About the California Almond Sustainability Program

california almonds
Almond Board of California

Why a sustainability program?

To document and tell your story!

Need for transparency of production practices in the marketplace

Need for conveying accurate production information to public policy makers and regulatory agencies

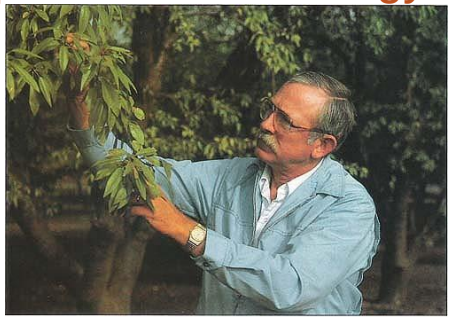
Why a sustainability program?

To learn about and share practices to improve production efficiencies

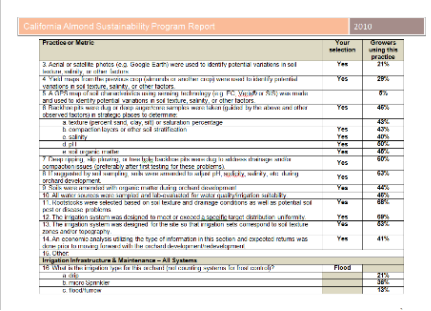
Optimize the efficient use of natural resources (e.g., water, nutrients, energy)

Optimize the efficiency of field operations (e.g., pest management, harvest)

practices/technology



comparison report



California Almond Sustainability Program Report — 2010

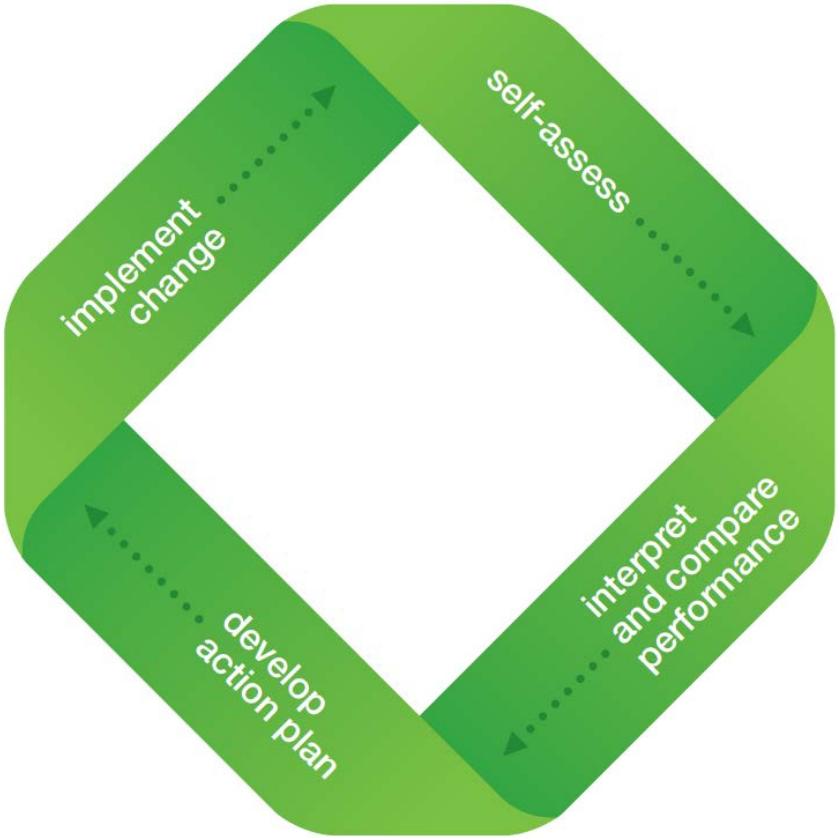
Practice or Metric	Your selection	Growers using this practice
3. Aerial or satellite photos (e.g. Google Earth) were used to identify potential variations in soil texture, salinity, or other factors.	Yes	31%
4. Yield maps from the previous crop (almonds or another crop) were used to identify potential variations in soil texture, salinity, or other factors.	Yes	29%
5. A GPS map of soil or plant variations using remote sensing technology (e.g. PIC, Veraflo or NIR) was made and used to identify potential variations in soil texture, salinity, or other factors.		8%
6. Backhoe pits were dug in three separate rows samples were taken guided by the above and other observed factors in strategic places to determine:	Yes	46%
a. texture (percent sand, clay, silt) or saturation percentage		43%
b. compaction layers or other soil stratification	Yes	43%
c. salinity	Yes	40%
d. pH	Yes	55%
e. soil organic matter	Yes	46%
7. Deep ripping, slip plowing, or bore holing backhoe pits were dug to address drainage and/or compaction issues (preferably after soil testing for these problems).	Yes	60%
If suggested by soil sampling, soils were amended to adjust pH, salinity, etc. during orchard development.	Yes	63%
9. Soils were amended with organic matter during orchard development	Yes	44%
10. All water sources were sampled and lab-analyzed for water quality/irrigation suitability.		48%
11. Rootstocks were selected based on soil texture and drainage conditions as well as potential soil pest or disease problems.	Yes	68%
12. The irrigation system was designed to meet or exceed a specific target distribution uniformity.	Yes	69%
13. The irrigation system was designed for the site so that irrigation sets correspond to soil texture zones and/or topography.	Yes	63%
14. An economic analysis utilizing the type of information in this section and expected returns was done prior to moving forward with the orchard development/redevelopment.	Yes	41%
15. Other		
Irrigation Infrastructure & Maintenance – All Systems		
16. What is the irrigation type for this orchard (not counting systems for frost control)?	Flood	
a. drip		21%
b. micro sprinkler		36%
c. flood furrow		19%

action plan

ACTION PLAN

Workbook Chapter	Criteria Number	Criteria and Area of Concern	Plan of Action	Timetable for Action
Pest Management	Criteria 6-1 Page	Vineyard Monitoring for Insect and Mite Pests Category 1: My vineyard is rarely if ever monitored.	Monitor every two weeks.	Next growing season
Pest Management	Criteria 6-37 Page 6-68	Pesticide Emergency Response Plan Category 1: I maintain minimum legal requirements or less for a pesticide emergency response plan.	Contact Ag Commissioner's office; a typical emergency response plan looks [illegible] how to make it work on my ranch; train both tractor drivers; post plan by the sprayer fill-up.	Immediately

