



Fertilizer Research and Education Program  
**2021 Final Project Report**

**A. Project Information**

Project Title	Developing a Review Process for Continuing Education Courses for Growers who Complete the Nitrogen Management Plan Training Course	
Project leaders	Coalition for Urban/Rural Environmental Stewardship (CURES), Parry Klassen, Executive Director, CURES	
Grant Number	16-0703-SA	
Project Duration	Start Date: January 1, 2017	End Date: June 30, 2021
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Report Type	Final Report	
Reporting Period	Start Date: January 1, 2021	End Date: June 30, 2021

**B. Abstract**

Through the Irrigated Lands Regulatory Program (ILRP), all growers are required to prepare Irrigation and Nitrogen Management Plans (INMP) for land enrolled in ILRP. They are given the option to self-certify through a California Department of Food and Agriculture (CDFA)-approved grower training course. After the initial grower self-certification, additional hours of continuing education are a requirement of the program approved by the Central Valley Regional Water Quality Control Board (CVRWQCB). Self-certified growers must earn 3 Continuing Education Units (CEUs) in three years to maintain their certification. In September 2018, CDFA and CRWQCB approved an extension to the 3-year CEU requirement for growers who were self-certified between 2015 and 2018. Since the continuing education protocol was not in place during the first three years of the INMP Self-Certification program, 2015-2018 self-certified growers had until January 2021 to complete 3 hours of Continuing Education Units.

Funds for this project were used to develop and manage the process for reviewing and approving Continuing Education sessions in collaboration with agriculture organizations in the Central Valley for growers who have been certified to complete their own Irrigation and Nitrogen Management Plans. Since the start of the program, Coalition for Urban Rural Environmental Stewardship (CURES) received 170 applications for Continuing Education sessions using criteria developed in conjunction with CDFA and University of California (UC). Out of the 170 applications, 152 were approved to issue Continuing Education Units to course attendees. Furthermore, CURES developed an online Continuing Education program, in collaboration with CDFA FREP and the Central

## Fertilizer Research and Education Program (FREP)

2021 Final Report

State of California

Department of Food and Agriculture

Valley Water Quality Coalitions. The information presented in these sessions supports the environmentally safe and agronomically sound use of nutrients and the reduction of nitrate to groundwater in the Central Valley and regions throughout California. Due to grower demand and sufficient remaining funds, CURES was approved for a no-cost extension in June 2020 that enabled continuation of the program through December 31, 2020. Funds were later approved to transition the program to CDFA in March 2021, under whom it continues to be managed.



### C. Introduction

Nitrate is the most common contaminant in Central Valley groundwater and elevated levels are attributed primarily to leaching of nitrogen fertilizers past the root zone into aquifers. Growers who belong to Central Valley Water Quality Coalitions are under requirements per the Irrigated Lands Regulatory Program to keep “on-farm” an Irrigation and Nitrogen Management Plan (INMP) to track nitrogen fertilizer applications. These INMPs must be certified by an irrigation and nitrogen management plan specialist. Growers may certify their own INMPs only after they successfully participate in a CDFA Irrigation and Nitrogen Management Training class. FREP worked with UC Davis to develop a grower training curriculum and then awarded a grant to the CURES to train CCAs who ultimately train growers to self-certify their Irrigation and Nitrogen Management Plans through the program. This self-certification program was originally funded by a FREP grant but was taken over by the Coalitions in 2019. Under CURES management, the program qualified 3,648 growers in a joint effort with CDFA, CURES, UC and Central Valley Water Quality Coalitions. Upon successful completion of the course, a grower became eligible to certify their INMP for lands that they farm. After the initial grower self-certification, additional hours of continuing education are a requirement of the program approved by the Regional Water Board.

Phase 2 included development and management of a process to review the agendas and contents of a proposed meeting or segment of a meeting that fulfills the Continuing Education requirement of the INMP certification process. In 2020, CURES and CDFA developed an online Continuing Education program in response to COVID-19 restrictions. These courses, called Self-Study courses, were available on the CURES website and allowed growers to take them at their leisure. Growers completed a brief post-test at the end of each online course to verify and record completion. Requests for continuing education credits were required to contain a CEU Approval Request Application and relevant course materials (i.e. agenda, test questions, etc). Applications were submitted online at [www.curesworks.org/cecourses](http://www.curesworks.org/cecourses) and contained basic contact and course information. The content review was performed by Terry Prichard and CURES staff using criteria developed in conjunction with CDFA and UC. Once the CE meeting content was approved, the organizing entity was allowed to issue Continuing Education credits to the grower in the form of an attendance confirmation certificate, for live courses. For Self-Study courses, CURES sent certificates of completion after growers passed the post-test. Growers were responsible for filing and maintaining records of attending CE events or courses.



**Objective #: 1)** Develop a system to review the content of Continuing Education sessions in order for qualified growers to fulfill this condition of the NMP certification program; also develop criteria for evaluating a session proposal (CURES, PI and CDFA staff)

**Objective #: 2)** Review and approve requests from meeting organizers for Continuing Education sessions using criteria developed in conjunction with CURES, CDFA and UC; also provide support to meeting organizers to reach all certified growers needing to complete this condition of the NMP certification process

**E. Methods**

**Objective #: 1)**

**Tasks activities and accomplishments:**

- a) **Develop Criteria:** PI Terry Prichard and CURES staff worked with CDFA and UC to develop criteria for content. DATE COMPLETED: Meetings and conference calls were held in February - April 2017
- b) **System Design:** CURES staff design the system, including accompanying documents and website portal needed to request CE credit for approval. DATE COMPLETED: Winter 2017; September 2018
- c) **Promotion and Support:** Staff promote and provide support of the program amongst agriculture organizations. DATE COMPLETED: March 1, 2021

**Results for each task:**

- a) **Develop Criteria:** Meetings and conference calls were held in February - April 2017 resulting in the development of the criteria for evaluating a session. It was decided that a session must include one or more of the following agronomic subjects: achieving nitrogen use efficiency for specific crops; practices to minimize leaching of nitrates to groundwater for specific crops, matching nitrogen applications to crop uptake and potential crop production, efficient irrigation practices that minimize over-irrigation when excess nitrogen could be in the soil profile, and other agronomic-focused nitrogen fertilizer and irrigation efficiency subjects deemed appropriate by the curriculum reviewers.
- b) **System Design:** In Winter 2017, CURES staff designed the system and CE application website portal ([www.curesworks.org/continuing-education/](http://www.curesworks.org/continuing-education/)). Applicants fill in the required fields and attach their agenda on the site. Once an application is submitted, they receive an automatic email with details and further instructions. In September 2018, the application requirements were modified to include a required Comprehensive Course Agenda. The purpose of this modification was to streamline the application approval process and eliminate the need to request further details from applicants after an application is submitted. In 2020, CURES developed an application for Self-Study (online) courses which include post-test questions and a course description.
- c) **Promotion and Support:** Since the project's start, several activities were conducted to promote the program. These include articles in coalition newsletters and



trade publications, presentations, and CEU emails send to the Specialty Crops Council, Central Valley water quality coalition managers, UC Cooperative Extension, and Regional Water Board. In September 2018, a notification was sent to all Central Valley water quality coalition members that contained information on the CEU requirement extension, as well as application requirements. Additionally, notifications were sent out annually via email or FREP blog post to encourage agricultural organizations to apply for CEUs. In 2020, Coalitions and growers were notified of online CE opportunities. In January 2021, all growers without complete CEUs were sent an email notification from their Coalition.

