California NRCS Ecological Sciences

STAR Curriculum

"A Blueprint for Success"

Supporting

Technical

Assistance

Results

December 2018

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Acronyms

TOT	Training of Trainers
JAA	Job Approval Authority
OJT	On the Job Training
TBD	To Be Determined
NEDC	National Employee Development Center
SVAP	Stream Visual Assessment Protocol
PMC	Plant Materials Center
WCC	Wetland Conservation Compliance
NEPA	National Environmental Policy Act
EE	Environmental Evaluation
CAP	Conservation Activity Plan
AgEMP	Agricultural Energy Management Plan

Curriculum Information

Mission

"Helping people help the land"

Goal

An integrated training program for field and area office staff that improves their technical competence, job confidence, and ability to engage clients in a way that results in long-term adoption of effective conservation.

Summary/Introduction

The Ecological Science Section has developed the STAR Curriculum in order to provide a blueprint for technical training in the disciplines that we lead. The courses described in this document serve as a guide to NRCS technical staff and their supervisors in formulation of Individual Development Plans. It is not possible to be comprehensive in listing every course or training opportunity. Rather, this curriculum serves as a foundation and guide. Additional training can be developed on a case-by-case basis.

Within each discipline, courses listed in the "basic" section should be completed before students enroll in "intermediate" courses; "intermediate" should be completed before "advanced." However, due to the broad range in subject matter, not all discipline sections are arranged the same, so it is important to read the "notes" section at the beginning of each discipline section. State discipline leads can approve exceptions for individuals on a case-by-case basis, based upon their experience and expertise. Not all courses will be available every year, and some courses are still being developed. State discipline leads are available to discuss, or answer questions regarding courses, in their section.

Tom Hedt

State Resource Conservationist

Agronomy

Lead Specialist: Hudson Minshew

Notes: The Agronomy Curriculum has three sub-categories. The first two categories are part of the Conservation Planner Designation Curricula and are considered basic. You can take courses or complete activities in multiple categories (you do not have to finish one category to go on to the next), but you should complete courses/activities under each sub-category in the following order: all basic first, then intermediate, and then advanced.

Sub- Category 1: Basic Agronomy and Soil Principles for Planners

Basic Objective: The courses in this section are to help planners have a fundamental understanding of agronomic principles and be conversant and knowledgeable with farmers and take steps to develop conservation plans with agronomic practices.

Basic Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
Overview of Water Quality Resource Assessment *	**Training Module**	**Online**	**(AgLearn/Web-based) (Contact Hours: 1.00) Apprentice Planner Requirement NRCS-NHQ-000038**
Nitrogen Management and Concerns*	**Training Module**	**Online**	**(AgLearn/Web-based) (Contact Hours: 1.00) Apprentice Planner Requirement NRCS-NHQ-000038**
Phosphorous Management and Concerns*	**Training Module**	**Online**	**(AgLearn/Web-based) (Contact Hours: 1.00) Apprentice Planner Requirement NRCS-NHQ-000038**
Sediment Management*	**Training Module**	**Online**	**(AgLearn/Web-based) (Contact Hours: 1.00) NRCS-NHQ-000041**
Water Bodies*	**Training Module**	**Online**	**(AgLearn/Web-based) (Contact Hours: 1.00) NRCS-NHQ-000042**
Pest Management and Water Quality Implications*	**Training Module**	**Online**	**(AgLearn/Web-based) (Contact Hours: 1.00) NRCS-NHQ-000043**
Water Management*	**Training Module**	**Online**	**(AgLearn/Web-based) (Contact Hours: 1.00) NRCS-NHQ-000044**

Basic Courses / Activities (cont)			
Course/Activity Name	Type	Format	Location/Notes
Nutrient Management Track 1, Part 1*	Training Module	Online	(AgLearn/Web-based) (Contact Hours: 8.00) NRCS-NHQ-000083
Pest Management, Track 2, Part 1*	Training Module	Online	(AgLearn/Web-based) (Contact Hours: 8.00) NRCS-NHQ-000085
Montana State University, Soil & Water Self Study, Module 1, Basic Soil Properties	Training Module	Online	Basic Soil Properties
Montana State University, Soil & Water Self Study, Module 3, Managing for Soil Erosion	Training Module	Online	Managing for Soil Erosion

*** Required Courses for Conservation Planner Certification**

Sub Category 2 – Cropping Systems

Basic Objective: Understand principles of horticulture and the basics of tillage equipment.

Basic Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
Plant Biology – Intro to Horticulture, UC Master-Gardener, Ch. 2	Reading	Sharepoint	Plant Biology/Available upon request
Tillage Equipment Pocket Guide	Self-study	eFOTG	eFOTG Section1

Intermediate Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
Cover Crops: Read Abdul-Baki & Teasdale cover crop publication. 2007	Reading	Sharepoint	Crop Systems/Available upon request
Develop two conserva- tion plans that in- clude cover crop, crop rotation, mulching, or residue and tillage management	Plan	OJT	Multiple

Advanced Objective: Staff will be able to advise and train others related to cropping systems issues & planning as a result of gaining proficiency in the proper use of planning tools (RUSLE2, WEPS, Win-PST), and have an understanding of the complexities of the management of a local cropping system.

Advanced Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
Pest Management track 2, part 1 (module 7) – one day on-site workshop to meet the requirements for 595 certification	**Course**	**Classroom**	**Various Locations**
Erosion Modeling in Toolkit/ArcGIS for both water and wind erosion—Integrated Erosion Tool (IET)	**Course**	**Webinar and OJT**	**IET Community Page**
Erosion Modeling for water erosion—RUSLE2	**Online**	**OJT**	**S & T Library** **Agricultural Research Service** **NRCS RUSLE2 Support**
Erosion Modeling for wind erosion—WEPS	**Online**	**OJT**	**NRCS WEPS Support** **S & T Webinar**
Develop two conser- va- tion plans using IET, RUSLE2 or WEPS	**Plan**	**OJT** **Module**	**TBD**

Sub- Category 3: Soil Fertility

Basic Objective: Staff will be competent and confident in having soil fertility conversations with customers.

Basic Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
Plant Nutrition and Soil Fertility Module 2	**Module**	**Online**	**MT State: Plant Nutrition and Soil Fertility**
Managing Cover Crops for Nutrient Manage- ment - a Farmer's	**Presentation**	**Webinar**	**NRCS Science and Technology Training Library**

Sub- Category 3: Soil Fertility (cont)

Intermediate Objective: Staff will be able to identify management alternatives leading to planning that addresses resource concerns. Knowledge gained will include an understanding of the "4Rs" of nutrient management, how to develop a nutrient budget, and co-managing nutrients and water.

Basic Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
Read Nutrient Management chapter in NRCS National Agronomy Manual.	**Reading**	**Online**	**NRCS National Agronomy Manual, 4th ed. Sub-part 503C**
Include 590 (Nutrient Management) in a conservation plan	**Plan**	**OJT**	**Multiple**
CA NRCS Nutrient Management Budgeting Guide training	**Course**	**Webinar**	**Local**

Advanced Objective: Staff will be able to advise and train others related to soil fertility issues & planning by gaining knowledge of soil/plant/nutrient relations, and developing nutrient management plans using 590 on systems that include multiple crops and nutrient sources.

Advanced Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
4R Site Specific Nutrient Management – 10 modules	**Training Module**	**Online**	**Science & Technology Training Library**
Montana State University, Soil & Water Self Study Manures and Biosolids: Regulations and Management. Module 13 only.	**Training Module**	**Online**	**MT State: Nutrient Management Modules**
Develop two conservation plans that include nutrient management for multiple nutrient sources and crops	**Plan**	**OJT**	**Multiple**

Air Quality

Lead Specialist: Ted Strauss
Notes: The Air Quality Curriculum provides multiple course activities and objectives to help better understand the treatments and practices to address the NRCS air quality resource concerns: ozone precursors, particulate matter, odors, and greenhouse gases. Please review the Climate Change Curriculum for addressing greenhouse gases and carbon sequestration.

Basic Objective 1: General understanding of the NRCS air quality resource concerns.

Basic Courses/ Activities 1.			
Course/Activity Name	Type	Format	Location/Notes
Why should we Care about Air Quality.	**Course**	**Online**	**AgLearn: NRCS-NEDC-000253**
Air Quality, Climate Change, and Energy	**Course**	**Online**	**AgLearn: NRCS-NEDC-000257**
Air Quality Resource Concern	**Course**	**Online**	**AgLearn: NRCS-NEDC-000258**

Basic Objective 2: General understand on how the air quality resource concerns are applied in conservation planning.

Basic Courses/ Activities 2.			
Course/Activity Name	Type	Format	Location/Notes
Reviewing Air Quality and the NRCS	**Webinar**	**On-Demand**	**S&T Training Library**
Air Quality and Atmospheric Change	**Coarse**	**Instructor Lead**	**WNTSC Air Quality Team - TBD**

Intermediate Objective 1: Addressing the air quality resource concerns from animal management activities

Intermediate Courses/Activities 1			
Course/Activity Name	Type	Format	Location/Notes
Air Quality and Animal Agriculture	**Course**	**Online**	**AgLearn: NRCS-NEDC-00328**
Air Quality and Manure Management	**Webinar**	**On-Demand**	**S&T Training Library**

Intermediate Objective 1: Addressing the air quality resource concerns from animal management activities (cont.)