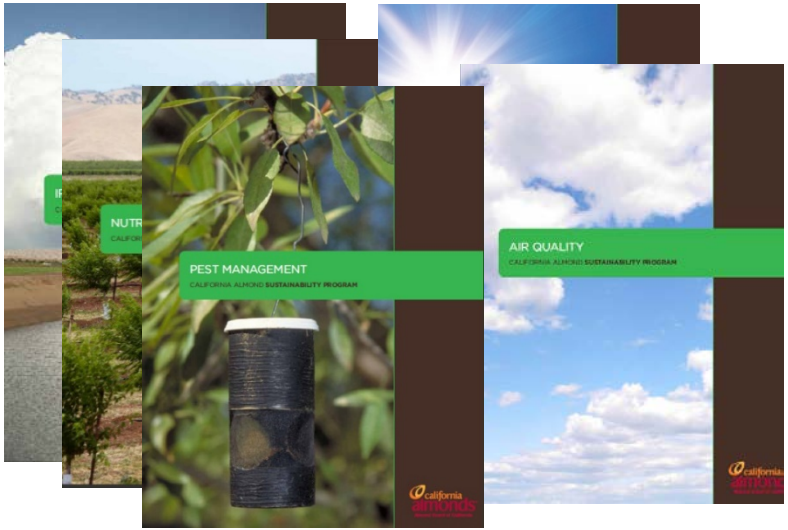
1. Decide what issues you can address.
2. Specify the issue and your area of concern
3. Determine an appropriate plan of action.
4. Create a realistic timetable for carrying out the action.



targeted education

Modules (Self-Assessment)

- Irrigation Management
- Nutrient Management
- Air Quality
- Energy Efficiency
- Pest Management
- Ecosystem Management
- Financial Management
- Workplace and Communities



Nutrient Management

For my orchard, I am using the following practices and/or technologies for maximizing nutrient management efficiency:			Not familiar with this	I haven't tried it	I have tried it	My current practice	Not applicable
	SOURCE						
5	The following sources of nitrogen were utilized in this orchard in the past year. (Select all that apply):	a. commercial in-organic nitrogen fertilizer	☐	☐	☐	☐	
		b. manure (not recommended for food safety reasons) ☑	☐	☐	☐	☐	
		c. compost ☑	☐	☐	☐	☐	
		d. nitrogen-fixing cover crops	☐	☐	☐	☐	
6	If compost, manure, or nitrogen-fixing cover crops were used, their nitrogen contribution to the crop was estimated and used in calculating the total nitrogen applied.		☐	☐	☐	☐	☐

	Practice or Metric	Your Selection	Use Statewide
	Irrigation Management Module		
	INTRODUCTION AND GENERAL INFORMATION - IRRIGATION MANAGEMENT		
	.		
	ORCHARD ESTABLISHMENT		
1	Were you involved in this orchard's establishment?		82.7 %
2	Soil maps (e.g., NRCS soil series or web soil survey) were used to identify potential variations in soil texture, salinity, water holding capacity, or other factors.		61.8 %
3	Aerial or satellite photos (e.g., Google Earth) were used to identify potential variations in soil texture, salinity, or other factors.		46.0 %
4	Yield maps from the previous crop (almonds or another crop) were used to identify potential variations in soil texture, salinity, or other factors.		45.4 %
5	A GPS map of soil characteristics using sensing technology (e.g., EC, Veris® or SIS) was made and used to identify potential variations in soil texture, salinity, or other factors.		15.2 %
6	Backhoe pits were dug or deep auger/core samples were taken (guided by the above and other observed factors) in strategic places to determine:		
	6a. texture (percent sand, clay, silt) or saturation percentage		67.4 %
	6b. compaction layers or other soil stratification		70.9 %
	6c. salinity		63.3 %
	6d. pH		68.3 %
	6e. soil organic matter		60.2 %
7	Deep ripping, slip plowing, or tree hole backhoe pits were dug to address drainage and/or compaction issues (preferably after first testing for these problems).		87.9 %
8	If suggested by soil sampling, soils were amended to adjust pH, sodicity, salinity, etc. during orchard development		75.8 %

Participation in Self-Assessment

Individual Participants.....1,425
Organizations Represented by Assessments.... 565
Orchards Assessed.....788
Acres Assessed.....156,309
Acres Managed by Organizations Represented by Assessments.....401,365

2014 Almond Sustainability Report

Strategic Communications

SUSTAINABILITY PROGRAM SUPPORTS RESPONSE TO MEDIA INQUIRIES

Share 0 Tweet 0 Pinterest 0 googleplus 0 Email 0

Nov. 17, 2014

Data on almond growers' irrigation practices gleaned from the California Almond Sustainability[1] Program's (CASP) 2014 Almond Sustainability Report have helped shape the almond industry's response to questions about almond water use during this drought year.

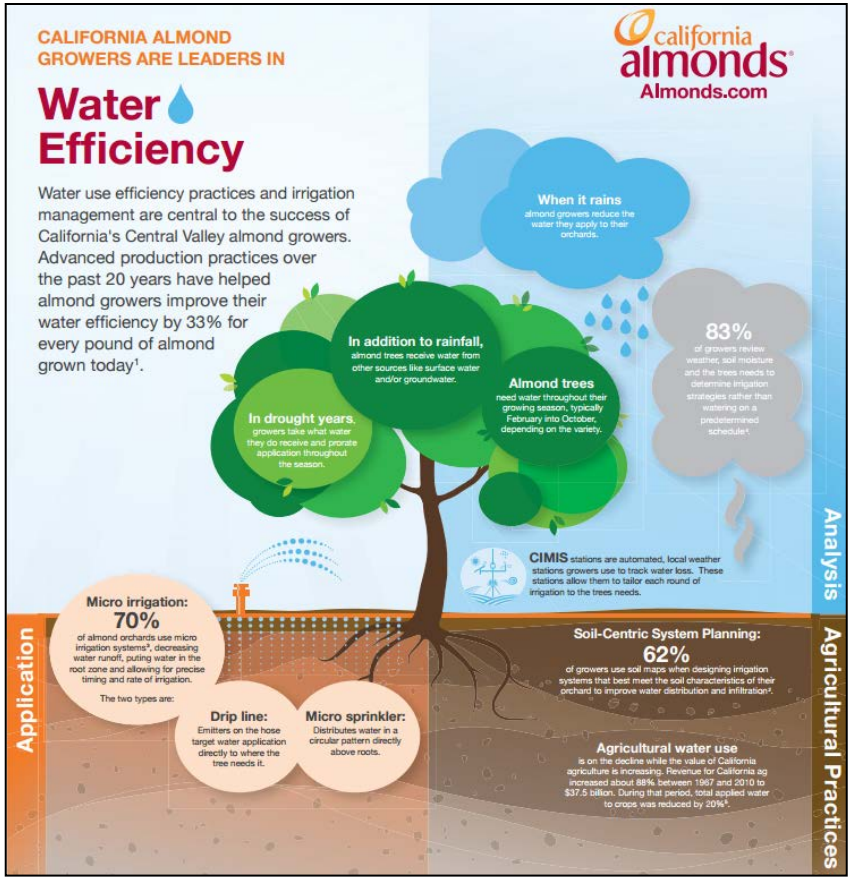
Western FARM PRESS
TIMELY RELIABLE INFORMATION FOR WESTERN AGRICULTURE