**Objective #: 2)**

**Tasks activities and accomplishments:**

- a) **Organizations Submit Requests:** Agriculture organizations develop and submit the request for Continuing Education credit to satisfy this condition of the INMP self-certification program (Phase 1), 2021 (grant term) DATE COMPLETED: March 1, 2021
- b) **Staff Review Content:** PI and CURES staff review content by using developed criteria; 2021 (grant term). DATE COMPLETED: March 1, 2021
- c) **Approved and Implemented:** The continuing education session is approved and implemented. The organizer issues Continuing Education credits to the grower in the form of an attendance confirmation certificate; 2021 (grant term) DATE COMPLETED: March 1, 2021
- d) **Filing Records:** Growers are responsible for filing and maintaining records of attending CE events or courses, 2021 (grant term). DATE COMPLETED: March 1, 2021
- e) **Notify Growers:** Notify growers who have attended previous certification courses about the availability of continuing education courses; 2021 (grant term) DATE COMPLETED: March 1, 2021

**Results for each task:**

- a) **Organizations Submit Requests:** From 2017 to 2021, 172 requests for Continuing Education credit were submitted by 40 different agriculture organizations using the CURES website portal.
- b) **Staff Review Content:** From 2017 to 2021, PI Terry Prichard and CURES staff reviewed 172 requests for Continuing Education.
- c) **Approved and Implemented:** From 2017 to 2021, 154 requests for Continuing Education Units were approved. Nine were cancelled, eight of these due to COVID-19. Nine applications were denied. Certificates of Completion were administered by workshop organizers to growers who completed the courses.
- d) **Filing Records:** Growers were informed at self-certification and CE events that is their responsibility to keep records of Continuing Education Certificates of Completion.
- e) **Notify Growers:** CURES created a page on its website to list approved live and self-study CEU meetings ([www.curesworks.org/cecourses/](http://www.curesworks.org/cecourses/)). A function on the page enabled a person to sign up for notifications via email when new courses are added to the calendar. As of March 1 2021, 656 growers had signed up to receive these notifications. In September 2018, an email notification was sent to 2,287 self-certified growers to notify them of the CEU requirement extension. In October 2018, a postcard notification was sent to 927 growers with missing or incomplete email

addresses notifying them of the extension. In 2020, Coalitions and growers were notified of online CE opportunities. In January 2021, all growers without complete CEUs were sent an email notification from their Coalition. All notifications included a link to the schedule of upcoming Continuing Education courses.

## **F. Results**

### **a. Material Deliverables**

See Appendix L for materials published for outreach events.

### **b. Information on Events**

The courses listed in Table 1 in the Appendix below were offered during the grant period. The attendee demographics included growers interested in self-certifying their Irrigation and Nitrogen Management Plans through the program. See section J: Outreach Activities Summary for more information on outreach events.

### **c. Impact Measures**

See Section N for the developed application template and evaluation criteria for course approvals.

## **G. Discussion and conclusions**

This project has met all objectives set forth in the original proposal. The system and criteria that was developed by CURES staff, CDFA, and UC has been integral in implementing educational workshops to increase agricultural nitrogen use efficiency and reduce nitrate leaching potential. The information delivered to growers by this project supports FREP's goals to advance the environmentally safe and agronomically sound use of nutrients and the reduction of agricultural contributions of nitrate to groundwater in the Central Valley and agricultural regions throughout California. The Best Management Practices (BMP)-related content of the Continuing Education Courses is vital to a significant portion of the approximately 30,000 landowners/operators, with a total of nearly 6 million acres of land in the Central Valley that are affected by the ILRP requirements to improve nutrient and irrigation application practices for reducing nitrate discharges to ground and surface water. This program also ensures the timely education of a diverse set of crop-specific topics via Continuing Education outreach sessions. The organizations and the growers they teach advance the knowledge of proper nitrogen stewardship, as attention by the public and policymakers continues to focus on the issue of nitrates in groundwater.



Challenge	Corrective Action and/or Project Change/lessons learned
<p>In response to Covid-19 restrictions, all in-person workshops/meetings had to be reconsidered.</p>	<p>All in-person meetings were cancelled and online Continuing Education courses were made available to growers who needed to obtain CEUs to maintain their certification. CURES, FREP and UC collaborated and created criteria for approval and online applications. Course sponsors were able to submit applications for live meetings and online courses. All courses were posted on the CURES website and growers had the option to complete online or “Self-Study” courses at their leisure.</p>

### I. Project Impacts

Through this project, there is now an increased awareness of the need for organizing CEU courses on nitrogen and irrigation management. It is expected that the program will continue to expand as water quality coalitions and farm organizations work to fulfill the ongoing need for its growers to obtain CEUs in nitrogen and irrigation management.

In response to Covid-19 restrictions, all in-person meetings were cancelled and online Continuing Education courses were made available to growers who need to obtain CEUs to maintain their certification. CURES, FREP and UC collaborated and created criteria for approval and online applications. Course sponsors were able to submit applications for live meetings and online courses. All courses were posted on the CURES website and growers have the option to complete online or “Self-Study” courses at their leisure. The program transitioned to CDFA management in March 2021 and continues through the CDFA website:  
[https://www.cdfa.ca.gov/is/ffldr/frep/continuing\\_education.html](https://www.cdfa.ca.gov/is/ffldr/frep/continuing_education.html).

An area of further activity under this project was the development of a database to track CEU courses and attendees. In 2020, CDFA took on this responsibility and developed a database containing all grower CEU data. This database is now used to track course attendees, as well as total CEU hours requested and approved. This allows for more accurate reporting and focused outreach to self-certified growers.

### J. Outreach Activities Summary

This project has undertaken outreach to inform farm organizations and growers about the availability of the program to approve content and facilitate organization of CEU meetings.

Activities conducted, to date, to promote the program and update interested parties include the following:

- Email notification sent to Coalitions and growers notifying them of online CE



opportunities.

- All growers without complete CEUs were sent an email notification from their Coalition. All notifications included a link to the schedule of upcoming Continuing Education courses.
- Email notifications sent to growers each time a new course is added to the CURES webpage. Currently, 656 growers have signed up on the CURES webpage to receive these notifications.
- Email reminders to all Central Valley Water Quality Coalition leads and blog posts targeting agricultural organizations encouraging them to apply for CEUs
- Email notifications sent to all Central Valley Water Quality Coalition members that contained information on the CEU requirement extension, as well as new application requirements.
- Email notification sent to 2,287 self-certified growers to inform them of the CEU requirement extension.
  - Included CURES webpage link to the schedule of upcoming Continuing Education courses
  - Coalitions were notified of email blast on 9/7/18
- Postcard notification sent to 927 growers with missing or incomplete email addresses to inform them of the extension.
  - Included CURES webpage link to the schedule of upcoming Continuing Education courses
  - Coalitions were notified of mailing on 10/26/18
- Presentations to grower groups soliciting their involvement in seeking self-certification of the INMP and attendance in the CE meetings. This included Regional Water Board stakeholder meetings held quarterly and periodic gatherings of Central Valley coalition leads where various issues of concern are discussed.
- Articles in coalition newsletters about availability of CE meetings
- When FREP funding was initially granted in 2017, a solicitation to organize CEU meetings was emailed to:
  - Specialty Crops Council (30+ contacts)
  - Central Valley water quality coalition managers (#13 entities)
  - UC Cooperative Extension (via Doug Parker): 20+ contacts

<b>Event Name (1)</b>	Creating Online Continuing Education Criteria and Applications
<b>Presentation title</b>	N/A
<b>Location and date</b>	<a href="http://www.curesworks.org/continuing-education/">www.curesworks.org/continuing-education/</a> ; June 2020
<b>Attendee demographics</b> (CCAs, PCAs, growers, consultants, researchers, etc.)	Coalitions, agricultural organizations



<b>CCA/Grower Continuing Education Units (CEUs) offered</b>	N/A	<b>Number of participants</b>	All CV Coalitions, multiple agricultural organizations
<b>Event Name (2)</b>	Notifying Coalitions of Online Continuing Education Criteria and Applications		
<b>Presentation title</b>	Online INMP Continuing Education Courses Now Available!		
<b>Location and date</b>	Email; July 22, 2020		
<b>Attendee demographics</b>	Central Valley Water Quality Coalitions		
<b>CCA/Grower Continuing Education Units (CEUs) offered</b>	N/A	<b>Number of participants</b>	29 Coalition leads

<b>Event Name (3)</b>	Notifying Growers of Online Continuing Education Courses		
<b>Presentation title</b>	Online INMP Continuing Education Courses Now Available!		
<b>Location and date</b>	Email; July 20, 2020		
<b>Attendee demographics</b>	INMP self-certified growers		
<b>CCA/Grower Continuing Education Units (CEUs) offered</b>	0.5 – 3	<b>Number of participants</b>	2875 self-certified growers

## K. References

Not applicable for this project.