Intermediate Courses / Activities 1			
Course/Activity Name	Type	Format	Location/Notes
Ammonia Recovery in Manure Management Systems	**Webinar**	**On-Demand**	**S&T Training Library**
Dust Control from Animal Activity on Open Lots	**Webinar**	**On-Demand**	**S&T Training Library**
Feed Management for Beef Feedlots to Reduce Air Emissions	**Webinar**	**On-Demand**	**S&T Training Library**
Feed Management for Dairy Operations to Reduce Air Emissions	**Webinar**	**On-Demand**	**S&T Training Library**

Intermediate Objective 2: Addressing the air quality resource concerns from Combustion Systems

Intermediate Courses/ Activities 2			
Course/Activity Name	Type	Format	Location/Notes
Combustion System Improvement (372)	**Webinar**	**On-Demand**	**WNTSC Website**
Engine Training – CPS 372 Combustion System Improvement	**Course**	**Classroom**	**CA Air Quality Conservationist**
Reciprocating IC Engine Technology (ARB)	**Course**	**Classroom**	**California Air Resources Board Training Course No. 271**
Stationary Diesel ATCM (ARB)	**Course**	**Classroom**	**California Air Resources Board Training Course No. 301**

Intermediate Objective 3: Addressing smoke management from prescribed burning

Intermediate Courses/ Activities 3			
Course/Activity Name	Type	Format	Location/Notes
Smoke Management and Air Quality for Land Managers	**Course**	**Online**	**SmoC Committee – Four Modules**
Smoke Management Training (ARB)	**Course**	**Classroom**	**California Air Resources Board Training Course No. 375**

Intermediate Objective 4: Addressing the air quality resource concerns from other sources

Intermediate Courses / Activities 4			
Course/Activity Name	Type	Format	Location/Notes
Air Filtration and Scrubbing – What Can It Be Used For?	**Webinar**	**On-Demand**	**S&T Training Library**
Mechanically-Generated Particulate Matter – Causes and Cures	**Webinar**	**On-Demand**	**S&T Training Library**
Air Quality Source Training	**Misc.**	**Classroom - OJT**	**Misc. - TBD**

Advanced Objective 1: Provide accurate air quality information and technical assistance in the planning process

Advanced Courses / Activities 1			
Course/Activity Name	Type	Format	Location/Notes
Complete three conservation plans	**Plan**	**OJT**	**Apply the Air Quality Assessment guidance sheet when developing conservation plans**
Present an air quality presentation at a partner workshop	**Presentation**	**OJT**	**Various location**

Advanced Objective 2: Utilizing the National Air Quality Site Assessment Tool (NAQSAT) for Comprehensive Nutrient Management Plans

Intermediate Courses / Activities 2			
Course/Activity Name	Type	Format	Location/Notes
National Air Quality Site Assessment Tool	**Coarse**	**Classroom-Field**	**WNTSC Air Quality Team - TBD**
Using the NAQSAT for Dairies	**Webinar**	**On-Demand**	**S&T Training Library**
Using the NAQSAT at Poultry Operations	**Webinar**	**On-Demand**	**S&T Training Library**
Using the NAQSAT at Swine Operations	**Webinar**	**On-Demand**	**S&T Training Library**

Climate Change

Lead Specialist: Ted Strauss \ Hue Dang

Notes: The Climate Change Curriculum has multiple basic, intermediate, and advanced objectives and courses/activities. The curriculum should be taken in the following order: all basic objectives and associated courses/activities should be completed, then all intermediate, and then all advanced. You do not have to complete the courses under each level- basic, intermediate, or advanced in any specific order.

Basic Objective 1: Staff can list NRCS practice standards that can help farmers adapt to climate change and list potential weather pattern changes that farmers may need to adapt to due to climate change.

Basic Courses / Activities 1.			
Course/Activity Name	Type	Format	Location/Notes
Aglearn Course: Air Quality, Climate Change, and Energy1	**Course**	**Online**	**Aglearn**

Basic Objective 2: Staff can list the potential weather pattern, water availability, and air quality changes that may occur due to climate change, give examples of climate changes that have occurred, and describe how these can be detrimental to crops (e.g. insufficient frost hours for stone fruit).

Basic Courses / Activities 2.			
Course/Activity Name	Type	Format	Location/Notes
Ag Learn Course: Why do we care about climate change?	**Course**	**Online**	**Aglearn**

Intermediate Objective 1: Staff is able to explain NRCS Climate Change Programs and assistance.

Intermediate Courses / Activities 1.			
Course/Activity Name	Type	Format	Location/Notes
NRCS Climate Change Programs Training	**Course**	**Classroom**	**TBD**

1 This course also satisfies one of the course/activity requirements under the following curriculums: Climate Change Basic Objective 1, Energy Basic Objective 3, and Air Quality Basic Objective 2.

Intermediate Objective 2: Staff is able to explain carbon sequestration benefits and disbenefits to land owners and the basics of carbon markets.

Intermediate / Activities 2.			
Course/Activity Name	Type	Format	Location/Notes
California Carbon Sequestration Training	**Course**	**Classroom**	**TBD**

Intermediate Objective 3: Staff is able to incorporate climate change adaptation, mitigation, and resiliency into the conservation planning process.

Intermediate Courses / Activities 3.			
Course/Activity Name	Type	Format	Location/Notes
Incorporating Climate Change Into Conservation Planning Training	**Course**	**Classroom**	**TBD**
Complete one rangeland conservation plan that builds in climate resiliency	**Plan**	**OJT**	**Multiple**
Complete one cropland conservation plan that builds in climate resiliency	**Plan**	**OJT**	**Multiple**
Complete one conservation plan that builds in climate resiliency that is not for rangeland or cropland (e.g. wetlands, forestry, etc.)	**Plan**	**OJT**	**Multiple**

Advanced Objective1: Staff is able to do a climate change vulnerability analysis to help prioritize areas for conservation.

Advanced Courses / Activities 1.			
Course/Activity Name	Type	Format	Location/Notes
Vulnerability Analysis Training	**Course**	**Classroom**	**TBD**
Complete one vulnerability/adaptation analysis	**Plan**	**OJT**	**Multiple**

Advanced Objective 2: Staff is able to use COMET to demonstrate GHG, carbon sequestration, and energy benefits of practices and assist with development and implementation of a conservation plan.

Advanced Courses / Activities 2.			
Course/Activity Name	Type	Format	Location/Notes
COMET Training	**Course**	**Classroom**	**TBD**
Run COMET reports and use reports to show savings and benefits of conservation practices to 3 different landowners on 3 different properties	**Plan**	**OJT**	**Multiple**

Conservation Planning

Lead Specialist: Hue Dang

Notes: The Conservation Planning Curriculum includes becoming a certified planner. Courses should be taken in the following order: all basic objectives and associated courses/activities should be completed first, then all intermediate, and then all advanced.

Basic Objective: Staff will be familiar with the 9-step planning process, the field office technical guide, and NEPA requirements to start planning with agricultural producers.

Basic Courses (Apprentice Planner Curriculum)			
Program/Certification Title: Apprentice Conservation Planner Role Curriculum ID: NRCS-CP-Apprentice			
Course/Activity Name	Type	Format	Location/Notes
Conservation Planning, Part 1 (AgLearn/Web-based) (Contact Hours: 1.00)	**Webinar**	**AgLearn**	**NRCS-NEDC-000019**
Introduction to Field Office Technical Guide (AgLearn/Web-based) (Contact Hours: 4.00)	**Webinar**	**AgLearn**	**NRCS-NEDC-000149**
Cultural Resource Training Series, Part 1 (AgLearn/Web-based) (Contact Hours: 4.00)	**Webinar**	**AgLearn**	**NRCS-NEDC-000141**
Environmental Evaluation Webinar Series No. 1: Primer on NRCS Environmental compliance (S&T Training Library for content; completion marked/self-certified in AgLearn)	**Webinar**	**S&T Training Library**	**NRCS-NHQ-000011 * Self-certification**
Environmental Evaluation Webinar Series No. 2: Documenting the Environmental Evaluation In reference to the NRCS-CPA-52 Environmental Evaluation Worksheet (S&T Training Library for content; completion marked/self-certified in AgLearn)	**Webinar**	**S&T Training Library**	**NRCS-NHQ-000012 * Self-certification**

Basic Courses (Apprentice Planner Curriculum)			
Program/Certification Title: Apprentice Conservation Planner Role Curriculum ID: NRCS-CP-Apprentice			
Course/Activity Name	Type	Format	Location/Notes
Overview of Water Quality Resource Assessment (AgLearn/Web-based) (Contact Hours: 1.00)	Webinar	AgLearn	NRCS-NHQ-000038
Nitrogen Management and Concerns (AgLearn/Web-based) (Contact Hours: 1.00)	Webinar	AgLearn	NRCS-NHQ-000039
Sediment Management for Water Quality – No. 4 (AgLearn/Web-based) (Contact Hours: 1.00)	Webinar	AgLearn	NRCS-NHQ-000041
Water Bodies – No. 5 (AgLearn/Web-based) (Contact Hours: 1.00)	Webinar	AgLearn	NRCS-NHQ-000042
Conservation Planning Business Tool Training (State or National-NEDC/EDS/Instructor led) e.g., Toolkit or Conservation Desktop State-specific Customer Service Toolkit (CST) 9.0 Training NRCS-NEDC-LOCAL-000001 (Contact Hours: 8.00) Customer Service Toolkit (Toolkit) 9.0 Hands-On National Training NRCS-NEDC-000360 (Contact Hours: 24.00) Customer Service Toolkit (Toolkit) 9.0 Train the National Trainer NRCS-NEDC-000359 (Contact Hours: 24.00) Conservation Desktop (CD) Release 1 National Training Sessions NRCS-NEDC-000387 (Contact Hours: 15.00) * Credit is granted for each of these items. This is the only exception to training officers marking completions for the NEDC/EDS course IDs (NRCS-NEDC-LOCAL IDs). Please only mark these courses complete when instructed to do so by national bulletin or direct NEDC/EDS communication.			NRCS-NHQ-LOCAL-000002 or NRCS-NEDC-LOCAL-000001 NRCS-NEDC-000360 NRCS-NEDC-000359 NRCS-NEDC-000387 * Credit is granted for each of these Toolkit items

Basic Courses (Apprentice Planner Curriculum)			
Program/Certification Title: Apprentice Conservation Planner Role Curriculum ID: NRCS-CP-Apprentice			
Course/Activity Name	Type	Format	Location/Notes
Assessment Tools Training Specific to the Employee's Location (OJT/State/National)	OJT or Webinar, or Classroom		NRCS-NHQ-000007 * Self-certification
Planning Criteria Training (OJT/State/National) Training on using planning criteria to identify resource concerns (e.g., Conservation Planning on Grazing Lands course (State, National, or OJT)	OJT or Webinar, or Classroom		NRCS-NHQ-000008 * Self-certification
Soil Health and Sustainability Training (State or National-NEDC/ Instructor led)	Classroom	N/A	NRCS-NHQ-LOCAL-000004
Basic Soils & Web Soil Survey to Interpret Land Capabilities & Limitations (OJT/State/National)	OJT or Webinar, or Classroom		NRCS-NHQ-000009 * Self-certification
State-Specific Training & Required Deliverables - Apprentice Planner This training is determined by the State Conservationist and concurred by CPTAD.	NA – no additional requirments in CA.	N/A	NRCS-NHQ-000024 * Apprentice Planner level of training required * Self-certification
Appropriate Job Approval Authority for Engineering & Ecological Conservation – Apprentice Planner Practices common to the work area and the position			NRCS-NHQ-000014 * Apprentice Planner level of job approval authority required * Self-certification
Supervisor Certification for Apprentice Conservation Planner Role			NRCS-NHQ-000025 * Completions can be marked by only supervisors and training officers.

