Ranch Water Quality Plan Template for

Napa River & Sonoma Creek Watersheds

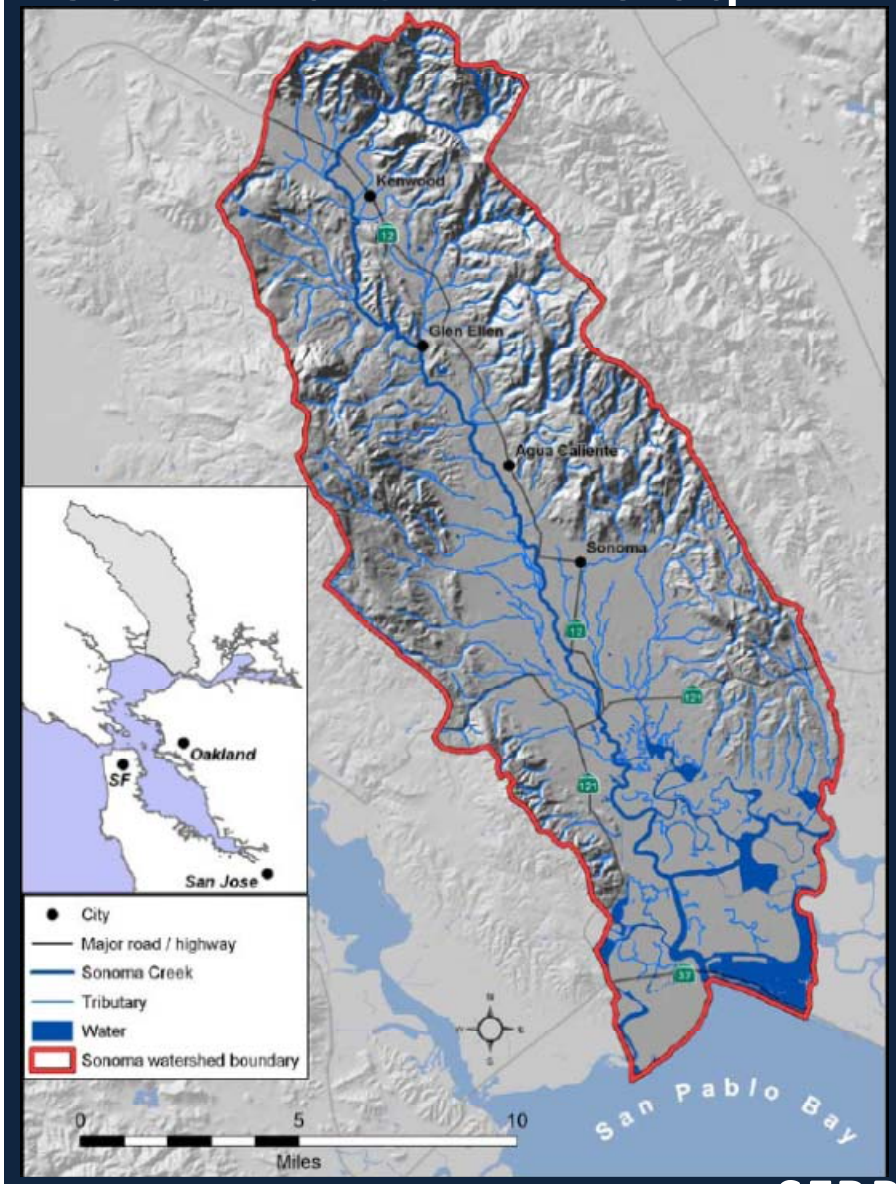
Michael Lennox

UCCE Ranch Planning & Conservation Monitoring Coordinator

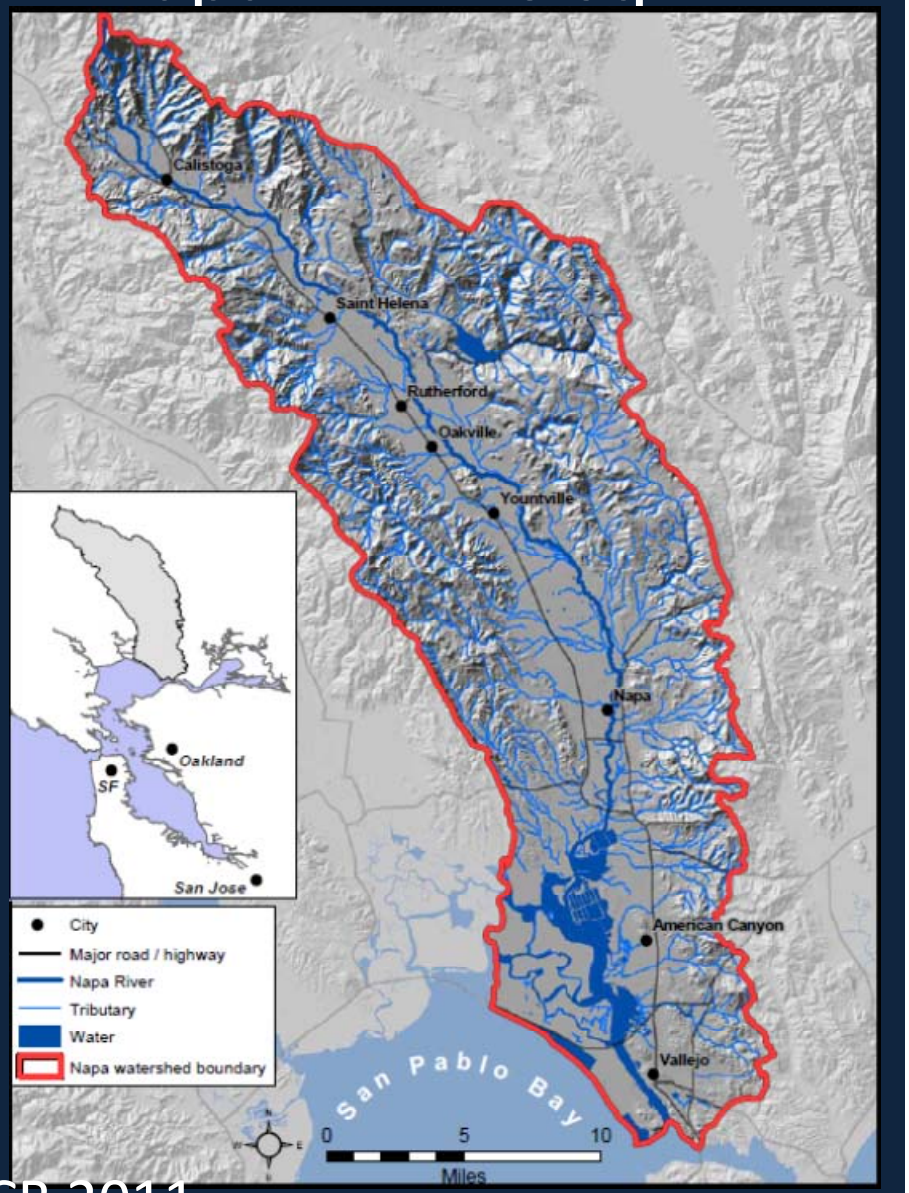
February 28, 2012

San Pablo Bay

Sonoma Cr = 126 sq mi



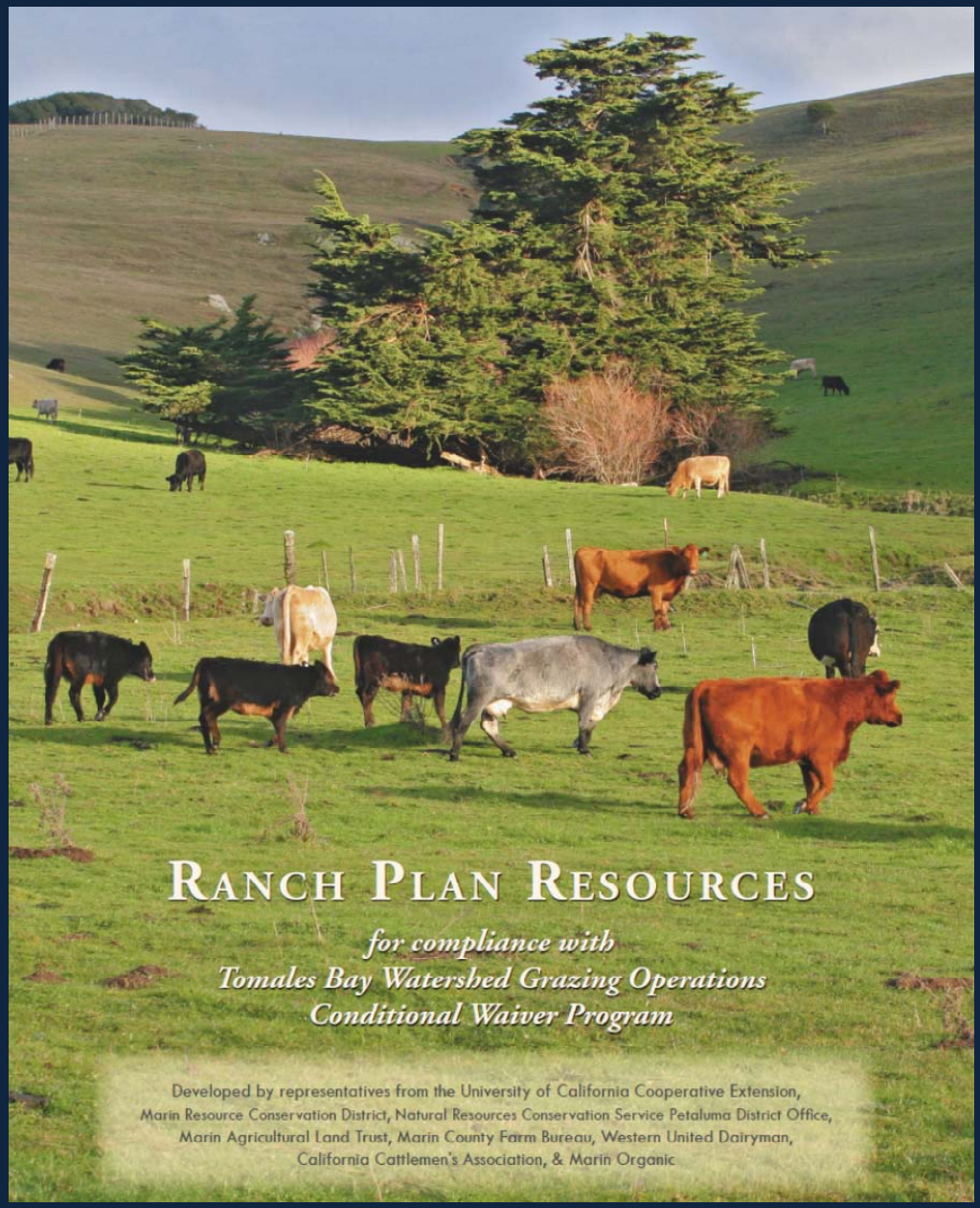
Napa R = 426 sq mi



SFBRWQCB 2011

Tomales Bay Grazing Waiver

1. Marin Resource Conservation District
2. Natural Resources Conservation Service
3. Marin County Farm Bureau
4. Western United Dairyman
5. California Cattlemen's Association
6. Marin Agricultural Land Trust
7. Point Reyes National Seashore



http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/tomalesbaypathogenstmdl.shtml