## L. Appendix

Figures, tables, and supporting documents

### L.1 Table 1. Record of Applications Received: Organizer, Course Title, Course date and Approval or Denial

Organization	Course Title	Course Date	Application Approval Date
Lodi Winegrape Commission	Cover Crops and Soil Management	10/24/2017	10/19/2017
FREP and Western Plant Health Association	Nutrient Management: Challenges and Opportunities	11/1/2017	9/23/2017



Fertilizer Research and Education Program (FREP)  
 2021 Final Report  
 State of California  
 Department of Food and Agriculture



Organization	Course Title	Course Date	Application Approval Date
Center for Irrigation Technology, Fresno State University	Innovations in Ag Irrigation Technology Demonstration and ...	11/3/2017	10/22/2017
Northern California Water Association	Efficient Irrigation Management and Nitrogen Use Work	11/8/2017	10/22/2017
Western Plant Health Association	Central Valley Nutrient Seminar	11/9/2017	10/26/2017 (cancelled)
Western Plant Health Association	Central Coast Nutrient Seminar	11/16/2017	10/26/2017
Dixon/Solano RCD Water Quality Coalition	2016 Nitrogen Summary Results Explained	11/29/2017	11/10/2017
Butte County Farm Bureau/Ag Commission	Grower Day	11/29/2017	DENIED
Almond Board of California	How to Manage a Young Orchard	12/5/2017	12/6/2017
Almond Board of California	What's New In Almond Tree Nutrition and Regulation	12/5/2017	12/6/2017
Almond Board of California	Tools for Better Irrigation	12/6/2017	12/6/2017
Almond Board of California	Almond Crop Solutions	12/6/2017	12/6/2017
Sacramento Valley Water Quality Coalition	Modeling, Measuring, Managing Sustainable Groundwater Quality for the Next Quarter Century and Beyond	12/19/2017	12/7/2017
UC Cooperative Extension	SJC and Delta Field Crops Meeting	1/12/2018	DENIED
Sacramento Valley Water Quality Coalition	Nitrogen Management Continuing Education Classes	1/23/2018	1/14/2018
Sacramento Valley Water Quality Coalition	Nitrogen Management Continuing Education Classes	2/6/2018	1/14/2018
Sacramento Valley Water Quality Coalition	Measuring and Managing Sustainable Groundwater Quality for the Next Quarter Century and Beyond	2/6/2018	1/31/2018
CA Chapter of the American Society of Agronomy	California Plant and Soil Conference	2/6/2018	1/31/2018
UC Cooperative Extension	2018 North San Joaquin Valley Almond Day	2/7/2018	1/14/2018
Sacramento Valley Water Quality Coalition	Nitrogen Management Continuing Education Classes	2/15/2018	1/14/2018
Yolo County Farm Bureau Education Corporation	Nitrogen Management Plan Self-Certification CE Units Work	2/20/2018	12/28/2017
Cover Cropping in Nut Orchards	CAFF Dixon Solano RCD	3/1/2018	2/5/2018
Almond Board of California/UCDavis/UCCE	Spring Almond and Walnut Nutrient and Water Management	3/13/2018	2/27/2018
Dixon/Solano RCD Water Quality Coalition	Irrigated Pasture & Water Quality	3/13/2018	2/28/2018
Almond Board of California/UCDavis/UCCE	Spring Almond Nutrient and Water Management Field Day	3/20/2018	3/12/2018
Almond Board of California, UC Davis, UCCE, CDFA-FREP	KERN UCCE/Almond Board NMP FIELD DAY	3/21/2018	3/12/2018
Dixon Resource Conservation District	Irrigation Efficiency Workshop - "Irrigate with Precision"	3/22/2018	2/22/2018
Almond Board of California	"In the Orchard" Workshop Irrigation & Nitrogen Budgeting & Compliance	3/27/2018	3/5/2018

Fertilizer Research and Education Program (FREP)  
 2021 Final Report  
 State of California  
 Department of Food and Agriculture



Organization	Course Title	Course Date	Application Approval Date
Almond Board of California/UC Davis/UCCE	Spring Almond and Walnut Nutrient and Water Management	3/27/2018	3/12/2018
Almond Board of California	"In the Orchard" Workshop Irrigation & Nitrogen Budgeting & Compliance	3/28/2018	3/5/2018
The Xerces Society	Cover Cropping Field Day	3/28/2018	3/5/2018
Kings River Water Quality Coalition	Grower Re-Certification Course	3/29/2018	3/27/2018
Almond Board of California	"In the Orchard" Workshop Irrigation & Nitrogen Budgeting & Compliance	4/10/2018	3/30/2018
Almond Board of California	"In the Orchard" Workshop Irrigation & Nitrogen Budgeting & Compliance	4/11/2018	3/30/2018
Westlands Water Quality Coalition/Water District	Nitrogen Application Efficiency Workshop	4/24/2018	4/3/2018
East Stanislaus Resource Conservation District	Irrigation & Nutrient Management Workshop	5/9/2018	4/6/2018
Westside San Joaquin River Watershed Coalition	Nitrogen and Irrigation Management in Almonds and Pistachios	5/17/2018	5/3/2018
UC Cooperative Extension	University of California Small Grains Field Day (am)	5/17/2018	5/12/2018
UC Cooperative Extension	University of California Small Grains Field Day (pm)	5/17/2018	5/12/2018
North Valley Ag Services/UCCE Tehama	Advances in on-farm water management (almond focus)	5/22/2018	5/12/2018
UC Cooperative Extension/Chico State	Irrigated Pasture & Annual Rangeland Management Workshop	5/31/2018	5/12/2018
FREP, CURES, Alpine Pacific Nut Company	Walnut Nitrogen and Irrigation Management Field Day	6/7/2018	5/12/2018
North Valley Ag Services/UCCE Tehama	Advances in on-farm water management (walnut focus)	6/7/2018	5/31/2018
Westside San Joaquin River Watershed Coalition	Nitrogen and Irrigation Management in Almonds and Walnuts	6/13/2018	6/5/2018
Organic Fertilizer Association of California	Sustainable and Organic Production in Northern California	6/15/2018	5/12/2018
UC Cooperative Extension, Merced	Unmanned Aerial Vehicles "Drone" Field Meeting	6/26/2018	6/5/2018
Organic Fertilizer Association of California	Sustainable and Organic Production in Northern California	7/25/2018	6/30/2018
Organic Fertilizer Association of California	Sustainable and Organic Production in Northern San Joaquin Valley	8/30/2018	8/8/2018
CAPCA Ed	CAPCA Ed Modesto	9/20/2018	8/8/2018
CDFA FREP/CAPCA/Western Region CCA	Nitrogen Management Update Seminar	10/13/2018	6/30/2018
CDFA FREP & WPHA	2018 FREP/WPHA Annual Conference	10/22/2018	9/25/2018
USDA NRCS, East Stanislaus RCD	Soil Health and Nutrient Management	10/23/2018	10/9/2018
UC Agriculture and Natural Resources	2018 Advances in Walnut Production Short Course	11/6/2018	10/31/2018
Kings River Water Quality Coalition & Westlands Water Quality Coalition	Nut and Grape Nutrient and Water Management	11/8/2018	8/26/2018
Organic Fertilizer Association of California	Sustainable & Organic Production in the Southern San Joaquin Valley	11/14/2018	DENIED

Fertilizer Research and Education Program (FREP)  
 2021 Final Report  
 State of California  
 Department of Food and Agriculture