Program/Certification Title: Certified Conservation Planner Role Curriculum ID: NRCS-CP-Apprentice	
Course/Activity Name	Location/Notes
Required training for an Apprentice Conservation Planner	NRCS-CP-Apprentice * Sub-requirement
Conservation Planning Course: Part 2 – Modules 6-8 (Instructor-led offered by State or National-NEDC/EDS) Attending Conservation Planning Boot Camp can be substituted for the instructor-led Conservation Planning Course, Modules 6-8. Training Officers can mark completions for the green (NRCS-NHQ-LOCAL) course ID. NEDC/EDS will manage completions for the NEDC/EDS Conservation Planning Boot Camp ID	NRCS-NHQ-LO-CAL-000003 * Scheduled Only, Seminar Course or NRCS-NEDC-000164 * Credit is given for Conservation Planning Boot Camp completion
Conservation planning Course: Part 3 – Module 9 (OJT/State/National) (develop RMS plan including the NRCS-CPA-52) a. The candidate will be accompanied to the field by the State Conservationist designee to meet with the decisionmaker. b.The candidate will be expected to demonstrate competency in the planning process and plan development; as well as interpersonal skills representing excellent customer service. c. At a minimum, the conservation plan components listed in section 409.13 should be documented in the plan or associated material. d. The observer will evaluate the candidate's involvement with the decisionmaker (landowner or land operator) in the planning process to determine whether all client objectives and resource concerns associated with the planning area are adequately addressed; and whether the client understands the alternatives presented and feels satisfied in the planning assistance provided. e. Field-reviewed plans must be approved by the State Conservationist or designee prior to final delivery to the decisionmaker.	NRCS-NHQ-000015 * Self-certification

Course/Activity Name	Type	Format	Location/Notes
Phosphorous Management and Concerns – No. 3 (AgLearn/Web-based) (Contact Hours: 1.00)	Webinar	AgLearn	NRCS-NHQ-000040 * Self-certification
Pest Management and Water Quality Implications – No. 6 (AgLearn/Web-based) (Contact Hours: 1.00)	Webinar	AgLearn	NRCS-NHQ-000043 * Self-certification
Cultural Resources Training Series Part 2 (State/Instructor led)	Classroom	N/A	NRCS-NHQ-LOCAL-000001
Water Management – No. 7 (AgLearn/Web-based) (Contact Hours: 1.00)	Webinar	S&T Training Library	NRCS-NHQ-000044

Program/Certification Title: Certified Conservation Planner Role Curriculum ID: NRCS-CP-Apprentice	
Course/Activity Name	Location/Notes
Environmental Evaluation Webinar Series No. 3-11 (S&T Training Library for content; completion marked/self-certified in AgLearn) -- No. 3: Planning for Floodplain and Riparian Area Special Environmental Concerns -- No. 4: Planning for Wetlands and Clean Water Act Special Environmental Concerns -- No. 5: Planning for Prime and Unique Farmland and Invasive Species Special Environmental Concern -- No. 6: Planning for Endangered Species/Migratory Birds/Bald and Golden Eagles Special Environmental Concern -- No. 7: Planning for Natural Areas, Scenic Beauty, and Wild and Scenic Rivers Special Environmental Concern -- No. 8: Planning for Clean Air and Environmental Justice Special Environmental Concern -- No. 9: Planning for Essential Fish Habitat, Coastal Zones, and Coral Reef Special Environmental Concerns -- No. 10: Planning for Cultural Resources Special Environmental Concerns and Making NEPA Finding -- No. 11: Appropriate Use of Categorical Exclusions	NRCS-CP-Apprentice * Sub-requirement
Soil Health and Sustainability Training (State or National-NEDC/EDS/Instructor led) States will have the option for their Soil Health requirement to do either the NEDC/EDS Soil Health and Sustainability for Field Staff course or to do a completely separate State-led course with assistance from the Soil Health Division. Training officers can schedule and mark completions for the green course ID. NEDC/EDS will manage completions for the NEDC/EDS ID. Soil Health and Sustainability for Field Staff Course (NRCS-NEDC-000050) (AgLearn/Instructor led) (Contact Hours: 24.00) * This course counts as a substitute for the above item. Credit is granted upon completion of the NEDC/EDS course	NRCS-NHQ-LO-CAL-000004 or NRCS-NEDC-000050 * This course counts as a substitute for the above item. Credit is granted upon completion of the NEDC/EDS course. NEDC/EDS will mark these completions

Course/Activity Name	Type	Format	Location/Notes
Economics of Conservation Planning Course (AgLearn/Instructor-led) (Contact Hours: 24.00)	Classroom	AgLearn	NRCS-NEDC-000017
Air Quality, Climate Change, and Energy Course (AgLearn/Web-based) (Contact Hours: 1.50)	Webinar	AgLearn	NRCS-NEDC-000253
Fundamentals of Highly Erodible Land (HEL) and Wetland Conservation (WC) provisions training (State or on-the-job-training)	Webinar	S&T Training Library	NRCS-NHQ-000013 * Self-certification

Program/Certification Title: Certified Conservation Planner Role Curriculum ID: NRCS-CP-Certified			
Course/Activity Name		Location/Notes	
Working Effectively with… Courses **A minimum of one "Working Effectively with" training course from the list below is required (AgLearn/Instructor-led)** **Working Effectively with Livestock Producers NRCS-NEDC-000045 (Contact Hours: 34.00)** **Working Effectively With American Indians NRCS-NEDC-000090 (Contact Hours: 32.00)** **Working Effectively With Alaskan Natives NRCS-NEDC-000147 (Contact Hours: 24.00)** **Working Effectively with Hispanic Producers NRCS-NEDC-000262 (Contact Hours: 20.00)** **Working Effectively with Asian-American Pacific Islander Producers NRCS-NEDC-000334 (Contact Hours: 20.00)** **Improving Conservation Delivery to Women Landowners and Producers NRCS-NEDC-000378 (Contact Hours: 20.00)** **Extending Outreach to All Customers NRCS-NEDC-000247 (Contact Hours: 28.00)**		**NRCS-NEDC-000045** **NRCS-NEDC-000090** **NRCS-NEDC-000147** **NRCS-NEDC-000262** **NRCS-NEDC-000334** **NRCS-NEDC-000378** **NRCS-NEDC-000247** *** Pool of 1 item required built into program/ certification. EDS will mark these completions**	
Course/Activity Name	Type	Format	Location/Notes
State Specific Training & Required Deliverables – Certified Planner Determined by the State Conservationist and concurred by CPTAD.	**NA – no additional requirements in CA.**		**NRCS-NHQ-000027** *** Certified planner level of training required** *** Self-certification**
Appropriate Job Approval Authority for Engineering & Ecological Conservation – Certified Planner Practices common to the work area and position.	**Demonstration of knowledge**		**NRCS-NHQ-000028** *** Certified planner level of job approval authority required** *** Self-certification**
Supervisor Certification for Certified Conservation Planner Role	**N/A**	**N/A**	**NRCS-NHQ-000023** *** Completions may only be marked by supervisors and training officers**

Advanced Objective: Staff will be able to build on and refine planning skills to develop plans for complex situations. Emphasis is on in-depth resource analysis, alternatives development and analysis, and planning on a landscape level.

Advanced Courses and Activities (Master Planner Curriculum)			
Program/Certification Title: Master Certified Conservation Planner Role Curriculum ID: NRCS-CP-MasterCertified			
Course/Activity Name	Type	Format	Location/Notes
Apprentice Conservation Planner Role Certification Required training for the apprentice and certified conservation planner roles	**NA**	**NA**	**NRCS-CP-Apprentice * Sub-requirement**
Certified Conservation Planner Role Certification Required training for the apprentice and certified conservation planner roles	**NA**	**NA**	**NRCS-CP-Certified * Sub-requirement**
Areawide Conservation Planning (AgLearn/Instructor-led) (Contact Hours: 24.00)	**Classroom**	**N/A**	**NRCS-NEDC-000092**
One areawide conservation plan submitted for review and approval by State Conservationist designee Provide significant contribution in the first seven steps of the conservation planning process for one areawide conservation plan submitted for review and approval by State Conservationist's designee. This requirement may be fulfilled as an individual or as a member of a team. The State Conservationist may utilize the technology specialist at the regional national technical center for plan reviews if expertise is not available in State	**Demonstration of knowledge**		**NRCS-NHQ-000016 * Self-certification**
Assist master certified conservation planners or designee with two State quality reviews Assist master certified conservation planner(s) or the State Conservationist's designee with two State quality reviews. One may be outside of the employee's home State	**Activity**	**N/A**	**NRCS-NHQ-000017 * Self-certification**