Ranch Water Quality Management Planning Shortcourse

Rangeland Watershed Program

University of California Cooperative Extension
USDA Natural Resources Conservation Service

NRCS Conservation Planning

Phase I - Collection and Analysis
(Understanding the Problems and Opportunities)

1. Identify Problems and Opportunities
2. Determine Objectives
3. Inventory Resources
4. Analyze Resource Data

Phase II - Decision Support
(Understanding the Solutions)

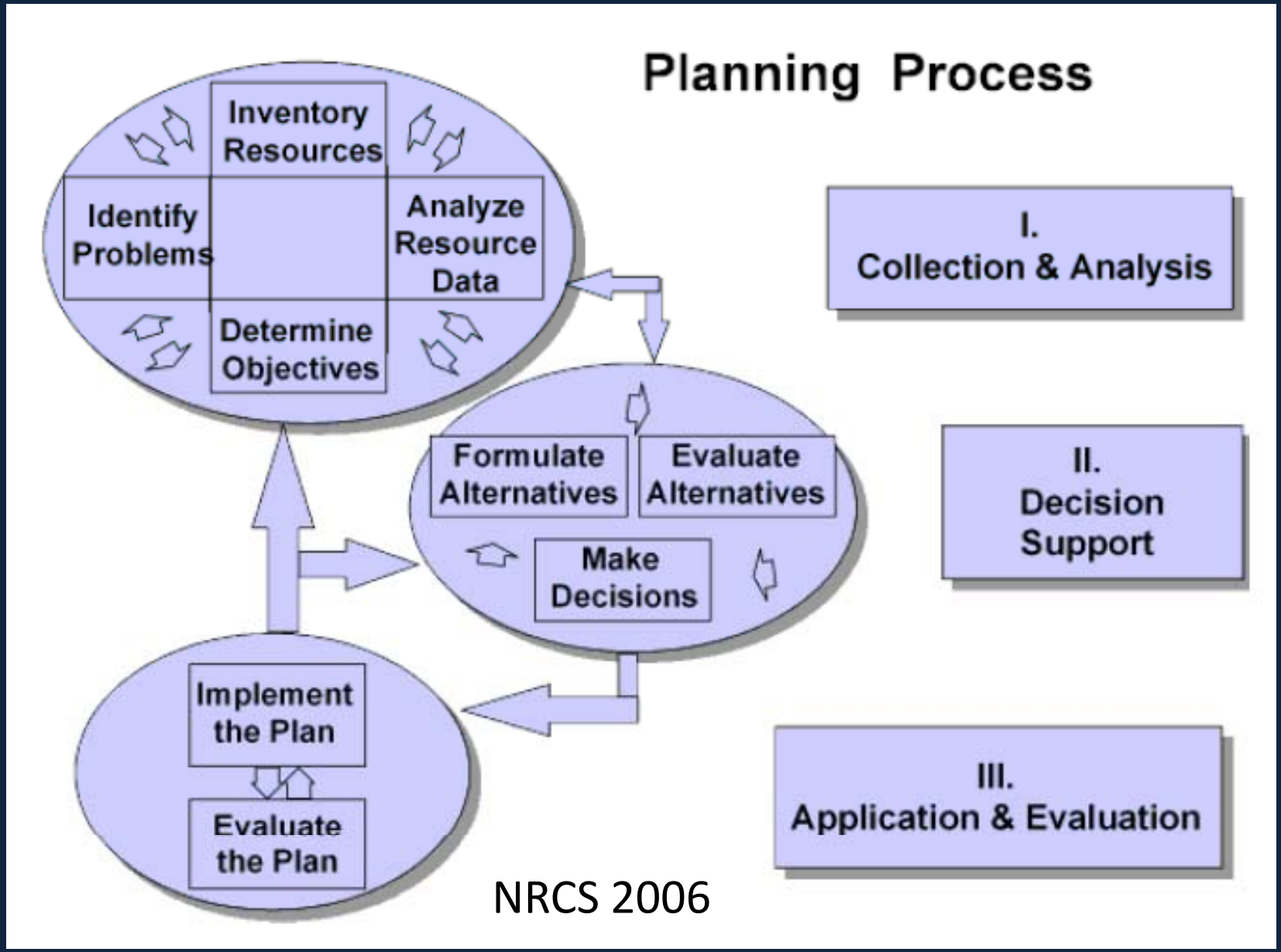
5. Formulate Alternatives
6. Evaluate Alternatives
7. Make Decisions

Phase III - Application and Evaluation
(Understanding the Results)

8. Implement the Plan
9. Evaluate the Plan

NRCS 2006

NRCS Conservation Planning



NRCS 2006

Waiver Requirements

1. Ranch Water Quality Plan

2. Compliance Monitoring & Reporting
   - Ranch/pasture inspections
   - RDM measurements
   - Annual Certification

RANCH WATER QUALITY PLAN,

COMPLIANCE MONITORING &

ANNUAL CERTIFICATION

TEMPLATES

for

CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR GRAZING OPERATIONS IN THE NAPA RIVER & SONOMA CREEK WATERSHEDS IN THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION

January 2012

Keeping it simple

List all future potential wat… livestock grazing or curren… maintaining ranch roads fo… practices, and changing m… time needed to conduct m… implementing the project. … work is done. List the step… meetings, applications, ex…

…s not indicate that …roblems such as …plementing new …s the amount of …ed order …ermines when …ams (ranch visits,

Water Quality Conc…			Implementation Planning
#	Describe…		

ANNUAL CERTIFICATION & COMPLIANCE MONITORING DOCUMENTATION
(required and must be submitted)

This ranch/farm is in compliance with the Grazing Operations Waiver Program (Conditional Waiver in the Tomales Bay Watershed, R2-2008-0054).

Farm/Ranch Name:	Phone:
Mailing address or P.O. Box:	City, State and Zip Code:
List all Assessor Parcel Numbers (APNs) or legal description (Township, Range, Sections) for each parcel, pasture, or silage field included in this plan:	

Ranch Plan (check one)

- ☐ A Ranch Water Quality Plan was completed in _____(year) and will be updated in____(year).
- ☐ The Ranch Water Quality Plan is expected to be finished in_____(year).

Compliance Monitoring Inspections (fill-in dates of monitoring inspections were completed)

1) Wet season inspections conducted on: Dec._____ Jan._____ Feb._____ March_____ April_____
2) Dry season inspections occurred on: June _____ Sept._____
3) Survey of stream(s) below and above ranch facility completed on : _____
4) Are further management practices needed to improve water quality? ☐ Yes ☐ No Not Sure

If yes is indicated in question 4, list any new potential water quality projects identified during ranch or stream inspections and describe planned or implemented fixes and any maintenance. Use additional pages if needed.

Date	Location (Pasture/ Field)	Describe Water Quality Concern	Notes (action taken, success, & future needs)

Completed by: ☐ Landowner ☐ Tenant ☐ Other_____

_____
(Print name)

_____
(Signature) (Date)

Phone #:_____

Make copies for landowner & tenant.
Mail completed form by registered mail **before November 15** to:

San Francisco Bay RWQCB
1515 Clay Street, Suite 1400
Oakland, CA 94612
ATTN: Grazing Operations Waiver Program

Ranch Water Quality Plan

Ranch Water Quality Plan

- Property Information – Page 8

- Contact Information
- Parcels covered
- Indicate Regional Board
- Landowner
- Tenant/Manager
- Existing plans

PROPERTY INFORMATION (required and kept on-site)

Ranch/Farm Location		
Ranch/Farm Name:		
Mailing Address, or P.O. Box:		County:
City, State, Zip Code:		What Water Board region(s) is the ranch/farm in? R1 (North Coast) √ **R2 (San Francisco Bay)** R3 (Central Coast) R4 (Los Angeles) R5 (Central Valley) R6 (Lahontan) R7 (Colorado River) R8 (Santa Ana) R9 (San Diego)
Phone:	Size (acres):	
List all Assessor Parcel Numbers (APNs) or legal description (Township, Range, Sections) for each parcel, pasture, or silage field included in this plan:		

Owner	
Name(s):	
Mailing Address or P.O. Box:	same as ranch address
City, State and Zip Code:	
Phone:	E-mail (optional):