Organization	Course Title	Course Date	Application Approval Date
UCCE	Cover Cropping for Any Farm	11/15/2018	10/8/2018
Madera County Farm Bureau	Tree/Vine & Irrigation Workshop	11/19/2018	10/26/2018
Dixon/Solano RCD Water Quality Coalition	Measurement & Management - Water & Nitrates	11/29/2018	10/26/2018
OFAC	Sustainable & Organic Production on the North Coast	11/29/2018	DENIED
UC Cooperative Extension, Merced and Merced County Farm Bureau	Water Measurement and Reporting	12/3/2018	DENIED
Almond Board of California	Update Water Quality Regulation and Management	12/4/2018	DENIED
Audubon California	Lunch and Learn on the Farm	12/7/2018	11/24/2018
Colusa Glenn Subwatershed Program	Nitrogen Management CEU Training	12/10/2018	11/24/2018
Sutter Yuba UCCE and Sutter Co. Agriculture Department	24th Annual Sacramento Valley Cling Peach Day	1/10/2019	12/25/2018
UC Cooperative Extension, San Joaquin County	SJC and Delta Field Crops Meeting	1/17/2019	12/25/2018
Dixon/Solano RCD Water Quality Coalition	Irrigation & Nitrogen Management in Orchards	1/22/2019	10/26/2018
San Joaquin County and Delta Water Quality Coalition	Nitrogen Management CE Class - Vines and Orchard Management	1/23/2019	1/16/2019
California Chapter American Society of Agronomy	California Plant and Soil Conference	2/5/2019	11/24/2018
Lodi Winegrape Commission	Comprehensive Vineyard Water Management	2/5/2019	1/24/2019
California Chapter American Society of Agronomy	California Plant and Soil Conference	2/6/2019	11/24/2018
San Joaquin County and Delta Water Quality Coalition	Nitrogen Management CE Class - Row Crops	2/13/2019	1/16/2019
San Joaquin County and Delta Water Quality Coalition	Nitrogen Management CE Class - Vines and Orchard Management	2/19/2019	1/16/2019
UC Cooperative Extension Tehama County	Northern Sacramento Valley Prune Meeting	2/22/2019	2/13/2019
Solano RCD, Dixon RCD, CAFF/Farmers Guild, NRCS	Cover Cropping in Orchards	2/27/2019	2/13/2019
San Joaquin County and Delta Water Quality Coalition	Nitrogen Management Continuing Education Class Orchard and Vine Management	3/6/2019	3/5/2019
University of California Cooperative Extension	Wheat Field Day on Tolls to Make In-Field Nitrogen Management Decisions	3/12/2019	3/5/2019
UC Cooperative Extension, UC Davis, CDFA FREP, ABC	Spring Almond Nutrient and Water Management Field Day	3/14/2019	3/5/2019
UC Cooperative Extension, UC Davis, CDFA FREP, ABC	Spring Almond Nutrient and Water Management Field Day	3/19/2019	3/12/2019
Solano Agricultural Water Conservation Committee	Irrigation Efficiency Workshop	3/21/2019	2/22/2019
UC Cooperative Extension, UC Davis, CDFA FREP, ABC	Spring Almond Nutrient and Water Management Field Day	3/26/2019	3/13/2019
CURES, CDFA FREP, Alpine Pacific	Walnut Nitrogen and Irrigation Management Field Day	4/2/2019	3/19/2019
Kings River Water Quality Coalition	Nut and Grape Nutrient and Water Management	4/4/2019	12/25/2018

Fertilizer Research and Education Program (FREP)  
 2021 Final Report  
 State of California  
 Department of Food and Agriculture



Organization	Course Title	Course Date	Application Approval Date
UC Cooperative Extension	South Sacramento Valley Wheat and Barley Field Day	4/24/2019	4/16/2019
East Stanislaus Resource Conservation District	Irrigation and Nutrient Management Workshop	5/29/2019	5/19/2019
Butte-Yuba-Sutter Water Quality Coalition	Nitrogen Management Continuing Education	6/20/2019	5/27/2019
Organic Fertilizer Association of California	Sustainable & Organic Production in the Central Valley	7/30/2019	7/6/2019
Organic Fertilizer Association of California	Sustainable & Organic Production in the Central Valley	8/8/2019	DENIED
Yolo County Farm Bureau	Nitrogen Management in Orchards and Field Crops	10/11/2019	10/1/2019
CDFA-FREP & WPHA	Central Valley Nutrient and Irrigation Management Farm Tour	10/28/2019	10/22/2019
CDFA-FREP & WPHA	FREP/WPHA Nutrient Management Conference	10/29/2019	10/10/2019
CDFA-FREP & WPHA	FREP/WPHA Nutrient Management Conference	10/30/2019	10/10/2019
UCCE	Comprehensive Nitrogen Management for Crop Health and Reporting in Organic Production	11/4/2019	10/11/2019
Kern River Watershed Coalition Authority (KRWCA)	Nitrogen and Irrigation Management Continuing Education Workshop	11/8/2019	10/13/2019
Madera County Farm Bureau	Tree/Vine Irrigation Workshop for NMP Certification Holders	11/12/2019	10/1/2019
Center for Irrigation Technology at Fresno State	Innovations in Ag Irrigation Technology Field Day	11/15/2019	10/30/2019
Yolo County Farm Bureau	Nitrogen Management in Orchards and Field Crops	11/20/2019	10/1/2019
California Department of Food & Ag, Healthy Soils Program	Improve Your Soil Health	12/5/2019	10/13/2019
East Stanislaus Resource Conservation District	Irrigation and Nutrient Management Workshop	12/5/2019	11/24/2019
Colusa Glenn Subwatershed Program	Nitrogen Management CEU Training	12/9/2019	11/14/2019
UC Cooperative Extension, San Joaquin County	SJC and Delta Field Crop Meeting	1/10/2020	12/14/2019
San Joaquin and Delta Water Quality Coalition	Tree and Vine Management	1/22/2020	1/13/2020
San Joaquin County and Delta Water Quality Coalition	Row Crop Management	1/28/2020	1/13/2020
California Chapter of the American Society of Agronomy	Cereal Crop Nitrogen Management	2/4/2020	1/10/2020
California Chapter of the American Society of Agronomy	Water Quality Regulatory Updates	2/5/2020	DENIED
California Chapter of the American Society of Agronomy	Nitrogen Management in Organic Systems	2/5/2020	1/15/2020
Sacramento Valley Water Quality Coalition/Colusa Glenn Subwatershed Program	The 4Rs and Other BMPs to Improve N Use Efficiency	2/6/2020	1/23/2020
San Joaquin County and Delta Water Quality Coalition	Tree and Vine Management	2/11/2020	1/10/2020

Fertilizer Research and Education Program (FREP)  
 2021 Final Report  
 State of California  
 Department of Food and Agriculture



Organization	Course Title	Course Date	Application Approval Date
Dixon/Solano RCD Water Quality Coalition	Irrigation / Nutrient Management (Row Crop Focus)	2/11/2020	1/30/2020
UC Cooperative Extension Sutter-Yuba Counties	Healthy Soils and Field Crops Grower Meeting	2/19/2020	1/30/2020
East San Joaquin Water Quality Coalition	East San Joaquin Water Quality Coalition Almond Nitrogen Management	2/25/2020	2/13/2020
East San Joaquin Water Quality Coalition	East San Joaquin Water Quality Coalition Almond Nitrogen Management	2/26/2020	2/13/2020
San Joaquin County and Delta Water Quality Coalition	Tree and Vine Management	2/27/2020	1/10/2020
East San Joaquin Water Quality Coalition	East San Joaquin Water Quality Almond Nitrogen Management	2/27/2020	2/13/2020
Lodi Winegrape Commission	Hedgerow Workshop with the Xerces Society	3/10/2020	DENIED
San Joaquin County and Delta Water Quality Coalition	Tree and Vine Management	3/26/2020	CANCELLED
UC Cooperative Extension	Winter Soil Nitrogen Management Workshop	3/31/2020	CANCELLED
Butte Yuba-Sutter Water Quality Coalition	NMP Continuing Education Meeting	4/1/2020	CANCELLED
Lodi Winegrape Commission	Mineral Nutrient Management Methods	4/7/2020	CANCELLED
Kings River Water Quality Coalition	Nitrogen and Irrigation Management Continuing Education	4/9/2020	CANCELLED
San Joaquin County and Delta Water Quality Coalition	Tree and Vine Management	4/9/2020	CANCELLED
East Stanislaus Resource Conservation District	Irrigation Nutrient Management Workshop	4/22/2020	CANCELLED
East Stanislaus Resource Conservation District	Irrigation Nutrient Management Workshop	4/22/2020	CANCELLED
KBWQA & TBWQC	Irrigation & Nitrogen Management Continuing Education Workshop	6/24/2020	5/19/2020
UCCE	Basic Irrigation Monitoring	Self-Study	6/8/2020
UCCE	Putting Weekly Crop Evapotranspiration Reports to Work for You	4/3/2020	6/16/2020
UCCE	Putting Weekly Crop Evapotranspiration Reports to Work for You	4/21/2020	6/16/2020
UCCE	Putting Weekly Crop Evapotranspiration Reports to Work for You	5/1/2020	6/16/2020
UCCE	Putting Weekly Crop Evapotranspiration Reports to Work for You	5/15/2020	6/16/2020
UCCE	Putting Weekly Crop Evapotranspiration Reports to Work for You	5/29/2020	6/16/2020
UCCE	Irrigation Management for Tree Health	Self-Study	6/24/2020
UCCE	Irrigation Management with Plant Stress	Self-Study	6/28/2020
UCCE	Optimizing the Irrigation System	Self-Study	7/3/2020
UCCE	Water Losses from the Agricultural System	Self-Study	7/3/2020
California Walnut Board	4Rs of Walnut Nitrogen Management	7/1/2020	6/16/2020
SCE/PG&E	Pumps - Energy and Water Efficiency	7/23/2020	7/15/2020
East San Joaquin Water Quality Coalition	Nitrogen and Irrigation Management in Almonds	Self Study	7/15/2020
UCANR	Putting Weekly Crop ET Reports to Work in Your Orchard	Self Study	8/14/2020

