PROTOTYPE PROGAMMATIC AGREEMENT
BETWEEN THE
US DEPARTMENT OF AGRICULTURE,
WASHINGTON STATE NATURAL RESOURCES CONSERVATION SERVICE OFFICE,
WASHINGTON STATE HISTORIC PRESERVATION OFFICER,
REGARDING CONSERVATION ASSISTANCE

WHEREAS, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) administers numerous voluntary assistance programs, special initiatives, and grant and emergency response programs for soil, water, and related resource conservation activities available to eligible private producers, States, commonwealths, Federally Recognized Tribal governments, other government entities, and other applicants for conservation assistance, pursuant to the Agricultural Act of 2014 (2014 Farm Bill, Public Law 113-79); Soil Conservation and Domestic Allotment Act of 1935 (Public Law 74-46, 16 U.S.C. 590 a-f, as amended); the Flood Control Act of 1944 (Public Law 78-534, as amended); the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended, 16 U.S.C. 1001-1012); the Agricultural and Food Act of 1981 (Public Law 97-98, 95 Stat. 1213); the Agricultural Credit Act (Public Law 95-3341, Title IV, Section 403); Food, Agriculture, Conservation and Trade Act of 1990 (Public Law 101-624); the Flood Control Act of 1936 (Public Law 74-738); the Food Security Act of 1 *985* (Public Law 99-198, as amended); the Federal Agricultural Improvement and Reform Act of 1996 (Public Law 104-127); and executive and secretarial orders, implementing regulations and related authorities; and

WHEREAS, NRCS, through its conservation assistance programs and initiatives, provides assistance for activities with the potential to affect historic properties eligible for or listed in the National Register of Historic Places (NRHP), including National Historic Landmarks (NHLs) and therefore constitute undertakings subject to review under Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. 470f, and its implementing regulations, 36 CFR Part 800, including the provisions of these regulations addressing NHLs at 36 CFR Part800.10; and

WHEREAS, NRCS has determined that the requirement to take into account the effects to historic properties of its undertakings may be more effectively and efficiently fulfilled through the use of a Prototype Programmatic Agreement (Prototype Agreement); and

WHEREAS, the NRCS Washington State Office has consulted with the Washington State Historic Preservation Officer/SHPO, Washington State Department of Archaeology & Historic Preservation, and followed the instructions in the ACHP letter that accompanied the Prototype Agreement, dated November 21, 2014; and

WHEREAS, NRCS also is responsible for fulfilling the requirements of the National Environmental Policy Act (NEPA), including the use of categorical exclusions, and coordinating NEPA and Section 106 reviews, as appropriate; and

WHEREAS, NRCS developed this Prototype Agreement in consultation with the National Conference of State Historic Preservation Officers (NCSHPO) and its members, interested Indian tribes, Native Hawaiian organizations, interested historic preservation organizations, (such as the National Trust for Historic Preservation), and the Advisory Council on Historic Preservation (ACHP); and

WHEREAS, in accordance with 36 CFR Part 800.14(b)(4), the ACHP has designated this agreement as a Prototype Agreement, which allows for the development and execution of subsequent prototype agreements by individual NRCS State office(s) (State-based Prototype Agreements) to evidence compliance with Section 106; and

WHEREAS, this State-based Prototype Agreement conforms to the NRCS Prototype Agreement as designated by the ACHP on November 21, 2014, and therefore, does not require the participation or signature of the ACHP when the NRCS State Office and the SHPO/THPO/Indian tribe agree to the terms of the State-based Prototype Agreement; and

WHEREAS, this Prototype Agreement replaces the 2002 nationwide "Programmatic Agreement among the United States Department of Agriculture Natural Resources Conservation Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers relative to Conservation Assistance," as amended in 2011 and 2012, which expired on November 20, 2014; and

WHEREAS, the NRCS State Conservationist is the responsible federal agency official within the state for all provisions of Section 106, including consultation with the SHPO and government-to government consultation with Indian tribes to negotiate the State-based Prototype Agreement; and

WHEREAS, the State-based Prototype Agreement does not apply to undertakings occurring on or affecting historic properties on Tribal lands, as defined by Section 301(14) of the NHPA, without prior agreement and execution of a State-based Prototype Agreement with the concerned Indian tribe; and

WHEREAS, the NRCS has consulted with Indian tribe(s) listed in Appendix C and has invited the Indian tribe(s) to enter into this State-based Prototype Agreement as a concurring party; and

WHEREAS, this Prototype Agreement does not modify the NRCS' responsibilities to consult with Indian tribes on all undertakings that might affect historic properties and properties of religious and cultural significance to them, regardless of where the undertaking is located, without prior agreement by the concerned Indian tribe, and recognizes that historic properties of religious and cultural significance to an Indian tribe may be located on ancestral homelands or on officially ceded lands near or far from current settlements; and

WHEREAS, when NRCS conducts individual Section 106 reviews for undertakings under this State-based Prototype Agreement, it shall identify and invite other agencies, organizations, and individuals to participate as consulting parties; and

NOW, THEREFORE, the NRCS Washington State Office and the Washington SHPO agree that undertakings in Washington State shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

NRCS shall ensure that the following stipulations are met and carried out:

I. Applicability.

a. Once executed by the NRCS and the Washington SHPO/Indian tribe, this Washington Prototype Agreement sets forth the review process for all NRCS undertakings subject to Section 106 in the Washington State.
a. Execution of this Washington Prototype Agreement supersedes any existing State Level Agreement with Washington SHPO executed under the previous NRCS nationwide Programmatic Agreement, but does not replace any existing project-specific Section 106 agreements (Memoranda of Agreement or Programmatic Agreements).
b. This Washington Prototype Agreement applies only when there is a Federal Preservation Officer (FPO) in the NRCS National Headquarters (NHQ) who meets the Secretary of the Interior's Professional Qualification Standards (48 FR 44716).
c. This Washington Prototype Agreement applies only where there is staff who meet the Secretary of Interior's Professional Qualification Standards in Washington State NRCS.