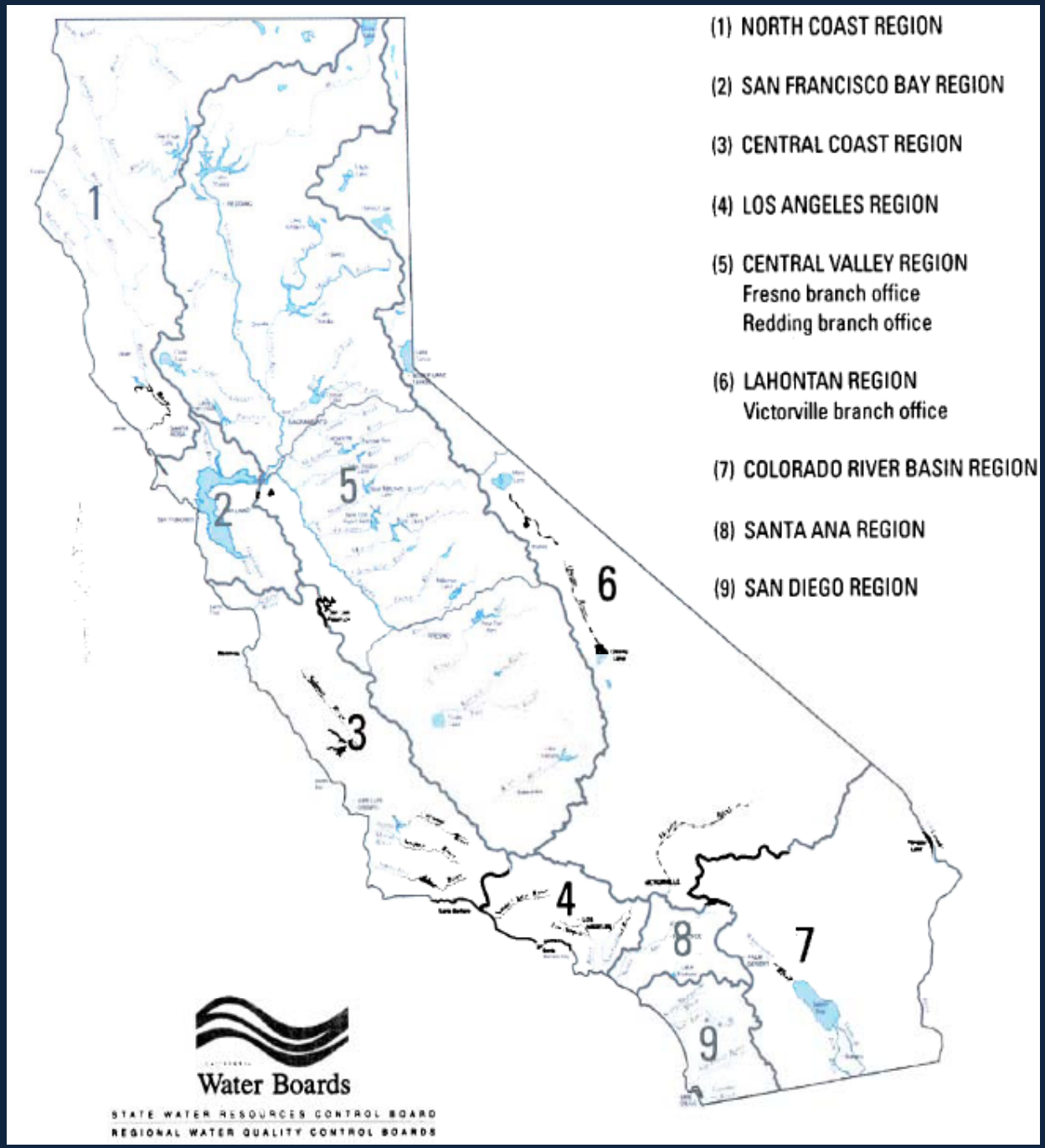
Tenant/Manager (if not owner)	
Name(s):	
Mailing Address or P.O. Box:	same as ranch address
City, State and Zip Code:	
Phone:	E-mail (optional):

Plans & Certifications

Check the box for the plans, certifications or other documents that exist for the ranch:

Conservation Easement	Dairy Quality Assurance Program	Erosion Control Plan	Fire Mngt. Plan
Fish Friendly Farming	Grass-Fed Certification	Grazing Mngt. Plan	UCCE Ranch Plan
Salmon Safe Certification	NRCS Conservation Plan	Dairy Nutrient Mngt.	Dairy Waste Mngt. Plan
Timber Harvest Plan	Organic Certification		

CA Regional Water Quality Control Boards



Ranch Water Quality Plan

- Property Information – Page 8
- Ranch/Farm Goals – Page 9

- Production
- Life
- Natural Resources

RANCH/FARM GOALS (optional)

Date(s) Updated: _____

Ranch goals are divided into production, quality of life and natural resource goals. These goals should reflect what you are trying to accomplish on your property. They are used to identify management strategies and practices for accomplishing your goals as well as to help you identify goals that might conflict with each other. Check any goal statements below which reflect your plans, reword them if needed and/or write-in your own.

Production
☐ pass on the farm/ranch to the next generation
☐ reduce family/farm debt
☐ expand farm/ranch enterprises
☐ develop new enterprises
☐ increase farm/ranch profitability
☐ reduce operating costs
☐ purchase or lease more ranch/farm property
☐ other:
☐ other:
Quality of Life
☐ reduce energy consumption in the farm/ranch operation
☐ provide for our children's college education
☐ provide financial or other support for community organizations
☐ reduce household operating expenses
☐ build an emergency fund
☐ raise livestock or crops during retirement
☐ build a retirement fund
☐ other:
☐ other:
Natural Resources & Water Quality
☐ manage rangeland to protect soil from erosion
☐ manage cropland, pastureland or forestland to protect soil from erosion
☐ manage ranch roads to reduce movement of sediment into streams and other water bodies
☐ reduce erosion of streambanks and gullies
☐ manage to increase tree cover and/or ground cover in riparian areas or along streams
☐ reduce concentration of livestock in or near streams, wetlands, or other water bodies
☐ manage to reduce entry of sediment, nutrients and pathogens to streams or wetlands
☐ reduce wildfire hazard
☐ maintain or enhance oak woodland, native grass, or other plant communities
☐ maintain or enhance wildlife or fisheries habitat or other aquatic resources
☐ reduce/manage invasive weeds
☐ reduce/manage predator impacts on the ranching operation
☐ meet water quality regulations
☐ other:
☐ other:


Set realistic goals

Ranch Water Quality Plan

- Property Information – Page 8
- Ranch/Farm Goals – Page 9
- Pasture Inventory – Page 10

1. Location
2. Season of use
3. Soils
4. Slope
5. Size
6. Slope
7. Woody vegetation cover
8. Minimum RDM expected

PASTURE INVENTORY (optional)

Date(s) Updated: _____

Describe each pasture, paddock and open rangeland on the ranch/farm with estimations of area, slope, and woody vegetation cover. Large or complex pastures may be subdivided into subsection units for management and/or mapping purposes. Estimate the minimum objective for Residual Dry Matter (RDM) monitoring using Tables 1-3 from http://anrcatalog.ucdavis.edu/RangelandMonitoringSeries/8092.aspx. Note the season(s) or months when livestock are moved in/out of the pasture each year and soil types(s) or series(s) if known.

Field #	Location (Name or #)	Season(s) of Use	Soil(s)	Size *(acres)*	Slope (%)	Woody Vegetation Cover (%)	RDM Minimum (lb/ac)

Estimate Minimum RDM Expected

Table 2. Minimum RDM standards for annual grassland/hardwood rangeland in pounds per acre (dry weight):

Woody cover (%)	RDM standard for percent slope (lb/acre)			
	0–10%	10–20%	20–40%	>40%
0–25	500	600	700	800
25–50	400	500	600	700
50–75	200	300	400	500
75–100	100	200	250	300
Bartolome et al. 2006				

Table 1. Minimum RDM standards for dry annual grassland (300-600)

Table 3. Minimum RDM standards for coastal prairie (200-2,100)

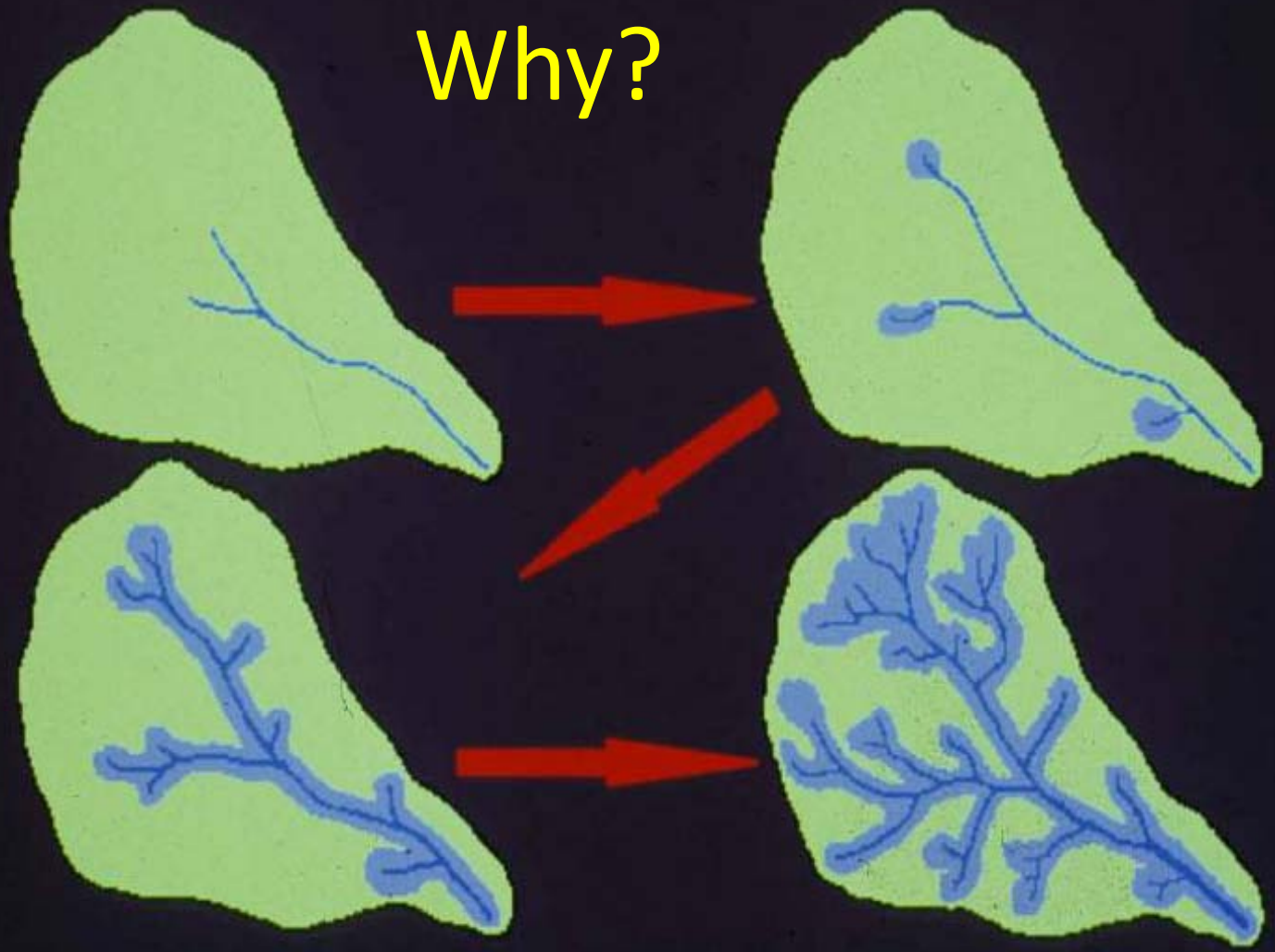
http://anrcatalog.ucdavis.edu/RangelandMonitoringSeries/8092.aspx

Ranch Water Quality Plan

- Property Information – Page 8
- Ranch/Farm Goals – Page 9
- Pasture Inventory – Page 10
- Pasture/Ranch Assessment – Page 11

Erosion Types

Expansion of Source Area and Channel System During A Storm



From Branson et al.