Fertilizer Research and Education Program (FREP)  
 2021 Final Report  
 State of California  
 Department of Food and Agriculture



Organization	Course Title	Course Date	Application Approval Date
UCANR	Using Crop ET Reports in Young, Developing Orchards	Self Study	8/14/2020
UCANR	Putting Weekly Crop ET Reports to Work in You - Soils Perspective	Self Study	8/14/2020
UCANR	Using Weekly Crop ET Reports - From a Tree Perspective	Self Study	8/14/2020
UCANR	Using Weekly Crop ET Reports - Gateway to Advanced On-Farm Water	Self Study	8/14/2020
CURES	4Rs and Walnut Nitrogen Management	Self Study	8/14/2020
UC ANR	Alfalfa and Forage Virtual Field Day	9/23/2020	8/23/2020
Center for Irrigation Technology	Irrigation System Performance to Save Energy and Water	10/22/2020	10/12/2020
UCCE	Practical Training in Nitrogen Planning and Management in Organic Production	10/26/2020	10/21/2020
Kaweah Basin & Tule Basin	Annual Crops Nutrient Management	Self Study	10/21/2020
Kaweah Basin & Tule Basin	Resources for More Efficient Irrigation and Nitrogen Management	Self Study	10/22/2020
Kaweah Basin & Tule Basin	Understand Your Soil to Improve Irrigation & Nitrogen Management	Self Study	10/23/2020
Kaweah Basin & Tule Basin	Uniform Irrigation & Fertigation	Self Study	10/27/2020
CDFA FREP, WPHA	2020 FREP/WPHA Nutrient Management Conference Day 1	10/28/2020	9/21/2020
CDFA FREP, WPHA	2020 FREP/WPHA Nutrient Management Conference Day 2	10/29/2020	9/21/2020
Madera County Farm Bureau	Tree/Vine Irrigation and Sediment and Erosion Management Workshop	11/12/2020	8/23/2020
University of California	UC Advances in Pistachio Production Short Course	11/16/2020	10/12/2020
Dixon RCD	Nitrogen and Irrigation Management	Self Study	11/9/2020
CIT Fresno State	Remote Monitoring and Control of Irrigation Pumps and Wells	11/18/2020	11/19/2020
CIT Fresno State	Remote Monitoring and Control of Irrigation Pumps and Wells Part Two	12/3/2020	11/19/2020
Stanislaus County Farm Bureau	Ask a PCA	12/10/2020	11/25/2020
Organic Fertilizer Association of California	Sustainable and Organic Production Webinar	12/15/2020	12/18/2020
UC Agriculture and Natural Resources	Statewide Pistachio Day 1	1/12/2021	12/28/2020
UC Agriculture and Natural Resources	Statewide Pistachio Day 2	1/13/2021	12/28/2020
University of California, Agriculture and Natural Resources	California Plant and Soil Conference Day 1	2/1/2021	12/28/2020
University of California, Agriculture and Natural Resources	California Plant and Soil Conference Day 2	2/2/2021	12/28/2020
University of California, Agriculture and Natural Resources	California Plant and Soil Conference Day 3	2/3/2021	12/28/2020
Center for Irrigation Technology	Ag Tech Field Day at Fresno State	2/12/2021	1/12/2021
UCCE	UCCE Virtual Walnut Series	2/16/2021	1/21/2021
Stanislaus County Farm Bureau	Nitrogen 101	3/04/2021	2/08/2021
Almond Board of California	Nitrogen Best Management Practices	3/02/2021	2/11/2021
Stanislaus County Farm Bureau	Ag Tech Summit Irrigation Technology: Making Every Drop Count	3/23/2021	2/22/2021
Lodi Winegrape Commission	UC: LODI WATER MANAGEMENT WORKSHOP I	3/11/2021	2/23/2021
Lodi Winegrape Commission	UC: LODI WATER MANAGEMENT WORKSHOP II FOR LODI WINEGROWERS	3/18/2021	2/23/2021



Organization	Course Title	Course Date	Application Approval Date
UC Cooperative Extension/ Colusa County Resource Conservation District	Winter Cover Cropping in the Sacramento Valley	3/24/2021	2/23/2021
Center for Irrigation Technology	Remote Well and Pump Monitoring using the Smart Meter	3/25/2021	2/23/2021

**L.2 Outreach Material 1** “Email notification sent to growers notifying them of online CE courses” (July 20, 2020)

**Online INMP Continuing Education Courses Now Available!**

Please visit [www.curesworks.org/cecourses](http://www.curesworks.org/cecourses) for online courses to fulfill your Continuing Education requirements. More courses added almost every week so sign up to receive automatic notifications whenever a new course is added to the selection. To receive notifications, sign up at the bottom of the webpage.

**Live Webinars:** pre-registration required; must attend the entire course. Once webinar ends, sponsor will send you a Certificate of Completion via email.

**Self-Study Courses:** view videos or podcasts at your leisure. Courses require a test to verify completion. A web link to the test included in course description. After passing test, Certificate of Completion sent via email within 5 business days.

As a reminder, a condition of maintaining the INMP certification is completing three hours of Continuing Education Units (CEUs) over a three-year period. COVID-19 restrictions have forced cancellation of all in-person meetings until further notice. Take advantage of these online courses to fulfill the CEU requirement!

We hope you find these online courses useful!

Questions: Contact Kayla Cathers at [kayla.cathers@curesworks.org](mailto:kayla.cathers@curesworks.org) or call 916-798-8003.

Thank you,



**L.3 Outreach Material 2: “Email notification sent to Coalitions asking them to plan/apply for online CEUs” (July 22, 2020)**

TO: Central Valley Water Quality Coalitions

As you know, CURES, CDFA and UC have developed an application process for online courses, including testing guidelines and content requirements for those who want to develop courses. The application webpages are now live and can be found at [www.curesworks.org/continuing-education/](http://www.curesworks.org/continuing-education/).

CURES and CDFA are working on developing some courses that will be posted on the CURES webpage at [www.curesworks.org/cecourses/](http://www.curesworks.org/cecourses/). Once these courses are added, you may use them as examples while planning your own online courses.

Once we have 2-3 online courses posted on the website, we will send email notifications and/or postcards to all NMP/INMP self-certified growers (currently 3600) notifying them of the online opportunities.

FREP recently sent out the blog post below to encourage meeting sponsors to create online material and apply for CEUs. We’re very excited to be able to offer this virtual option to growers and we hope to see a flood of applications from you all!

Please let me know if you have any questions.

Thank you,





Fertilizer Research and Education Program (FREP)  
2021 Final Report  
State of California  
Department of Food and Agriculture



**L.4 Email notification sent to growers each time a new course is added to the CURES webpage (continuous)**

## New Continuing Education Courses

New courses have been added to the list of grower continuing education courses on the CURES website.

