WASTE DISCHARGE REQUIREMENTS
FOR DISCHARGES FROM IRRIGATED AGRICULTURAL LANDS
ORDER NO. R4-2023-0353

Example Management Practice Plan

Please Note: *This is an example MPP. The information presented here is an example of the logic and understanding of what the water board may expect in an MPP (This example is using fictitious information for educational purposes). Using this example with the specifics for your property does not automatically guarantee approval of your MPP. Please make sure all fields are completed with your information. For additional information, the required contents of the Management Practice Plan are specified in Appendix 3, Section 3.4.1. Additional assistance is available from water board staff by phone, email, or in person.*

Section 1: General Information

Name: Blight Schroot

VCAILG ID: 012345

Business/Farm Name: Sattle Bar Pragmatica Beet Farm

Mailing Address: 320 4th St. Suite 200, Los Angeles, CA 90012

Business/Farm Address: 1000 Avenida Del Far, Malibu, CA 90265

Email Address: example01@fakemail.com

Phone Number: (555) 012-3456

APN10(s) and associated crops: 555-0-444-321, Beets, Tomatoes, Strawberries, lemons, navels, and avocados

Latitude and Longitude: 34.077768, -118.776065

> *Please attach a map of location to this plan with outfalls or property drainage points located, labeled “Map 1”

Responsibility Area Name: RA-00 El Nido

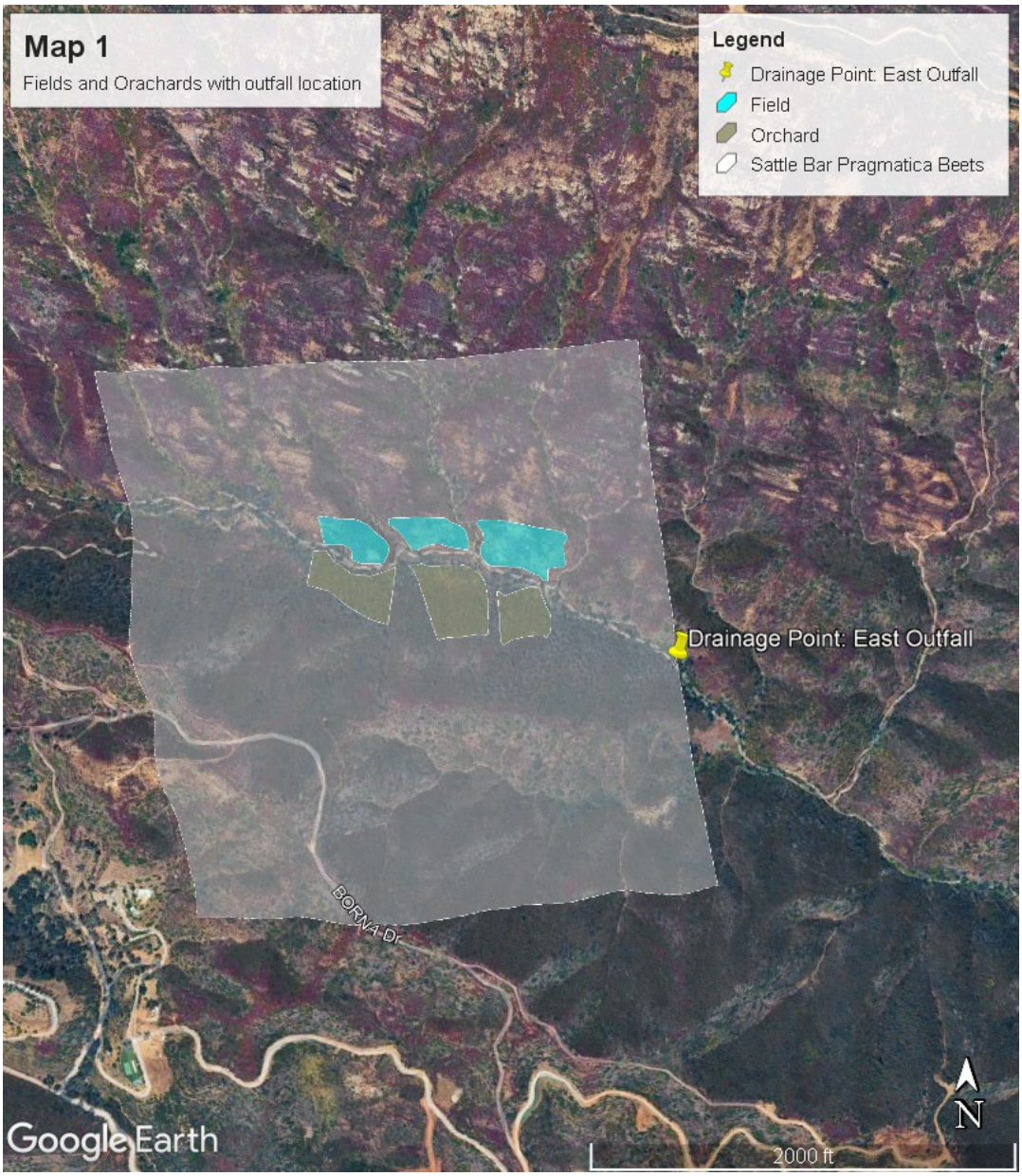


Figure 1. Map 1 with crop fields numbered 1-3 from west to east. Outfall labeled on eastern property boundary

Section 2: Site Analysis

Please include the crops being grown, the frequency of crop rotation and how that might affect runoff quality, and the drainage points.