- Sediment
- Nutrients & Pathogens

PASTURE/RANCH ASSESSMENT (required and kept on-site)

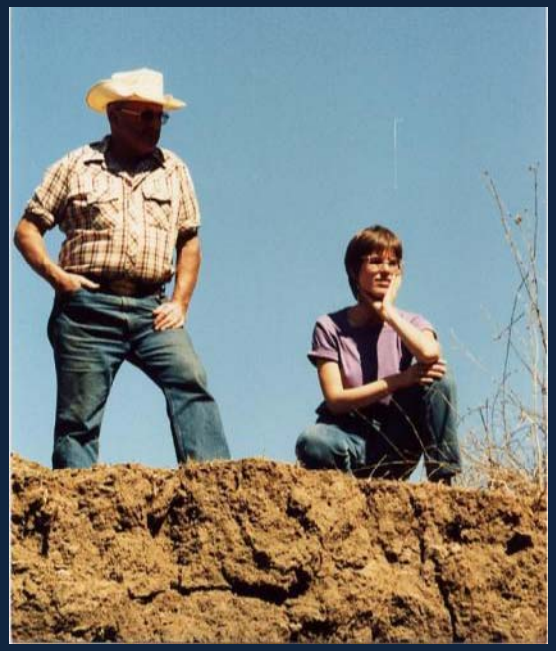
Date(s) Updated: _____

The following questions are intended to help assess ranch/farm water quality and potential sources of pollution in the watershed. It is important to note that identified pollution sources **may not be caused by current livestock grazing activities**. This assessment is intended to be used on each pasture/field utilized for agricultural production purposes on the ranch/farm. Multiple fields or the entire ranch may be assessed at once. Describe the condition and pasture/field location. Note any recorded problem conditions as caused by: **C**urrent livestock management (**C**); a **H**istoric legacy site (**H**); or **N**atural causes (**N**).

Question	Potential Source	Location (*pasture/field*) & Describe Condition	Cause (*C, H, or N*)
SEDIMENT			
RANGELAND & PASTURE/CROP FIELDS			
Bare soil visible throughout the rainy season?	Yes No Not Sure		
Rill or sheet erosion present?	Yes No Not Sure		
Gullies, slumps, or headcuts present?	Yes No Not Sure		
ROADS			
Surface erosion present on road(s) (rills, gullies)?	Yes No Not Sure		
Culverts or ditches cause gullies or erosion?	Yes No Not Sure		
Sediment fills drainage ditches after winter?	Yes No Not Sure		
PATHOGENS AND NUTRIENTS			
LIVESTOCK DISTRIBUTION			
Storm runoff from corrals connects to stream?	Yes No Not Sure		
Corrals used throughout the winter?	Yes No Not Sure		
Feeding, salting, or watering areas near stream?	Yes No Not Sure		
Do livestock congregate in the stream?	Yes No Not Sure		
MANURE MANAGEMENT			
Manure stockpile runoff connects to stream?	Yes No Not Sure		
Manure applied to pasture less than 2 weeks before a runoff generating rain storm?	Yes No Not Sure		
Manure applied to pastures is stored (aged) less than one month?	Yes No Not Sure		

Ranch Water Quality Plan

- Property Information – Page 8
- Ranch/Farm Goals – Page 9
- Pasture Inventory – Page 10
- Pasture/Ranch Assessment – Page 11
- Stream Assessment – Page 12



- Channel
- Temperature
- Nutrients

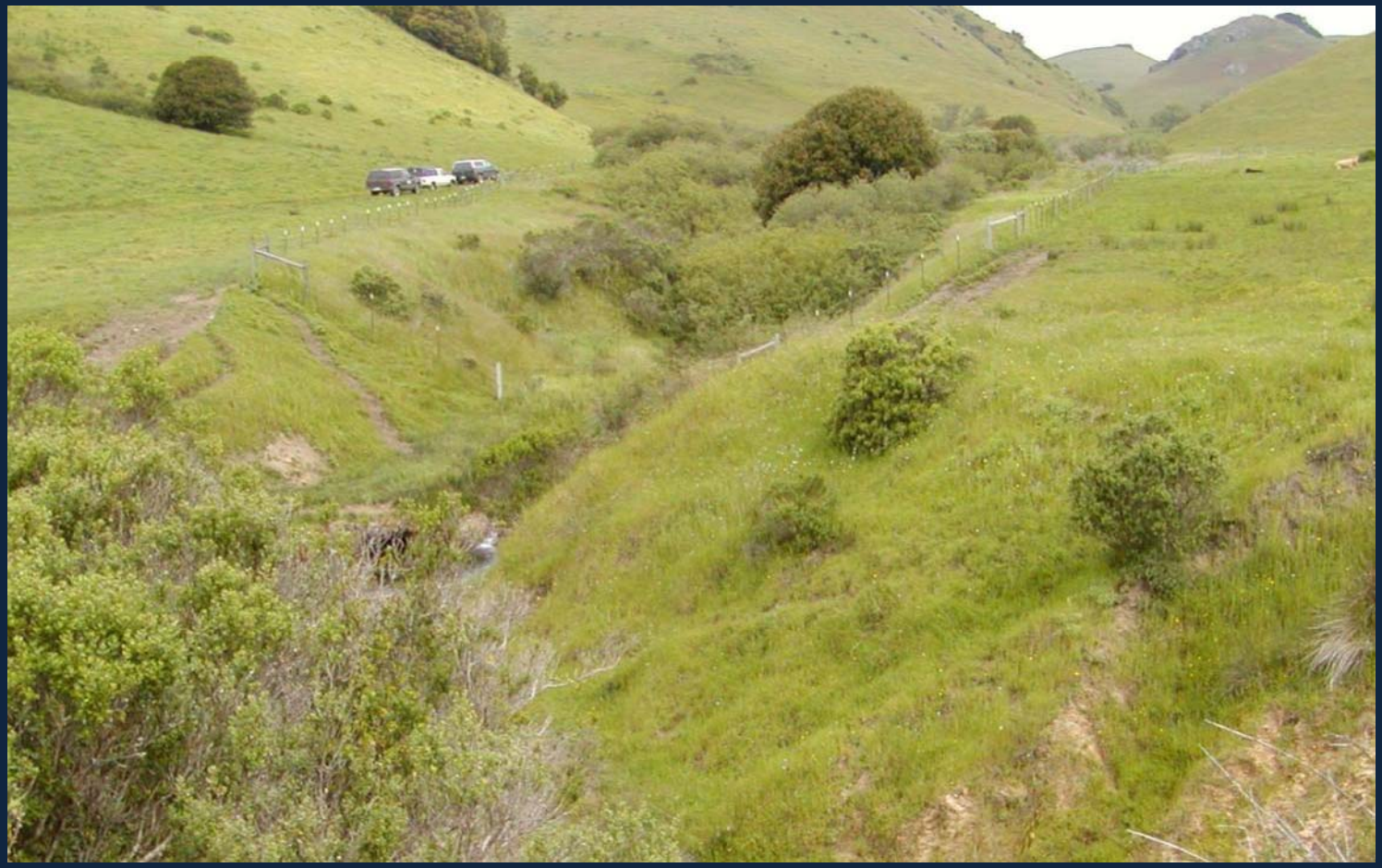
STREAM ASSESSMENT (required and kept on-site)

Date(s) Updated: _____

This assessment is intended for perennial or intermittent streams that provide habitat for fish or frogs or support riparian vegetation. If you do not have streams with riparian vegetation, assess the larger intermittent stream channels that flow during the entire rainy season. Assess ranch/farm streams while standing near the creek. It is important to note that **concerns identified may not be caused by current livestock grazing activities**. Describe the condition and location. Note any recorded problem conditions as caused by: **C**urrent livestock management (**C**); a **H**istoric legacy site (**H**); or **N**atural causes (**N**).