Home | Cotton | Alfalfa | Grapes | Tree Nuts | Vegetables | Orchard Crops | Rice | Irrigation

HOME > TREE NUTS > NEW ONLINE TOOLS HELP ALMOND GROWERS IMPROVE N EFFICIENCY, COMPLY WITH REGULATIONS

New online tools help almond growers improve N efficiency, comply with regulations

Gabriele Ludwig, Associate Director, Environmental Affairs, Almond Board of California *Mar 29, 2015*



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Past Targeted Education Workshops

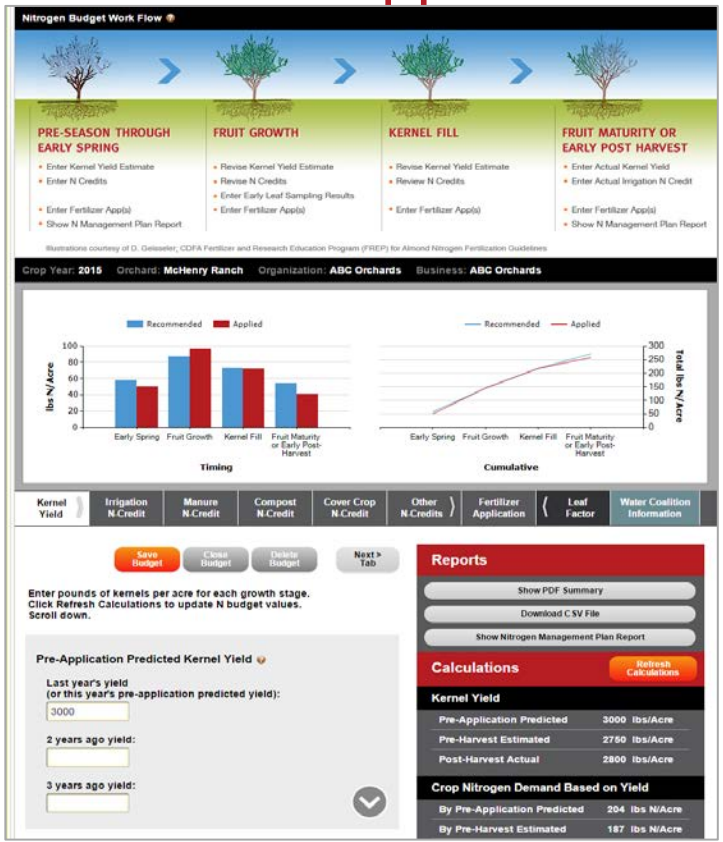
Series 1: Water and Nutrient Management

NORTH VALLEY	CENTRAL VALLEY	SOUTH VALLEY
February 26 - Oroville *Butte County Farm Bureau* 2580 Feather River Blvd.	**March 5 - Modesto** *Stanislaus County Ag Center* 3800 Cornucopia Way	**March 12 - Visalia** *Visalia Convention Center* 303 E. Acequia Ave.
February 27 - Woodland *Hampton Inn & Suites* 2060 Freeway Dr.	**March 10 - Merced** *Hampton Inn & Suites* 225 S. Parsons Ave.	**March 13 - Bakersfield** *Kern County Farm & Home Advisors* 1031 S. Mount Vernon Ave.

Series 2: Pest & Honey Bee Management

NORTH VALLEY	CENTRAL VALLEY	SOUTH VALLEY
April 6 - Oroville *Butte County Farm Bureau* 2580 Feather River Blvd.	**April 9 - Modesto** *Stanislaus County Ag Center* 3800 Cornucopia Way	**March 18 - Bakersfield** *Kern County Farm & Home Advisors* 1031 S. Mount Vernon Ave.
April 7 - Woodland *Norton Hall* 70 Cottonwood St.	**April 14 - Merced** *Hampton Inn & Suites* 225 S. Parsons Ave.	**March 19 - Visalia** *Visalia Convention Center* 303 E. Acequia Ave.

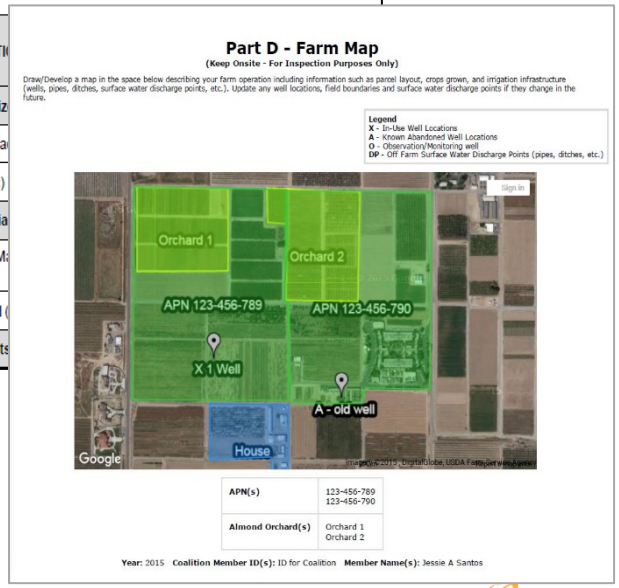
Decision-Support and Compliance Tools



NITROGEN MANAGEMENT PLAN WORKSHEET

1. Crop Year (Harvested):	2015	4. APN(s)	5. Field(s) ID
2. Member ID #:	ID for Coalition	000-22-1123 123-456-478	McHenry Ranch
3. Name:	Jessie A Santos		

CROP NITROGEN MANAGEMENT PLANNING		N APPLICATI
6. Crop	Almonds	17. Nitrogen Fertiliz
7. Production Unit	Pounds (kernel)	18. Dry/Liquid (lbs/a
8. Projected Yield (Units/Acre)	3000	19. Foliar N (lbs/ac)
9. N Recommended (lbs/ac)	291	20. Organic Materia
10. Acres	22	21. Available N in M (lbs/ac estimate)
Post Production Actuals		22. Total N Applied (
11. Actual Yield (Units/Acre)	2800	23. Nitrogen Credits