Program/Certification Title: Master Certified Conservation Planner Role Curriculum ID: NRCS-CP-MasterCertified			
Course/Activity Name	Type	Format	Location/Notes
Serve as an instructor along with one or more master conservation planner or designee. Serve as an instructor along with one or more master conservation planners or the State Conservationist's designee for two conservation planning training sessions (State or National). One may be outside of the employee's home State	Activity	NA	NRCS-NHQ-000018 * Self-certification
State-Specific Training & Required Deliverables – Master Certified Planner Determined by the State Conservationist and concurred by CPTAD	N/A – no additional requirements in CA.	NA	NRCS-NHQ-000029 * Master Certified Planner level of training required * Self-certification
Appropriate Job Approval Authority for Engineering & Ecological Practices – Master Certified Planner Common to the work area and position	Demonstration of knowledge		NRCS-NHQ-000030 * Master Certified Planner level of job approval authority required * Self-certification
Supervisor Certification for Master Certified Conservation Planner Role	N/A	N/A	NRCS-NHQ-000026 * Completions can be marked by only supervisors and training officers

Program/Certification Title: Technical Specialist Planner Designation Certification ID: NRCS-CP-Technical Specialist			
Course/Activity Name	Type	Format	Location/Notes
Complete two quality assurance activities that evaluate conservation plans and practice implementation related to their area(s) of expertise to the satisfaction of the technical supervisor	Activity	NA	NRCS-NHQ-000020 * Self-certification
Deliver two state or national technical training programs that instruct other conservation planners in using NRCS planning procedures relative their position's area of specialization	Activity	NA	NRCS-NHQ-000021 * Self-certification
Complete state-identified training and required deliverables which are applicable to the specialist's discipline area	Training		NRCS-NHQ-000022 * Technical Specialist Planner level of training required * Self-certification
For those not already Certified as Master Certified Conservation Planners, the following additional requirements must be met: a. Required national and state training for the Apprentice planner role designation b. Conservation Planning Course Modules 6 – 8. (Instructor-led) Attending Conservation Boot Camp may be substituted for this. c. Cultural Resources Training Series Part 2 (State) d. Environmental Evaluation Webinar Series No. 3 – 11 (S&T Library for content; completion marked in AgLearn) e. Conservation Planning Course Module 9 (complete a conservation plan related to their area(s) of expertise for in-field review by the State Conservationist or designee).	Training	N/A	"a" = NRCS-CP-Apprentice is a subrequirement "b" = NRCS-NHQ-LO-CAL-000003 or NRCS-NEDC-000164 * Credit is given for Conservation Planning Boot Camp completion "c" = NRCS-NHQ-LO-CAL-000001 "d" = NRCS-NHQ-000013 * Self-certification "e" = NRCS-NHQ-000015 * Self-certification
Supervisor Certification for Technical Specialist Planner Designation			NRCS-NHQ-000032 * Completions can be marked by only supervisors and training officers

Conservation Desktop, Toolkit, and GIS

Lead Specialist: Terryl Kocsis
Notes: Through FY18, Customer Service Toolkit (Toolkit) will be fully supported. Conservation Desktop, Technical Assistance (CD-TA) will be available with limited functionality in FY18, becoming more robust by FY19. GIS skills can be enhanced as optional training activities.

Basic Objective: Planners will be proficient in Toolkit 9 to document resource inventory and planning decisions. Users should be familiar with the local geodata layers to create soils and other resource and interpretive maps. Skillset includes digitizing land units, practices, using symbology and labelling, and creating a maps with appropriate map elements. Plan and Contract Wizards are run to create Plan and Contract Reports. Limited functionality of Conservation Desktop is available in FY18.

Basic Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
Customer Service Toolkit / GIS, 2-day class [1]	**Hands-On Course**	**Classroom**	**Work with Area Staff to schedule small-group classes at various locations**
Conservation Desktop Release 1	**Course**	**Webinar**	**Recordings available after Sept 7 2017**
Conservation Desktop Release 2	**Course**	**Webinar**	**Recordings available after Dec 2017**
Conservation Desktop Release 3 [1]	**Two-Day Course**	**Classroom**	**Small group classes held in various locations TBD, after July 2018**

[1] *This course also satisfies the Toolkit or CD requirement for Apprentice Level Planner Certification*

Intermediate Objective: Enhance skills to more efficiently create map products, provide trouble-shooting assistance in Toolkit, and find geodata for projects.

Intermediate Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
SAMPLE COURSES: **Getting Started with GIS** **Working with Annotation in ArcGIS** **Creating Map Products** **Getting Started with the Geodatabase** **Editing in ArcGIS Desktop** **Get Started with Survey123 for ArcGIS** **Integrating Data in ArcGIS Pro** **Creating and Editing Metadata in ArcGIS**	**Webinar**	**Virtual Classroom**	**ESRI Virtual Campus [2]** **Pre-Paid Courses directly from ESRI** **No Cost to NRCS and RCD employees**

Intermediate Courses / Activities (cont)			
Course/Activity Name	Type	Format	Location/Notes
Local Geodata Administration		**OJT**	**TBA**

Advanced Objective: Build GIS skills for in-depth resource analysis, data sharing, model building, alternatives development and analysis, and planning on a landscape level.

Advanced Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
SAMPLE COURSES: **Predict Floods with Unit Hydrographs** **Approaches to Spatial Analysis** **Displaying Raster Data Using ArcGIS** **Solving Spatial Problems Using ArcGIS** **Classifying Imagery Using ArcGIS** **Simplify CAD-GIS Workflows Using ArcGIS for AutoCAD**	**Webinar**	**Virtual Classroom**	**ESRI Virtual Campus [2]** **Work with employee's supervisor and the State GIS Coordinator to customize course selection to meet needs**

[2] ESRI Virtual CampusTraining

NRCS and RCD employees are able to order directly courses for themselves. Employees have to be on a list showing that they are part of the NRCS/SWCD organization. To join the NRCS organizational list, contact Ron Selph to request to be added to the NRCS/SWCD organizational online learning list. Accepting the invitation will allow you to immediately enroll and launch any self-paced ESRI course without having to request a course code. Once you accept the invitation, you will be able to go to the ESRI training site, https://www.esri.com/training and order yourcourses.

Search the ESRI catalog for classes you would like to enroll. All the courses in the catalog with light blue headers are free. Select the button that say 'View Details,' then the button 'Launch Course.'

Cultural Resources

Lead Specialist: Emily Castano
Notes: Completing the entire Cultural Resources Curriculum results in the Cultural Resources Technician CRT certification. A CRT may complete various levels of Archeology compliance work. Courses should be taken in the following order: all basic objectives and associated courses/activities should be completed first, then all intermediate, and then all advanced.

Basic Objective 1: Staff will be able to define cultural resources and discuss why, and how, such resources must be considered and protected during project and program planning.

Basic Courses/ Activities 1.			
Course/Activity Name	Type	Format	Location/Notes
"Cultural Resources Training Series" Module 1 - Why Cultural Resources are Important [1]	**Course**	**Online**	**NRCS - NEDC - 000141**
"Cultural Resources Training Series" Module 2 - Cultural Resources in the Planning Process[2]	**Course**	**Online**	**Aglearn**
"Cultural Resources Training Series" Module 3 - Using Existing Information to Identify Cultural Resources	**Course**	**Online**	**Aglearn**
"Cultural Resources Training Series" Module 4 - Identifying Cultural Resources in the Field	**Course**	**Online**	**Aglearn**
"Cultural Resources Training Series" Module 5 - Evaluation and Treatment of Cultural Resources	**Course**	**Online**	**Aglearn**
"Cultural Resources Training Series" Module 6 - Protecting Cultural Resources Under Specific Circumstances	**Course**	**Online**	**Aglearn**

[1] This course also satisfies one of the course/activity requirements under the following curriculums: Cultural Resources Basic Objective and Conservation Planning Intermediate Objective.

[2] This course also satisfies one of the course/activity requirements under the following curriculums: Cultural Resources Basic Objective and Conservation Planning Intermediate Objective.

Basic Objective 2: Staff will develop an understanding and awareness of tribal issues and concerns and learn how the unique status of Indian tribes and their historical relationship with the Federal government affects government programs, responsibilities, and initiatives.

Basic Courses/ Activities 2.			
Course/Activity Name	Type	Format	Location/Notes
GoLearn: "Working Effectively with Tribal Governments"	**Course**	**Online**	http://www.golearn.gov/

Intermediate Objective 1: Staff will be able to demonstrate an understanding of NRCS State operating procedures and documentation requirements for cultural resources compliance.

Intermediate Courses/ Activities 1.			
Course/Activity Name	Type	Format	Location/Notes
Complete "Cultural Resources Training Series" Module 7 - Part 1	**Course**	**Classroom**	**TBD**

Intermediate Objective 2: Staff will be able to recognize and discuss a range of prehistoric and historic-era cultural resources typical to the State of California and particular NRCS administrative or service areas.

Intermediate Courses/ Activities 2.			
Course/Activity Name	Type	Format	Location/Notes
Complete "Cultural Resources Training Series" Module 7 - Part 2	**Course**	**Classroom**	**TBD**

Advanced Objective 1: Staff will be able to identify cultural resources in the field and demonstrate competency in documenting both positive and negative survey findings according to State procedures and requirements.

Advanced Courses/ Activities 1.			
Course/Activity Name	Type	Format	Location/Notes
Complete "Cultural Resources Training Series" Module 8	**Course**	**Classroom / Field**	**TBD**

Environmental Compliance

Lead Specialist: Jennifer Cavanaugh

Notes: The Environmental Compliance Curriculum has two sub-categories. You can take courses or complete activities in multiple categories (you do not have to finish one category to go on to the next), but you must complete courses/activities under each sub-category in the following order: all basic first, then intermediate, and then advanced.

Sub-Category 1: Food Security Act

Basic Objective: Staff will be able to discuss Wetland Conservation Compliance (WCC) confidently with clients.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Wetland Identification for Food Security Act Purposes- Phase 1: Basic Concepts OR NRCS Alaska Wetland Course: Phase 1	**Course**	**Online Reading 24 hours**	**Aglearn NRCS-NEDC-000268 Aglearn NRCS-NEDC-000300**
Fundamentals of Highly Erodible Land (HEL) and Wetland Conservation (WC) provisions training	**Course**	**Webinar 2 hours**	**Aglearn NRCS-NHQ-000010**
Field Office Administration of WC/HELC—responding to Form AD-1026	**Course**	**Classroom 4 hours**	**Contact Area WC and/or HELC Representative**

Intermediate Objectives: Staff will be able to assist in completing FSA wetland determinations.

