETE	
Delegate	▼ st	Member Module	ested acces	Checklist Module	To add a n T	their Delegate		FE Module	own delegate	MPIR Module				:
Delegate Test Company Test Te	▼ st	Member Module	ested acces	Checklist Module	To add a n T	their Delegate		FE Module	own delegate	MPIR Module		EDIT	× DELETE	:

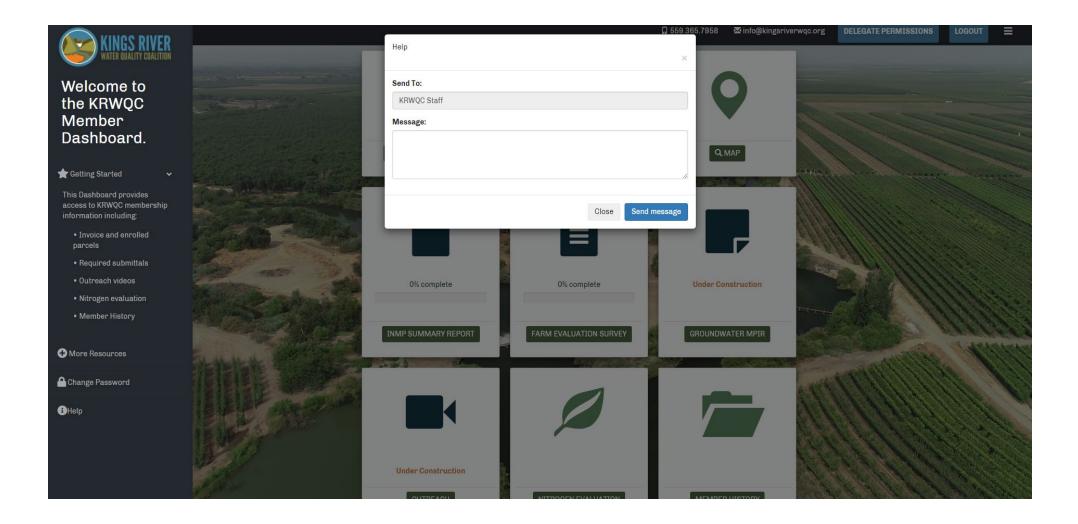
Left Menu

	©	×				□ 559.365.79	958 🛛 🖾 info@kingsriverwqc.org	DELEGATE PERMISSIONS
*	Dashboard							
٩	Member Information			D	elegate Pe	rmissions		
~	Checklist				summary of delegates wi		rship.	
¢	Мар			-	rant or revoke permission to fully remove the deleg	_		
Ľ	INMP SR							
L III	FE	If your table is	blank, no delegates have r		account. To add a new dele nembership through their		create their own delegate a	ccount and request access to your
F	Groundwater MPIR	Delegate	▼ Member Module	Y Checklist Module	Y INMP Module	Y FE Module	MPIR Module	T
•	Outreach	Test Company Test T	īest 🖸	0	2		0	EDITDELETE
ø	Nitrogen Evaluation	Test Co. Dunn Test T	iest 🔽		0	0	8	C EDIT
-	Member History							× DELETE
		Test Co. Sambrano						EDIT 1 - 6 of 6 items

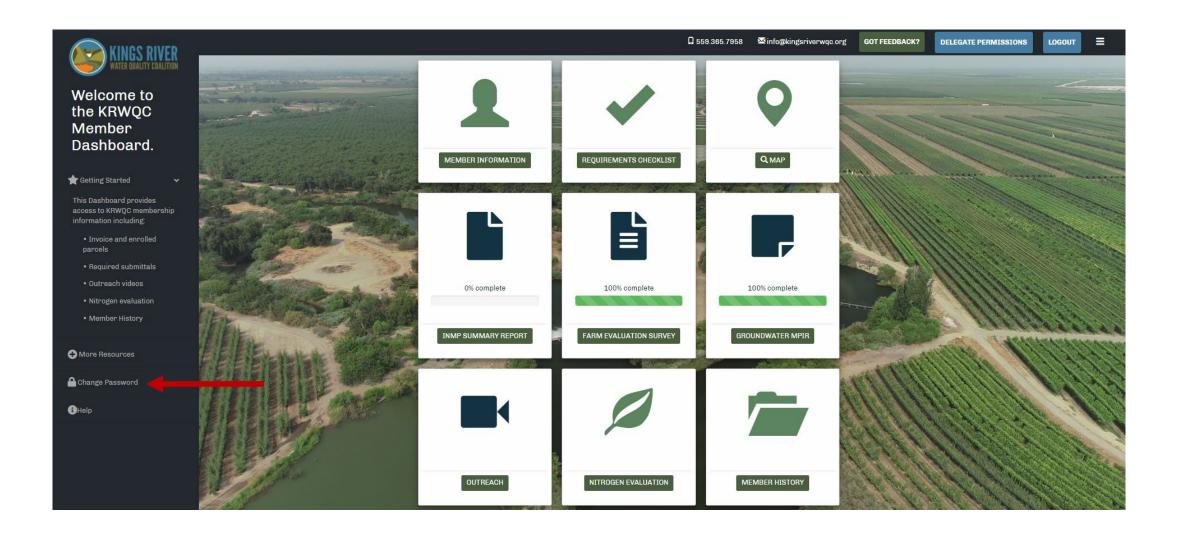
Help



Need Help?



Change Password



Change Password

Update your password

Old Password:

Old Password

New Password:

Retype New Password:

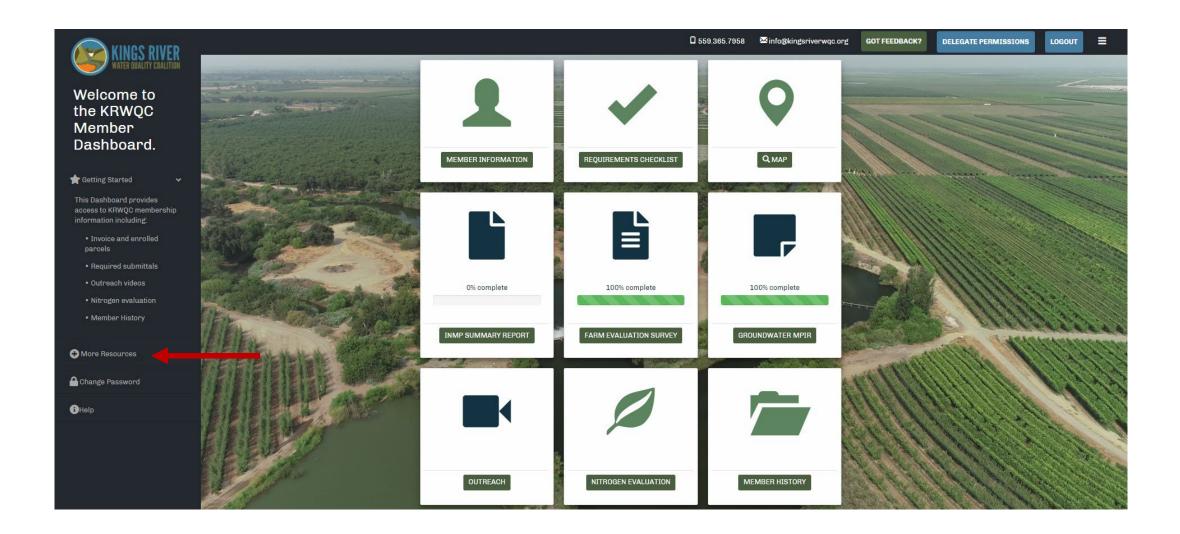
Retype Password

New Password

*Note: Once you change your password, you will have to login again with your new password.

Change Password

More Resources



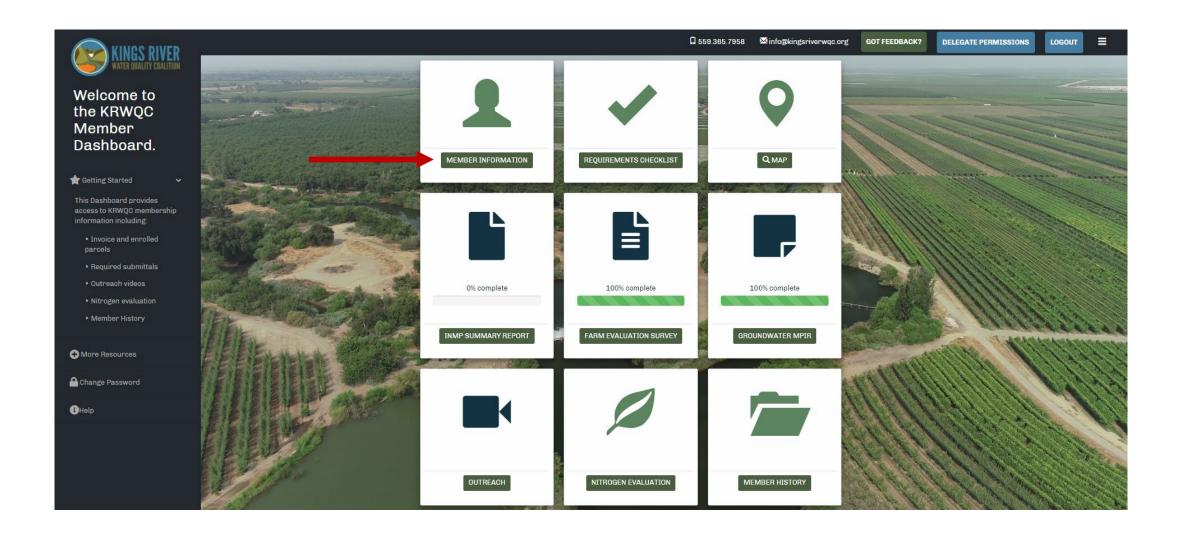
Grower Resources

Grower	r Resources				
Survey Templates	Regulatory Requirements				
KRWQC TEMPLATES	GENERAL ORDER				
Nitrogen Management Planning	Evapotranspiration (ETo)				
CALCULATOR FOR N IN IRRIGATION WATER	ET 10 YEAR AVERAGE CROP WATER USE				
COMMON NITROGEN CONVERSIONS	AGLINE ET 7 DAY CROP WATER USE				
SSJV MPEP					
Certification, Education and Training	Best Management Practices				
FIND A CERTIFIED CROP ADVISOR	CDFA FERTILIZATION GUIDELINES				
INMP SELF-CERTIFICATION	SOIL SAMPLING GUIDANCE				
CONTINUING EDUCATION FOR INMP CERTIFICATION	CURES				
SEDIMENT EROSION CONTROL PLANS	SSJV MPEP				
Additional Tools and F					



1/18/2022

KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022



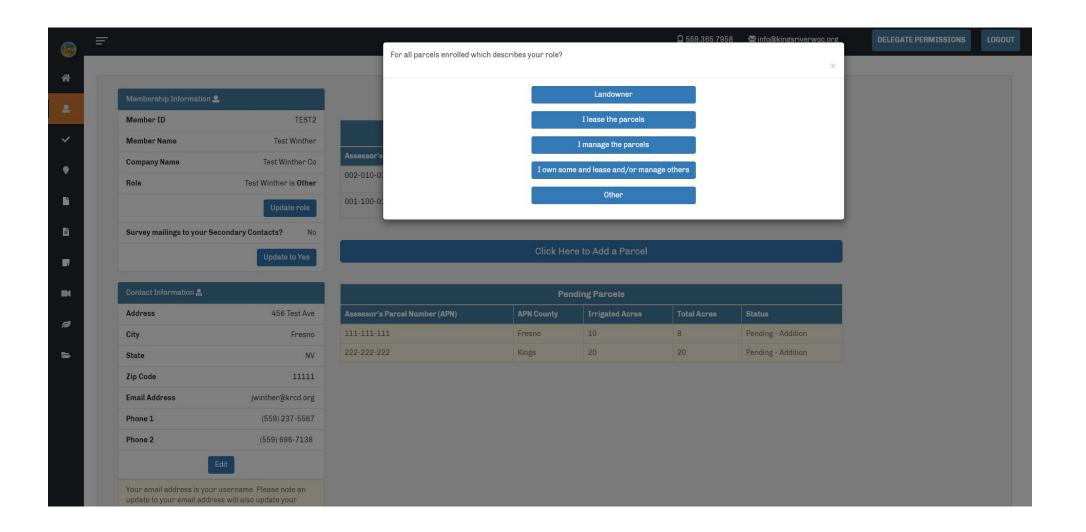
Membership Information 🚨	<u> </u>						Searc	h Enrolled Parcels	
Member ID	TEST2								
Member Name	Test Winther		Enrolled Parce	ls		Click to	Add/Edit Secondar	ry Contacts	
Company Name	Test Winther Co	Assessor's Parcel Number (APN)	APN County	Irrigated Ac	res Total Acres	De-Designated	Edit	Delete	
Role	Test Winther is Other	001-100-011	Tulare	15	20	No	Edit	Delete	
	Update role	002-010-039	Kings	20	20	No	Edit	Delete	
Survey mailings to your Secondary Contacts?	No	111-111-111	Fresno	10	8	No	Edit	Delete	
	Update to Yes	222-222-222	Kings	19	20	No	Edit	Delete	
Language Preference	English								
	Update	Ĩ		Click He	re to Add a Parcel				
Contact Information 🌡				Per	ding Parcels				
Address	456 Test Ave	Assessor's Parcel Number (APN)	AP	N County	Irrigated Acres	Total Acres	Status		
City	Fresno	333-333-333	Fre	isno	12	12	Pending - D	eletion	
State	NV	000-000-000	Kin	gs	40	50	Pending - D	eletion	
Zip Code	11111								
Email Address	jwinther@krcd.org								
Phone 1	(559) 237-5567								
Phone 1 Type	LANDLINE								
Phone 2	(559) 696-7138								

- Update member role
 - (Landowner, lessee, manager, landowner/lessee, other)
- Update contact information
- Update language preference (English, Spanish, Hmong, or Punjabi)
 - English is selected by default.
- Manage secondary contact
 - If the member is a landowner, they can add a lessee.
 - If the member is a lessee, they can add a landowner.
- Manage parcels
- Billing information
 - Make payment
 - View invoice
 - Request a revised invoice if parcel or acreage changes are made.