Question	Potential Concern	Location (*pasture/stream*) & Describe Condition	Cause (*C, H, or N*)
STREAM CHANNEL			
Bare soil along banks of stream?	Yes No Not Sure		
Unstable or eroding stream banks?	Yes No Not Sure		
Does the stream have the potential to support trees (look for remnant trees/shrubs along the channel)?	Yes No Not Sure		
Are crossings for livestock unstable?	Yes No Not Sure		
Grazing in riparian areas takes place all season?	Yes No Not Sure		
STREAM TEMPERATURE			
Is stream exposed to full sun?	Yes No Not Sure		
Wide and shallow streams?	Yes No Not Sure		
Does stream flow appear inadequate, given stream channel size?	Yes No Not Sure		
NUTRIENTS			
Algae growth excessive in stream?	Yes No Not Sure		

Remember: Look for potential problems & causes before prescribing fixes & conservation practices



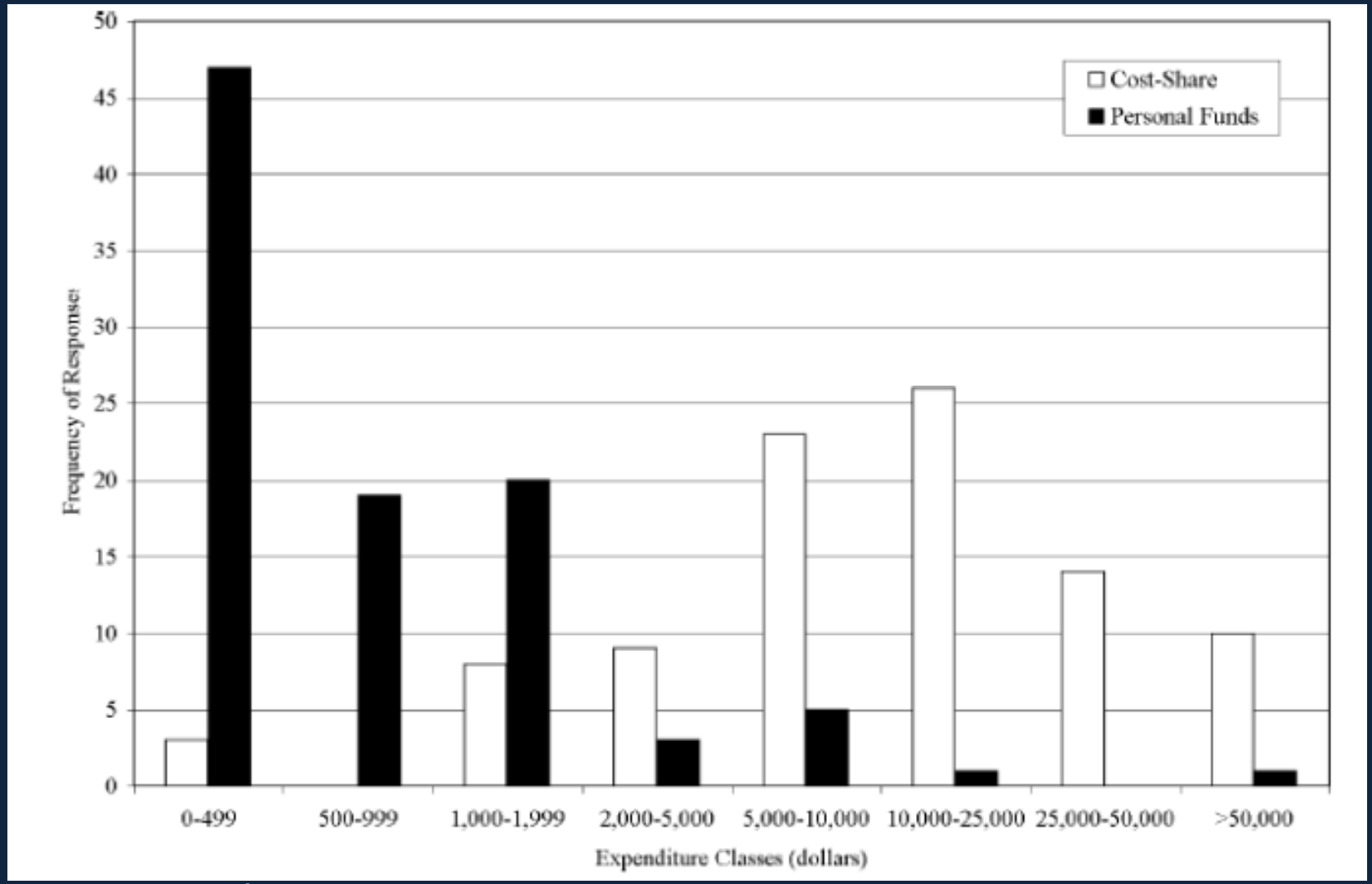
Ranch Water Quality Plan

COMPLETED WATER QUALITY PROJECTS (optional)

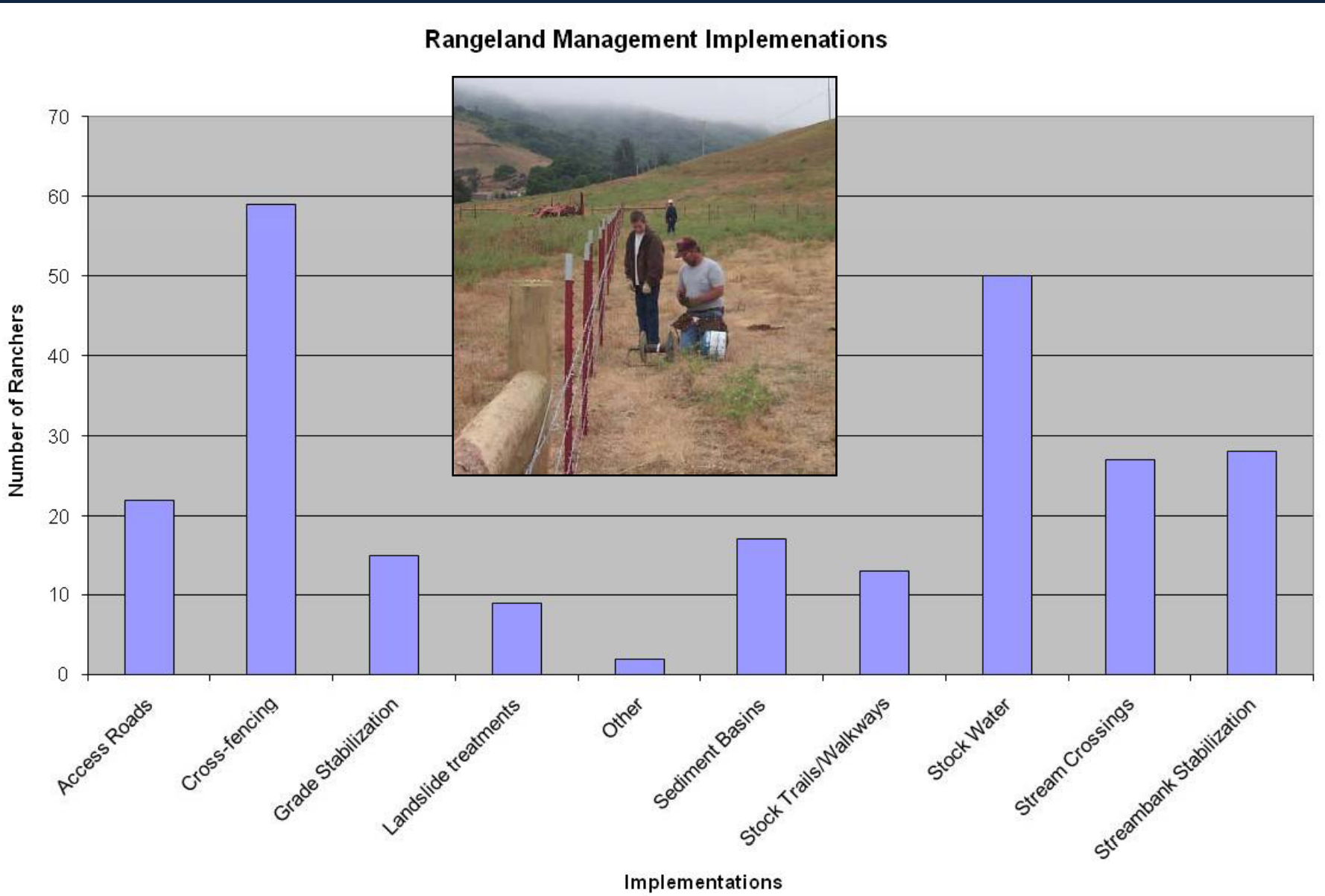
List all past water quality concerns on the ranch/farm and describe the issue. A concern does not indicate that livestock grazing or current management caused it. Describe any previously implemented management practice(s) intended to fix the problem. This includes steps to plan or receive technical/financial assistance, actual implementation or management changes, and the maintenance of projects or ranch infrastructure (cleaning culverts, scraping corrals, weed removal, etc.). Evaluate if more work is needed to improve water quality for each listed concern. Attach any old photographs of the concern including work completed if available. Use additional sheets if needed.

Water Quality Concern		Location (pasture/ field)	Practice(s) Completed	Maintenance Needs	Evaluation (*Is more work needed?*)	Photo Avail.?
#	Describe					

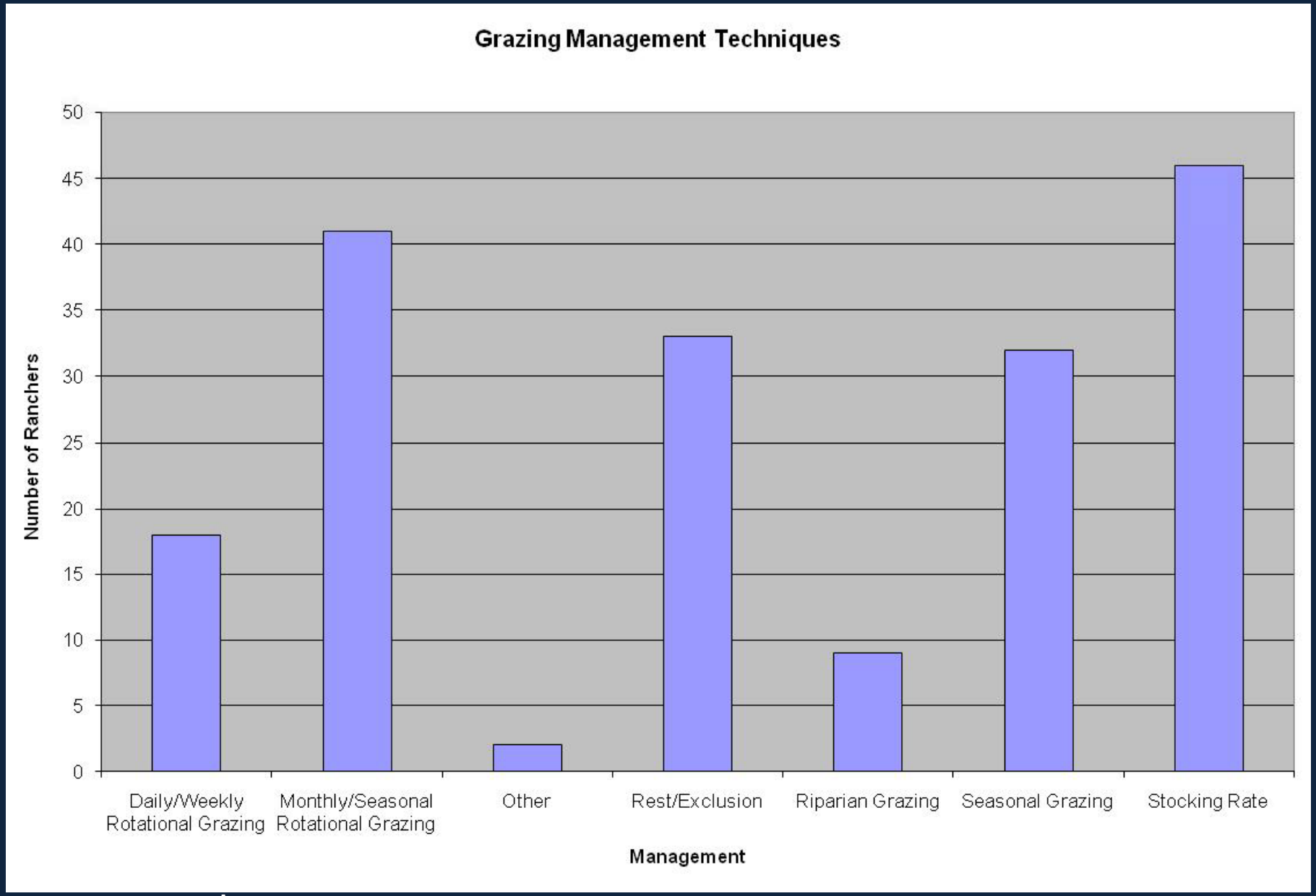
BMP Implementation (98%): personal vs. cost-share funds