On the property, there are 3 south draining annual fields planted in beets (1.1 acres), tomatoes (1.0 acres) and strawberries (2.1 acres) and 3 north draining orchards in lemons (1.7 acres), navels (2.3 acres), and avocados (1.3 acres). Each crop field has

moderate to steep slopes that influence runoff behavior. Because the orchards are permanent plantings, no crop rotation occurs, and their stable canopy and vegetative understory contribute to low runoff potential. The annual fields undergo regular soil disturbance, which increases sediment and nutrient mobility during storm events. [NOTE: Runoff should be estimated using tools including, but not limited to: NOAA ATLAS 14 Point Precipitation Frequency Estimates: CA (https://hdsc.nws.noaa.gov/pfds/pfds_map_cont.html?bkmrk=ca), USDA NRCS Curve Number (CN) Method, Runoff Esimator/Pond Refill Calculator (https://occviz.com/CW3/PR/PR.html)] Using Hydrological Soil Group B, and the 10yr, 24-hr storm depth of 7.6 inches, the NRCS curve number method provides theoretical runoff values that reflect differences in ground cover and imperviousness. The orchards have a CN of 55, generate 2.5 inches of runoff, while the beets and tomatoes, represented as straight row crops with a CN of 78, produce approximately 5.0 inches. The strawberry field which uses plastic mulch, which due to its higher effective imperviousness, is assigned an adjusted CN of 84, generates about 5.73 inches of runoff. Converting these depths to volumes using standard NRCS methodology shows that the orchards discharge between roughly 11,800 and 21,000 cubic feet per storm, the beets and tomatoes discharge about 20,000 and 18,000 cubic feet respectively, and the strawberries discharge more than 43,600 cubic feet. These differences highlight that the annual fields, especially strawberries, contribute the largest stormwater volumes and thus require careful management at their drainage points. The orchards drain to the northern edge of their plantings, while the annual fields drain to the southern edge of their plantings at furrow-outlet discharge points into a creek that appears during the wet season.

Section 3: Existing Conditions

Please list out Management Practices (MPs) currently being implemented:

**Please identify where current MPs are located on Map 1 and include size of MPs, where applicable*

Contour terrace farming is practiced throughout each of the lemon, navel. and avocado orchards. These orchards are labeled in Map 1 above. The terraced orchards span across about 5 acres in total.

Section 4: Water Quality Benchmark Exceedance(s)

Please circle the all the TMDLs that the farm is subject to:

Calleguas Creek Nitrogen Compounds and Related Effects TMDL	Oxnard Drain #3 Pesticides, PCBs, and Sediment Toxicity TMDL
Calleguas Creek Watershed Boron, Chloride, Sulfate and TDS (Salts) TMDL	Revolon Slough and Beardsley Wash Trash TMDL
Calleguas Creek Watershed and Mugu Lagoon Metals and Selenium TMDL	Santa Clara River Bacteria TMDL
Calleguas Creek Watershed and Mugu Lagoon OC Pesticides & PCBs TMDL	Santa Clara River Estuary Toxaphene TMDL
Calleguas Creek Watershed and Mugu Lagoon Siltation TMDL	Santa Clara River Nitrogen Compounds TMDL
Calleguas Creek Watershed and Mugu Lagoon Toxicity, Chlorpyrifos, and Diazinon TMDL	Upper Santa Clara River Chloride TMDL
Malibu Creek Watershed Nutrients TMDL	Ventura River Algae TMDL
Malibu Creek Watershed Sedimentation and Nutrients TMDL	Ventura River Estuary Trash TMDL
McGrath Lake OC Pesticides and PCBs TMDL	El Nido Nitrogen Compounds TMDL

List of constituents with an exceedance after TMDL compliance date:

- **Nitrate-N+Nitrite-N**

Section 5: Quantitative Demonstration and Additional MP Implementation Plan

Please include a quantitative demonstration that all the management practices currently being implemented and that will be implemented will cumulatively address the constituent(s) of concern. The assessment shall be based on the location, size, and volume retention capacity or pollutant reduction efficiency of the management practices.
Please list out MPs to be implemented to achieve Water Quality Benchmarks.