Update Member Role

Membership Information 🚨	売						Samah	Enrolled Parcels	
Member ID	TEST2						Search	Entonieu Parceis	
Member Name	Test Winther		Enrolled Parce	6		Click to	Add/Edit Secondary	Contacts	
		Assessor's Parcel Number (APN)	APN County	Irrigated Acres	Total Acres	De-Designated	Edit	Delete	
Company Name	Test Winther Co	001-100-011	Tulare	15	20	No	Edit	Delete	
Role	Test Winther is Other	002-010-039	Kings	20	20	No			
	Update role						Edit	Delete	
Survey mailings to your Secondary Contact	s? No	111-111-111	Fresno	10	8	No	Edit	Delete	
	Update to Yes	222-222-222	Kings	19	20	No	Edit	Delete	
Language Preference	English								
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	opoate								
Contact Information 🌡				Pendin	Parcels				
Address	456 Test Ave	Assessor's Parcel Number (APN)	AP	l County	rrigated Acres	Total Acres	Status		
City	Fresno	333-333-333	Fre	sno :	2	12	Pending - Del	letion	
State	NV	000-000-000	Kinj	gs 4	0	50	Pending - Del	letion	
Zip Code	11111								
Email Address	jwinther@krcd.org								
Phone 1	(559) 237-5567								
Phone 1 Type	LANDLINE								
	(559) 696-7138								
Phone 2									

Update Member Role



Update Language Preference

						G 559.365.7958	🖾 info@kingsriverwqo	o.org	GOT FEEDBACK?	DELEGATE PERMISSIONS
Membership Information 🚨							Search Enro	olled Parcels		
Member ID	TEST2									
Member Name	Test Winther		Enrolled Parcel	5		Click	o Add/Edit Secondary Con	ntacts		
Company Name	Test Winther Co	Assessor's Parcel Number (APN)	APN County	Irrigated Ac	es Total Acres	De-Designated	Edit	Delete		
Role	Test Winther is Other	001-100-011	Tulare	15	20	No	Edit	Delete		
	Update role	002-010-039	Kings	20	20	No	Edit	Delete		
Survey mailings to your Secondary Co	intacts? No	111-111-111	Fresno	10	8	No	Edit	Delete		
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Language Preference	English									
	Update	Ĩ		Click Her	e to Add a Parcel					
Contact Information 💩				Per	ding Parcels					
Address	456 Test Ave	Assessor's Parcel Number (APN)	APN	i County	Irrigated Acres	Total Acres	Status			
City	Fresno	333-333-333	Fres	sno	12	12	Pending - Deletion	in		
State	NV	000-000-000	King	(5	40	50	Pending - Deletion	n		
Zip Code	11111									
Email Address	jwinther@krcd.org									
1000555000	(559) 237-5567									
Phone 1										
Phone 1 Phone 1 Type	LANDLINE									
	(559) 696-7138									
Phone 1 Type										

Update Contact Information

Membership Information 2							Search Enrol	lled Parcels	
Member ID	TEST2						<u></u>	_	
Member Name	Test Winther		Enrolled Parce	ls		Click to	Add/Edit Secondary Cont	tacts	
Company Name	Test Winther Co	Assessor's Parcel Number (APN)	APN County	Irrigated Acres	Total Acres	De-Designated	Edit	Delete	
Role	Test Winther is Other	001-100-011	Tulare	15	20	No	Edit	Delete	
	Update role	002-010-039	Kings	20	20	No	Edit	Delete	
Survey mailings to your Secondary Cor	ntacts? No	111-111-111	Fresno	10	8	No	Edit	Delete	
	Update to Yes	222-222-222	Kings	19	20	No	Edit	Delete	
Language Preference	English								
	Update	Ĩ		Click Here to	Add a Parcel				
Contact Information 🛔				Pendin	Parcels				
Address	456 Test Ave	Assessor's Parcel Number (APN)	AP	N County	rrigated Acres	Total Acres	Status		
City	Fresno	333-333-333	Fre	sno	.2	12	Pending - Deletion	1	
State	NV	000-000-000	Kin	gs	10	50	Pending - Deletion	1	
Zip Code	11111								
Email Address	jwinther@krcd.org								
Phone 1	(559) 237-5567								
Phone 1 Type	LANDLINE								
Phone 2	(559) 696-7138								
	Cell								

Add/Edit Secondary Contact

						G 559.365.7958	🔀 info@kin	gsriverwqc.org	DELEGATE PERMISSIONS
Membership Information 🚨							Search E	nrolled Parcels	
Member ID	TEST2								
Member Name	Test Winther		Enrolled Parce	ls		Click to Add	/Edit Seconda	ary Contacts	
Company Name	Test Winther Co	Assessor's Parcel Number (APN)	APN County	Irrigated Acres	Total Acres	De-Designated	Edit	Delete	
Role	Test Winther is Other	002-010-039	Kings	20	20	No	Edit	Delete	
	Update role	001-100-011	Tulare	20	20	No	Edit	Delete	
Survey mailings to your Seco	ndary Contacts? No								
	Update to Yes			Click Here to A	dd a Parcel				
Contact Information 🍰				Pending Pa	arcels				
Address	456 Test Ave	Assessor's Parcel Number (APN)	APN	l County Irri	gated Acres	Total Acres	Status		
City	Fresno	111-111-111	Free	sno 10		8	Pending -	Addition	
State	NV	222-222-222	King	gs 20		20	Pending -	Addition	
Zip Code	11111								
Email Address	jwinther@krcd.org								
Phone 1	(559) 237-5567								
Phone 2	(559) 696-7138								
Edi	t								

Add/Edit Secondary Contact

Enrolled Parcels and Secondary Contacts

All Parcels						
Parcel	Secondary Contact					
001-100-011	Test Secondary	Delete				
002-010-039	Shedy Acres Dairy	Delete				
111-111-111	Owner					
222-222-222	Owner					

	Update Secondary Contacts
Step 1:	
Choose Secondary Contact:	Select a Secondary Contact
	Click here to add a new Secondary Contact
Step 2:	
Role:	Select a Role *
Step 3:	
	Choose parcels to assign the chosen secondary contact to
Parcel	Select All Unselect All
001-100-011	D
002-010-039	0
111-111-111	
222-222-222	0
01 0	
Step 3:	
Submit	

Edit or Delete Parcels

						559.365.7958	⊠info@kin	gsriverwqc.org
Membership Information							Search E	nrolled Parcels
Member ID	TEST2							
Member Name	Test Winther		Enrolled Parce	ls		Click to Add	/Edit Seconda	ry Contacts
Company Name	Test Winther Co	Assessor's Parcel Number (APN)	APN County	Irrigated Acres	Total Acres	De-Designated	Edit	Delete
Role	Test Winther is Other	002-010-039	Kings	20	20	No	Edit	Delete
	Update role	001-100-011	Tulare	20	20	No	Edit	Delete
Survey mailings to your Se	econdary Contacts? No							
	Update to Yes			Click Here to Ac	ld a Parcel			
Contact Information 💂								
Address	456 Test Ave	A	4.00	Pending Pa		T-4-1 4	Status	
City	Fresno	Assessor's Parcel Number (APN)	Fres		gated Acres	Total Acres	Pending -	Addition
State	NV	222-222-222	King			20	Pending -	
Zip Code	11111							
Email Address								
	jwinther@krcd.org							
Phone 1	(559) 237-5567							
Phone 2	(559) 696-7138							
	Edit							
Your email address is your	r username. Please note an ess will also update your							

Add a Parcel

						559.365.7958	⊠info@kin	gsriverwqc.org	DELEGATE PERMISSIO
Membership Information	•						Quarter Dr.	nrolled Parcels	
Member ID	TEST2						Search El	Irolled Parcels	
Member Name	Test Winther		Enrolled Parce	ls		Click to Add,	/Edit Seconda	ry Contacts	
Company Name	Test Winther Co	Assessor's Parcel Number (APN)	APN County	Irrigated Acres	Total Acres	De-Designated	Edit	Delete	
Role	Test Winther is Other	002-010-039	Kings	20	20	No	Edit	Delete	
NOIE		001-100-011	Tulare	20	20	No	Edit	Delete	
	Update role						Edit	Delete	
Survey mailings to your s	Secondary Contacts? No								
	Update to Yes			Click Here to Ac	ld a Parcel				
Contact Information 🖁				Pending Pa	rcels				
Address	456 Test Ave	Assessor's Parcel Number (APN)	APN	County Irrig	gated Acres	Total Acres	Status		
City	Fresno	111-111-111	Fres			8	Pending -		
State	NV	222-222-222	King	(s 20		20	Pending -	Addition	
Zip Code	11111								
Email Address	jwinther@krcd.org								
Phone 1	(559) 237-5567								
Phone 2	(559) 696-7138								
	Edit								
	ur username. Please note an								

Add a Parcel

۲	=			Add A Parcel		×		0 669.3	365.7958 🖾 info@kingsr	iverwqc.org	DELEGATE PERMISSIONS	LOGOUT
*		Membership Information & Member ID TEST2 Member Name Test Winther Company Name Test Winther Co Role Test Winther is Other	Assessor's Parcel Number (APN) 002-010-039	APN County: Select County APN: Irrigated Acres:	~		Click to A De-Designated No	se dd/Edit Secondary C Edit Edit	arch Enrolled Parcels			
lù Bi		Update role Survey mailings to your Secondary Contacts? No	001-100-011	Total Acres:			No	Edit	Delete			
IF IN	F	Update to Yes			P	Close Add						
ø		Address 456 Test Ave City Fresno	Assessor's Parcel Number (APN)		APN County Fresno	Irrigated Acres	Total Acres	Status Pending - Addit				
		State NV Zip Code 11111	222-222-222		Kings	20	20	Pending - Addit	ion			
		Email Address jwinther@krcd.org Phone 1 (559) 237-5567										
		Phone 2 (559) 696-7138										
		Your email address is your username. Please note an update to your email address will also update your username.										
		Billing Information \$ Invoice Amount \$2,137.20										
		Balance \$2137.20 Acreage 70.00										
		Dues Year 2020 Make a Payment Print Invoice 🖨										

Pending Parcels

						5 59.365.7958	⊠info@king	gsriverwqc.org	DELEGATE PERMISSIONS
Membership Information	n 2						Search En	rolled Parcels	
Member ID	TEST2							_	
Member Name	Test Winther	E	nrolled Parcel	s		Click to Add	/Edit Seconda	ry Contacts	
Company Name	Test Winther Co	Assessor's Parcel Number (APN)	APN County	Irrigated Acres	Total Acres	De-Designated	Edit	Delete	
Role	Test Winther is Other	002-010-039	Kings	20	20	No	Edit	Delete	
	Update role	001-100-011	Tulare	20	20	No	Edit	Delete	
Survey mailings to your	Secondary Contacts? No								
	Update to Yes			Click Here to Add	l a Parcel				
Contact Information 🗟									
				Pending Par					
	450 T 1 4								
Address	456 Test Ave	Assessor's Parcel Number (APN)	APN		ted Acres	Total Acres	Status		
City	Freen	111-111-111	Fres	10	ited Acres	8	Pending -		
City State	Freed			10	Ited Acres				
City	Freen	111-111-111	Fres	10	ited Acres	8	Pending -		
City State	Freed	111-111-111	Fres	10		8	Pending -		
City State	Fress NV 11111	111-111-111	Fres	10	Ited Acres	8	Pending -		
City State Zip Code Email Address	NV 11111 jwinther@krcd.org	111-111-111	Fres	10	Led Acres	8	Pending -		
City State Zip Code Email Address Phone 1	NV 11111 jwinther@krcd.org (559) 237-5567	111-111-111	Fres	10		8	Pending -		

- Added parcels will be sent to Coalition staff to validate before being added to official enrollment and can be found under Pending Parcels until approved.
 - Pending parcels will still be available for reporting.