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Wetland Identification for National Food Security Act Purposes: Phase 2 Application	**Course**	**Classroom 32 hours**	**Offered through NEDC; submit training request**
Hydric Soils for Wetland Delineation	**Course**	**Classroom 32 hours**	**Offered through NEDC; submit training request**
Assist with wetland determinations			
Local training with Wetland Compliance Specialist assisting with completion of wetland determinations	**OJT**	**Classroom and Field**	**Coordinate with regional or state Wetland Compliance Specialist Duration of necessary OJT is dependent upon specialist level of knowledge of each topic**

Sub-Category 2: NEPA

Basic Objective: Staff will have a basic understanding of NRCS Environmental Compliance responsibilities and requirements.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Environmental Compliance for Conservation Assistance EC Level 1	**Course**	**Online 1 hour**	**Aglearn NRCS-NEDC-000190**
Environmental Evaluation Series No. 1: Primer on NRCS Environmental Compliance	**Course**	**Online 1 hour**	**Aglearn NRCS-NHQ-000011**
Environmental Evaluation Series No. 2: Documenting the Environmental Evaluation	**Course**	**Online 1 hour**	**Aglearn NRCS-NHQ-000012**

Sub-Category 2: NEPA (cont)

Intermediate Objective: Staff are able to understand the kind and amount of documentation required to adequately complete the environmental evaluation process and understand how to use the features included in the current version of the Environmental Evaluation (EE) NRCS-CPA-52 Worksheet.

Intermediate Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
Environmental Evaluation Series No. 3-11: Documenting the Environmental Evaluation on the NRCS CPA-52 Environmental Evaluation Worksheet	**Course**	**Online 10 hours**	**S&T Training Library**
CPA-52 Automation: The EEPT Environmental Evaluation Planning Tool	**Course**	**Online 1 hour**	**Environmental Evaluation Planning Tool and/or EEPT Youtube Training Video**

Advanced Objective: Staff will be able to independently complete a CPA-52 Environmental Evaluation (EE) worksheet as required by policy.

Advanced Courses / Activities			
Course/Activity Name	Type	Format	Location/Notes
Completing the Environmental Evaluation, Phase 1	**Course**	**Classroom 8 hours**	**Intended for all staff. Class will go step by step through completing an EE and where to find resources to adequately evaluate SECs. Staff may attend course multiple times as needed.**
Completing the Environmental Evaluation, Phase 2, Refresher	**Course**	**Classroom 6 hours**	**Intended for staff that are completing EEs on a regular basis. Class activities include reviewing current plans/EEs. Portions of course syllabus driven by participants needs. Course may be repeated as needed, and at least once every 4 years.**
Complete at least three Environmental Evaluations	**Plan**	**OJT**	**Submit at least 3 CPA-52s to Area Office for review and feedback. Area Office will determine when individuals may complete EEs independently.**

Forestry

Lead Specialist: Christopher Zimny
Notes: The Forestry Curriculum has five sub-categories. For the first three sub-categories you can take courses or complete activities in multiple categories (you do not have to finish one category to go on to the next), but you must complete courses/activities under each sub-category in the following order: all basic first, then intermediate, and then advanced. **In order to move on to the final two sub-categories, Forest Advisor Training and Woodland Conservationist Training, you must first complete all of the courses/activities in sub-categories 1 through 3.**

Sub-Category 1: Silviculture

Basic Objective: Staff will be able to identify local forest plants, use simple inventory methods and procedures, and understand the basics of growing and tending of the forest.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Tree and planet Identification: **Use Cal Flora/PLANTS/Veg Guide to identify 15 local shrubs, 15 local trees, and 3 local forest association in your Service Area**	**Tool**	**Online**	Calflora
Basic NRCS Forest Inventories	**Course**	**Field**	(SharePoint)
Introduction to Forest Ecological Site Descriptions	**Course**	**Online Reading**	Ecological Site Descriptions Ecological Selection Map
Apply Forest Stand Improvement (666) standard and specification	**Plan**	**OJT**	**Multiple**
Read associated silvicultual practices (315, 383, 490, 612, 660)	**Reading**	**Online**	**eFOTG**
Read Forest Stewardship Training Series parts 1-7 series Coop Extension/ANR	**Reading**	**Online**	(SharePoint)

Read through the Forestland Steward Newsletters (1996-2015) and have a working knowledge of the stewardship topics	**Reading**	**Online**	Forestland Steward Newsletters
For three forest stands, complete category A elements of Forestland Health Assessment Protocol (FLHAP) and Scorecard (Tech Note 44)	**Plan**	**OJT**	(SharePoint)
Read "Reforestation Services" program memo, read "Planting CA Forestlands" and be able to identify the field office seed zone and its boundaries and elevations.	**Reading**	**Online**	(SharePoint)

Intermediate Objective: Staff will be able to assess forest health, provide conservation options and communicate to landowners about growing and tending the forest.

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Use California Wildlife Habitat Relationships (CWHR) for identifying 10 locally unique, threatened or special status species; 5 unwanted forestland plants and 3 local wildlife habitats in the area	**Tool**	**Online**	**TBD**
Using Forest Vegetation Simulator (FVS) or similar analysis, develop three silvicultual alternatives to a typical forest stand	**Tool**	**OJT**	**TBD**
Work with soil/veg specialists to draft one local forest Ecological Site Description	**Plan**	**OJT**	**Multiple**
For three forests or forest types, develop local specifications for 666 and associated practices to support regional forest types, include the use of approved/draft Ecological Site Description.	**Plan**	**OJT**	**Multiple**

For one declining forest plant species in local a forest, know the responsible agency strategy to sustain/ improve the species survival	**Plan**	**Online**	(SharePoint)
On three plans on forestlands assist field staff on rating elements in the Forestland Health Assessment (FLHAP) and Scorecard	**Plan**	**OJT**	(SharePoint)
Take the CAL FIRE/UCCE webinar on cone surveys and participate in the multiagency Reforestation Services seed bank cone collection process	**Course**	**Webinar**	Webinars/Reforestation

Sub-Category 2: Ecosystem Services

Basic Objective: Staff will be able to recognize forest resource concerns, identify common forest conservation practices and be able to communicate ecosystem forest services to the landowner.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Read the following forestry practices 342, 384, 391, 472, 560, 578, 64X, 654, and 655	**Reading**	**Online**	**eFOTG**
For two parcels, complete category B and C elements of the Forestland Health Assessment Protocol (FLHAP) Scorecard	**Plan**	**Online**	(SharePoint)
Participate in the NRCS Roads Course and fill out two data collection forms and two plan template.	**Course**	**Online**	Ranch, Fire and Utility Access Roads Roads Webinar

Assess the erosion hazard on two sites for water quality related sediment from roads and disturbed areas.	**Plan**	**OJT**	(SharePoint) **Reference Materials:** Chalk Mountain Hoagland Road Assessment Price Creek Road Assessment
Inventory procedures for fuel load and habitat wood	**Course**	**Field**	**TBD** **Reference Materials:** (SharePoint - Forest Conservation)
In two forest types, measure tree understory and riparian cover and assess data for planning purposes	**Plan**	**OJT**	**Multiple**
Read Forest Stewardship Training Series parts 8-17 series Coop Extension/ANR	**Reading**	**Online**	(SharePoint)
On the local public forest landscape, read and be familiar with 1 (one) regional forest ecosystem management strategy (See USFS, BLM, USFWS)	**Reading**	**Online**	**Reference Materials:** (SharePoint)
Forest and rural roads	**Reading**	**Online**	**See: UC Forest Research and Outreach** Managing Forest Roads **Forest Stewardship Series #17** Forest Roads **Handbook for Forest, Ranch and Rural Roads** Forest, Ranch and Rural Roads

Intermediate Objective: Staff will be able to inventory and assess local forest resource concerns, complete the forest assessment scorecard, and document baselines and mitigations for typical forest conservation practices.

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Complete one inventory and data analysis for each of the following inventories: road erosion/sediment, fuel load, habitat wood, understory and riparian cover. Use one or more of these inventories in three plans and/or forest types.	**Plan**	**OJT**	**Multiple**
Work with local biologists and draft one conservation strategy for regional wild-life habitat requirements for wood – snags, cavities, downed wood and/or in-stream for Area technical specialist to review	**Plan**	**OJT**	**Multiple**
After completing basic environmental compliance course (CPA-52), develop three unique forestland based mitigations and findings that address threatened resources, species and/or cultural concerns associated with forest conservation practices and submit draft for review by Area technical specialist	**Plan**	**OJT**	**Multiple** **Prerequisite: Environmental Compliance for Conservation Assistance EC Level 1. Located on Aglearn: (NEDC-000190)**
Create a conservation plan that includes declining forest habitat and be familiar with strategies for habitat recovery	**Plan**	**OJT**	**Multiple**
In three conservation plans, provide locally based alternatives to support non-tree elements of Forestland Health Assessment Scorecard	**Plan**	**OJT**	(SharePoint)

Read the CAL FIRE California Forestry Handbook	**Reading**	**Online**	(SharePoint)
Work with Engineers to obtain Job Approval Authority (JAA) for low use roads and small stream crossings	**Plan**	**OJT and online reading**	**Handbook for Forest, Ranch and Rural Roads** Forest, Ranch and Rural Roads

Sub-Category 3 Forest Planning and Practices

Basic Objective: Staff will be able to meet with forest landowners, understand their conservation goals and objectives, recognize resource concerns, and develop conservation plans on forestland.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Read the California Forest Practice Rules 2015 Manual and be familiar with table of Contents of Title 14 CCR 4 & 10	**Reading**	**Online**	California Forest Practice Rules
Create a conservation plan for forestland with practices and alternatives using the (FLHAP) assessment scorecard	**Plan**	**OJT**	**Multiple** (SharePoint)
Review one locally developed forest management plan, harvest plan, and an exemption. Read and dissect the documents for cumulative impact purposes and watershed management data	**Reading**	**Online**	Forest Practice Watershed Mapper
Read Forest Stewardship Training Series parts 18-24 series Coop Extension/ANR	**Reading**	**Online**	(SharePoint)
Read the National Forestry Handbook on policy, planning, inventories and practices, specifically sections 636.0-40	**Reading**	**Online**	**eFOTG** (SharePoint)

Intermediate Objective: Staff will be able to review Forest Management Plan (FMP) "oneplan" forest management plans, communicate the values of planning to landowners and be conversant with the state and federal regulations on private forestland.