You can find these courses at <https://www.curesworks.org/cecourses/>.

Thank you,

Coalition for Urban Rural Environmental Stewardship



This email was sent to [kayla.cathers@curesworks.org](mailto:kayla.cathers@curesworks.org)  
You received this email because you are subscribed to the  
CURES Continuing Education Courses Notification List

[Unsubscribe here](#)





**L5. Language for FREP Blog post encouraging agricultural organizations to apply for CEUs (October 24, 2019)**

**Apply Now to Offer INMP Continuing Education Units at Your Grower Events**

Growers who belong to California’s Central Valley Water Quality Coalitions and who are in areas designated as high vulnerability are under requirements from the Irrigated Lands Regulatory Program (ILRP) to keep “on farm” a certified Irrigation and Nitrogen Management Plan (INMP) to track nitrogen fertilizer applications. The Waste Discharge Requirements General Order for the Central Valley allows growers to self-certify their own INMPs if they attend a training program approved by the California Department of Food and Agriculture. The 12 Central Valley coalitions, with funding from FREP, have instituted a [grower training program](#) for their members.

Once a grower is certified, they must complete 3 hours of Continuing Education Units (CEUs) in 3 years to maintain their certification. The purpose of continuing education is to ensure Irrigation and Nitrogen Management Plan (INMP) certificate holders keep current their knowledge on subjects related to efficient use of nitrogen-based fertilizing materials and irrigation management techniques. This continuing education component is being orchestrated through a FREP-funded project and provides sponsors a way to offer courses for credit to INMP certificate holders.

The application for Continuing Education Units is submitted online then reviewed by a UC representative and CURES to ensure it meets the requirements for CEUs. Once a session is granted CEUs, a template “Certification of Completion” will be provided to the applying organization for distribution to participants, as well as a sign-up sheet for those who are given the certificate.

Apply, using the link below, to offer INMP CEUs at your next Irrigation and/or Nitrogen Management grower event. If only a portion of your event focuses on these topics, you may apply for CEUs for those specific sessions.

[www.curesworks.org/continuing-education](http://www.curesworks.org/continuing-education)

Check this page for a list of CEU events that are currently scheduled:

[www.curesworks.org/cecourses/](http://www.curesworks.org/cecourses/)

**L.6 Email reminder to all Central Valley Water Quality Coalition leads**



TO: CV Water Quality Coalitions

As discussed at the 10/9 CV Coalitions meeting in Modesto, FREP funding for the NMP/INMP program has ended and the Coalitions have agreed to fund the program. CURES has developed the attached Agreement detailing program tasks and costs. This agreement must be signed by the Coalition Lead before an INMP course can be held by that Coalition. **Please submit your signed Agreement to me by Friday, November 1.** If you are unable to meet this deadline, then please make sure it is submitted before your next INMP course.

The new INMP curriculum is being revised and is expected to be ready for distribution by January 1, 2020. FREP is currently reviewing it and will be done by Nov 1. Once they are done, it will go to Terry Prichard, UC Emeritus and then to the Coalitions for a final review. You can expect to see a revised version by mid to late-November. The final versions of the binder and presentation will be posted on the CURES webpage at [www.curesworks.org/grower-training/](http://www.curesworks.org/grower-training/).

Please note that the Coalitions are now responsible for printing the curriculum binder. I am, of course, available to do this if needed, but it is not included in the attached agreement. I will send you the curriculum binder and printing instructions, once they are finalized. It takes a minimum of 2 weeks to print and mail, so please plan accordingly.

The cost of the CCA trainers is also the responsibility of the Coalitions. Since the FREP grant is over, the \$500 rate is no longer a requirement. You may discuss with your CCAs if you'd like to change this rate.

Regarding NMP/INMP Continuing Education. Thank you to all that have applied this season so far! We have 13 courses scheduled through February 2020. Details can be found on the CURES website at [www.curesworks.org/cecourses/](http://www.curesworks.org/cecourses/). FREP is posting a blog post in the coming days to encourage commodity groups and other ag organizations to apply. I've also attached the draft CEU video guidance doc that was discussed at the 10/9 meeting, in case any of you want to take it on as a pilot project.

Please let me know if you have any questions.

Thanks!

**Kayla Cathers**

Assistant Project Manager

Coalition for Urban Rural Environmental Stewardship

[kayla.cathers@curesworks.org](mailto:kayla.cathers@curesworks.org) | 916-798-8003 | 831-214-9125

[www.curesworks.org](http://www.curesworks.org)

**L7. Email notification of the CEU requirement extension, as well as new**

Fertilizer Research and Education Program (FREP)  
2021 Final Report  
State of California  
Department of Food and Agriculture  
**application requirements (sent to all Central Valley water quality coalition members) (September 15, 2018)**



Hello Coalition Leads,

Thank you for your patience in this matter. We have received clarification on the three-year Continuing Education requirement from CDFA (see attached letter).

As you are aware, growers must complete three hours of Continuing Education Units (CEUs) in three years to maintain their NMP Self-Certification. Since the continuing education protocol was not established in the first two years of the training program and courses were slow to be organized, the **CEU requirement for self-certifying growers will not begin until this calendar year (2018)**. Any CEUs that growers have earned since 2016 will count towards the three hours expected to be completed before January 2021.

**All growers who have passed the NMP Self-Certification exam thus far must complete three hours of CEUs before January 2021.**

CURES will be sending out an email (or postcard for those without email addresses) to all NMP Self-Certified growers notifying them of these requirements. We will notify you when the announcement is sent out. In an effort to streamline the CEU application approval process, we have revised our processes in the following ways:

1. We are now requiring applicants to provide two versions of the agenda: a Basic Course Agenda and a Comprehensive Course Agenda. This is to ensure that applicants submit the correct information the first time and eliminate delays in reviewing and approving the course. Requirements for the two agendas are listed on the instructions page (attached) and CURES website: <https://www.curesworks.org/continuing-education/>.
2. If an application is incomplete or is awarded fewer CEUs than requested, our review team will provide a brief explanation of the determination.
3. Examples of topics necessary for approval are listed below. Please read the attached instructions thoroughly for a list of required course subject matter eligible for CEU credits.
  - a. Achieving nitrogen use efficiency for specific crops;
  - b. Practices to minimize leaching of nitrates to groundwater for specific crops;
  - c. Matching nitrogen applications to crop uptake and potential crop production;
  - d. Efficient irrigation;
  - e. Other agronomic-focused nitrogen fertilizer and irrigation efficiency subjects deemed appropriate by the curriculum reviewers.

Please contact CURES staff with any questions regarding the Continuing Education program requirements or approval process.

Fertilizer Research and Education Program (FREP)  
2021 Final Report  
State of California  
Department of Food and Agriculture  
Thank you,



Parry Klassen  
Executive Director  
Coalition for Urban Rural Environmental Stewardship (CURES)  
[klassenparry@gmail.com](mailto:klassenparry@gmail.com)  
559-288-8125

**L.8 Email notification sent to 2,287 self-certified growers to inform them of the CEU requirement extension (September 15, 2018)**

Fertilizer Research and Education Program (FREP)  
2021 Final Report  
State of California  
Department of Food and Agriculture  
Dear NMP Self-Certified grower,



**Thank you for completing the Nitrogen Management Plan Self-Certification course, sponsored by CDFA's Fertilizer Research and Education Program (FREP) and facilitated by the Coalition for Urban Rural Environmental Stewardship (CURES).**

As you are aware, a condition of maintaining this certification is completing three hours of Continuing Education Units (CEUs) over a three-year period.

In the first two years of the training program (2016-17), the continuing education protocol was not in place, thus the Continuing Education Unit requirement for self-certifying growers will not begin until this calendar year (2018). However, **any CEUs that you have earned in the first two years of the program will count toward the three hours expected to be completed before January 2021.**

**All growers who have passed the NMP Self-Certification exam thus far must complete three hours of CEUs before January 2021.**

Continuing education courses are being offered by a number of entities including your local water quality coalition, the University of California, the Certified Crop Advisor (CCA) program, CDFA/FREP, commodity groups or other organizations. These entities will advertise the courses as fulfilling the grower Nitrogen Management Plan continuing education requirements.