Billing Information

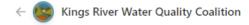
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Image of the part of th	Role	Test Winther is Other						Cuit	Delete
Idea to the defendence of the second		Update role	001-100-011	Tulare	20	20	No	Edit	Delete
Index of the fact of th	Survey mailings to your Secondary C	ontacts? No							
Adress458 Text with CityAssort' Parcol Mumber (APM)AP CountyInglad AcresIndia AcresIndia AcresStateTextStateTextCip CodeTittliCip CodeTittli </td <td></td> <td>Update to Yes</td> <td></td> <td></td> <td>Click Here to</td> <td>Add a Parcel</td> <td></td> <td></td> <td></td>		Update to Yes			Click Here to	Add a Parcel			
katesSole (a) (b) (b) (b) (b)CityPeans108Peding-AdditionStati(b)(b)(b)222222kngs209City(b)(b)(b)(b)(b)(b)(b)Pane 1(b)(b)(b)(b)(b)(b)(b)Pane 2(b)(b)(b)(b)(b)(b)(b)Fane 2(b)(b)(b)(b)(b)(b)(b)Fane 2(b)(b)(b)(b)(b)(b)(b)Fane 3(b)(b)(b)(b)(b)(b)(b)Fane 4(b)(b)(b)(b)(b)(b)(b)Fane 5(b)(b)(b)(b)(b)(b)(b)Fane 4(b)(b)(b)(b)(b)(b)(b)Fane 5(b)(b)(b)(b)(b)(b)(b)Fane 5(b)(b)(b)(b)(b)(b)(b)Fane 5(b)(b)(b)(b)(b)(b)(b)Fane 5(b)(b)(b)(b)(b)(b)(b)Fane 5(b)(b)(b)(b)(b)(b)(b)Fane 5(b)(b)(b)(b)(b)(b)(b)Fane 5(b)(b)(b)(b)(b)(b)(b)Fane 5(b)(b)(b)(b)	Contact Information 🌡				Pendin	Parcels			
trip	Address	456 Test Ave	Assessor's Parcel Number (APN)	APN Co	unty I	rrigated Acres	Total Acres	Status	
Site M Zip Gode 11111 Email Address jwinther@krod org Phone 1 (559) 237-5567 Phone 2 (559) 686-7138 Edf Image: Strate and update to your email address is your username. Please note an update to your email address will also update your username. Biling Information \$ 1moice Amount Stratege 52,137.20 Rance 52,137.20 Arcege 70.00	City	Fresno	111-111-111	Fresno	1	.0	8	Pending - Ac	dition
Email Addressjwinhen@krod.orgPhone 1(cfs9) 237-5567Phone 2(cfs9) 696-7138EntCatCutCatBuing Information \$CatoInvice AmountSci 137-20BaneeSci 137-20AcageTotoCotageToto	State	NV	222-222-222	Kings	2	10	20	Pending - Ac	dition
Phone 1(559) 237.567Phone 2(559) 686-7138EditEditYour email address is your username. Please note an update to your email address will also update your username. Plase.Biling Information \$2137.20Balance\$2.137.20Acragé70.00	Zip Code	11111							
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Edt Your email address is your username. Plaase note an update to your email address will also update your username. Balance Salance Salanc	Phone 1	(559) 237-5567							
Your email address is your username. Please note an update to your email address will also update your username. Billing Information \$ Invoice Amount \$2.137.20 Acreage 70.00	Phone 2	(559) 696-7138							
Biling Information \$ Invoice Amount \$2,137.20 Balance \$2,137.20 Acreage 70.00		Edit							
Invoice Amount\$2.137.20Balance\$2.137.20Acreage70.00									
Balance \$2,137,20 Acreage 70.00	Billing Information \$								
Acreage 70.00	Invoice Amount	\$2,137.20							
	Balance	\$2,137.20							
Dues Year 2020	Acreage	70.00							
	Dues Year	2020							
	Request a R	evised Invoice Ø							
Request a Revised Invoice 🔗									
Request a Revised Invoice D	Website Ø								
	http://kingsriverwqc.org/								

Billing Information

Invoice Amount	\$3,568.56
Balance	\$2,786.65
Acreage	64.00
Dues Year	2021
Make a Payment Print 1	Invoice 🖨
Request a Revised Invo	ice Ø
Website Ø	

• A revised invoice is typically requested after any acreage changes, including additions or deletions of APNs.

Make a Payment



Member ID: TEST2

\$2,201.34 2020-2021 Member Dues plus 2.9% + .30¢ processing fee

Powered by stripe Terms Privacy

Pay with card

Email

Card information **≜** SECURE VISA 🌔 🊟 🔤 1234 1234 1234 1234 3 MM / YY CVC

Name on card

Country or region

United States ZIP

 \sim

Pay \$2,201.34

View Invoice

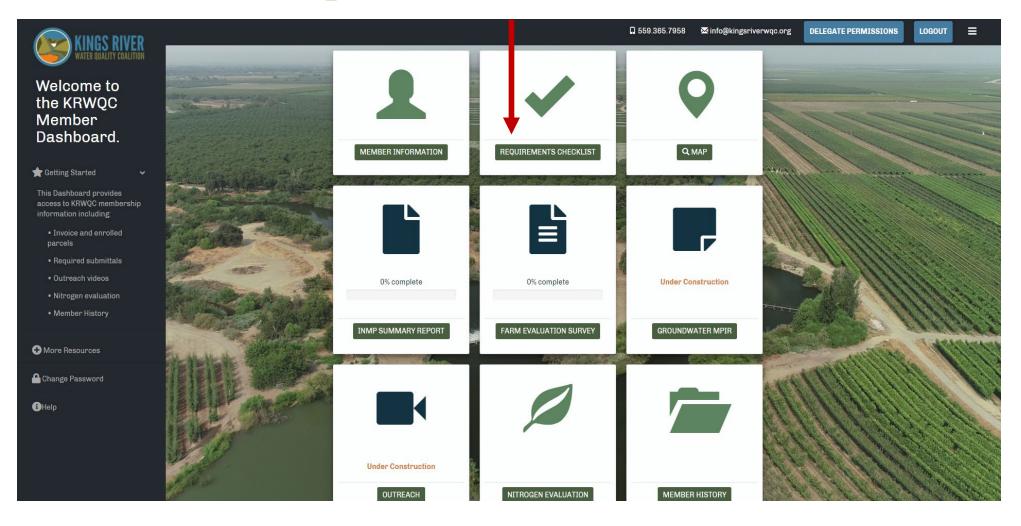
		Invoice Date 01/12/2022 2021 - 2022 Payment 7/1/2021 - 6/30/2022	
KINGS RIVER WATER QUALITY COALITION P.O. Box 8259 Fresno, CA 93747 (559) 365-7958 info@kingsriverwqc.org	_DUE BY 9/30/2021	Acreage Fees Not Prioritized at \$3.55/acre Not Prioritized Acres Not Prioritized Total Priority 1 at \$5.87/acre	15 \$53.25
Test Winther 456 Test Ave Fresno, NV 11111		Priority 1 Acres Priority 1 Total	49 \$287.63
Late Payment Notice: If payment is not received by the due date listed above, a 15% late fee will be charged to this account.		Admin Fee Balance/(Credit)	\$30.00 \$2137.20
		Total Due If you need to add or revise acreat online for balance adjustment: https://kingsriverwqc.org/accour	

Requirements Checklist



KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

Requirements Checklist



Requirements Checklist

TEST2 Test Winther Co Test Winther 456 Test Ave Fresno NV 11111						
Language Preference:		Eng	lish			
Irrigated Acreage:		64				
2021 Dues Balance:		\$ 21	786.65			
2021 Outreach Attenda	nce:	No	meeting attendance on record for current year			
2020 Farm Evaluation S	Survey:	Con	Complete			
2020 Groundwater MP	IR Survey:	Con	Complete			
2021 Irrigation and Niti	rogen Management Plan	(INMP) Summary Report:Req	uired, turn in to the Coalition			
Past NMP Summary Re	port:	Nitr	ogen Summary Report due for 2019,2020			
2022 Irrigation and Nitr	rogen Management Plan	(INMP) Worksheet: Plea	ase keep your Worksheet on farm.			
Irrigated Acreage	Parcel Number	Groundwater Vulnerabi	ity SECP Requirements	Outlier		
15	001-100-011	Low	Required - Self Assessment	No		
20	002-010-039	High	Not Required	No		
10	111-111-111	Unknown	Unknown	No		
19	222-222-222	Unknown	Unknown	No		

*If vulnerability is unknown, this means the parcel number is not recognized for mapping. Please review parcel.

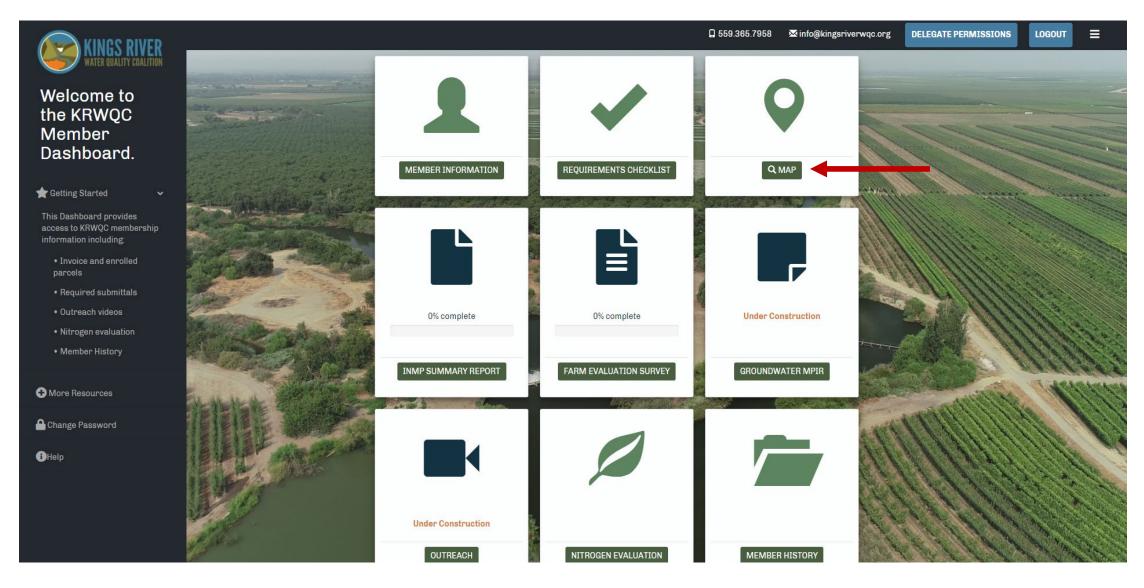
84



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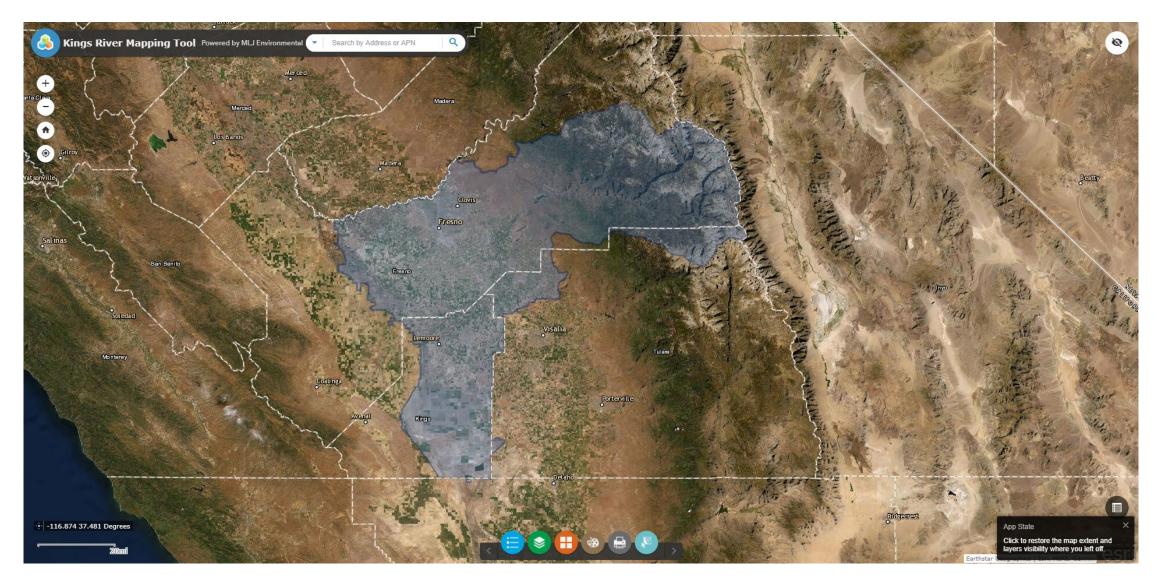
KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