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Be able to know the land use history, assess impacts and effects of the CA forest practice rules (FPR) and, in one plan, show the use of the FPR in providing landowner conservation guidance	**Reading**	**Online**	California Forest Pratice Rules
Create three plans on forestlands that address three different resource concerns	**Plan**	**OJT**	**Multiple**
Review three completed Forest Management Plan "One-Plan" and/or Conservation Activity Plan for forestlands for content, errors and omissions	**Plan**	**OJT**	California Cooperative Forest Management Plan
Recognize the Purposes and Uses of Legal Exemptions, Harvest Plans and Associated Permits	**Course**	**Field**	California Forest Practice Rules
Review a minimum of three locally developed harvest planning documents, specifically the NTMP/ THPs that would have watershed based conservation mitigations for planning and environmental compliance purposes and demonstrate its use in identifying local concern	**Plan**	**OJT**	**Multiple**
When providing forest management guidance, document forestry activities and plans that are performed under the direction of an RPF or agency accredited forester to meet JAA and/or licensing requirements	**Office**	**OJT**	**TBD**

IN ORDER TO MOVE TO THIS SECTION YOU MUST FIRST COMPLETE ALL OF THE COURSES/ ACTIVITIES IN SUB-CATEGORIES 1 THROUGH 3

Sub-Category 4: Forest Advisor Training

Note: Courses must be taken in the following order: all basic, then intermediate, then advanced.

Category Objective: Staff will have a thorough understanding of forest management in California and can meet the requirements of California licensing for professional foresters.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Review the coursework necessary to meet requirements for the California Registered professional forester	**Online**	**Reading**	Registered Professional Forester

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Review and document the forestry experience completed under a Forest Advisor (GS11+) or RPF	**Plan**	**OJT**	**Multiple**
Meet the qualifications to apply for the State of CA professional foresters test	**Qualification**	**OJT**	Registered Professional Forester

Advanced Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Read and review on-line examinations of the professional foresters test	**Reading**	**Online**	Read and review on-line examinations of the professional foresters test

For three projects, instruct and guide field staff on inventory systems and analysis for forest, sediment, habitat wood, and understory and riparian cover. Has provided technical reviews for field staff on three office reviews.	**Plan**	**OJT**	**Multiple**
Has communicated demonstrable knowledge of CA forest management in field office/area documents as a forester and has guided cluster/area/state staff on three or more on emerging forestland issues	**Plan**	**OJT**	**Multiple**

Sub-Category 5: Woodland Conservationist Training

Category Objective: Staff will be able to understand and use forest and woodland management techniques to address resource concerns outside the typical forestland setting.

Note: Courses must be taken in the following order: all basic, then intermediate, then advanced.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Prescribed Burning	**Course**	**Field**	**Reference Materials:** Prescribed Burning **Policy** State Policy on Prescribed Burning
Windbreak and Buffers Design	**Course**	**Field**	Windbreak and Buffers Design
Environmental Procedures and Document Preparation	**Course**	**Field**	Environmental Procedures & Document Preparation

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Working under the specialist, demonstrate management principals of oak/hardwood/ woodland (nonconifer) management and riparian forests (391) and communicate technical guidance on two ecologically unique types to the field staff or client	**Plan**	**OJT**	**Multiple**
Be an instructor for two or more courses and/or lead two or more workshops and/or be the regional tech lead for windbreak design and implementation	**TOT**	**OJT**	**Multiple**

Advanced Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
With support from multi agency/ private biologists and specialists, direct/guide/support the installation of habitat wood – snags, cavities, downed wood and in stream in three projects, one on upland, and another on riparian and last project in stream.	**Plan**	**OJT**	**Multiple**
Be an instructor for inventory systems and analysis for forest, sediment, habitat wood, understory and riparian cover	**TOT**	**OJT**	**Multiple**

Plant Materials

Lead Specialist: Margaret Smither-Kopperl
Notes: The Plant Materials Curriculum only contains basic level courses. All intermediate and advanced level courses will be taught by state specialists in conjunction with the Plant Materials Center. Courses may be taken in any order.

Basic Objective 1: Staff will have enough plant materials knowledge to be able to identify crop and rangeland plants, weedy species and know the local flora adapted to their areas

Basic Courses/ Activities 1			
Course/Activity Name	Type	Format	Location/Notes
PLANTS Database Training	**Online**	**Webinar**	**PLANTS Database Training**
Using NRCS's PLANTS Database in Conservation Planning	**Online**	**Webinar**	**Database in Conservation Planning**
Use of eVeg Guide [1]	**Online**	**Webinar**	**eVeg Guide**
Weed Identification	**Online**	**Reading**	**Weed Identification**

Basic Objective 2: Staff will be able to talk confidently about planning plantings, including seed labels and seed quality, seeding rates and seed mixtures, farm equipment, field preparation drill calibration and planting.

Basic Courses/ Activities 2			
Course/Activity Name	Type	Format	Location/Notes
eVeg Guide Use and Database Training	**Course**	**Classroom**	**Area locations**
Reading a Seed Label, Understanding Seed Quality[2]	**Course**	**Classroom**	**Plant Materials Center**
Seeding Rates and Seeding Mixtures[2]	**Course**	**Classroom**	**Plant Materials Center**
Farm Equipment for Site Preparation and Planting[2]	**Course**	**Classroom**	**Plant Materials Center**
Drill Calibration and Planting[2]	**Course**	**Classroom**	**Plant Materials Center**

[1] This course also satisfies one of the course/activity requirements under the following curriculums: Plant Materials Basic Objective 1 and the Conservation Planning Basic Objective.

[2] These will be included with Cover Crop Training at the PMC.

Range/Pasture

Lead Specialist: Bob Gillaspy

Notes: The Range/Pasture Curriculum has multiple basic, intermediate, and advanced objectives and courses/activities. The curriculum should be taken in the following order: all basic objectives and associated courses/activities should be completed, then all intermediate, and then all advanced. You do not have to complete the courses under each level- basic, intermediate, or advanced in any specific order. Course waivers can apply when similar courses or the equivalent have been satisfied.

Basic Objective 1: Staff will be able to identify plants, use inventory tools, understand rangeland policy and associated rationale, and know rangeland health indicators in order to develop better conservation and rangeland grazing plans.

Basic Courses/ Activities 1			
Course/Activity Name	Type	Format	Location/Notes
Plant Identification Course: Common Forage Species/Invasive Species and Native Species	**Course**	**Classroom/ Field**	**TBD**
Complete Jornada Videos on Range Monitoring & Inventory	**Video**	**Online**	**Jornada Videos on Range Monitoring & Inventory**
Read Interpreting Indicators of Rangeland Health (Technical Reference 1734-6, Version 4)	**Reading**	**Online**	**Interpreting Indicators of Rangeland Health**
Read the National Range and Pasture Handbook (NRPH) Chapters 1-4	**Reading**	**Online**	**National Range and Pasture Handbook**

Basic Objective 2: Staff will be able to understand soil surveys, their use and application to conservation planning and be able to use Web Soil Survey.

Basic Courses/ Activities 2			
Course/Activity Name	Type	Format	Location/Notes
Attend a training session on Soils from the Area Soil Scientist, offered annually. Course will include information on soil physical properties, soil textures, soil taxonomy and classification.	**Course**	**Classroom/ Field**	**TBD**
Complete at least two soil database queries using Web Soil Survey	**Tool**	**Independent Study**	**Web Soil Survey**

Intermediate Objective 1: Staff is able to develop basic grazing plans including conducting forage/animal balance and calculating carrying capacity.

Intermediate Courses/ Activities 1			
Course/Activity Name	Type	Format	Location/Notes
Forage Identification and Inventory Course	**Course**	**Online**	**Field Guide for Common California Rangeland and Pasture Plants**
Rangeland Ecology I	**Course**	**Classroom**	**NEDC**
Pastureland Ecology I	**Course**	**Classroom**	**NEDC**
Body Condition Scoring Livestock	**Course**	**Classroom / Field**	**Body Condition Scoring Livestock**
Grazing Planning Training	**Course**	**Classroom / Field**	**Provided by State Range Specialist and/ or Area Range Specialist**

Intermediate Objective 2: Staff is able to understand ranch management principles, ungulate herbivory and range livestock production economics in California, including the ability to communicate with livestock producers regarding each of the above.

Intermediate Courses/ Activities 2			
Course/Activity Name	Type	Format	Location/Notes
Nutrition Balance Analyzer Program Training	**Course (Optional)**	**Classroom / Webinar**	**Nutrition Balance Analyzer**
Plant/Herbivore Interactions	**Course**	**Classroom**	**NEDC**
Working Effectively with Livestock Producers	**Course**	**Classroom**	**NEDC**
California Grazing Management: Plant Growth Curves and Diet Preference of Foraging Animals, and Range Livestock Production	**Course**	**Classroom**	**California Grazing Management**
Beef Production for NRCS Employees	**Course**	**Classroom**	**AgLearn-NEDC**

Intermediate Objective 3: Staff is able to conduct Pasture Condition Score and conduct Indicators of Rangeland Health and have an understanding of why and where they should be applied. They should also have the ability to independently use each of the inventory tools necessary to complete each of these assessments.