How to Use CASP Online

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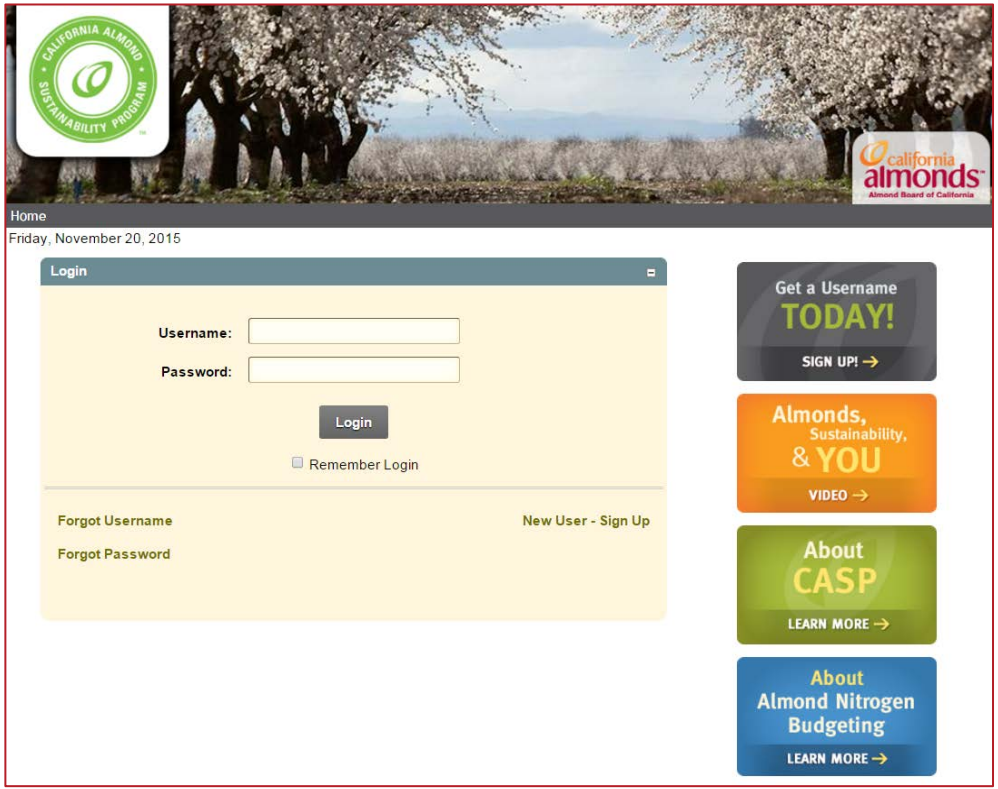
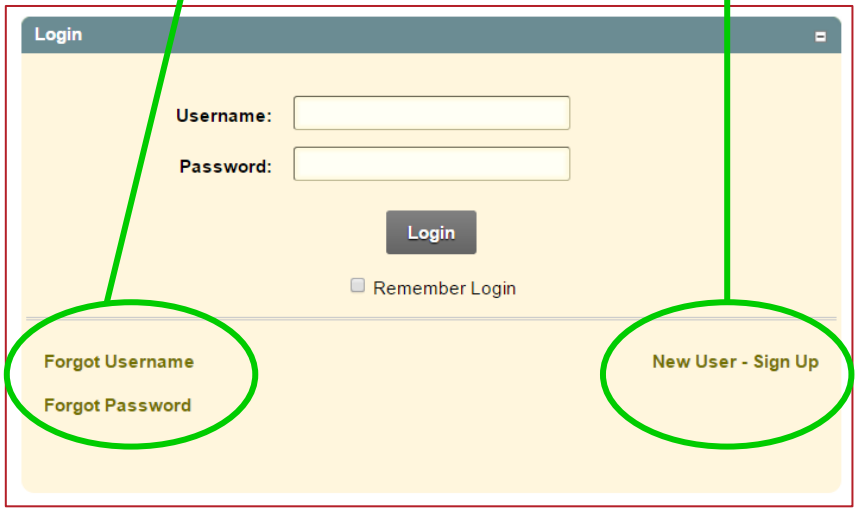
Login at www.sustainablealmondgrowing.org