You are responsible for collecting and maintaining certificates of attendance for the events you attend. If you are an employee or lease property from one or more Coalition members, provide a copy of the CEU certificate to each Coalition member for their files. The coalition member is required to produce this documentation to the Regional Water Board if their Nitrogen Management Plan is audited.

A schedule of upcoming continuing education courses can be found on the CURES website at <https://www.curesworks.org/cecourses/>. At the same site, you may enter your email address to receive notifications when new courses are added.

Please contact CURES staff with any questions you may have.

(530) 747-2023

[m.box@curesworks.org](mailto:m.box@curesworks.org)



Fertilizer Research and Education Program (FREP)

2021 Final Report

State of California

Department of Food and Agriculture

**L.9 Postcard notification sent to 927 growers with missing or incomplete email addresses to inform them of the extension (October 24, 2018)**



1480 Drew Ave, Suite #130  
Davis, CA 95618

## CLARIFICATION OF NMP CONTINUING EDUCATION PROGRAM REQUIREMENTS

### CLARIFICATION OF NMP CONTINUING EDUCATION PROGRAM REQUIREMENTS

Thank you for completing a Nitrogen Management Plan Self-Certification course.

**NMP Self-Certified growers must complete three hours of Continuing Education Units over a three-year period to maintain their certification.**

In recognition that most continuing education courses were not offered until 2018, the Continuing Education Unit requirement for self-certifying growers will not begin until this calendar year (2018). Any CEUs that you have earned in the first two years of the program will count toward the three hours expected to be completed before January 2021.

**ALL GROWERS WHO HAVE PASSED THE NMP SELF-CERTIFICATION EXAM THUS FAR MUST COMPLETE THREE HOURS OF CEUS BEFORE JANUARY 2021**

A comprehensive schedule of continuing education courses can be found on the CURES website at [www.curesworks.org/cecourses/](http://www.curesworks.org/cecourses/).

At the same site, you may enter your email address to receive notifications when new courses are added.







### M. Factsheet/ Database Template

<b>Project Title</b>	<b>Developing a Review Process for Continuing Education Courses for Growers who Complete the Nitrogen Management Plan Training Course</b>	
<b>Project leaders</b>	Coalition for Urban/Rural Environmental Stewardship (CURES), Parry Klassen, Executive Director, CURES	
<b>Grant Number</b>	16-0703-SA	
<b>Project Duration</b>	Start Date: January 1, 2017	End Date: June 30, 2021
<b>Locations</b>	Central Valley California	
<b>Counties</b>	Colusa, Fresno, Glenn, Kern, Kings, Madera, Merced, Sacramento, San Joaquin, Stanislaus, Tulare, and Yolo	
<b>Highlights</b>	<ul style="list-style-type: none"> <li>• From 2017 to 2021, 172 requests to host Continuing Education credit courses were submitted by 40 different agriculture organizations using the CURES website portal.</li> <li>• CURES approved 154 applications for live and online Continuing Education sessions using criteria developed in conjunction with CDFA and UC. Nine of the 172 were cancelled, eight of these due to COVID-19. Nine applications were denied.</li> <li>• In response to Covid-19, in 2020 CURES developed an application for Self-Study (online) courses which include post-test questions and a course description. 17 online Continuing Education courses were made available to growers who needed to obtain CEUs to maintain their certification.</li> <li>• Under CURES management, the program qualified 3,648 growers in a joint effort with CDFA, CURES, UC and Central Valley Water Quality Coalitions.</li> </ul>	
<b>Introduction:</b>	Growers who belong to Central Valley Water Quality Coalitions are under requirements per the Irrigated Lands Regulatory Program (ILRP) to keep “on farm” an Irrigation and	



Nitrogen Management Plan (INMP) to track nitrogen fertilizer applications. For land in areas within High Vulnerability Groundwater Areas, Irrigation and Nitrogen Management Plans must be certified by a nitrogen management plan specialist. Growers may certify their own nitrogen management plans only after they successfully participate in a CDFA Nitrogen and Irrigation Management Training class. As of March 2021, this program had qualified 3,648 growers in a joint effort with CDFA, CURES and UC. Upon successful completion of the course, growers can certify their INMP for lands that they farm. After the initial grower self-certification, additional hours of continuing education are a requirement of the program approved by the Regional Water Board.

Phase 2 of this program includes development and management of a process to review the agendas and contents of a proposed meeting or segment of a meeting that fulfills the Continuing Education requirement of the INMP certification process. Requests for continuing education credits are submitted online and contain basic contact information, as well as course details. The content review is performed by Terry Prichard and CURES staff using criteria developed in conjunction with CDFA and UC. Once the CE meeting content is approved, the organizing entity is allowed to issue Continuing Education credits to the grower in the form of an attendance confirmation certificate. The grower is responsible for filing and maintaining records of attending CE events or courses.

The program transitioned to CDFA in March 2021, under whom it continues to be managed ([https://www.cdfa.ca.gov/is/ffldrs/frep/continuing\\_education.html](https://www.cdfa.ca.gov/is/ffldrs/frep/continuing_education.html)).

**Methods/ Management:**

**Develop the Process and Criteria:** Project Leader, Terry Prichard, and CURES staff worked with CDFA and UC to develop criteria for content. CURES staff designed the system for approval, including accompanying documents and a website portal needed to request Continuing Education Units for approval. The program has been promoted through coalition newsletters and trade publications, presentations, and emails sent to Specialty Crops Council, Central Valley Water Quality Coalition managers, UC Cooperative Extension and Regional Water Board.

**Manage and Coordinate the Continuing Education Sessions:** Once agricultural organizations submit a request for CEU approval, project leaders and CURES staff review content by evaluating if the course meets application criteria. If an application meets the requirements, it is approved and implemented. Upon completion of a course, growers receive a Certificate of Completion. A schedule of upcoming courses was posted on the CURES webpage and updated continuously. Each time a new course is added an email notification is sent out to all growers who signed up to receive these notifications.

**Findings**

This project has met all objectives set forth in the original proposal. The system and criteria that was developed by CURES staff, CDFA, and UC has been integral in implementing educational workshops to increase agricultural nitrogen use efficiency and reduce nitrate leaching potential. The information delivered to growers by this project supports FREP's goals to advance the environmentally safe and agronomically



sound use of nutrients and the reduction of agricultural contributions of nitrate to groundwater in the Central Valley and agricultural regions throughout California.

The BMP-related content of the Continuing Education Courses is vital to a significant portion of the approximately 30,000 landowners/operators, with a total of nearly 6 million acres of land in the Central Valley that are affected by the ILRP requirements to improve nutrient and irrigation application practices for reducing nitrate discharges to ground and surface water. This program also ensures the timely education of a diverse set of crop-specific topics via Continuing Education outreach sessions. The organizations and the growers they teach advance the knowledge of proper nitrogen stewardship, as attention by the public and policymakers continues to focus on the issue of nitrates in groundwater.

In response to Covid-19 restrictions, 8 in-person meetings were cancelled and 17 online Continuing Education courses were made available to growers who needed to obtain CEUs to maintain their certification. CURES, FREP and UC collaborated and created criteria for approval and online applications.

## N. Copy of Product/ Result

Two products were developed for this project: an application for continuing education units and evaluation criteria for approving continuing education course units.