Intermediate Courses/ Activities 3			
Course/Activity Name	Type	Format	Location/Notes
Pasture Condition Score	**Course**	**Classroom/ Field**	**Provided by State Range Specialist and/or Area Range Specialist**
Ecological Site Description (ESD) Workshop	**Course**	**Classroom/ Field**	**TBD by State Range Ecologist**
Interpreting Indicators of Rangeland Health	**Course**	**Classroom / Field**	**Provided by State Range Specialist or State Range Ecologist**

Complete at least two Conservation Plans where Pasture Condition Score (PCS) or Indicators of Rangeland Health (IRH) were used in the Resource Inventory	**Plan**	**OJT**	**Multiple**

Intermediate Objective 4: Staff is able to understand livestock nutritional requirements during various reproductive phases and match grazing systems to meet those requirements while addressing various resource concerns on the landscape.

Intermediate Courses/ Activities 4			
Course/Activity Name	Type	Format	Location/Notes
Attend UCCE Grazing Academy	**Course**	**Classroom**	**Course provided from UCCE, Placer County**
Livestock Reproductive Cycles and Feed Requirements	**Course**	**Classroom**	**Livestock Reproductive Cycles and Feed Requirements**
Read UCCE publication on livestock nutrition and annual/perennial grassland forage quality	**Reading**	**Online**	**UCCE publication on livestock nutrition and annual/perennial grassland forage quality**
*** Overview of Water Quality Resource Assessment**	**Course**	**Online**	**Aglearn**

Advanced Objective 1: Staff is able to use the 528 Spec Tool and develop grazing plans for multiple herds, multiple species, and on various plant community types.

Advanced Courses/ Activities 1			
Course/Activity Name	Type	Format	Location/Notes
Complete all the Prescribed Grazing Modules 1-3 and pass tests for each of these modules	**Course**	**Online/ Webinar**	**All courses accessible upon request from the State Range Specialist**
Complete at least 3 Grazing Plans	**Plan**	**OJT**	**Multiple**

Create and teach at least one Prescribed Grazing and Range Monitoring class for new field office staff and/or landowners	**TOT**	**Classroom/ Field**	**Developed by journey level range staff and implemented at an area office or field office.**
Riparian Ecology Management & Restoration	**Course**	**Classroom/ Field**	**TBD**

Advanced Objective 2: Staff is able to design fence systems and off-stream water systems using any fence type and water system.

Advanced Courses/ Activities 2			
Course/Activity Name	Type	Format	Location/Notes
Work with Area Engineer to obtain Job Approval Authority (JAA) for off-stream water system design and certification	**JAA**	**OJT**	**Field Office**
Complete contract and Practice Requirement Sheets/Designs for each fence type (electric temporary and permanent; barbed wire, woven wire, wildlife friendly, take down fence, and suspension	**Plan**	**OJT**	**Field Office**
Obtain adequate Job Approval Authority (JAA) for all range practices- 382, 550, 314, 315, 348, 512, and 528	**JAA**	**OJT**	**Follow procedures for JAA for all these practices via State or Area office leads.**

Advanced Objective 3: Staff is able to understand all range field measurement tools, know where they can and cannot be applied, and have the ability to teach range inventory and monitoring methods/tools. This includes all those associated with NRI, ESD's, and those specific to annual, perennial, and pasture grassland systems as well as riparian systems.

Advanced Courses/ Activities 3			
Course/Activity Name	Type	Format	Location/Notes
Mentor a new range employee on inventory, resource assessment, monitoring and prescribed grazing	**TOT**	**OJT**	**Field Office**
Annual Natural Resource Inventory Training	**Course**	**Classroom/ Field**	**TBD**

Advanced Objective 4: Staff is able to conduct seeding recommendations on various plant community types using both native and perennial species using drill seed, broadcast seed cuttings, and/or plug seedlings and are able to set up and conduct seed trials.

Advanced Courses/ Activities 4			
Course/Activity Name	Type	Format	Location/Notes
Attend field training provided by seed companies and the Plant Materials Center	**Course**	**Classroom/ Field**	**Plant Materials Center (PMC)**
Complete at least 3 plans that include seeding recommendations or restoration practices	**Plan**	**OJT**	**Field Office**

Advanced Objective 5: Staff is able understand the interactions of riparian/wetland ecosystems with livestock grazing and have the ability to develop grazing plans that address resource concerns within these vegetation types

Advanced Courses/ Activities 4			
Course/Activity Name	Type	Format	Location/Notes
Proper Functioning Condition of Lotic and Lentic Systems and/or SVAP	**Course**	**Classroom/ Field**	**TBD State Wetlands Biologist or State Wildlife Biologist**
Grazing Treatments and Management Principles used in Riparian Areas/Wetlands	**Course**	**Classroom/ Field**	**TBD (special emphasis on vegetation changes related to livestock grazing)**
Monitoring Methods for Riparian/Wetland Systems	**Course**	**Classroom/ Field**	**TBD**
Complete at least two grazing plans to address riparian and/or wetland management	**Plan**	**OJT**	**Multiple**

Soils

Lead Specialist: Tony Rolfes, State Soil Scientist
Notes: The Soils Curriculum is critical to managing Highly Erodible Lands (HEL), Farmland Protection Policy Act (FPPA) and Soil Health field analysis. A *Soils For Conservationists* course will be offered that addresses fundamentals specific to rules of the Farm Bill and National policy.

Basic Objective: Staff will be familiar with the field office technical guide, and NEPA requirements to augment planning with agricultural producers.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Highly Erodible Lands Procedures	**Course**	**Online**	**Power Point on Share point**
Farmland Protection Act Procedures.	**Course**	**Online**	**Power Point on Share point and USDA Web Site:** Farmland Protection Act
Introduction to the Soil Health Field Worksheet	**Course**	**Field Day**	**TBD**
Soils For Conservations	**Course**	**In Class/Field**	**TBD**

Sub- Category 1: Soil Health

Basic Objective: Staff will be competent and confident in having soil health conversations with customers

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Soil Health and Sustainability CA Training	**Seminar**	**Classroom**	**Soil Health workshops-statewide Apprentice Planner Requirement: NRCS-NHQ-LOCAL-000004**
Soil health Management Systems: Using NRCS Practice Standards	**Presentation**	**Webinar**	**NRCS Science and Technology Training Library**

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Read Soil Quality Agrono-my Technical Notes 1-20	Reading	Sharepoint	Agronomy Technical Notes
The Role of Soil Biology in Improving Soil Quality	Course	Webinar	NRCS Science and Technology Training Library
Develop conservation plans for a soil health resource concern on two separate units	Plan	OJT	Various Locations

Advanced Courses / Activities

Intermediate Objective: Staff will have an understanding of soil health that equips them to identify management alternatives leading to planning that addresses resource concerns. Knowledge gained will include basic soil biology and an understanding of how various management practices affect soil health.

Advanced Objective: Staff will be able to advise and train others related to soil health issues & planning, and be able to recognize soil health resource concerns and their causes on complex agricultural systems that may include multiple crop rotations, livestock, and annual and perennial plant species.

Advanced Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Soil Biology Primer: Read all chapters	Reading	Online	Soil Biology Primer
Advanced Soil biologyRead two papers-Brussaard et al., and Kibblewhite et al.	Reading	Sharepoint	Advanced Soil Biology
Develop a conservation plan for a soil health resource concern on one complex operation that involves multiple practices and systems	Plan	OJT	Multiple

Intermediate Objective: Staff will be able to develop basic conservation plans and obtain planner certification.

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Conservation Planning Training Part 2	**Course**	**Online**	**TBD**
Complete 3 conservation plans for planner certification	**Plan**	**OJT**	**Multiple**
Completing the Environmental Evaluation CPA-52 [1]	**Course**	**Classroom**	**TBD**
Soils for Planners	**Course**	**Classroom**	**TBD**
"Cultural Resources Training Series" Module 1 - Why Cultural Resources are Important [2]	**Course**	**Online**	**Aglearn**
"Cultural Resources Training Series" Module 2 - Cultural Resources in the Planning Process [3]	**Course**	**Online**	**Aglearn**

Advanced Objective: Staff will be able to build on and refine planning skills to develop plans for complex situations. Emphasis is on in-depth resource analysis, alternatives development and analysis, and planning on a landscape level.

Advanced Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Economics of Conservation Planning	**Course**	**Classroom**	**TBD**
Areawide Planning (NEDC-000019)	**Course**	**Classroom**	**TBD**
Advanced Planning Seminar	**Course**	**Classroom**	**TBD**

[1] This course also satisfies one of the course/activity requirements under the following curriculums: Environmental Compliance Sub-Category 2: NEPA- Intermediate Objective and Conservation Planning Intermediate Objective.

[2] This course also satisfies one of the course/activity requirements under the following curriculums: Cultural Resources Basic Objective and Conservation Planning Intermediate Objective.

[3] This course also satisfies one of the course/activity requirements under the following curriculums: Cultural Resources Basic Objective and Conservation Planning Intermediate Objective.

Wildlife

Lead Specialist: Tom Moore

Notes: The Wildlife Curriculum has nine sub-categories. **You must complete all of the basic AND intermediate courses/activities in Sub-Category 1: General Wildlife before completing any other courses/activities in the curriculum (you do not need to complete the advanced activities in this category before moving on to other courses/activities)**. After you have completed the basic and intermediate courses in Sub-category 1: General Wildlife, you can take courses or complete activities in multiple categories (you do not have to finish one category to go on to the next), but you must complete courses/activities under each sub-category in the following order: all basic first, then intermediate, and then advanced.

Sub-Category 1: General Wildlife

Basic Objective: Staff will be able to understand Ecological Principals driving wildlife management.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Terrestrial Wildlife Habitat	**Course**	**Webinar**	**TBD**
Aquatic Wildlife Habitat	**Course**	**Webinar**	**TBD**
Management of Disturbance for Wildlife	**Course**	**Webinar**	**Science & Technology Training Library**
Wildlife Habitat Conservation and Management - Ecological Principals	**Course**	**Classroom**	**State Biologist and Area Biologist**
Designing Habitats for Multiple Benefits: wildlife, soil, water and carbon.	**Course**	**Webinar**	**Science & Technology Training Library**
Amphibian and Reptile Conservation and Management	**Course**	**Webinar**	**Science & Technology Training Library**

Intermediate Objective: Staff will be able to recommend practices that address

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
WHEG Training	**Course**	**Classroom**	**State Biologist and Area Biologist**
SVAP II Training	**Course**	**Classroom**	**In Development**

YOU MUST COMPLETE THE ABOVE BASIC AND INTERMEDIATE COURSES BEFORE MOVING ON TO THE REST OF THE CURRICULUM

Advanced Objective: Staff will be able to develop Wildlife Habitat Conservation Plans for upland and/or aquaticspecies.