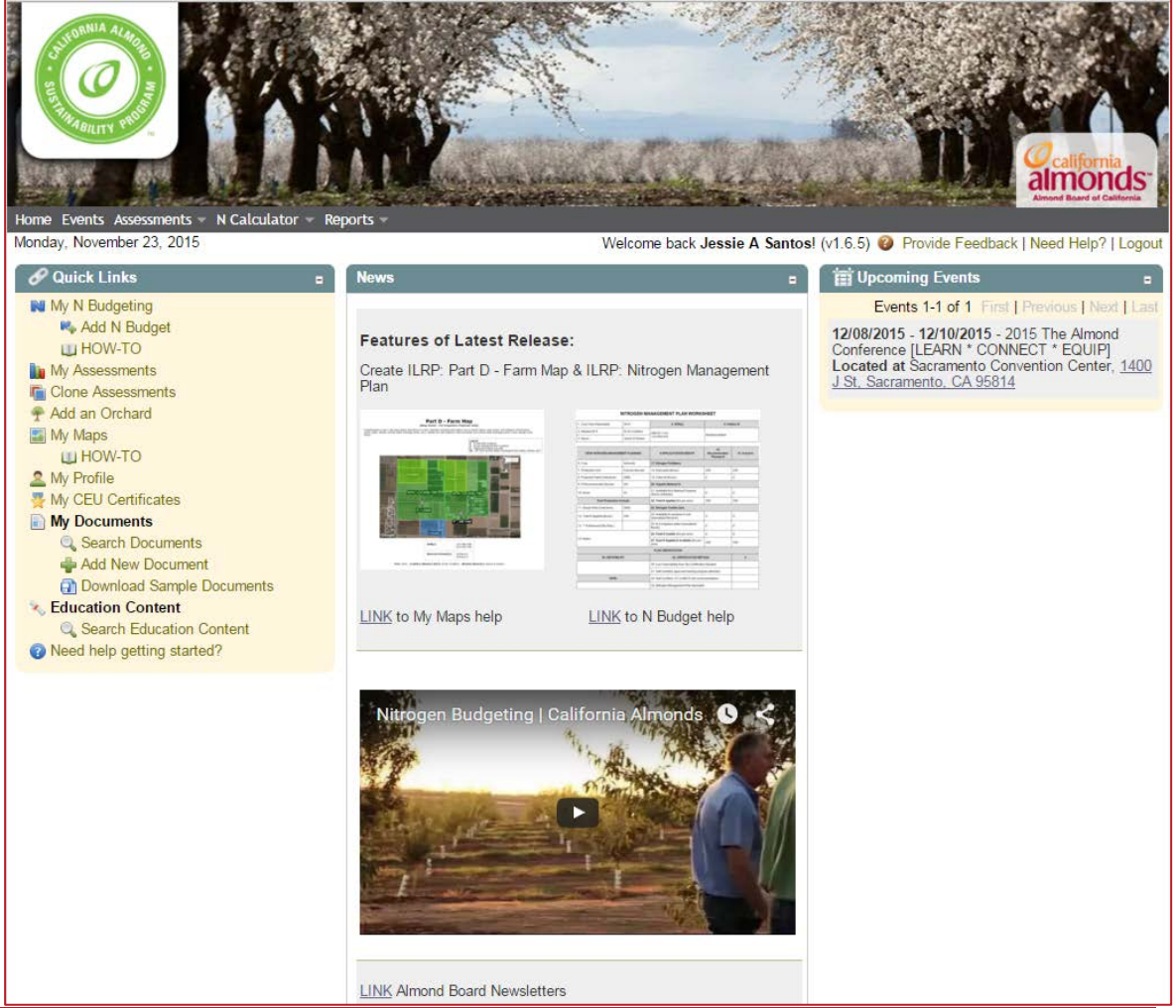


Sign Up

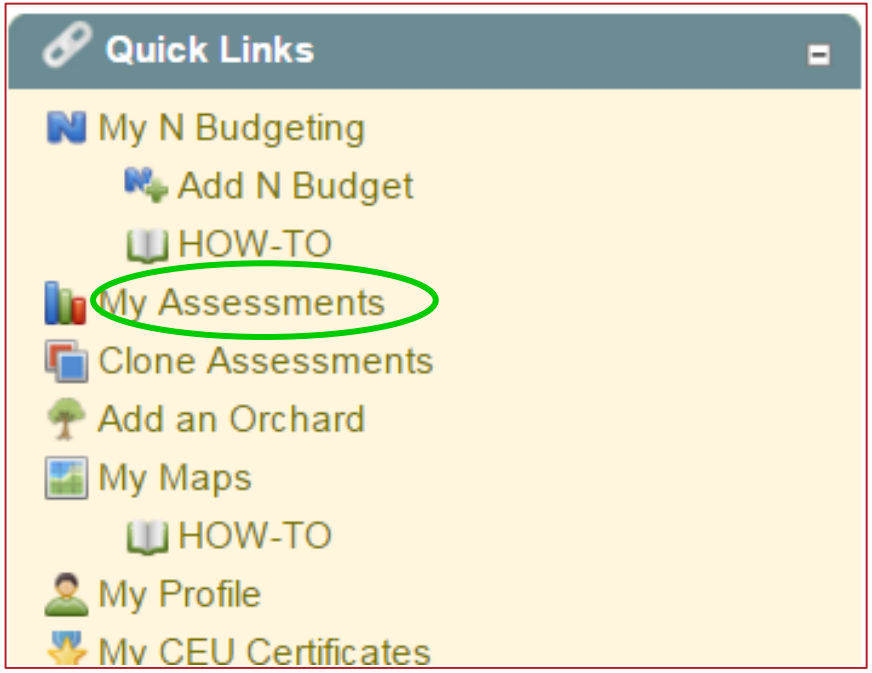
Forgot password



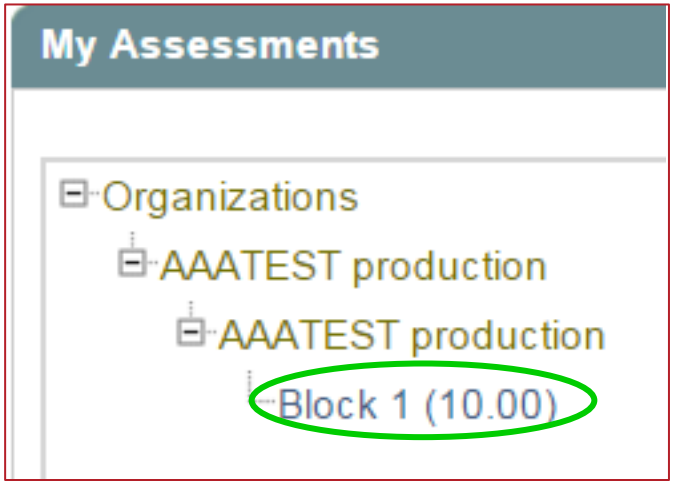
Home Page


Home Events Assessments N Calculator Reports
Monday, November 23, 2015
Welcome back Jessie A Santos! (v1.6.5) Provide Feedback | Need Help? | Logout
Quick Links
My N Budgeting
Add N Budget
HOW-TO
My Assessments
Clone Assessments
Add an Orchard
My Maps
HOW-TO
My Profile
My CEU Certificates
My Documents
Search Documents
Add New Document
Download Sample Documents
Education Content
Search Education Content
Need help getting started?
News
Features of Latest Release:
Create ILRP: Part D - Farm Map & ILRP: Nitrogen Management Plan
LINK to My Maps help
LINK to N Budget help
Nitrogen Budgeting | California Almonds
LINK Almond Board Newsletters
Upcoming Events
Events 1-1 of 1 First | Previous | Next | Last
12/08/2015 - 12/10/2015 - 2015 The Almond Conference [LEARN * CONNECT * EQUIP]
Located at Sacramento Convention Center, 1400 J St, Sacramento, CA 95814

Completing Assessments



Select Orchard or Facility



Entering Responses and Comparing Results

	ORCHARD ESTABLISHMENT	
1	Were you involved in this orchard's establishment? *If No, click "No" and skip to question 16.*	○ Yes ○ No
2	Soil maps (e.g., NRCS soil series or web soil survey) were used to identify potential variations in soil texture, salinity, water holding capacity, or other factors.	○ Not familiar with this ○ I didn't try it ○ Used this practice