Larson et al. 2005



Larson et al. 2005



Larson et al. 2005

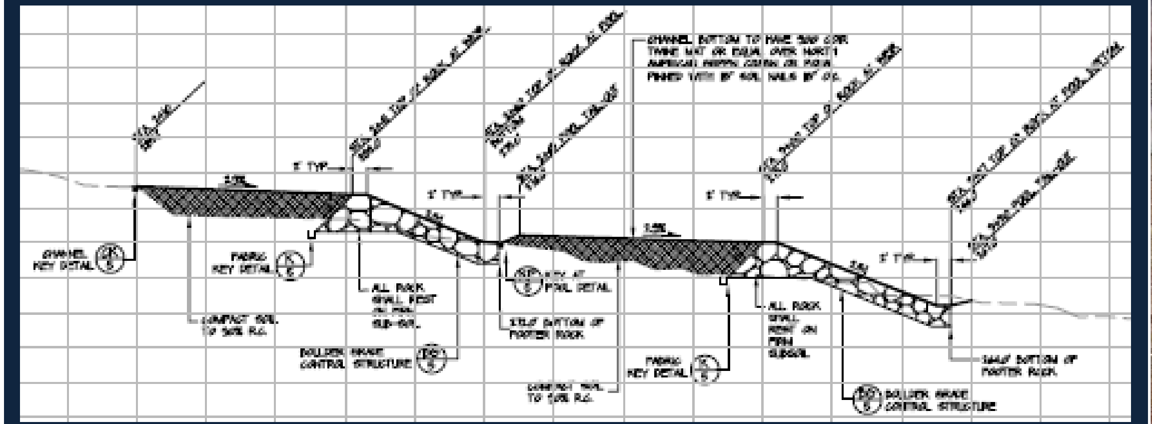
Maintenance of Practices

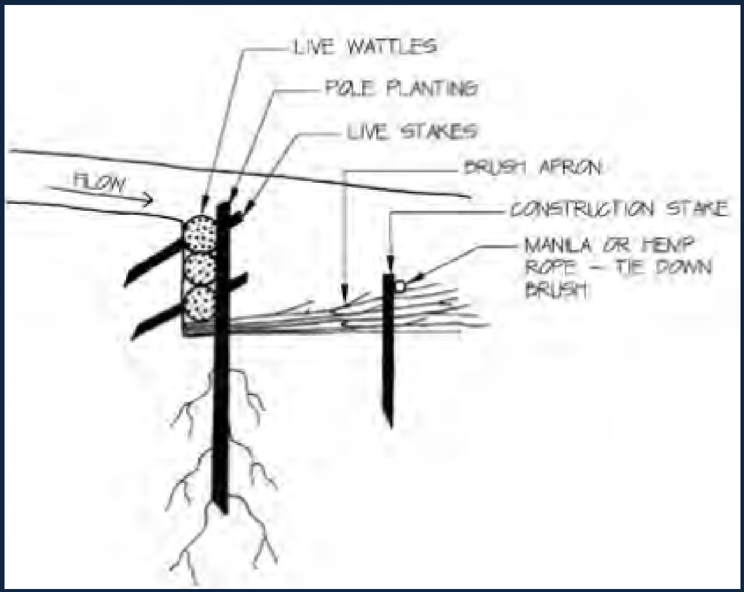
Ranch Water Quality Plan

FUTURE WATER QUALITY PROJECTS (required and kept on-site)

List all future potential water quality concerns on the ranch/farm with the expected pollutants from each. A concern does not indicate that livestock grazing or current management caused it. This includes locations where your current maintenance prevents problems such as maintaining ranch roads following winter storms. Consider multiple options for fixing water quality concerns such as implementing new practices, and changing management or maintenance routines. Estimate the approximate cost of each option as well as the amount of time needed to conduct maintenance. Give each project a priority, relative to other potential projects, indicating preferred order implementing the project. Assignment of priority recognizes that the availability of financial and technical assistance determines when work is done. List the steps taken to plan for the project including participation in technical & financial assistance programs (ranch visits, meetings, applications, expected contract dates, etc). Use additional sheets if needed.

Water Quality Concern		**Location (*pasture/ field*)**	**Options for Maintenance, Management Changes, or Practice(s) to Implement**	**Estimate Cost of Each Option**	**Priority**	**Implementation Planning**
#	**Describe**					




LIVE WATTLES
POLE PLANTING
LIVE STAKES
BRUSH APRON
FLOW
CONSTRUCTION STAKE
MANILA OR HEMP
ROPE – TIE DOWN
BRUSH

Ranch Water Quality Plan

- Topo
- Aerial
- Soils
- Future water quality projects
- Add other features important to you

MAPPING RANCH/FARM FACILITIES AND RESOURCES (optional)

Mapping

Which map types are being used for this ranch plan?

topographic
aerial photograph
soil information

_____
_____

What is the scale of your map(s)? 1:12,000 _____

_____ _____

Locate the following important ranch/farm features on your map and attach the map to this plan:

property lines for each APN
barns and dairy facilities
holding areas and corrals
pasture fence lines
leased pastures or silage fields
water troughs and pipelines
potential sediment, nutrient, pathogen, or mercury water quality projects
Residual Dry Matter (RDM) monitoring data

_____
_____
_____

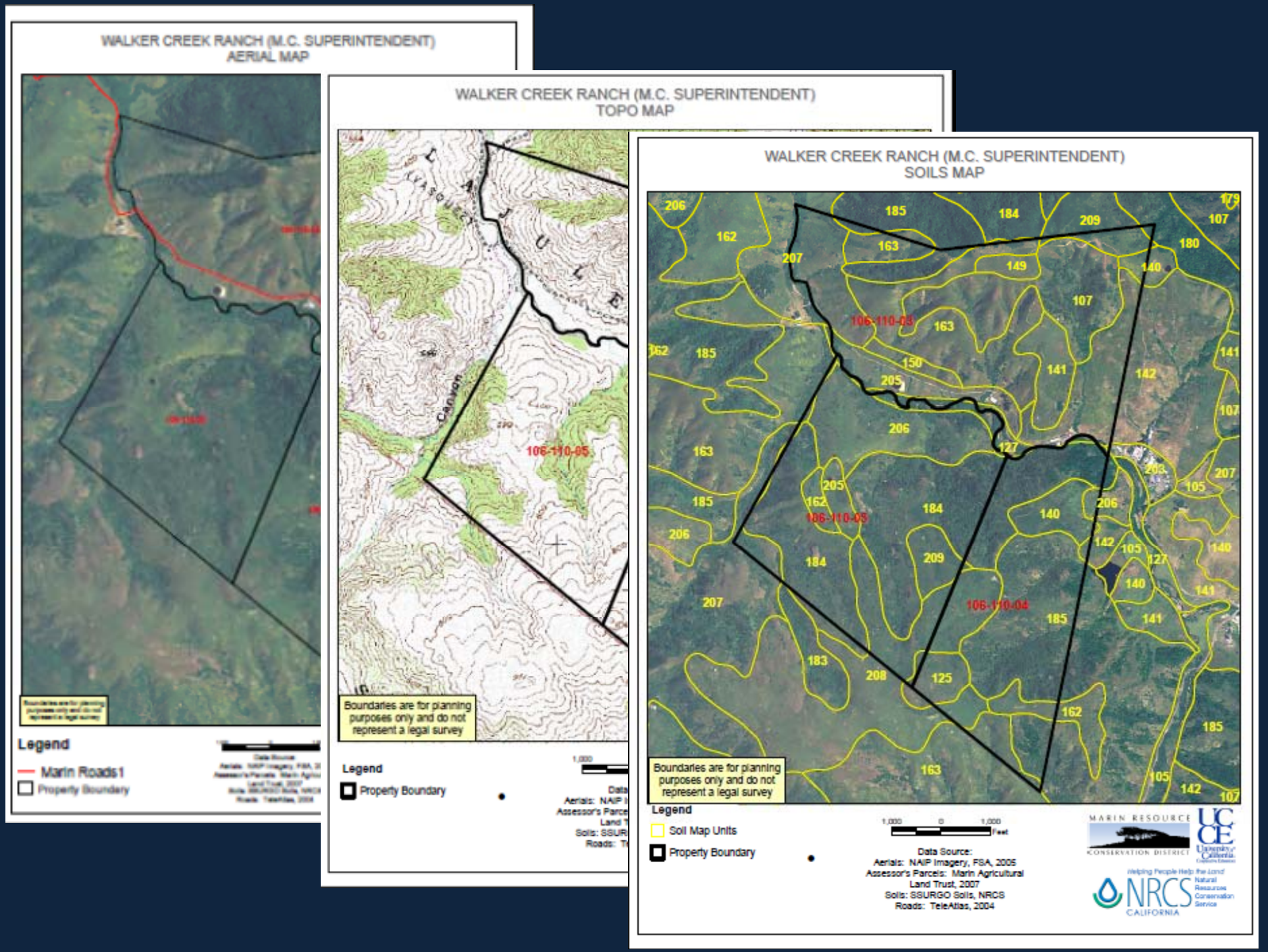
Watershed Assessment

What types of stream(s) are on the ranch/farm? ☐ Seasonal (intermittent) ☐ Perennial ☐ Both