Map



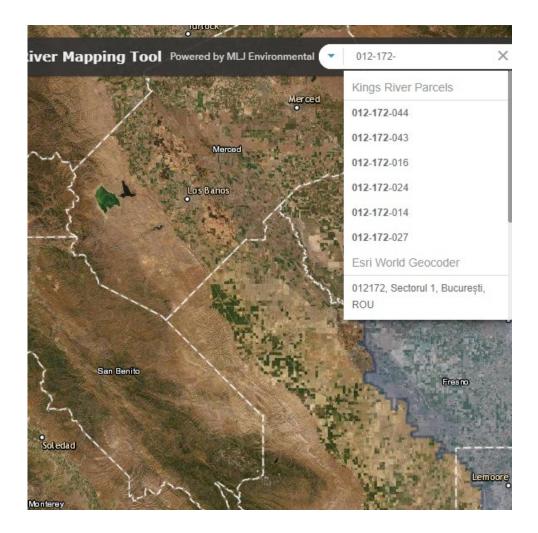
86 1/18/2022 KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

Map

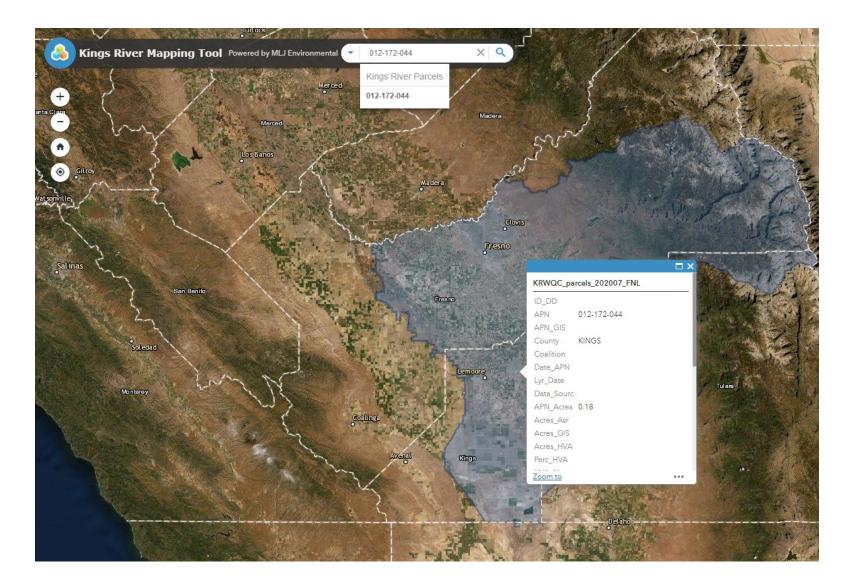


APN Search

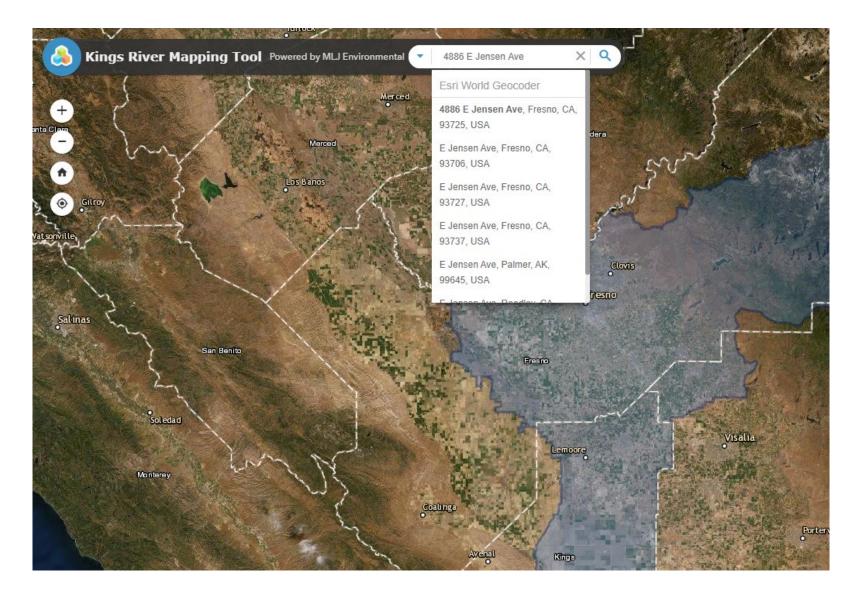
- Start by typing the APN in the search bar and select the correct number from the dropdown list.
- Just typing in the APN and hitting enter will not always work as some APNs have issues that do not allow them to map.



APN Search



Address Search



Map Overview



• A bird's eye view can be used with map overview to help with orientation.

Attribute Table

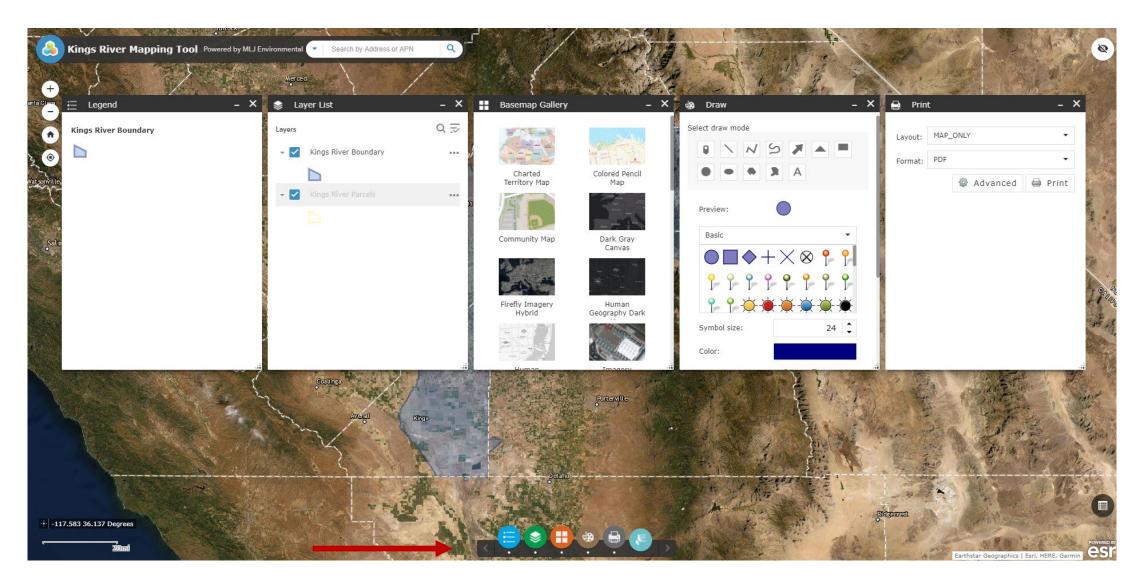
Kings River Mapping Tool Power Power				
APN	County	Acres	GW_Vuln	G
338-180-57S	FRESNO	0.03	High	
338-161-355	FRESNO	0.31	High	
338-170-20T	FRESNO	0.02	High	
335-051-60	FRESNO	40.00	High	
345-070-07	FRESNO	20.00	High	
338-161-255	FRESNO	0.15	High	

• When zoomed in, the attribute table can list APNs in a given area.

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1120 features 1 selected

Bottom Menu



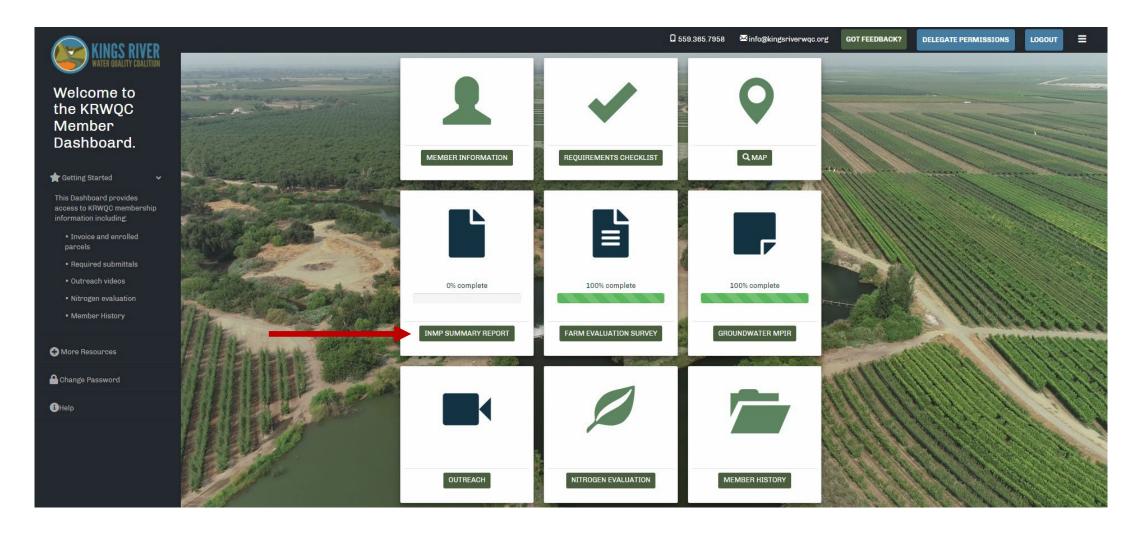
Irrigation and Nitrogen Management Plan Summary Report



1/18/2022

KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

Irrigation and Nitrogen Management (INMP) Summary Report



Getting Started



Let's build your

INMP SUMMARY REPORT

in 4 easy steps

Step 1. Field details.

Step 2. Nitrogen, crop yield, and irrigation information.

Step 3. Irrigation and nitrogen practices.

Step 4. Final review and submittal.

GET STARTED

Tour

		0 559.365.7958	⊠info@kingsriverwqa.org	DELEGATE PERMISSIONS	100007
EXPORT					
	20: 001-100-011				
X DELETE II FIEDE	Click Edit to create management units (MUs) by entering and as				
	Crop, MU description, and Year Planted. Click the				
	information button in the top right for a full definition of MU. Next year your MU information will be prepopulated.				
	END TOUR				
	GOT IT, NEXT!				

- A guided tour will take you through the main functions of this section.
- The tour can always be repeated by clicking the "?" symbol on the bottom left menu.

Step 1: Edit Your Field Info

	=	_						G 559.365.7958	🔀 info@kingsr	iverwqc.org	DELEGATE PERMISS	SIONS		
.		1 0	Step 1: Field Details	5	Step 2: Nitro	gen and Irrigation Inform	ation	Step 3: Management Practices	5		Step 4: Review and Submi	it		
~					E	dit You	ur Field	d Info						
۰							s into Management							
Ľ		MUs include fields that are managed in the same way and are grouped together using Management Unit Description, Specific Crop, and Year Planted. As you create MUs, the Management Unit Assignments section at the bottom of the page will summarize which fields/parcels are included in each MU.												
L.						🕄 in the left navig	ation bar of the web	page for tips and extra info						
				To add a new parce	el (you do not see it pop		the MU table below.	ease click the + ADD NEW F	ARCEL button	in the upper				
F		+ ADD NEW PAR	CEL 🛛 EXPORT	TO EXCEL										
				MU Description*	Year Planted*	Acres*	APN*	Specific Crop*	Co	unty*	Field ID	MU		
ø			4 500	•		20	001-100-011			ilare	Home Ranch	-		
-		× DELETE .	EDIT											
		× DELETE .	/ EDIT			20	002-010-039		Ki	ngs	Ranch 1			
i		× DELETE .	/ EDIT			10	111-111-111		Fr	esno	Ranch 2			
?		× DELETE .	/ EDIT			20	222-222-222		Ki	ngs	Dinuba Ranch			
		× DELETE	/ EDIT			10	111-1 <mark>1</mark> 1-111		Fr	esno	Ranch 2			
	*	*required field										Ţ		

- Fill-in Management Unit (MU) Description, Year Planted, Specific Crop, and Field ID by clicking Edit.
- Field ID is any name used to refer to a specific field
- MU Description is used to group like fields.

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INMP Management Units

- Parcels can be grouped into Management Units (MUs)
- Grouping by MUs allows for averaging of nitrogen and yield across multiple parcels or fields.
- Parcels with the <u>same crop</u>, <u>same nitrogen management practices</u>, AND <u>same age category</u> (for perennials) can be grouped and treated as one field for reporting purposes.
- <u>Not grouping by MU requires reporting nitrogen and yield numbers for each parcel or field individually.</u>
- Age Categories
 - 1
 - 2
 - ~
 - 3
 - 4
 - 5+

Creating INMP Management Units MU Description "Oranges"

+ ADD NEW PARCEL 🛛 EXPORT TO) EXCEL							
	MU Descrition*	APN*	County*	Acres*	Field ID	Specific Crop*	Year Planted*	MU :
× DELETE 🖍 EDIT	Oranges	111-111-111	Kings	20	Ranch 1	CITRUS, ORANGES	1995	3
× DELETE 🖍 EDIT	Almonds	111-111-111	Fresno	10	Ranch 1	ALMONDS	2010	2
× DELETE 🖍 EDIT	Young Almonds	222-222-222	Kings	20	Ranch 2	ALMONDS	2019	6
× DELETE 🖍 EDIT	Oranges	222-222-222	Fresno	20	Ranch 2	CITRUS, ORANGES	1998	3

- Adding the same MU Description to parcels/fields will group them.
- In this example, the text "Oranges" was added to the MU Description
- Field ID is a name that relates to the parcel number or field such as "Home Ranch"

Management Units (MUs) Summarized

Management Unit (MU) Assignments

Your parcels will move between MU assignments as you update the table above. The Unassigned Parcels box lists all parcels without enough information to create a MU assignment.