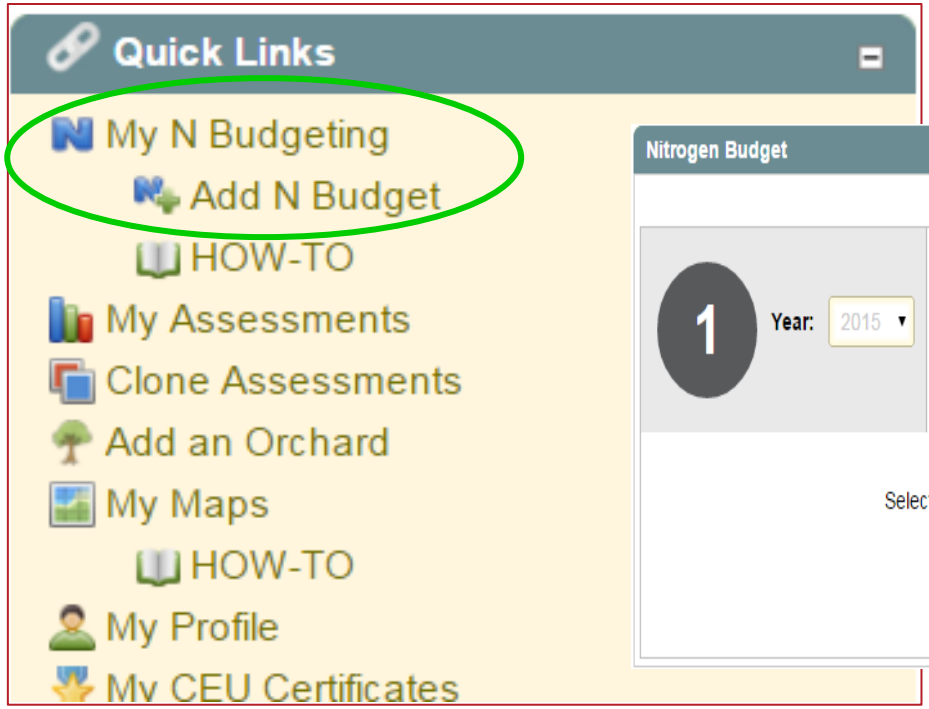
SAVE

Go to Assessment Comparison Report

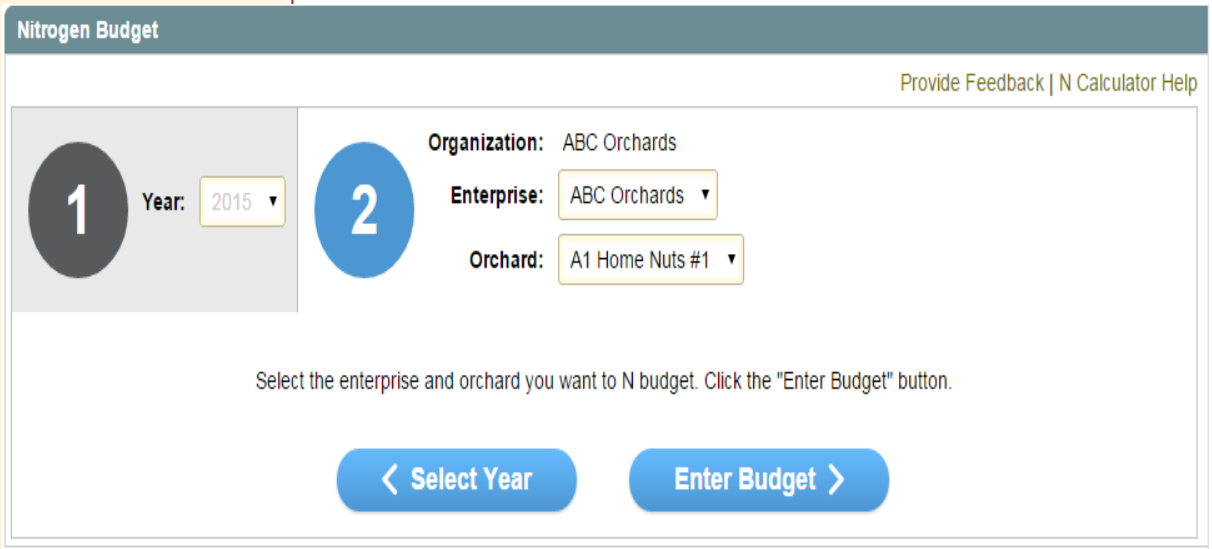
Name: Block 1
Type: Orchard
Organization: AAATEST production
Enterprise: AAATEST production

	Practice or Metric	Your Selection	Use Statewide
	Irrigation Management Module		
	INTRODUCTION AND GENERAL INFORMATION - IRRIGATION MANAGEMENT		
	ORCHARD ESTABLISHMENT		
1	Were you involved in this orchard's establishment?		82.7 %
2	Soil maps (e.g., NRCS soil series or web soil survey) were used to identify potential variations in soil texture, salinity, water holding capacity, or other factors.		61.8 %
3	Aerial or satellite photos (e.g., Google Earth) were used to identify potential variations in soil texture, salinity, or other factors.		46.0 %
4	Yield maps from the previous crop (almonds or another crop) were used to identify potential variations in soil texture, salinity, or other factors.		45.4 %
5	A GPS map of soil characteristics using sensing technology (e.g., EC, Veris® or SIS) was made and used to identify potential variations in soil texture, salinity, or other factors.		15.2 %
6	Backhoe pits were dug or deep auger/core samples were taken (guided by the above and other observed factors) in strategic places to determine:		
	6a. texture (percent sand, clay, silt) or saturation percentage		67.4 %
	6b. compaction layers or other soil stratification		70.9 %
	6c. salinity		63.3 %
	6d. pH		68.3 %
	6e. soil organic matter		60.2 %

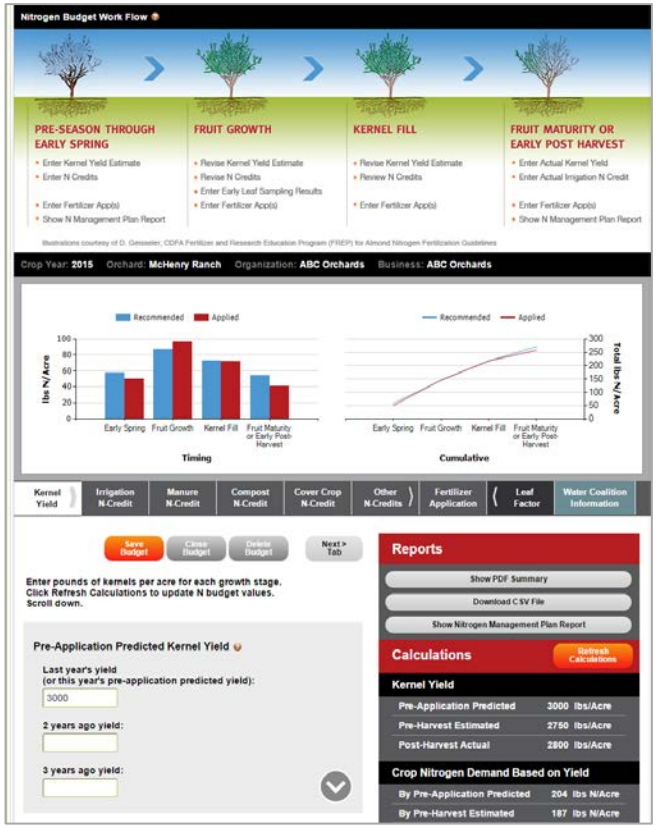
Nitrogen Calculator and Budgets



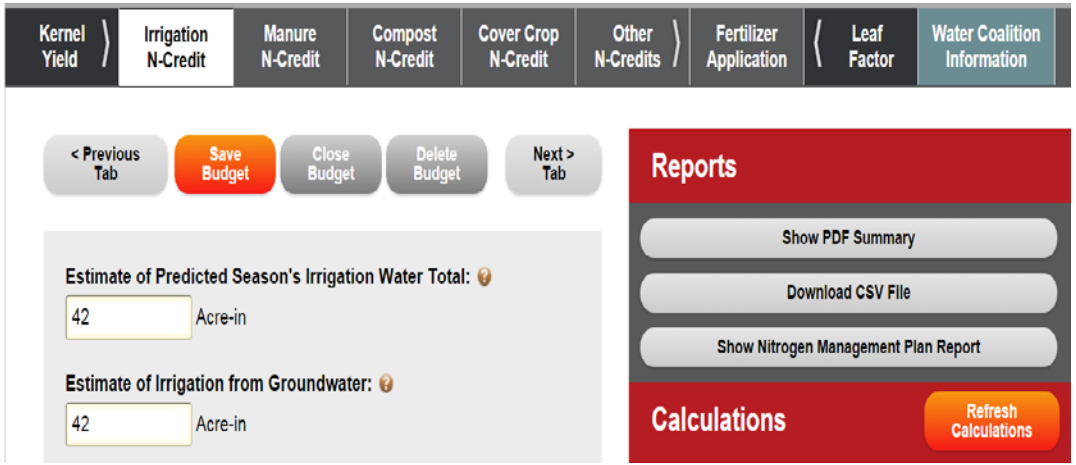
Select Year and Orchard



Using the Nitrogen Calculator



Enter Data (Save Optional)