Name(s) of stream(s) on your ranch/farm (if named):
_____

Name of sensitive river, waterbody or wetland downstream (lake, bay, etc.):
_____

Is a municipal or domestic water supply source downstream? ☐ Yes ☐ No ☐ Not Sure


WALKER CREEK RANCH (M.C. SUPERINTENDENT)
AERIAL MAP
Legend
Marin Roads1
Property Boundary
WALKER CREEK RANCH (M.C. SUPERINTENDENT)
TOPO MAP
106-110-05
Boundaries are for planning purposes only and do not represent a legal survey
Legend
Property Boundary
WALKER CREEK RANCH (M.C. SUPERINTENDENT)
SOILS MAP
106-110-03
106-110-05
106-110-04
Boundaries are for planning purposes only and do not represent a legal survey
Legend
Soil Map Units
Property Boundary
1,000 0 1,000 Feet
Data Source:
Aerials: NAIP Imagery, FSA, 2005
Assessor's Parcels: Marin Agricultural Land Trust, 2007
Soils: SSURGO Soils, NRCS
Roads: TeleAtlas, 2004
MARIN RESOURCE CONSERVATION DISTRICT
UCCE University of California
NRCS CALIFORNIA
Helping People Help the Land
Natural Resources Conservation Service

Ranch Water Quality Plan

1) Visual Inspections

- Wet season
  - every month = 5x
- Dry season
  - 2x (including Sept.)
- Stream survey
  - upstream
  - Downstream

2) Measure RDM

COMPLIANCE MONITORING (required and kept on-site)

Visual Inspections

Annual compliance monitoring consists of:

1) Wet season inspections of the ranch monthly or following storms (Dec.-April).
2) Two dry season inspections including one in September of the entire ranch prior to the rainy season.
3) One stream survey above and below or upstream and downstream of the ranch.

Use these inspections to decide if further management practices are needed to improve water quality on the ranch/farm. Start the yearly task of compliance monitoring on the ranch in December with the wet season inspections. Follow these up with two dry season inspections (one required in September) to make preparations and implement conservation practices before the winter rains arrive. To make compliance monitoring more efficient conduct the stream survey above and below the ranch during one of the wet season or dry season inspections. For more information on indicators of rangeland and pasture health, refer to ftp://ftp-fc.sc.egov.usda.gov/GLTI/technical/publications/IIRH_v4_8-15-05.pdf.

List the dates that the respective inspections were completed on the following Annual Certification form that will be submitted to the Water Board by November 15 of each year. Note monitoring activities below for 1) field observations of potential water quality concerns found during visual inspections, 2) estimates of Residual Dry Matter (RDM), and 3) photo-monitoring dates.

Residual Dry Matter (RDM) & Photo-Monitoring

Estimate RDM by visual and clip/dry/weigh methods (http://www.wildlandsolutions.com/rdm/). Interpret data as less (<), equal, or above (>) the minimum RDM objective for each pasture using the Pasture Inventory on page 10 (http://anrcatalog.ucdavis.edu/RangelandMonitoringSeries/8092.aspx).

Photographs are taken from the same location over time to document 1) RDM monitoring, 2) dates when management practices were implemented, and 3) improvements at a site over time such as increased vegetation cover. List and describe the locations of photo-points and attach photos if possible (http://californiarangeland.ucdavis.edu/Publications%20pdf/8067.pdf).

Date	Location (pasture #/name)	RDM Estimate (check method & if photo taken)	Visual Inspection Observations, RDM Explanations & Notes
		RDM=__________ lb/ac □ > minimum □ = min. < min. Visual Clip Photo	
		RDM=__________ lb/ac □ > minimum □ = min. < min. Visual Clip Photo	
		RDM=__________ lb/ac □ > minimum □ = min. < min. Visual Clip Photo	
		RDM=__________ lb/ac □ > minimum □ = min. < min. Visual Clip Photo	
		RDM=__________ lb/ac □ > minimum □ = min. < min. Visual Clip Photo	
		RDM=__________ lb/ac □ > minimum □ = min. < min. Visual Clip Photo	

Extra Data Sheets

COMPLIANCE MONITORING RECORDS (required and kept on-site)

Date	Location (pasture #/name)	RDM Estimate (check method & if photo taken)	Visual Inspection Observations, RDM Explanations & Notes
		RDM=____________ lb/ac ☐ > minimum Visual ☐ = min. Clip < min. Photo	
		RDM=____________ lb/ac ☐ > minimum Visual ☐ = min. Clip < min. Photo	
		RDM=____________ lb/ac ☐ > minimum Visual ☐ = min. Clip < min. Photo	
		RDM=____________ lb/ac ☐ > minimum Visual ☐ = min. Clip < min. Photo	
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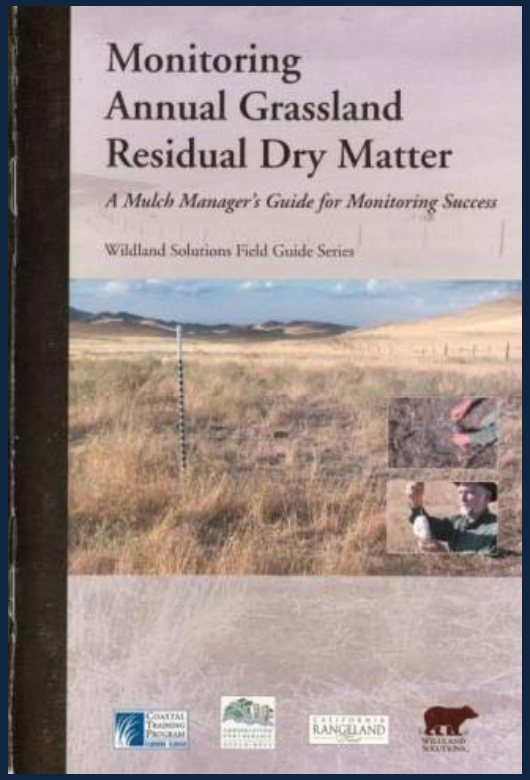
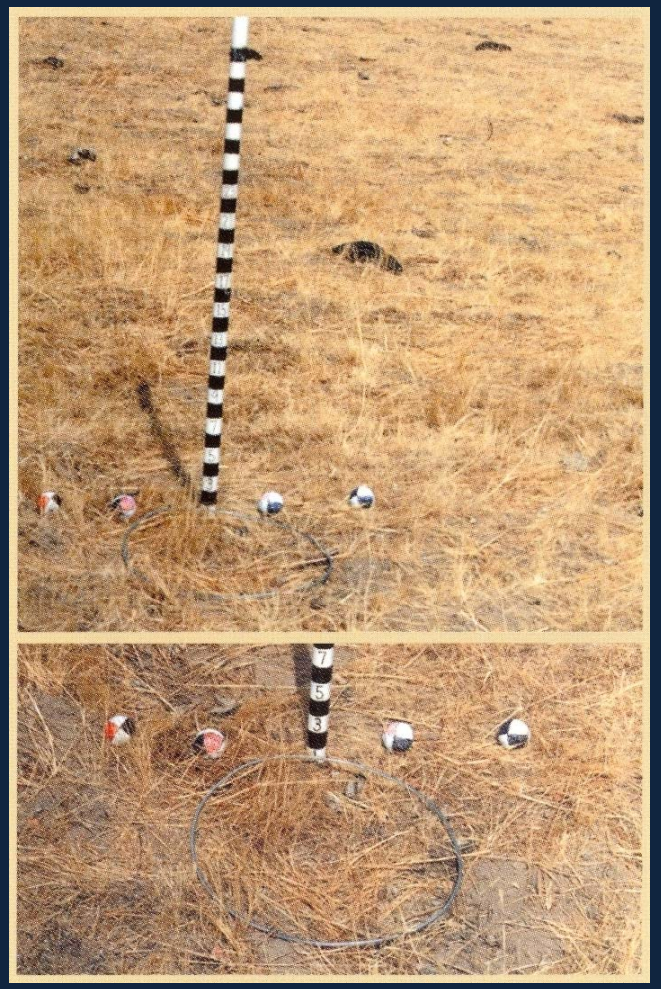
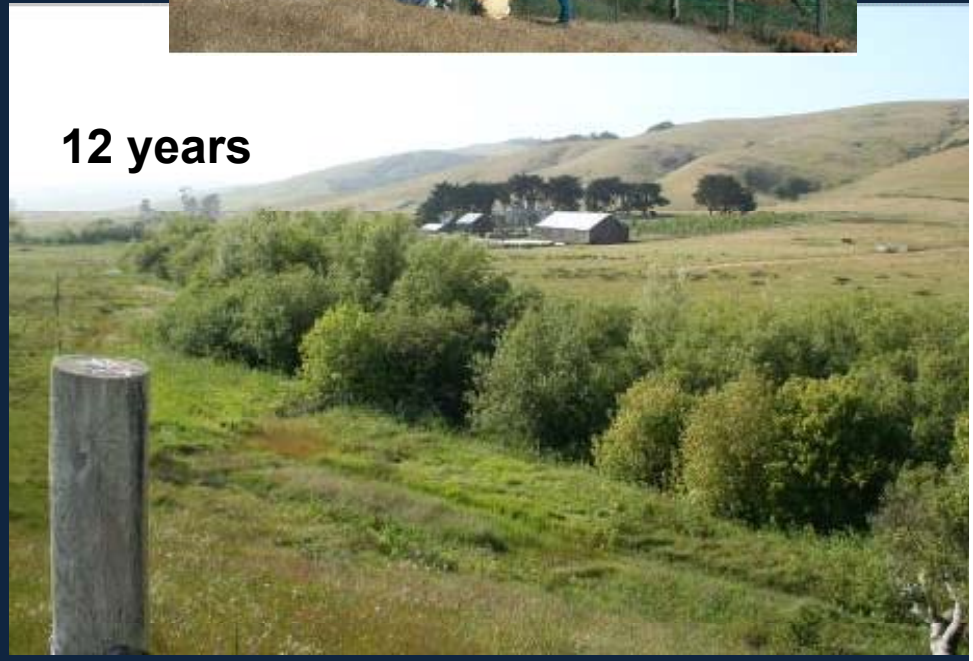
Monitoring RDM