- All parcel numbers must be assigned a management unit.
- Any parcel that has <u>not</u> been assigned a management unit will appear in the "(Unassigned parcels)" box.

Fields with Multiple Crops or Double-Crops

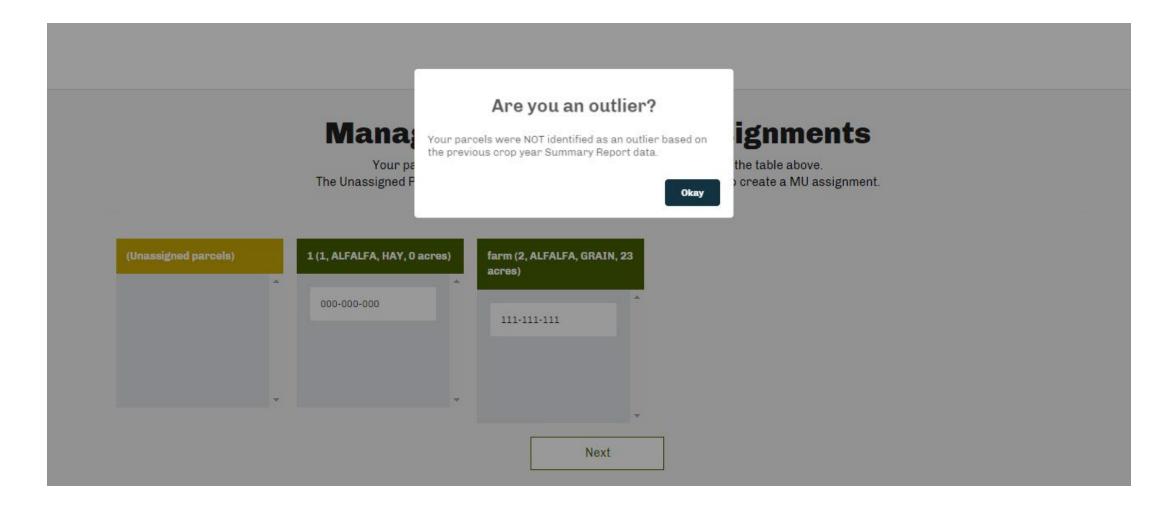
- For parcels with multiple crops grown on one APN, create a row per crop and split the acreage appropriately.
 - 1. Click Add New Parcel to an additional row to the table.
 - 2. Update crop, acreage and field ID to reflect the additional crop
- For parcels that are double cropped or have rotating crops, create a row for each crop and add a note under Comments that the field is "Double Cropped"

Edit Your Field Info

,	=											₽ 559.365.7958	⊠info@	kingsriverwq	c.org	DELEG	ATE PERMI	ISSIONS	LOGOU
				Year Planted. A N	s you cr eed help	nanaged in the reate MUs, the o? Click on the	same wa Manage fiel fiel	ment Unit A ds/parcels left navigat elow or nee	grou Assigi are i tion b d to s	ped togethe nments sec ncluded in par of the w	er using tion at t each Mu ebpage please	Management Unit Desc he bottom of the page w	vill sumn nation.	narize whi	ch				
		+ ADD NEW PARCE	EL 😰 EXPORT TO) EXCEL															
,				MU Description*		Year Planted*		Acres*		APN*		Specific Crop*		County*		Field ID		MU	÷
		× DELETE	🖋 EDIT	Oranges		1998		19		111-111-11	1	CITRUS, ORANGES		Fresno		Ranch 2		1	A
		× DELETE	🖋 EDIT	Almonds		2010		20		001-100-0	11	ALMONDS		Tulare		Home Rar	ich	2	
		× DELETE	EDIT	Oranges		1995		20		002-010-0	39	CITRUS, ORANGES		Kings		Ranch 1		1	
		× DELETE	/ EDIT	Almonds		2010		10		111-111-11	1	ALMONDS		Fresno		Ranch 2		2	
		× DELETE	DIT	Raisins		1988		20		222-222-2	22	GRAPES, RAISINS		Kings		Dinuba Ra	Inch	3	
		required field																	

- The notification bell will alert of any remaining field(s) that need attention.
- The "i" on the left menu will bring you to additional information on how to fill-out the INMP.

Are You an Outlier



Step 2 Tour

Step	o 1 MU(s)									
Step Management Unit cription	t Total Sp	ecif:								
Management Unit	t Total Sp	op (lbs)					Production Unit it an MU, click Back.			
Management Unit	t Total Sp	Yc		om Step 1 a	re listed	l. To edi				
Management Unit	t Total Sp	Yc	ur MUs fro	om Step 1 a	re listed	l. To edi	it an MU, click Back.			
Management Unit	t Total Sp	Yc	Dur MUs fro	om Step 1 a	re listed	l. To edi	it an MU, click Back.			
Management Unit	t Total Sp	Yc	Dur MUs fro	om Step 1 a	re listed	l. To edi	it an MU, click Back.			

Nitrogen Sources

- All parcels with Oranges as a crop are now grouped as one under the Management Unit Description "Oranges".
- Mature Almonds and Young Almonds are grouped separately.
- All <u>nitrogen sources</u> must be reported in <u>pounds per acre</u>.

		Step 1 MU	(s)		l	Nitrogen Sourc					
Management Unit Description	Management Unit	Specific Crop	Total Acres	Reported Acreage	N in Irrigation Water	Organic Amendments	Dry/Liquid Fertilizers	Foliar Fertilizers	Harvested Yield (Per Acre)	Production Unit	
Almonds	2	ALM	10	10	2	0	110	2	2000	Pounds	~
Oranges	3	CITR	40	40	10	0	90	2	20	Bin (1000 lbs)	~
Young Ain	6	ALM	20	20	6	0	100	2	0	Pounds	~

Production Unit & Yield Information

Step 1 MU(s)				Nitrogen	Sources		Yield						
Management Unit Description	Total Acres	Specific Crop	N in Irrigation Water (Ibs/acre)	Organic Amendments (Ibs/acre)	Dry/Liquid Fertilizers (lbs/acre)	Fertilizers	Harvested Yield (Per Acre)	Production Unit		Yield Information			
Almonds	10	ALM	10	0	110	2	200(Pounds	~	None	~		
Oranges	40	CITF	40	0	90	2	20	Bin (1000 lbs)	~	None	~		
Young Aln	20	ALM	20	0	0	0	0	Pounds	~	None	~		
								Next		None No Yield Non-Bearing No Nitrogen Applied Not Irrigated Seed or Rootstock <u>Irrigation Nitrogen Only</u> Not Farmed Specialty Vegetables			

- Production Unit must match the weight that the yield is reported in.
- In this example, 20 bins (each bin weighing 1000 pounds each) of oranges were produced per acre.
- Mature Almonds produced 2000 pounds per acre and Young Almonds are not producing yet
- Additional yield information can be added such as:
 - No Yield Crop can produce but there was "no yield" due to external factors
 - Non-Bearing Crop is too young to produce
 - Irrigation Nitrogen Only Nitrogen already available in irrigation water was the only source applied.

Reporting INMP Yield

- <u>All yields should be reported per acre.</u>
- Example 1:
 - Crop: Almonds
 - •Total Yield = 60,000 lbs. Kernel weight
 - •Acres = 20
 - •60,000 / 20 = 3,000
 - Correct Reporting Yield = 3,000 lbs. per acre
- Reported <u>almond yield</u> should be <u>kernels</u>.

Reporting INMP Yield

- Example 2
 - •Crop: Raisins
 - •Total Yield: 40 Tons Dry weight
 - •Acres: 20
 - •40 / 20
 - •Correct Reporting Yield = 2 Tons per acre
- Reported **raisin yield** should be in **dry weight**

Reporting Yield Weights

- Reported **almond** yield should be **kernels**
- Reported **raisin** yield should be in **dry weight**
- Reported **pistachio** weight should in **CPC weight** (dry, in shell)
- Reported **cotton** yield **should be noted if it is ginned or if it is not** in the comments on Step 2 -Nitrogen and Yield Sources of the INMP Summary Report.
- <u>All other crops should be reported in gross weight.</u>

Organic Amendments

- Should be reported in amount of <u>available nitrogen per</u> <u>acre</u>.
- Commercial manure or compost may come with a printout of the nutrient content.
- If not, a general rule of thumb is 6.9 lbs Available N/ton

Additional Information

Additional Information										
Certification Method	Primary Irrigation Method	Secondary Irrigation Method	Comments							
Certified INMF 🗸	Drip 🗸	Flood 🗸	Production low due to weather							
Certified INMF 🗸	Drip 🗸	Flood ~	Comments							
Certified INMF 🗸	Drip 🗸	Flood	Production low due to weather							

Certification Methods of INMP Worksheet:

- Certified INMP Specialist
- Self-Certified (CDFA Training Program)
- Self-Certified (No Fertilizers Applied)
- No Certification Required (Low Vulnerability

Irrigation Methods:

- Drip
- Micro Sprinkler
- Furrow
- Sprinkler
- Border Strip
- Flood

Comments

 Please comment on anything that would negatively effect yield production in the current crop year.

Section 3: Irrigation and Nitrogen Management Practices

MU(s)	Laser Use Leveling ■ Check All	of ET in scheduling irrigations ✓ Check All	Water application scheduled to need Check All	Use of moisture probe (e.g. tensiometer) ■ Check All	Soil Moisture Neut Probe ■ Check All	ron Pressure Bomb Check All	Do Not Irrigate ■ Check All	Other
onds (6)								[
nges (3)								
ng Almonds (7)								
		ractices Irrigation Water N Testing						
B. MU(s)		ractices	Soil Testing Check All Check All	ting Fertigation Foliar N Application Check All Check All	n Cover Crops Variable R Check All	ate Applications using GF Check All	PS No N Applied ■ Check All	Other
	Split Fertilizer Application	ractices Irrigation Water N Testing						Other
MU(s)	Split Fertilizer Application	ractices Irrigation Water N Testing & Check All						Other

- Irrigation and Nitrogen management practices are group by management units.
- Check all that apply for both:
- A: Irrigation Efficiency Practices and
- B: Nitrogen Efficiency Practices

Section 4: Final Review of Nitrogen and Yield



Review your information below before clicking "submit" to officially send in your information. You may return to this page to edit data until March 1st

Outlier Information

Outlier Ques	tion									Response	Edit
			alition provided information re identified as an outlier b		rship's nitrogen ef	ficiency for the pre	evious crop year ar	nd identified management units that	were considered outliers compared to other Coalitic	on members No	Update to Yes
			N	litro	gen	and	Yiel	d Inforn	nation		
				·			Editing Data?				
EXPORT TO	EXCEL										
	MU D	Acres	Specific Crop	Irrigat	Organ	Dry or	Foliar N	Yield Yield Info	: Production Unit :	Certification Method	Comments
🖉 EDIT	Almonds	30	ALMONDS	5	0	115	0	1500	Pounds	Self-Certified (CDFA training program)	
2 2011										training program/	
EDIT	Oranges	39	CITRUS, ORANGES	10	0	120	0	19000	Pounds	Self-Certified (CDFA training program)	Hail damage

- Review information and make needed changes.
- Click the Edit button to the left of each record to update Nitrogen applied, yield, production unit or certification method then click Update to save.
- Any information form Step 1, such as adding parcels or editing a MU, cannot be changed here. Please contact the Coalition.

Final Review of Management Practices

Management Practices

			Responses								
	Primary Irrigation			Nitrogen Efficiency							
Management Unit Description	🖒 EDIT	C EDIT	Č EDIT	C EDIT							
Almonds (2)	Drip	Flood	Use of ET In scheduling irrigations,Water application scheduled to need	Split Fertilizer Applications.Irrigation Water N Testing.Soil Testing.Tissue/Petiole Testing							
Oranges (1)	Drip	Flood	Use of ET In scheduling irrigations,Water application scheduled to need	Split Fertilizer Applications.Irrigation Water N Testing,Soil Testing,Tissue/Petiole Testing							
Raisins (3)	Flood	None	Use of ET In scheduling irrigations,Water application scheduled to need	Split Fertilizer Applications.Irrigation Water N Testing							



- Management Practices can also be edited and updated.
- Once all information has been reviewed, you can sign and submit the INMP.

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Submitted

Your INMP Summary Report was received on 1/12/2021

Member ID#: TEST2

Outlier Information

Question	Response	
Are any of your management units outliers? The Coalition provided information about this membership's nitrogen efficiency for the previous crop year and identified management units that were considered outliers compared to other Coalition members growing the same crop. Please choose ves if you were	No	
identified as an outlier by the Coalition.		