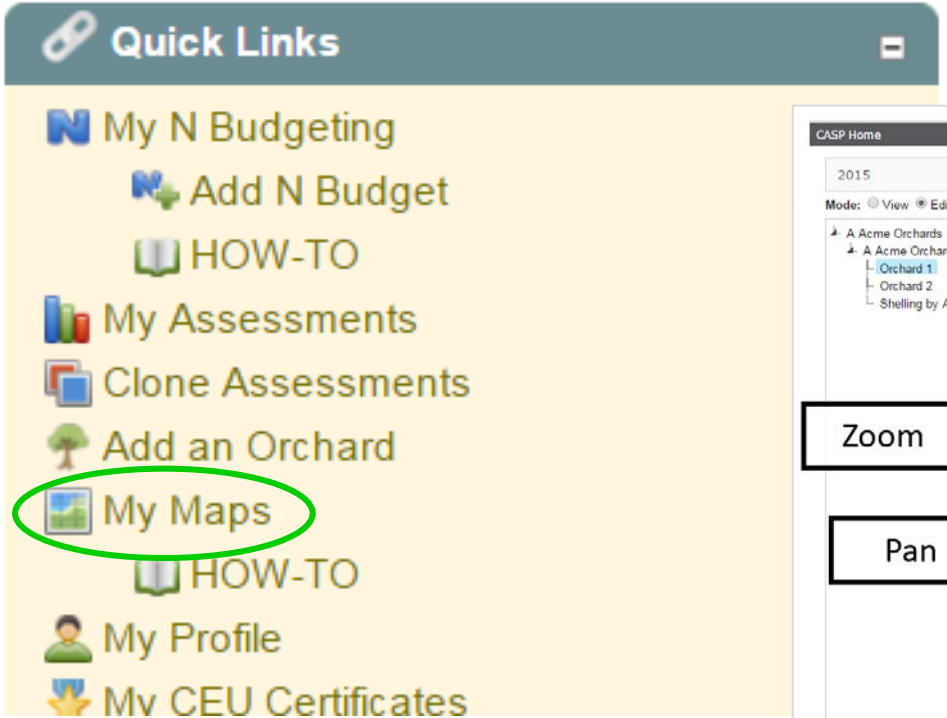
Nitrogen Calculator and ILRP Nitrogen Management Plans

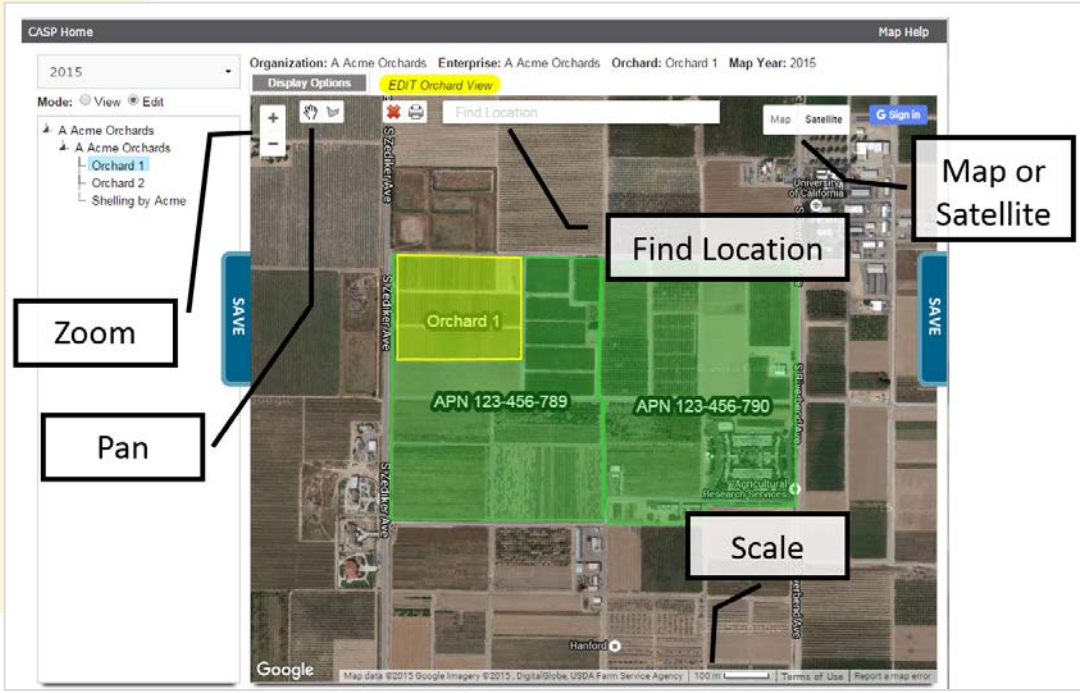
NITROGEN MANAGEMENT PLAN WORKSHEET

1. Crop Year (Harvested):	2015	**4. APN(s)**	**5. Field(s) ID**
2. Member ID #:	ID for Coalition	000-22-1123 123-456-478	McHenry Ranch
3. Name:	Jessie A Santos		