### N.1 Application for Continuing Education Units

<b>MEETINGS / LIVE EVENTS APPROVAL REQUEST APPLICATION</b>		<i>Coalition for Urban Rural Environmental Stewardship (CURES) 1480 Drew Ave, Suite 130, Davis, CA 95618 (530) 747-2023 (530) 756-5225 (fax)</i>	
APPLICANT INFORMATION			
A. Course Description			
COURSE I.D. CODE (CURES/UC USE ONLY)		DATE RECEIVED	
COURSE TITLE		COURSE DATE	
LOCATION ADDRESS (City) (State) (Zip)		STARTING TIME	ENDING TIME
SPONSOR		Contact Information EMAIL ADDRESS	



CONTACT PERSON			TELEPHONE NUMBER	
CONTACT PERSON ADDRESS (City) (State) (Zip)			FAX NUMBER	
<b>B. Course Type – Check Appropriate Subject(s)</b> (see instructions for detailed descriptions and caveats)				
<input type="checkbox"/> College level instruction		<input type="checkbox"/> Field trial tours		
<input type="checkbox"/> Professional or technical seminars		<input type="checkbox"/> Product specific training		
<input type="checkbox"/> Demonstrations pertaining to nitrogen use or management		<input type="checkbox"/> Equipment use and operation		
<input type="checkbox"/> Live Webinars		<input type="checkbox"/> Keynote speakers		
<b>C. Hours Requested</b>			<b>D. Hours Approved</b>	
	Hours Requested		Hours Approved	CURES/UC Use Only
Nitrogen Management				
Irrigation and Nitrogen Management				
Other	<input type="text"/>		<input type="text"/>	TOTAL NUMBER OF HOURS APPROVED
<b>E. Estimated number in attendance:</b> _____				
<b>F. Registration Information:</b> _____				
<b>G. Course Agenda – Attach a comprehensive agenda. The agenda must include the information as specified in the CEU Instructions.</b>				
<b>H. Signature of Person Submitting Application</b>				
APPLICANT'S SIGNATURE			DATE SIGNED	
<b>I. Notification Status – CURES/UC Use Only</b>				<b>ACCOUNTING USE ONLY</b>
Based on the information provided on your Continuing Education Approval Request Application, the course <b>did not</b> meet CURES/UC approval requirements.				
Your Continuing Education Approval Request Application is Approved.				
REVIEWER'S SIGNATURE			DATE SIGNED	

**N.2 Evaluation Criteria/ Application requirements for Approving CEU Course Units**

**Nitrogen Management Plan (NMP) Grower Certification**



## **Request for Continuing Education Units (CEUs)**

### **Credit Application Instructions**

The purpose of continuing education is to ensure Nitrogen Management Plan (NMP) certificate holders keep current their knowledge on subjects related to efficient use of nitrogen-based fertilizing materials and irrigation management techniques.

#### **Course Content Requirements**

Course contents are specifically required to promote environmentally safe and agronomically sound use of nitrogen-based fertilizing materials and proper irrigation management. These CEU courses are intended to build upon the Nitrogen Management Plan Self-Certification Courses developed as part of the Irrigated Lands Regulatory Program.

Continuing education courses must include at least one-half hour of approved content. See "Specific Section Instructions For Application", Section F, for subjects necessary for CEUs.

Program sponsors must ensure that speakers/instructors chosen to give presentations are qualified by education and experience to provide training and instruction in the relevant subject matter.

Continuing education course formats may include:

- College level instruction;
- Professional or technical seminars;
- Demonstrations pertaining to nitrogen use or management;
- Field trial tours:
  - CEUs for field trial tours to be granted on one of three levels:
    1. **Full Credit:** a qualified instructor must focus the tour with a planned and structured educational program with a defined time frame for each stop.
    2. **50% Credit:** Tour is not tightly structured, but provides for specific stops with educational instruction by a qualified person. Each stop is assigned a unique number.
    3. **No Credit:** Open tour with no instructor. Tour is product specific with marketing and customer service focus. Vendors will need to be very specific and detailed in their applications for CEUs for field tour events.
- **Product Specific Training** - Approval will only be granted when the



discussion is related to an agronomic concept focused on nitrogen fertilizer use practices.

- **Equipment Use and Operation** – Credit will be granted on topics related to tillage and application equipment as it relates to the accurate application/placement of nitrogen fertilizers.
- **Keynote Speakers** - Keynote Speaker and Panel Discussions will be approved when the content is appropriate and speakers are professionals or practitioners.

#### No CEUs Credit Given To:

- Presentations on pending or proposed legislative/regulatory issues.
- Product sales presentations (unless criteria in section above are met).
- Presentations focused on product marketing, product positioning or its specific features; advantages and benefits over competitive products.
- Specific product commercial crop input sales training or marketing sessions and award presentations.
- Professional publication of papers, journals or books.
- Open tour with no instructor: Tour is product specific with marketing and customer service focus. Vendors will need to be very specific and detailed in their applications for CEUs for field tour events to qualify. (see criteria above)

#### **Participant Certificate of Completion**

Upon successful completion of a course, a grower will receive Continuing Education Units that are used to maintain their certification for approving a Nitrogen Management Plan (NMP) for lands that they farm. This certificate is kept in each grower's farm records. The certificate of completion must be provided by the sponsoring organization.

#### **Sponsoring Organization Requirements**

The event or course sponsors are required to track the participation via sign-in and sign-out sheets. Course sponsors will be provided a template "Certificate of Completion" that should be filled in with the CEU event specifics and given to the participant at the end of the course.

#### **CEU Review Guidelines**

Continuing education courses will be reviewed and approved by a panel selected by the California Department of Food and Agriculture (CDFA). Currently, the panel

Fertilizer Research and Education Program (FREP)

2021 Final Report

State of California

Department of Food and Agriculture

includes the Coalition for Urban Rural Environmental Stewardship (CURES), representing the Central Valley Water Quality Coalitions, and qualified personnel from the University of California.



## Submission Timelines

The approved courses may be audited by the curriculum reviewers. To obtain course approval, **sponsors must submit the following at least 21 days before the course date:**

1. A Continuing Education Approval Request Application. Applications are available on CURES website.
2. A Basic Course Agenda that will be used for outreach and posted on the CURES website upon approval.
3. A Comprehensive Course Agenda that further explains your event for the CURES review team. This agenda must include the following:
  - the title of each session
  - a 3-4 sentence description of each session
  - the approximate start and end time of each session
  - the name and affiliation of each speaker

Complete the electronic form located on [www.curesworks.org](http://www.curesworks.org). Your application will be submitted to:

CURES CE Program:  
ce.applications@curesworks.org

## Approval Timeline

You will be notified by CURES if your application is determined to be incomplete or if additional information about the course is needed. A calendar of approved courses will be posted on CURES Website at: [www.curesworks.org](http://www.curesworks.org)

CURES will send approval status information to the contact person listed on the application **within 10 business days of submission of a completed application.**

### **Nitrogen Management Plan (NMP) Grower Certification**

#### **Request for Continuing Education Units (CEUs) Credit**

##### **Specific Section Instructions for Application**

**Section A: Course Description.** This information is for record keeping and contact purposes and may be posted to CURES Web site. CURES will send approval status information to the contact person listed on the application **within 10 business days of submission of a completed application.**



**Section B: Course Type.** Check all that apply. This information is for record keeping purposes.

**Section C: Hours Requested.** Indicate the number of hours you are requesting. Total number of hours approved must be at least one half hour.

**Section D: Hours Approved.** This section is completed by CURES/UC staff. Approval is based on the information submitted in the application and comprehensive agenda.

**Section E:** Estimated Number in Attendance.

**Section F: Basic Course Agenda.** A basic course agenda must be included to be used for outreach. This agenda will be posted on the CURES website upon approval. An example can be found on the CURES website here: <https://www.curesworks.org/continuing-education/>.

**Section G: Comprehensive Course Agenda.** A comprehensive course agenda must include the following: a description of the course, the title of each session, the main points of each session, the start and end time of each session, and the name and affiliation of each speaker. An example can be found on the CURES website here: <https://www.curesworks.org/continuing-education/>. The instruction must focus on nitrogen management and irrigation/nitrogen management.

Examples of topics necessary for approval include:

1. Achieving nitrogen use efficiency for specific crops;
2. Practices to minimize leaching of nitrates to groundwater for specific crops;
3. Matching nitrogen applications to crop uptake and potential crop production;
4. Efficient irrigation;
5. Other agronomic-focused nitrogen fertilizer and irrigation efficiency subjects deemed appropriate by the curriculum reviewers.

**Section H:** Signature of person submitting application; Date of signature.

**Section I: Notification Status.** This section will be completed by CURES/UC staff, before it is returned to you.



Fertilizer Research and Education Program (FREP)  
2020 Annual Report  
State of California  
Department of Food and Agriculture



For assistance completing this form, please call CURES  
at 530-747-2023