Advanced Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Wildlife Habitat Conservation Plan Development	**Course**	**Classroom**	**TBD**
Development of a Wildlife Habitat Management Plan **• Rangeland** **• Cropland** **• Forestland** **• Riparian**	**Plan**	**OJT**	**Contact Area Biologist to initiate. Contributes to JAA for upland practices**

Sub-Category 2: Threatened and Endangered Species

Basic Objective: Staff will be able to identify federal and state listed species and be able to develop alternative approaches to avoid negative impacts.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
T&E Plant Avoidance and Conservation	**Course**	**Classroom**	**TBD**
T&E Wildlife Avoidance and Conservation	**Course**	**Classroom**	**TBD**

Sub-Category 3: Wetlands

Basic Objective: Staff will be able to identify aquatic resources within their planning area and identify possible associated resource concerns.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Recognizing Wetlands Using Remote Sensing	**Course**	**Webinar**	**TBD**

Intermediate Objective: Staff will be able to recommend practices that address resource concerns associated with aquatic resources within the planning area.

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Wetland Restoration Hydrology and Design Overview	**Course**	**Webinar**	**Science & Technology Training Library**
Agricultural Working Lands: Meeting the Needs of Spring-migrating Waterfowl in the Intermountain West on Working Ranches	**Course**	**Webinar**	**Science & Technology Training Library**
Wet Meadow Restoration in the Sagebrush Ecosystem	**Course**	**Webinar**	**Science & Technology Training Library**
Cheap and Cheerful Stream and Riparian Restoration: Beaver Dam Analogues as a Low-cost tool	**Course**	**Webinar**	**Science & Technology Training Library**
Agricultural Working Lands and Wildlife: Waterbird Conservation and Rice Agriculture	**Course**	**Webinar**	**Science & Technology Training Library**
Riverine/Riparian Wetland Restoration Vernal Pool Restoration Pacific Coast Wetland Restoration	**Course**	**Webinar**	**Science & Technology Training Library**
Considerations for Aquatic Resources in the Planning Area	**Course**	**Webinar**	**TBD**

Advanced Objective: Staff will understand wetland classification and how to use the knowledge of wetland types to select and implement appropriate planning activities that benefit specific types of wetlands in their work area.

Advanced Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
How to prepare a Good Wetland Restoration Plan	**Course**	**Webinar**	**Improving Wetland Restoration Success Project**
Development of a wetland restoration plan (Not WRE) **•Rangeland** **•Cropland** **•Forestland** **•Meadow/prairie**	**Plan**	**OJT**	**Contact Area Biologist to initiate. Contributes to JAA for wetland practices**
Development of an aquatic habitat management plan: **•Rangeland** **•Cropland** **•Forestland** **•Meadow/prairie**	**Plan**	**OJT**	**Contact Area Biologist to initiate. Contributes to JAA for wetland practices**

Sub-Category 4: Streams

Basic Objective 1: Staff will be able to discuss hydrology and fluvial geomorphology in the planning area by understanding the physical basis of stream habitat and apply concepts and tools to diagnose causes of habitat degradation, as well as suggest management framework to consider options

Basic Courses/ Activities 1			
Course/Activity Name	Type	Format	Location/Notes
Stream Habitat - Assessing Stream Condition & Identifying Management Options	**Course**	**Webinar**	**Science & Technology Training Library**
River Science (Hydrology & Fluvial Geomorphology) for Non-Engineers	**Course**	**Webinar**	**Science & Technology Training Library**

Basic Objective 2: Staff will be able to assess and recommend practices to ensure appropriate aquatic organism passage in the planning area.

Basic Courses/ Activities 2			
Course/Activity Name	Type	Format	Location/Notes
Aquatic Organism Passage: an Overview of Ecology, Analysis and Tools	**Course**	**Webinar**	**Science & Technology Training Library**
Aquatic Organism Passage at Road Crossings and Culverts	**Course**	**Webinar**	**Science & Technology Training Library**
Culverts and Low Water Crossing: Tools, Techniques and Considerations for Low Water Passages	**Course**	**Webinar**	**Science & Technology Training Library**

Intermediate Objective: Staff will be able to recommend practices for proper management of salmonid habitat in the planning area.

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Salmonid Ecology and Habitat Management	**Course**	**Classroom**	**TBD**

Sub-Category 5: Forest/Woodlands

Basic Objective: Staff will be able to recommend planning alternatives for wildlife management in oak woodlands and/or mixed conifer areas.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Wildlife Habitat Management on Grasslands	**Course**	**Classroom**	**TBD**
Wildlife Habitat Management on Grasslands, Shrublands and/or Savannah	**Course**	**Classroom**	**TBD**

Sub-Category 6: Rangeland

Basic Objective: Staff will be able to recommend planning alternatives for wildlife habitat management on grasslands, shrublands, and/or savannah.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Wildlife Habitat Management on Grasslands	**Course**	**Classroom**	**TBD**
Wildlife Habitat Management on Grasslands, Shrublands and/or Savannah	**Course**	**Classroom**	**TBD**

Sub-Category 7: Cropland

Basic Objective: Staff will be able to recommend planning alternatives for wildlife habitat management on croplands

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Wildlife Habitat Management on Croplands	**Course**	**Classroom**	**TBD**

Sub-Category 8: Riparian

Basic Objective: Staff will be able to discuss riparian ecology confidently with clients and other planners.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Riparian Ecology	**Course**	**Webinar**	**TBD**
Riparian Areas - Ecosystems Processes	**Course**	**Webinar**	**TBD**

Intermediate Objective 1: Staff will be able to recommend planning alternatives for wildlife management of riparian areas.

Intermediate Courses/ Activities 1			
Course/Activity Name	Type	Format	Location/Notes
Wildlife Management of Riparian Areas	**Course**	**Classroom**	**TBD**

Intermediate Objective 2: Staff will be able to use evidence-based guidelines for designing vegetative buffers as presented in the publication Conservation Buffers: Design Guidelines for Buffers, Corridors, and Greenways, a guide created for field professionals.

Intermediate Courses/ Activities 2			
Course/Activity Name	Type	Format	Location/Notes
Conservation Buffers: Sink or Source Habitats for Fish-Wildlife	**Course**	**Webinar**	**Science & Technology Training Library**
A Practical Guide for Designing Conservation Buffers	**Course**	**Webinar**	**Science & Technology Training Library**

Sub-Category 9: Pollinators

Basic Objective: Staff will be able to confidently discuss native bee biology and Habitat establishment in California.

Basic Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Farming for Bees: Conservation of Native Pollinators	**Course**	**Webinar**	**TBD**
Biology Technical Note 19 Pollinator Biology and Habitat in California	**Reading**	**Online**	**eFOTG Section I**
Conserving Pollinators While Addressing Other Resource Concerns	**Course**	**Online**	**Science & Technology Training Library**
Farming for Beneficial Insects: Pollinators, Predators and Parisatoids	**Course**	**Webinar**	**Science & Technology Training Library**
Farming with Beneficial Insects: Conservation Biological Control Short Course	**Course**	**Classroom/ Field**	**Xerces Society Staff**
Conservation Buffers to Support Beneficial Insects on Organic Farms	**Course**	**Webinar**	**Science & Technology Training Library**

Intermediate Objective: Staff will be able to assess, plan, and develop implementation requirements consistent with practice specifications for pollinator habitat.

Intermediate Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Read Conservation Cover (327) for Pollinators: Specifications and Implementation Requirements	**Reading**	**Online**	**eFOTG Section IV**
Read Hedgerow Planting (422) for Pollinators: Specifications and Implementation Requirements	**Reading**	**Online**	**eFOTG Section IV**
Completing Pollinator Habitat Assessments	**Course**	**Webinar**	**TBD**
Pollinator Habitat Assessment and Establishment - Doing It	**Course**	**Classroom**	**TBD**
Planners complete Implementation Requirements (1each of 422, 327) for pollinators	**Plan**	**OJT**	**Multiple**

Advanced Objective: Staff will be able to develop Pollinator Habitat Conservation Plans.

Advanced Courses/ Activities			
Course/Activity Name	Type	Format	Location/Notes
Pollinator Habitat Conservation Plan Development	**Course**	**Classroom**	**TBD**
Completing 2 Pollinator Habitat Conservation Plans	**Plan**	**OJT**	**Multiple**

Specialist Contact Information

Discipline	Lead Specialist	Phone Number	Email Address
Agronomy	Hudson Minshew	530-792-5659	Hudson.Minshew@ca.usda.gov
Air Quality	Ted Srauss	209-491-9320 Ext. 125	Ted.Strauss@ca.usda.gov
Climate Change	Ted Srauss \ Hue Dang	209-491-9320 Ext. 125	Ted.Strauss@ca.usda.gov Hue.Dang@ca.usda.gov
Conservation Planning	Hue Dang	530-792-5657	Hue.Dang@ca.usda.gov
Conservation Desktop, Toolkit, and GIS	Terryl Kocsis	530-792-5630	Terryl.Kocsis@ca.usda.gov
Cultural Resources	Emily Castano	530-792-5621	Emily.Castano@usda.gov
Environmental Compliance	Jennifer Cavanaugh	530-792-5632	Jennifer.Cavanaugh@ca.usda.gov
Forestry	Chris Zimny	530-792-5655	Chris.Zimny@ca.usda.gov
Plant Materials	Margaret Smither-Kopperl	209-727-5319 Ext. 102	Margaret.Smither-Kopperl@ca.usda.gov
Range/ Pasture	Bob Gillaspy	530-792-5658	Bob.Gillaspy@ca.usda.gov
Soils	Tony Rolfes	530-792-5656	Tony.Rolfes@ca.usda.gov
Wildlife	Tom Moore	530-792-5652	Thomas.Moore@ca.usda.gov

Notes