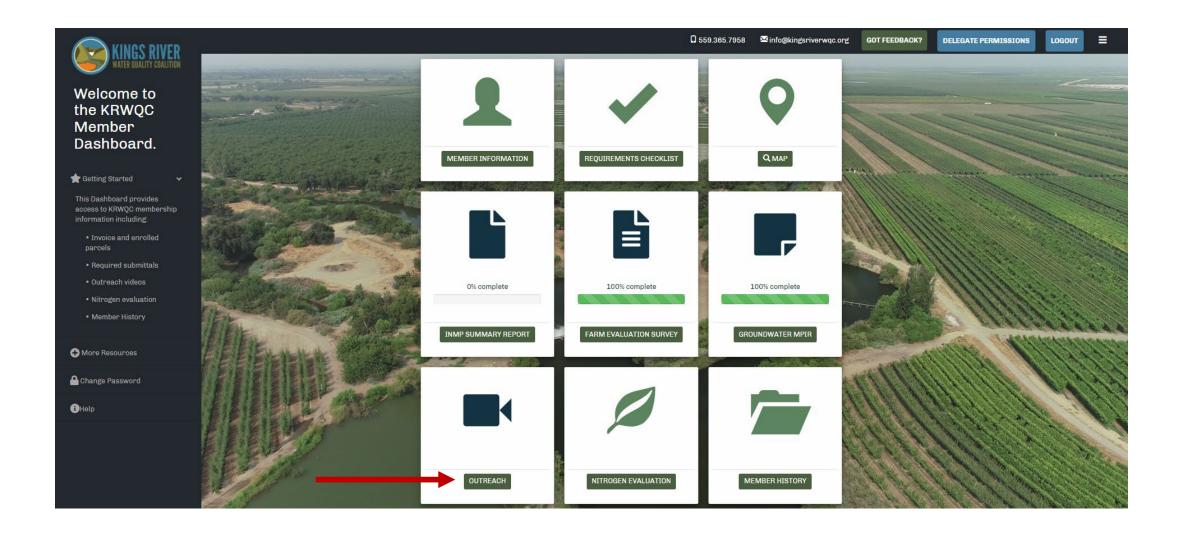
Parcels and Management Units

Management Unit Description	Management Unit	APN	County	Acres	Crop	Year Planted
Almonds	2	001-100-011	Tulare	20	ALMONDS	2010
Almonds	2	111-111-111	Fresno	10	ALMONDS	2010
Oranges	1	002-010-039	Kings	20	CITRUS, ORANGES	1995
Oranges	1	111-111-111	Fresno	19	CITRUS, ORANGES	1998
Raisins	3	222-222-222	Kings	20	GRAPES, RAISINS	1988

Nitrogen Application

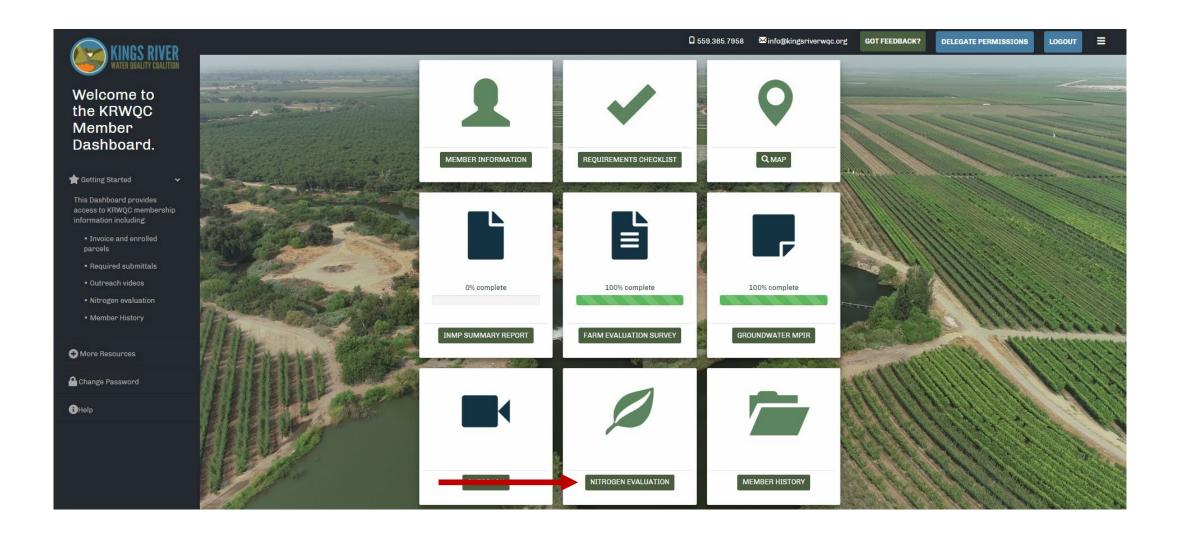
Step 1 MU(s)		Nitro	gen Sources			Yield			Additional Information		
Management Unit Description	Total Acres	N in Irrigation Water	Organic Amendments	Dry/Liquid Fertilizers	Foliar Fertilizers	Total N Applied	Harvested Yield	Production Unit	Yield Info	Certification Method	Comments	
Almonds (2)	30	5	0	115	0	120	1500	Pounds		Self- Certified (CDFA training program)		
Oranges (1)	39	10	0	120	0	130	19000	Pounds		Self- Certified (CDFA training program)	Hail damage	
Raisins (3)	20	3	0	37	0	40	2	Tons (2000 Ibs)		Self- Certified (CDFA training program)		

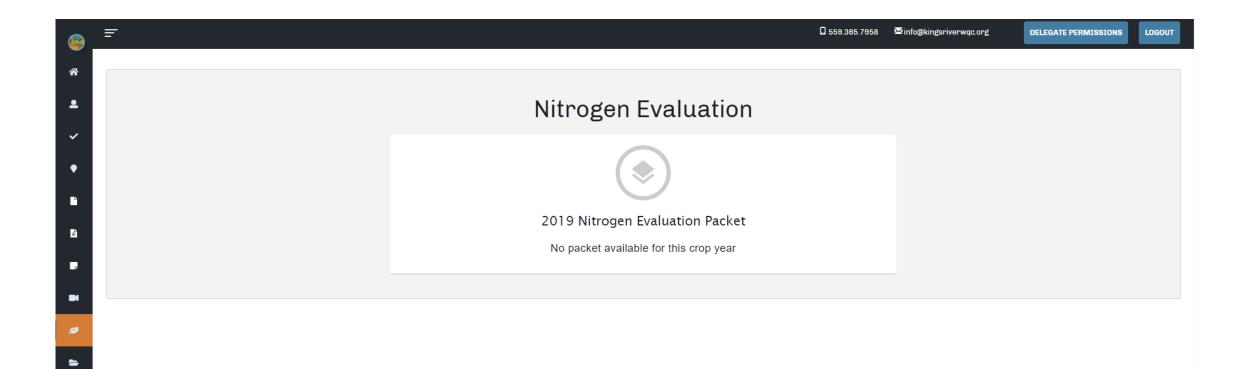
Outreach



Outreach

- By attending today, you are fulfilling the outreach requirement.
- Video of today's webinar be available after January of 2022.
- At the end of the outreach video a button will appear. Please be sure to click this button to receive credit for viewing the outreach video.
- If you have multiple memberships, you can add those additional member IDs for credit. You do not have to view the video multiple times for each membership.





Section 2: Summary of Your Data

2018, 2019 & 2020 NMP Summary Report Data by Parcel

Member ID #:

The Coalition conducts outlier analysis based on the last 3 years of reported data; the same crop must be grown all three years. The table below includes the information you reported to the KRWQC in your INMP Summary Report. If any of this information does not match your records, please contact the Coalition to update your information.

APN	Year	Сгор	Acres	A (Ibs/acre)	A/Y	Y (Ibs/acre)	Outlier APNs	Notes
FRESNO	2018	ALMONDS	16	200	0.10	2000	Outlier	
FRESNO	2019	ALMONDS	16	200	0.10	2000	Outlier	
815 880-39 Fresno	2020	ALMONDS	16	500	0.25	2000	Outlier	

Table 1. INMP Summary Report data reported to Coalition by parcel for 2018, 2019, and 2020.

*In years 2017-2019, you reported A/Y and Removed was calculated from those ratios. Starting in 2020, only A and Y was reported to the Coalition. Outlier parcels are marked red and include the word "Outlier" in the Outlier APNs Column.

Code Definitions:

NB = Non-Bearing crop.

Y = If not reported, yield was calculated from your A/Y.

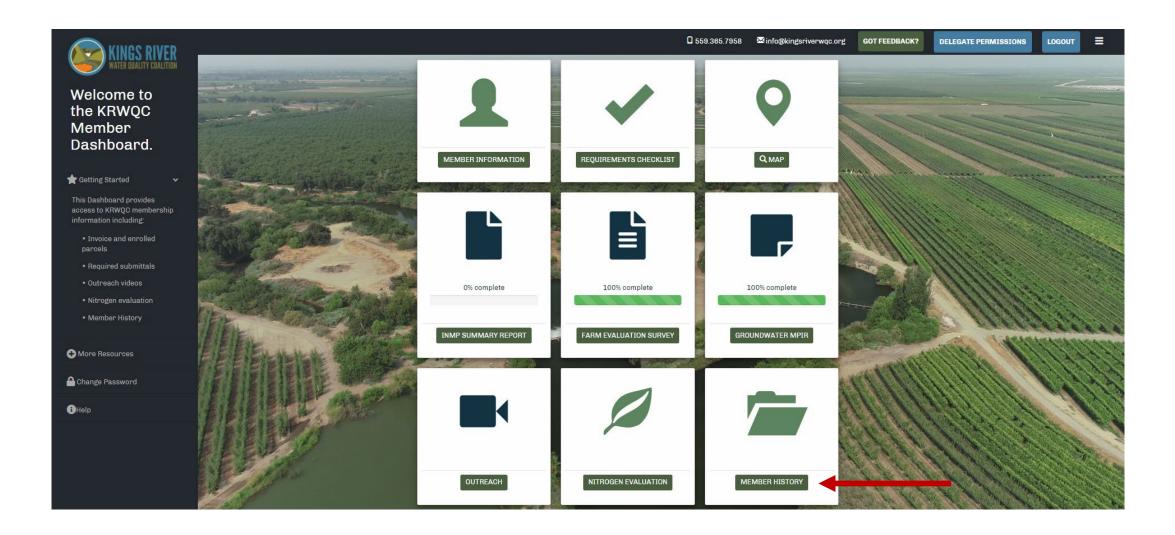
NR = Crop age or harvest type not reported.

NY = No Yield harvested.

PS = Plant stress resulted in lower than expected yield.

NNA = No nitrogen applied.

ERROR = The Coalition identified this field as having missing or suspect data. Please review and contact the Coalition to either update or confirm this information



Member History

	Ŧ	D 51	59.365.7958	⊠info@kingsriverwqc.org	DELEGATE PERMISSIONS	LOGOUT
*						
٩		Member History				
~						
•		ALL INMP	FE			
Ľ						
L						
F						
-						
ø		Irrigation and Nitrogen Management Plan Summary Re	port 2020)		
=		CLICK TO COMPLETE INMP VIEW AND PRINT				
		Farm Evaluation Survey 2020				
		CLICK TO COMPLETE FE VIEW AND PRINT				



1/18/2022

KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

- Analysis of All Grower Reported Data
 - Previous crop year summary to be mailed to members mid to late January 2022.
- Compares Your Reported Data to Coalition-wide Data for the Same Crop
- Used to Calculate 3-Year Outlier Values
 - Based Upon Applied/Removed Ratio
- Allows Analysis of Risk Based upon Applied-Removed Metric
 Unused Applied N is What is at Risk of Leaching to Groundwater
- Each Feedback Report is Specific to Each Grower
 - Analysis is Private, Only the Member Receives this Analysis
- Those Identified as Outliers May be Required to Complete Additional Outreach/Plan Certification, Regardless of Vulnerability Designation

- Separate Pages for Each Crop
- Outlier Determination Based on 3-years of Reported Data
 - Annual Crops—3 Years of Same Crop (May not be Consecutive)
 - Avoids 1 "bad" year causing Outlier status
- Additional Requirements for Outliers
 - Crop Specific Outreach
 - Could Require INMP Certification for Low Vulnerability Parcels

(Part 1 of 1)

Section 2: Outlier Analysis

3-Year Nitrogen Use Evaluation for CORN, SILAGE

The Coalition calculates and reports on the pounds of nitrogen applied divided by the pounds of nitrogen removed (A/R ratio). The A/R ratio is a representation and measure of agronomic efficiency. For example, values near or equal to one indicate the amount of nitrogen applied is the same as the amount of nitrogen removed as harvested yield (and stored in wood in perennial crops). Furthermore, an A/R ratio of two indicates that twice as much nitrogen was applied than removed by the crop.