NRCS Curve Number calculations for Hydrologic Soil Group B estimate that the farm's six cultivated fields produce approximately 130,372 cubic feet of runoff during a 10-year, 24-hour storm. Annual crop fields, especially strawberries, account for the highest fraction of this runoff due to soil disturbance and plastic mulch. Because nitrate and nitrite readily mobilize in stormwater, these areas represent the greatest potential for nutrient transport. The orchards produce substantially lower runoff volumes, but they still contribute nutrient loads when fertilizers are applied during the growing season. These values serve as the baseline for determining the effectiveness of the farm's structural and vegetated management measures.

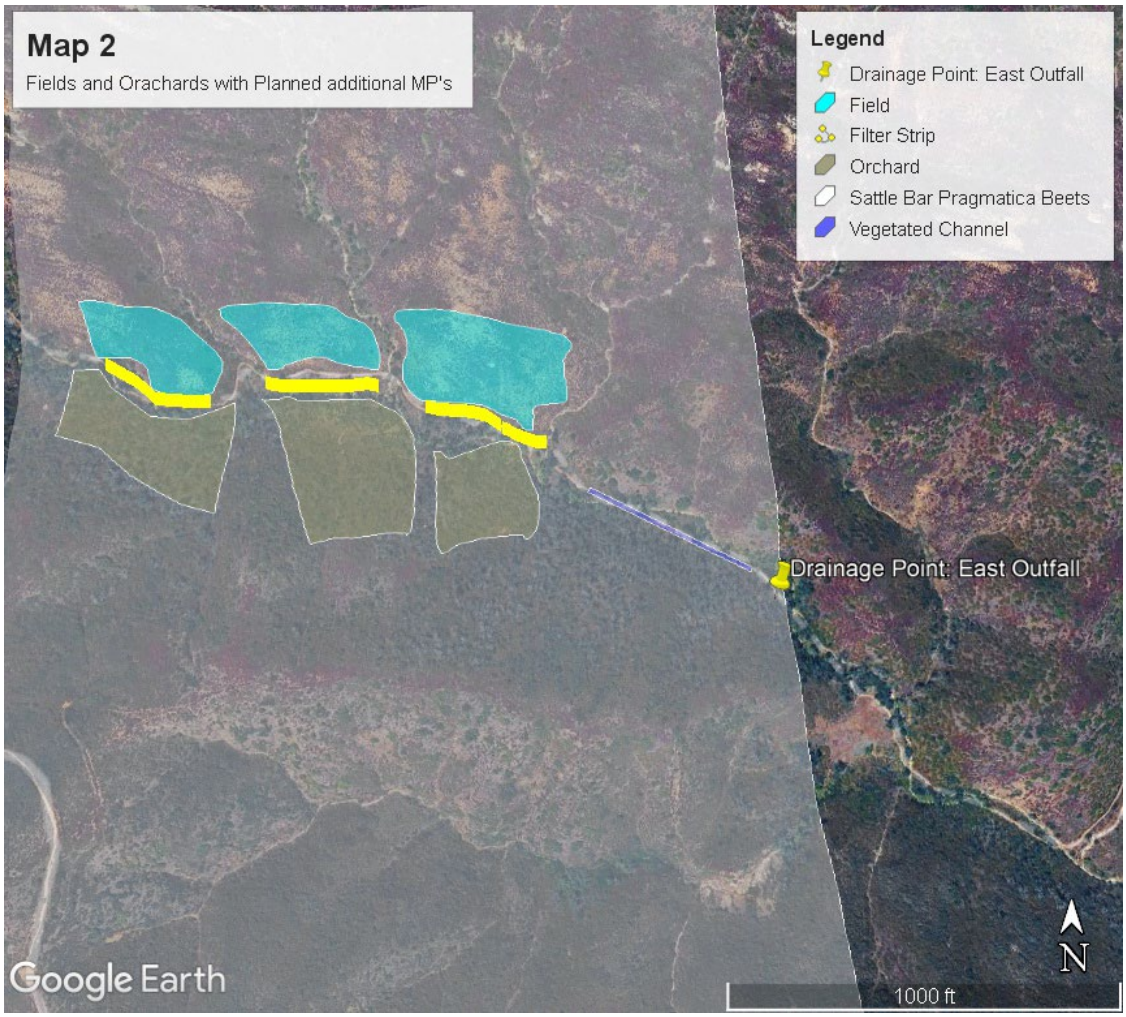
Three vegetated filter strips, each about 300 linear feet, have been installed between Orchard 1 and Field 1, Orchard 2 and Field 2, and Orchard 3 and Field 3. These strips provide infiltration, flow dispersion, and nutrient uptake along all primary drainage pathways. Vegetated filter strips are effective at lowering nitrate concentrations by slowing runoff, increasing soil-water contact time, and allowing plant roots and soil microbes to remove dissolved nitrogen. Combined, the three strips offer 900 feet of continuous vegetated treatment, intercepting runoff from both orchard and annual crop blocks before it reaches the farm's drainage points.