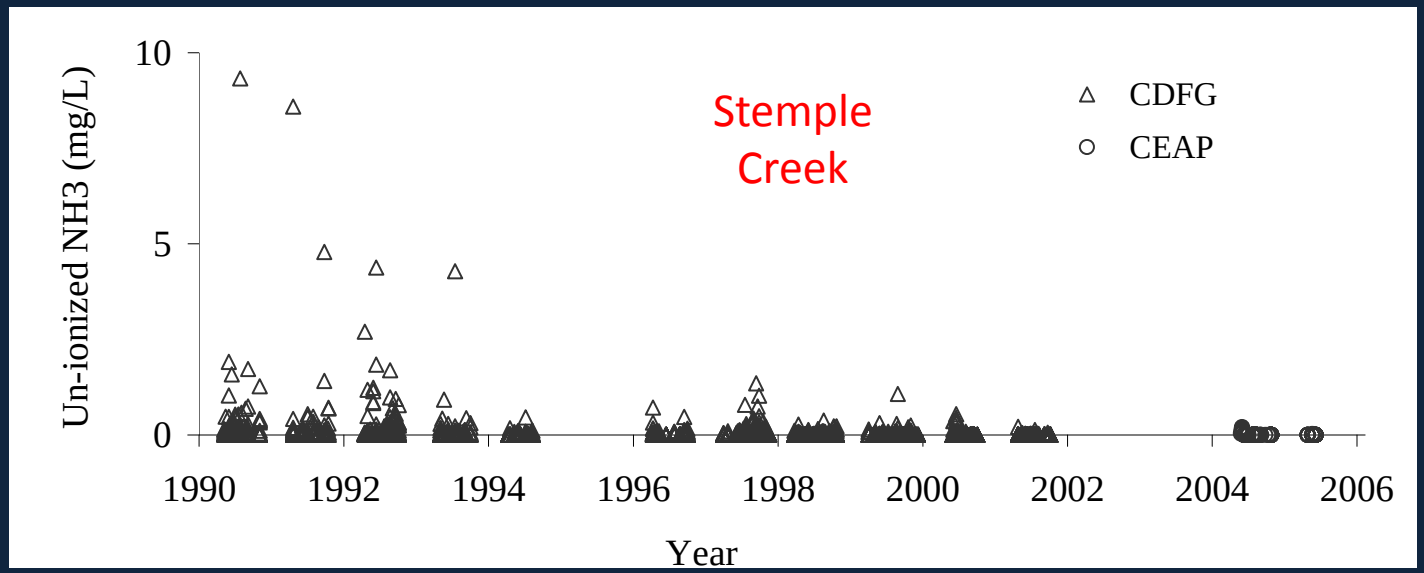


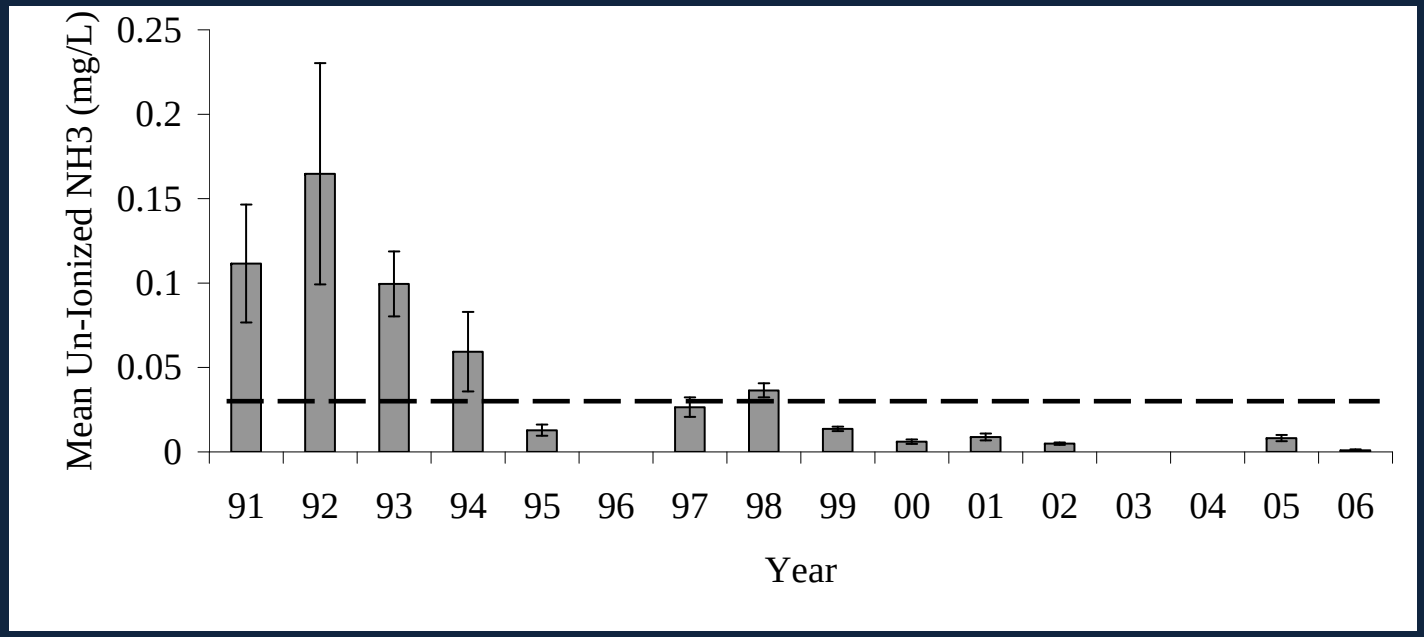
Wildland Solutions 2008



Photographic time-series
(images courtesy of Marin RCD)

NOT Water Quality Trends





Ranch Water Quality Plan

- Tenant may submit
- Find ranch plan binder with forms & APNs
- Review monitoring records
- Note actions to improve water quality
- Nov 15

ANNUAL CERTIFICATION FORM
(required and must be submitted)

This ranch/farm is in compliance with the Grazing Operations Waiver Program (Conditional Waiver in the Napa River and Sonoma Creek watersheds, Resolution No. R2-2011-0060).

Farm/Ranch Name:	Phone:
Mailing address or P.O. Box:	City, State and Zip Code:
List all Assessor Parcel Numbers (APNs) or legal description (Township, Range, Sections) for rangeland and pasture fields included in this plan:	Watershed(s): Napa River Sonoma Creek

Ranch Plan (check one)

☐ Ranch Water Quality Plan was completed in _____(year) and will be updated in_____(year).
☐ Ranch Water Quality Plan is expected to be finished in_____(year).

Compliance Monitoring Inspections (fill-in dates when monitoring inspections were completed)

1) Wet season inspections conducted on: Dec._____ Jan._____ Feb._____ March_____ April_____
2) Dry season inspections occurred on: June_____ Sept._____
3) Survey of stream(s) below and above ranch facility completed on: _____
4) RDM results: ☐ All fields **>** minimum ☐ Most fields **=** min. Most fields **<** min. ☐ All fields **<** min.
   Explanation:_____
5) Are further management practices needed to improve water quality? ☐ Yes ☐ No Not Sure

If yes is indicated in question 5, list potential water quality concerns identified during ranch/stream inspections, planned or implemented fixes and maintenance. Add additional pages if needed.

Date	Location (Pasture/ Field)	Describe Water Quality Concern	Notes (action taken, success, & future needs)

Completed by: ☐ Landowner ☐ Tenant ☐ Other_____

_____
(Print name)

_____
(Phone) (Email)

_____
(Signature) (Date)

Make copies for landowner &/or tenant.
Mail completed form **before Nov. 15** to:

San Francisco Bay RWQCB
1515 Clay Street, Suite 1400
Oakland, CA 94612
ATTN: Grazing Operations Waiver Program

Keep it simple

List all future potential wat
livestock grazing or curren
maintaining ranch roads fo
practices, and changing m
time needed to conduct m
implementing the project.
work is done. List the step
meetings, applications, ex

s not indicate that
problems such as
plementing new
s the amount of
ed order
ermines when
ams (ranch visits,

Water Quality Conc				Implementation Planning
#	Describe			

ANNUAL CERTIFICATION & COMPLIANCE MONITORING DOCUMENTATION
(required and must be submitted)

This ranch/farm is in compliance with the Grazing Operations Waiver Program (Conditional Waiver in the Tomales Bay Watershed, R2-2008-0054).

Farm/Ranch Name:	Phone:
Mailing address or P.O. Box:	City, State and Zip Code:
List all Assessor Parcel Numbers (APNs) or legal description (Township, Range, Sections) for each parcel, pasture, or silage field included in this plan:	

Ranch Plan (check one)

- ☐ A Ranch Water Quality Plan was completed in _____(year) and will be updated in____(year).
- ☐ The Ranch Water Quality Plan is expected to be finished in_____(year).

Compliance Monitoring Inspections (fill-in dates of monitoring inspections were completed)

1) Wet season inspections conducted on: Dec._____ Jan._____ Feb._____
March_____ April_____

2) Dry season inspections occurred on: June _____ Sept._____

3) Survey of stream(s) below and above ranch facility completed on : _____

4) Are further management practices needed to improve water quality? ☐ Yes ☐ No Not Sure

If yes is indicated in question 4, list any new potential water quality projects identified during ranch or stream inspections and describe planned or implemented fixes and any maintenance. Use additional pages if needed.

Date	Location (Pasture/ Field)	Describe Water Quality Concern	Notes (action taken, success, & future needs)

Completed by: ☐ Landowner ☐ Tenant ☐ Other_____

_____
(Print name)

_____
(Signature) (Date)

Phone #:_____

Make copies for landowner & tenant.
Mail completed form by registered mail **before November 15** to:

San Francisco Bay RWQCB
1515 Clay Street, Suite 1400
Oakland, CA 94612
ATTN: Grazing Operations Waiver Program

Thank you

Michael Lennox
mlennox@ucdavis.edu
(707) 565-2836, office
(707) 206-5162, cell