To take into account year to year crop variability, the Coalition determines outliers based on the most recent three years of reported data. An analysis was conducted on your parcel(s) and is provided below.

ssessor's Parcel Number	APN County	Crop Age	3-Year Applied-N/ Removed-R	3-Year Outlier Threshold	3-Year Total Applied-N (pounds/acre)	Removed-N	3_Year Applied-N minus Removed-N
APN	County	Age	A/R	Outlier A/R	A	R*	A - R
000-000-001	Merced	>4	1.41	1.34	1185	842	343
000-000-002	Merced	>4	1.41	1.34	1185	842	343

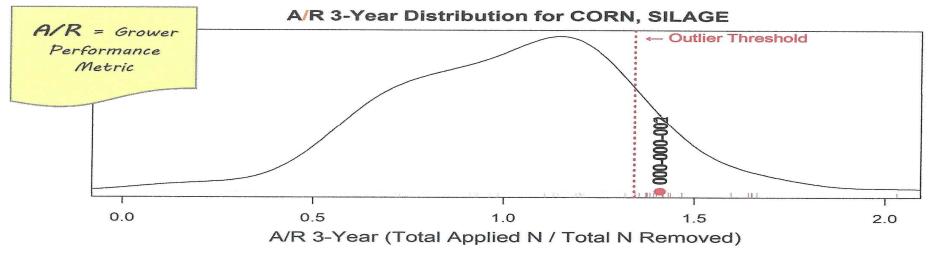
Table 1. 3-Year calculation of data reported per parcel.

* R estimates are based on the assumption that nitrogen removed at harvest for CORN, SILAGE is 0.00378 lbs N/lbs @ 70% moisture.

How Do Your Management Units Compare To All Other CORN, SILAGE Growers?

72 Coalition members reported on 152 parcels with 3 years of A/R data.

Median A/R = **1.08** Median A-R **=37.1** Median A **= 700.00**



(Part 1 of 1)

Section 2: Outlier Analysis

3-Year Nitrogen Use Evaluation for WALNUTS

The Coalition calculates and reports on the pounds of nitrogen applied divided by the pounds of nitrogen removed (A/R ratio). The A/R ratio is a representation and measure of agronomic efficiency. For example, values near or equal to one indicate the amount of nitrogen applied is the same as the amount of nitrogen removed as harvested yield (and stored in wood in perennial crops). Furthermore, an A/R ratio of two indicates that twice as much nitrogen was applied than removed by the crop.

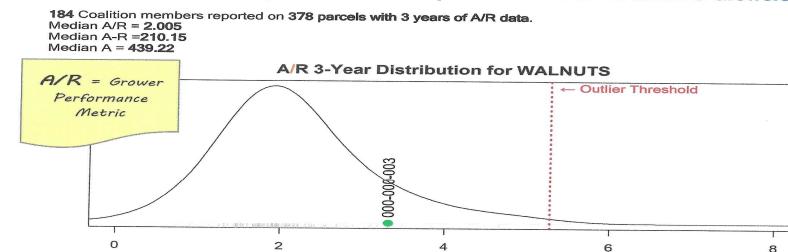
To take into account year to year crop variability, the Coalition determines outliers based on the most recent three years of reported data. An analysis was conducted on your parcel(s) and is provided below.

Table 1. 3-Year calculation of data reported per parcel.

Assessor's Parcel Number	APN County	Crop Age	3-Year Applied-N/ Removed-R	3-Year Outlier Threshold	3-Year Total Applied-N (pounds/acre)	Removed-N	3_Year Applied-N minus Removed-N
APN	County	Age	A/R	Outlier A/R	Α		A - R
000-000-003	Merced	>4	3.32	5.28	890	268	622

* R estimates are based on the assumption that nitrogen removed at harvest for WALNUTS is 0.01595 lbs N/lbs with shells.

How Do Your Management Units Compare To All Other WALNUTS Growers?



A/R 3-Year (Total Applied N / Total N Removed)

128 1/18/2022 KINGS RIVER WATER QUALITY COALITION ANNUAL MEMBERSHIP WORKSHOP 2021-2022

Protective Practices for Groundwater

• Goals

- Source Control at Surface
 - Encourage Efficient Management Practices
 - Irrigation Management
 - Nitrogen Management
- Encourage Wellhead Protection
 - Active Wells
 - Inactive Wells
- Encourage Proper Destruction of Abandoned Wells

Protective Practices: Irrigation Management

- Be smart with your irrigations
- Crop water use is weather dependent
 - Crop water use increases during season until peak, then declines
 - Knowledge of soil moisture levels critical (Know Your Soil!)
 - Proper irrigation management provides the right amount of water to crop at right time
 - Apply at rates that soil can absorb without runoff
 - Maintain pore space for oxygen for healthy roots
 - Manages vegetative growth-fruiting growth balance
 - Influences crop quality
 - Excess irrigation leaches nutrients below rootzone
 - Beneficial if salt control is goal
 - Major problem if nitrogen is lost
 - Uniformity of Application is critical
- Use Irrigation Scheduling Information for Current Crop Water Use
 - KRCD AgLine <u>www.krcd.org/agline/</u> or other

Protective Practices: Nitrogen Management

- Use the Four "R"s
 - Right Material
 - Right Place
 - Right Time
 - Right Amount
- Example
 - Wrong Material at Wrong Time
 - Nitrate Heavy fertilizer before heavy rains in Winter
 - Roots are not actively absorbing nutrients
 - No plant need as crop is dormant
 - Material is leached out of rootzone
 - Right Material at Right Time
 - Crop Actively growing
 - Soil Moisture decreasing
 - Applied Material is rapidly taken up as crop needs water, nutrients

Protective Practices: Nitrogen Management

- Use the Four "R"s
 - Right Material
 - Right Place
 - Right Time
 - Right Amount
- Example
 - Wrong Place
 - Fertilizer Placed beyond rootzone
 - Fertilizer Placed on surface, losses from volatilization
 - Wrong Amount
 - Application of More N than Crop can Uptake
 - Split Applications (aka "Spoon Feeding") better approach
 - Application of More than Crop Need based on N Removed
 - Some excess is required to ensure proper uptake, but keep to minimum
 - Review (A minus R) value on Nitrogen Feedback Report
 - Risk of Increased Pest Pressure when over fertilized

Protective Practices: Nitrogen Management

- Know Your Input Levels
 - N in Irrigation Water
 - <u>FREE</u> Fertilizer
 - Can be Significant Source
 - Correct N Applied via Fertilizer Type
 - Correct Assumptions on Manure/Compost N content
- Review Nitrogen Feedback Reports
 - Updated Research on N content within Yield
 - Match N Input with Amount Removed
 - Add some extra for known losses, need for surplus in soil
- Use Cover Crops
- Use Minimum Tillage
 - Increased Organic Matter ties up excess N in soil

Protective Practices: Wellhead Protection

- Good Housekeeping Practices for Active and Inactive Wells
 - Keep Area Around Well Clean
 - Store Agricultural Materials Away from Well
 - Eliminate any Standing Water near wellhead
 - Make Sure any Backflow Prevention Devices are Operational
 - Cover any openings to well casing
- Abandoned Wells
 - Keep area around well clear
 - Place Secure Cover on Well
 - Arrange for Licensed, Professional Destruction
- Wells are Direct Conduits to Groundwater—What happens at the Surface can Impact Groundwater Quality

Questions and Contact Information

- Questions
- Contact Information
 - Website: <u>http://kingsriverwqc.org/</u>
 - Email: <u>info@kingsriverwqc.org</u>
 - Phone: 559.365.7958
 - Virtual Appointment: <u>https://kingsriverwqc.org/virtualappointment</u>

REMOVED Slides

update

- Regional Board Inspections
 - Expected to Resume Once COVID Restrictions Lifted
 - Review of Documents/Operation
 - Copy of General Order (electronic copy sufficient)
 - Previously Submitted Templates
 - Physical Inspection of Well Sites

COALITION AND REGULATORY UPDATES

- Regional Board Inspections
 - Expected to Resume Once COVID Restrictions Lifted
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 - Copy of General Order (electronic copy sufficient)
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Coalition and Regulatory Updates

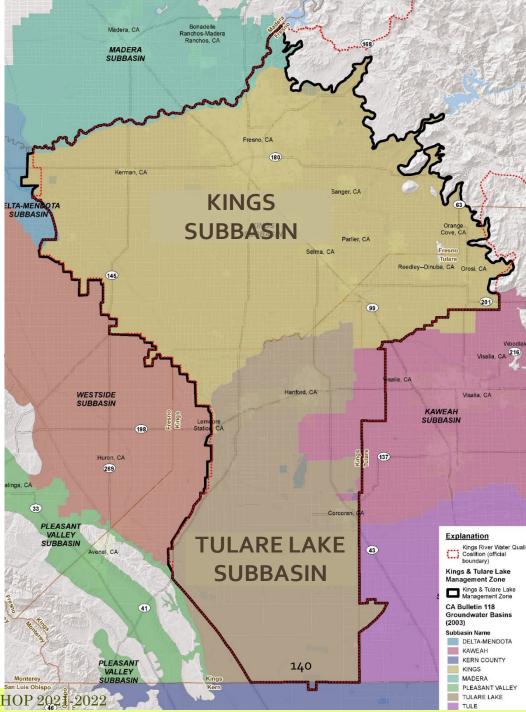
- General Order Updates
 - Basin Plan Amendments Related to Nitrates, Salts
 - Management Zones (Nitrate Control Program)
 - Salt Control Program Managed by Central Valley Salinity Coalition

Salt Control Program

- What is the Salt Control Program?
 - A new regulation that will help prevent future problems related to Salt buildup in soils in our area.
 - Long Term Studies to:
 - Reduce Salt Loading from Dischargers
 - Study potential Removal Mechanisms
 - Ensure Long Term Viability for Agriculture
 - Protect/Restore Groundwater Quality
- Involves All Dischargers
 - Irrigated Ag (Coalition)
 - Dairies
 - Cities

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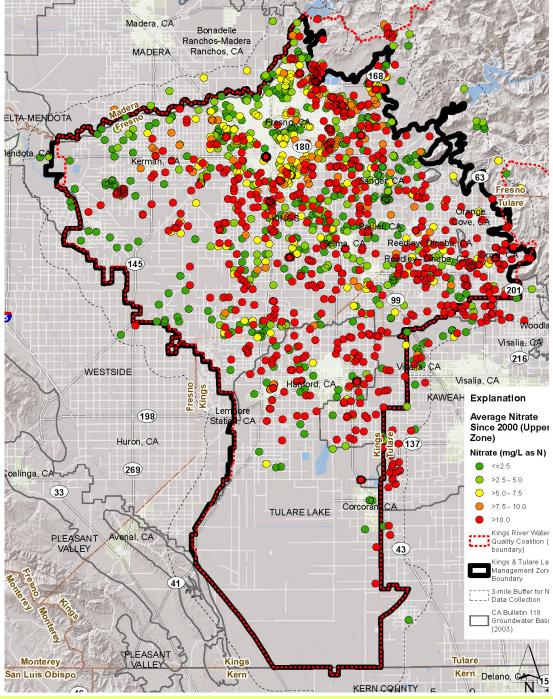
- Industry
- Managed by Central Valley Salinity Coalition
- Extends Timelines for Compliance



Coalition and Regulatory Updates

- Drinking Water Well Testing
 - All Drinking Water Wells on **Enrolled** Parcels Must Be Tested for Nitrate and Nitrite-N levels
 - Analysis by Certified Lab
 - Original Deadline was December 31, 2020
 - Users of Well, if not Owner, Must be Notified if Nitrate + Nitrite Exceeds 10 mg/L
 - Copy of Notice Must be Sent to Regional Board
 - Results <u>not</u> sent to Coalition
 - Lab Report can be used to supply Tenants with Replacement Water if over 10 mg/L
 - Apply for Replacement Water at <u>www.kingswateralliance.org</u>
- Testing Frequency
 - 0-8 mg/L: Yearly Testing for 3 years, then Once Every 5
 - 8-10 mg/L: Yearly Testing
 - Over 10 mg/L: No Further Testing
 - Source Cannot be Used as Drinking/Cooking Water for Third Parties
 - Owner can Use as Before