A vegetated channel is planned for installation upstream of the eastern outfall. The channel will be approximately 1,000 feet long with a 6,000-square-foot vegetated footprint. This feature will provide detention, infiltration, and biological treatment of nitrogen-bearing runoff. Even at a modest, assumed storage depth of 0.5 feet, the channel can temporarily store around 3,000 cubic feet of stormwater. Additional infiltration and nutrient uptake will occur along the channel length during peak flows, further reducing nitrate and nitrite loads prior to discharge.

Together, the vegetated filter strips and vegetated channel form a distributed treatment system spanning all major flow paths across the farm. The filter strips intercept and treat runoff from both orchards and annual crop fields, while the vegetated channel provides supplemental detention and infiltration in the eastern drainage area. Map 2 below, has the locations of the planned MPs. These practices collectively reduce runoff volumes, slow velocities, and enhance contact between nutrient-laden water and vegetation, soil, and microbial communities that naturally remove nitrogen.

To meet nitrate-related water quality benchmarks, the farm will rely on the following management practices: operation and maintenance of all three vegetated filter strips; installation and upkeep of the vegetated channel; continued groundcover maintenance in orchards; outlet protection measures for the strawberry field's plastic-mulch furrows; and annual self-evaluation of management practice performance. The filter strip will be inspected after storm events and repair any gullies that have formed, remove unevenly deposited sediment accumulation that will disrupt sheet flow, reseed disturbed areas and take other measures to prevent concentrated flow through the filter strip. The vegetated channel will be maintained by: repairing any damage promptly, avoid use of pesticides or herbicides that would be harmful to the vegetation or pollinating insects in and adjacent to the waterway, minimize damage to vegetation by excluding livestock. These actions work together to reduce nutrient transport, mitigate erosion, and stabilize drainage areas.

In summary, the quantitative demonstration indicates that the farm's existing and planned management practices provide a sufficient cumulative capacity to reduce Nitrate-N + Nitrite-N concentrations in stormwater. The combination of vegetated filter strips and a vegetated channel will intercept and treat the majority of runoff generated during storm events and meaningfully improve nutrient-related water quality outcomes at all discharge points.



Section 6: Certification (Professional Expert and Discharger)

The person signing this report certifies, under penalty of law, that the report was prepared under their direction and supervision, that the information and data reported is to the best of their knowledge and belief, true, accurate, and complete, and that they are aware that there are penalties for knowingly submitting false information. The qualified professional signing the report may rely on the information and data provided by the Discharger and is not required to independently verify the information and data.

The person signing the report below further certifies that they used sound management planning practices to develop recommendations and that the recommendations are informed by applicable training for meeting the crop's agronomic needs while minimizing the constituent of concern loss to surface water and groundwater.

Where the person signing the MPP is not the Member, he/she is not responsible for any damages, loss, or liability arising from subsequent implementation of the MPP by the Member in a manner that is inconsistent with the MPP's recommendations for. This certification does not create any liability for claims for environmental violations.

Qualified Professional Certification:

I, John Doe, certify this MPP in accordance with the statement above.
_____ (Signature)

As a Qualified Professional, I, John Doe, certify that I have knowledge and experience in (select all that apply):

☑ Erosion control
☑ Hydrology
☐ Environmental engineering
☐ Hydraulic engineering
☐ Agricultural engineering
☑ Filter strips
☐ Tailwater recovery systems
☑ Riparian buffers
☐ Bioreactors

For more information on the knowledge and experience qualifications need for exceedance type refer to Appendix 3 Section 3.4.2.

The Discharger additionally agrees as follows: I, Blight Schroot, Member, have provided information and data to the certifier above that is, to the best of my knowledge and belief, true, accurate, and complete, that I understand that the certifier may rely on the information and data provided by me and is not required to independently verify the information and data, and that I further understand that the certifier is not responsible for any damages, loss, or liability arising from subsequent implementation of the MPP by me in a manner that is inconsistent with the MPP's recommendations. I further understand that the certification does not create any liability for claims for environmental violations. _____ (Signature)

Section 7: Planned Funding

Please list sources of funding that can be utilized in implementation of additional MPs:

Public funding through NRCS and CDFA grants. Private finding for remaining project needs.

Section 8: For Los Angeles Regional Board Use Only (do not fill out)

Date Submitted:
Approved By:
Date Approved:
Date(s) Inspection Occurred:

Form Submittal Instructions:
Assistance with this form may be obtained by contacting the Los Angeles Water Board, Phone: (213) 878-7906.