

Created By

Humboldt County Resource
Conservation District
5630 So. Broadway
Eureka, CA 95503
707-442-6058
or
707-786-9766
humboldtrcd.org
&
GHD, Inc.
718 Third Street
Eureka, CA 95501
for
California's North Coast Region
September 2016

Grant funding provided by West Coast Watershed,
Strategic Growth Council, and Proposition 84

PLACE
STAMP
HERE



DISCLAIMER: The North Coast Irrigation Water and Fertigation Management Plan (IWFMP) tool is intended to help agricultural producers assess water and nutrient applications and crop demands on irrigated agricultural lands. Water and nutrient demands are seasonally dependent and based on multiple environmental site specific conditions which should be evaluated by a professional agronomist qualified to make recommendations. The IWFMP management tool is not intended as a substitute to recommendations from a qualified professional. Currently, the IWFMP model does not account for soil moisture or soil type, but it is envisioned that this will be added into a future version of the model. *System requirements: Microsoft Office Excel 2010 (or newer).*

Contact the HCRCDC office, or visit our website, for a copy of the IWFMP model.

Humboldt County Resource Conservation District
5630 South Broadway
Eureka, CA 95503

NORTHCOAST IRRIGATION WATER & FERTIGATION MANAGEMENT PLAN

Version 1.0



PURPOSE

The IWFMP uses Excel workbooks as an input framework for agricultural producer inputs and is based on calculating a water and nutrient balance for a variety of crop types (system requirements: Microsoft Office Excel 2010 [or newer]). It is regionally adaptable for use throughout the North Coast to inform producers of optimal water and fertilizer usage for enhanced management of farm resources and to maximize crop production. Producers input their farm-specific data, such as acreages, crop type, irrigation sources, application rates, pumping rates, irrigation schedule, and fertilizer applications. The model compiles this information to provide the user with a summary of current management and information for each designated land unit. The IWFMP can also incorporate farm-specific information equipment, information for soil moisture monitoring data, well water monitoring, and other agronomic information to better refine the outputs.

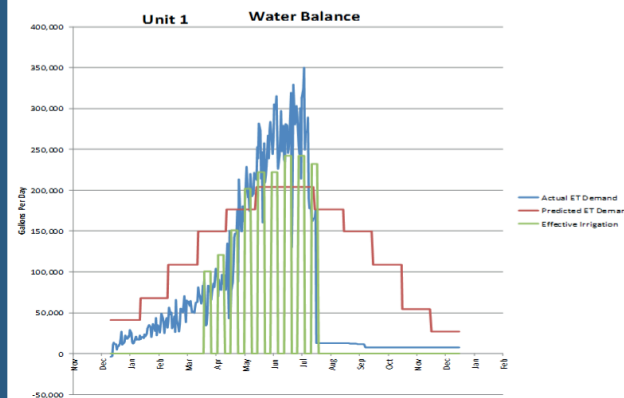
- Understanding of Irrigation rates to meet crop evapotranspiration (ET) demands
- Understanding of fertigation rates to meet crop demands
- Potential to reduce energy costs by improving efficiency of irrigation practices
- Better understanding of growing season, crop demands, and irrigation scheduling
- A defensible and reproducible summary of crop moisture and nutrient demands

INPUTS: Information Needed to Use This Tool

- Farm altitude
- Farm elevation in meters
- Gallons per minute (GPM) of each water source used for irrigation
- GPM of applicator head flow (a.k.a. sprinkler head flow rate)
- Number of applicators on system or number used per irrigation set
- Crop type by pasture or land unit
- Expected crop yields (tons/acre) annually by pasture or land unit
- Weekly hours of irrigation per pasture or land unit
- Pounds of nitrogen, phosphorus, and potassium applied to each land application unit



OUTPUTS



Site Name	My Facility	
Land Application Unit	Unit 1	
Crop Type	PASTURE	
Acreage	50	acre
Water Source	Well 1	
Max Source Allocation (% of water source capacity used)	112%	
Irrigation Type	Wheel Line	
Number of Applicators	40	
Applicator Head Flow Rate (flow rate per applicator)	7	GPM
Max Application Rate based on # of applicators and applicator flow rate.	280	GPM

Application is Greater Than Crop Demand

Application Within 10% of Demand

Application Less than 10% of Demand

Nitrogen Demand	62.5	lbs/acre
Nitrogen applied	60	lbs/acre
Phosphorus Demand	20	lbs/acre
Phosphorus Applied	18	lbs/acre
Potassium Demand	60	lbs/acre
Potassium Applied	46	lbs/acre

Unit 1 Nutrient Balance