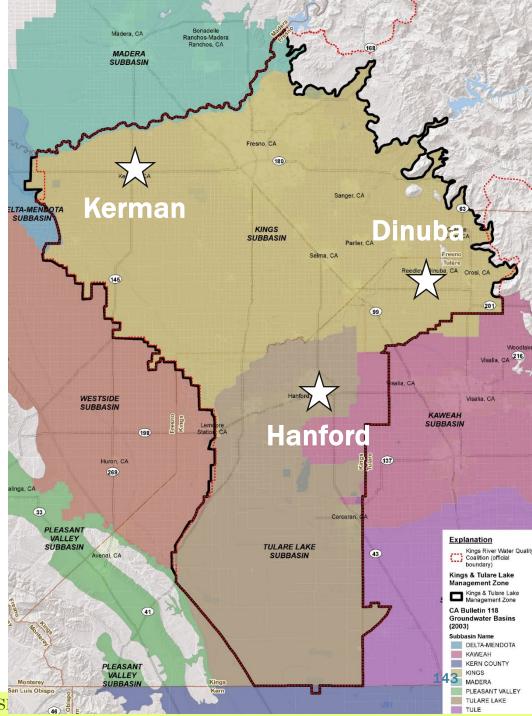
- The Kings/Tulare Lake Management Zone is working to identify areas affected by Nitrate
 - Locating areas where unsafe levels of Nitrate are in drinking water
 - Locating domestic wells in areas with unsafe Nitrate levels
 - Identifying existing water systems that treat for Nitrate



- Fill Stations
- Kerman Community Center
 - 15100 Kearney Blvd.
 - Average Usage: 2,820 gallons/month

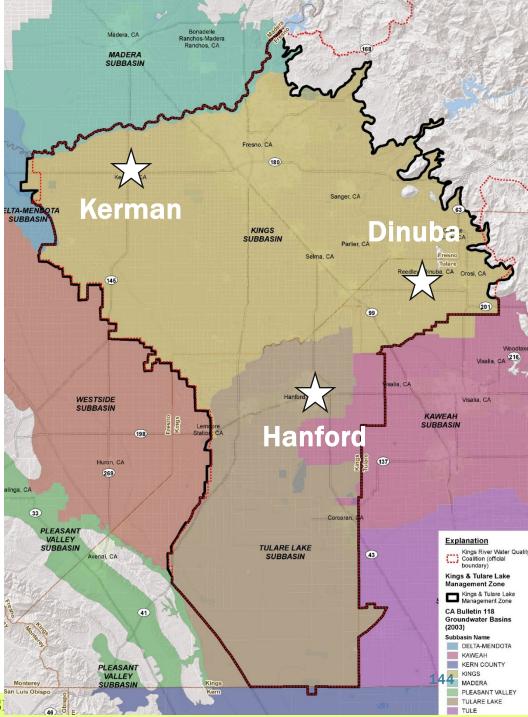


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- Fill Stations
- Dinuba Circle K
 - 517 W El Monte Way
 - Average Usage: 1,685 gallons/month

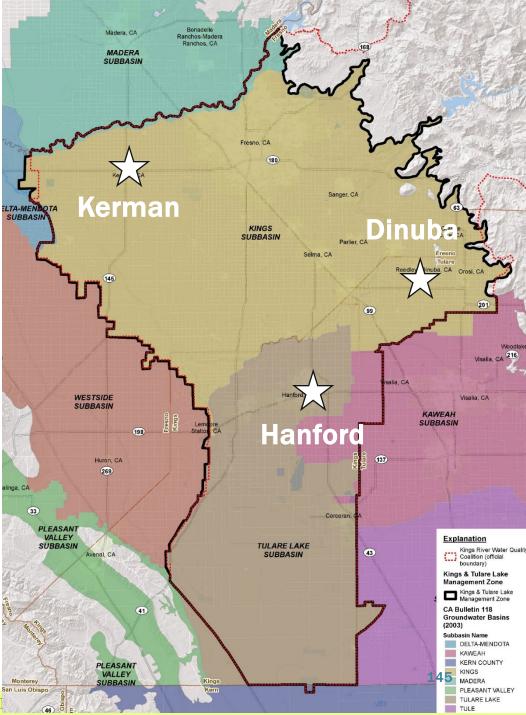




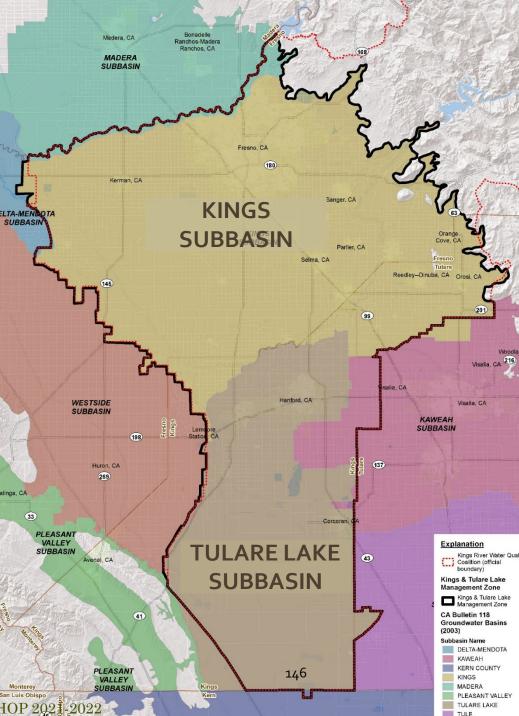
- Fill Stations
- Hanford KART Bus Terminal
 610 W 7th St
 - Average Usage: 2,102 gallons/month



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- What is the Nitrate Control Program?
 - A new regulation that will help resolve problems with Nitrate in our area. We have three goals:
 - 1. Provide safe drinking water supplies
 - 2. Reduce Nitrate impacts to water supplies
 - 3. Restore groundwater quality, where reasonable, feasible, and practicable
- Involves All Dischargers
 - Irrigated Ag (Coalition)
 - Dairies/Feedlots/Confined Animal Operations
 - Cities
 - Industry
- 2021 Targeted Kings Subbasin
- 2022 Addresses Tulare Lake Subbasin
- Managed by Kings Water Alliance



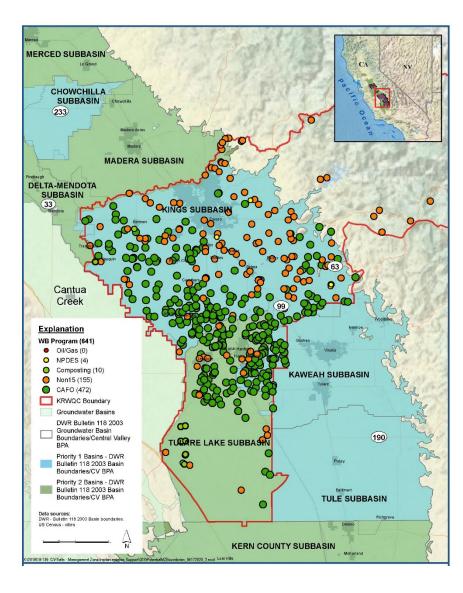
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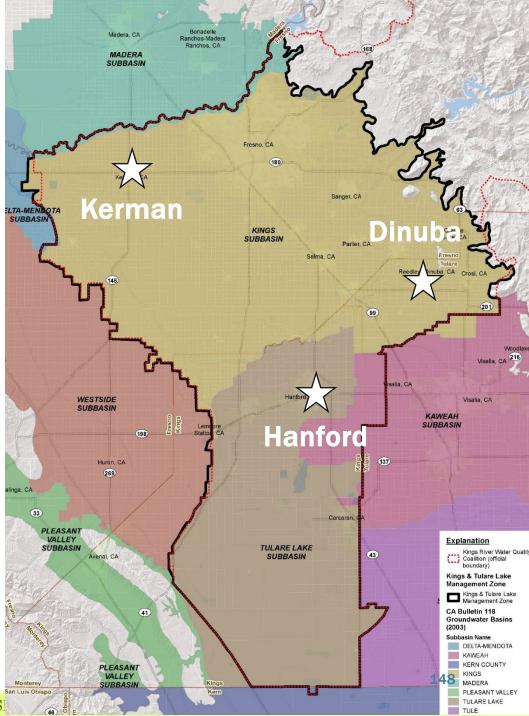




Dischargers (633)	Total
Permittees permitted under General Or	der (479)
Irrigated Agriculture(~4,000 members\~765,000 irrigated acres)	1
Dairy	286
Confined Bovine	91
Poultry	101
Permittees with Individual Waste Discha (154)	arge Requirements
Wastewater Treatment Facilities	59
Food Processors	55
Industrial/Manufacturing	17
Wineries	10
Composting Facilities	9
Other Animal Facilities	4



- Fill Stations
 - Connected to City Systems
 - Sediment Filtered
 - Checked Twice Monthly for Bacteria
 - Cleaned 5 days per Week
 - No Charge to User
 - No Limit on Usage
 - Accommodates Containers up to 5 gallons



- Temporary Replacement Water Options
 - Free Testing of wells on **Non-ILRP** Enrolled Parcels
 - \bullet Not served by compliant water system
 - Bottled Water Available if
 - Test Results at 10 mg/L Nitrate-N or higher
 - Available to ILRP Enrolled Parcels
 - Must Provide Drinking Water Test Results
 - Results within last 5 years

• Currently servicing 142 residences with Bottled Water Deliveries

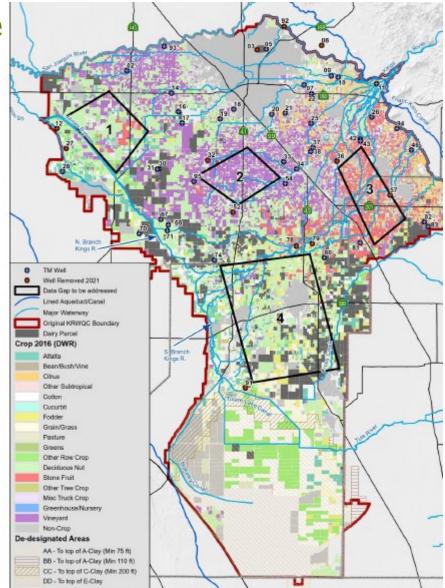
• Apply at <u>www.kingswateralliance.org/welltest</u>

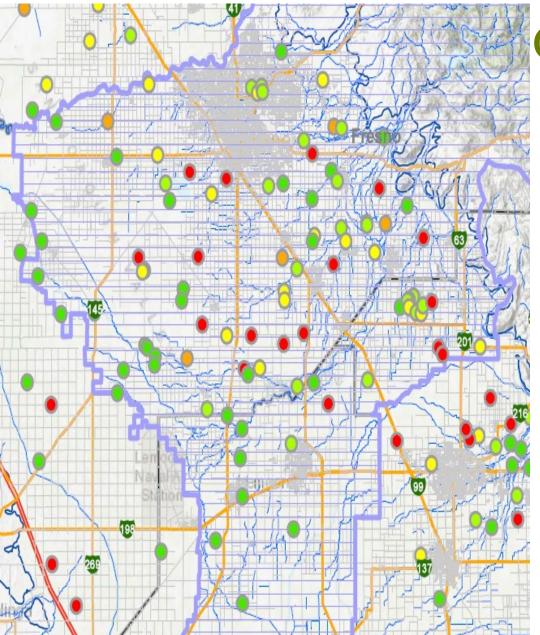
Coalition and Regulatory Updates

- Surface Water Monitoring
 - 6 of 8 Surface Water Sites Monitored in 2021
 - 33 sets of Water Quality Data Collected
 - 527 individual samples
 - Another Year without Agricultural Material Detections
- Monitored Sites represent changes in local conditions
 - Changes in Cropping Patterns
 - Changes in Soil Characteristics
 - Chemistry Testing based on local use patterns
- Known Issues
 - Bacteria (intermittent)
 - Electrical Conductivity (seasonal)
 - pH (random)

KRWQC Activitie

- Groundwater Quality Trend Monitoring
 - Network of Shallow ag and domestic wells
 - Monitors changes in uppermost fraction of aquifer
 - Samples collected June of each year
- Additional Cooperators Needed
 - Fill gaps in basin coverage
 - No charge to cooperator
- Requirements
 - Well Construction Report
 - \bullet Need to know depth and screen locations
 - Located in Underserved Areas
 - Not adjacent to non-irrigated ag dischargers





Groundwater Trend Monitoring Wells

General Order Reminders and Updates

• Groundwater Protection Formulas

- Parcel level Analysis of Nitrogen Loading
- All ILRP Parcels within target township considered
 - SWAT (Soil Water Assessment Tool) Model Runs to Account for Physical Factors
 - Crop Growth
 - Soil Textures
 - Climatic Factors
 - Management Practices
 - Yield

Coalition and Regulatory Updates

- Groundwater Protection Values
- Calculated in Townships with > 10% Irrigated Acreage classified as High Vulnerability and/or
- Calculated if Township has Disadvantaged Community within
- Factors Considered
 - Parcel by Parcel Calculation
 - Nitrogen Applied
 - Nitrogen Removed
 - Net Water Applied
 - Environmental Losses
 - Denitrification
 - Volatilization
 - Organic Matter
 - Perennial Tissue
 - Nitrogen Leached

Coalition and Regulatory Updates

- Groundwater Protection Targets
 - Township level Analysis of Nitrogen Loading
 - Crop/Soil/Management Practice Combinations
 - Hydrologic conditions
 - Estimates of other loads (other permit holders)
 - Consideration of post-rootzone processes
 - Consideration of Groundwater Processes
 - Input into appropriate groundwater model for Target Calculation, Fate Evaluation
- Calculations are done internally
 - Individual Grower Information not included