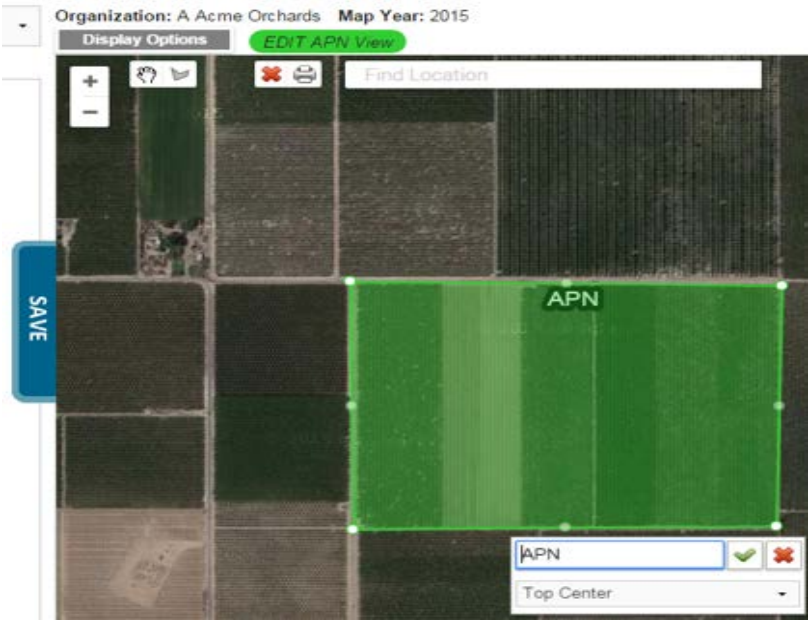
CROP NITROGEN MANAGEMENT PLANNING		**N APPLICATIONS/CREDITS**	**15. Recommended / Planned N**	**16. Actual N**
6. Crop	Almonds	**17. Nitrogen Fertilizers**		
7. Production Unit	Pounds (kernel)	18. Dry/Liquid (lbs/ac)	290	258
8. Projected Yield (Units/Acre)	3000	19. Foliar N (lbs/ac)	0	0
9. N Recommended (lbs/ac)	291	**20. Organic Material N**		
10. Acres	22	21. Available N in Manure/Compost (lbs/ac estimate)	0	0
Post Production Actuals		**22. Total N Applied** (lbs per acre)	290	258
11. Actual Yield (Units/Acre)	2800	**23. Nitrogen Credits (est)**		

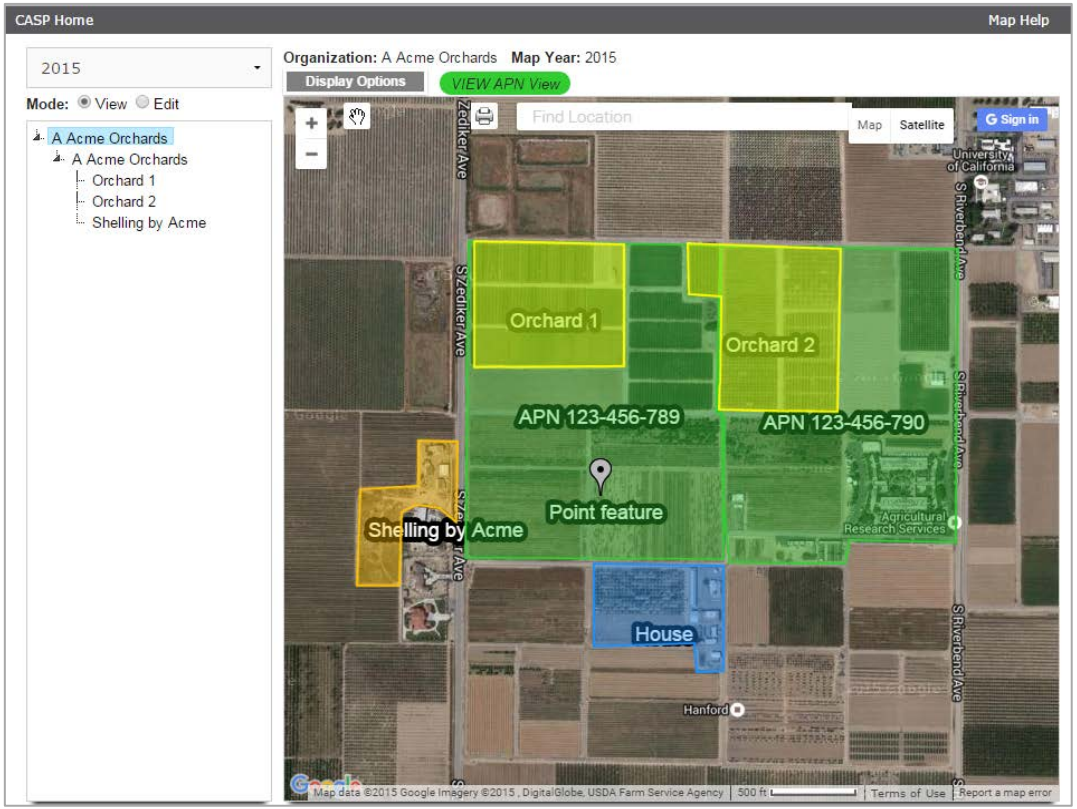
Farm Mapping





Map APNs, Orchards, Facilities and Ad Hoc Features





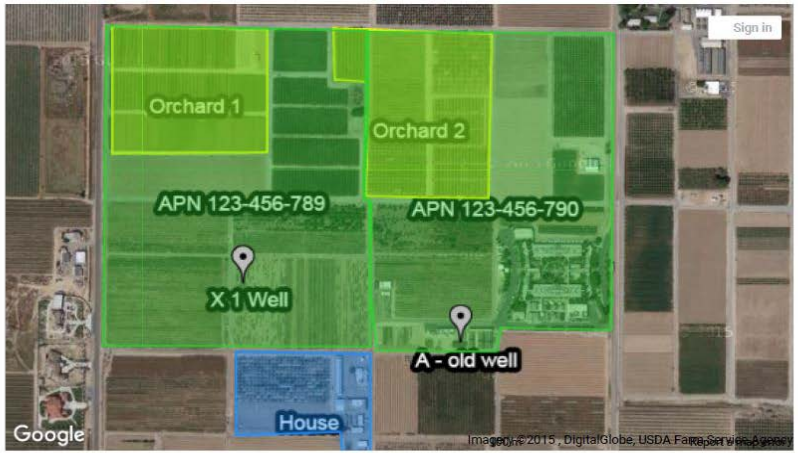
Farm Mapping and ILRP Part D – Farm Map

Part D - Farm Map

(Keep Onsite - For Inspection Purposes Only)

Draw/Develop a map in the space below describing your farm operation including information such as parcel layout, crops grown, and irrigation infrastructure (wells, pipes, ditches, surface water discharge points, etc.). Update any well locations, field boundaries and surface water discharge points if they change in the future.

Legend
X - In-Use Well Locations
A - Known Abandoned Well Locations
O - Observation/Monitoring well
DP - Off Farm Surface Water Discharge Points (pipes, ditches, etc.)



APN(s)	123-456-789 123-456-790
Almond Orchard(s)	Orchard 1 Orchard 2

Year: 2015 **Coalition Member ID(s):** ID for Coalition **Member Name(s):** Jessie A Santos

What's Next?

- Outreach to increase awareness and use of CASP features and tools.
- Continued use of CASP results for beneficial correspondence with media, buyers and regulators.
- Linking CASP and findings to grower incentives.
- Additional online decision-support tools (e.g., irrigation).
- Education via www.sustainablealmondgrowing.org and workshops to increase BMP adoption based on value and assessment results.

For help or more information:

CASP Helpdesk: CASP@SureHarvest.com or (831) 477-7797

ABC: Jenny Nicolau at jnicolau@almondboard.com or (209) 343-3248