II. Roles and Professional Qualifications.

a. The NRCS Washington State Conservationist is responsible for oversight of its performance under this Washington Prototype Agreement.
b. NRCS Washington shall ensure all NRCS staff or individuals carrying out Section 106 historic preservation compliance work on its behalf, including the NRCS Washington State senior historic preservation professional staff member (the Cultural Resources Specialist (CRS), or Archaeologist, or Historian), are appropriately qualified to coordinate the reviews of resources and historic properties as applicable to the resources and historic properties being addressed (site, building, structure, landscape, resources of significance to Indian tribes, and other concerned communities). Thus, these staff and consultants must meet the Secretary of the Interior's Professional Qualification Standards and have the knowledge to assess the resources within an undertaking's area of potential effects (APE).
The Washington State Conservationist or their designee is responsible for consultation with the Washington SHPO, or their designee and government to government consultation with Indian Tribal leaders and/or their THPO to develop consultation protocols. The Washington State Conservationist shall inform Tribal leaders and/or their THPO when a designee has been assigned. These responsibilities may not be carried out on behalf of NRCS by another federal agency.

c. The NRCS Washington CRS shall provide technical historic property and resource information to the State Conservationist for use in Section 106 findings and determinations, after appropriate consultations with the SHPO, Indian tribes, and discussions with the landowner. The CRS shall monitor and oversee the work and reporting of all NRCS field office personnel and professional service consultants. The CRS shall also assist the State Conservationist in determining whether an undertaking has the potential to affect historic properties, triggering Section 106 review, pursuant to 36 CFR Part 800.3(a).
d. NRCS field office personnel involved in implementing this Washington Prototype Agreement, after completion of NRCS' web, classroom, and field awareness training acquired through USDA's AgLearn training site, shall work with the CRS, as feasible, in completing historic preservation compliance (Section 106) field records for the agricultural producer's (NRCS' client or voluntary applicant for assistance) files and for use in producing initial historic property identification records (as set forth and outlined in NRCS' operational guidance, the National Cultural Resources Procedures Handbook, Title 190, Part 601).
e. The CRS in Washington shall oversee development of the scopes of work for investigation of the APEs for identified undertakings (see 36 CFR Part 800.4). The NRCS may use professional service contractors or consultants or partners to assist with cultural resources compliance studies. NRCS shall ensure these contractors meet the Secretary of Interior's Professional Qualifications Standards.
f. NRCS remains responsible for all consultation with the SHPO, Indian tribes and THPOs, and all determinations of NRHP eligibility and effect. NRCS may not delegate consultation for findings and determinations to professional services consultants or producers/applicants for conservation assistance.
g. Washington SHPO shall consult and provide a response to NRCS within 30 days of receipt if provided sufficient data on a proposed undertaking and APE. The definition of sufficient data is provided in 36 CFR Part 800.11.
h. The ACHP shall provide technical guidance, participate in dispute resolution, and monitor the effectiveness of this agreement, as appropriate.

III. Training.

a. NRCS shall require personnel conducting conservation planning or application to complete the NRCS Web-based (in USDA AgLearn) and field Cultural Resources Training in modules. NRCS should provide this training within two years of being hired. After hire and on an on-going basis, on-the-job training shall be provided by the CRS. Personnel will be encouraged to complete the ACHP's Section 106 *Essentials* course.
b. NRCS shall require CRS/Archaeologist/Historian and/or other NRCS personnel overseeing cultural resource work to take the NRCS Cultural Resources Training Modules (awareness training) and the ACHP's Section 106 *Essentials* course, or a course with similar content, if approved by the NRCS FPO. Training must be completed within the first calendar year after execution of this Washington Prototype Agreement or of being hired by NRCS.
c. NRCS personnel shall review and update training completion with their supervisors and include their training in their Individual Development Plans. Personnel completion of cultural resources training will be recorded and tracked by NRCS.
d. NRCS may invite the SHPO/Indian tribes or staff to participate in presentations at agency classroom or field trainings. NRCS shall encourage participation and provide the proposed training agenda to the consulting parties in the geographic area of the training.

NRCS shall encourage all personnel conducting or overseeing cultural resources work to take additional appropriate specialized training as provided by the SHPO, Indian tribes, the ACHP, National Park Service, General Services Agency or other agencies, as feasible. NRCS shall encourage the CRS to participate in regional conferences, archaeology month events and other public education activities.

IV. Lead Federal agency.

a. For any undertaking for which the NRCS is the lead federal agency for Section 106 purposes per 36 CFR Part 800.2(a)(2), NRCS staff shall follow the terms of this Washington Prototype Agreement. NRCS shall notify the SHPO/Indian tribe of its involvement in the undertaking and the involvement of the other federal agencies.
b. For any undertaking for which the NRCS is not the lead federal agency for Section 106 purposes, including those undertakings for which the NRCS provides technical assistance to other USDA or other federal agencies, the terms of this Washington Prototype Agreement shall not apply to that undertaking. If the lead federal agency agrees, NRCS may follow the approved alternative procedures in place for that agency. NRCS and the lead federal agency shall ensure the consulting parties are promptly notified of lead status.

V. Review Procedures.

a. In consultation with the Washington SHPO/Indian tribe, NRCS shall identify those undertakings with little to no potential to affect historic properties and list those undertakings in Appendix A. Upon the determination by the CRS that an undertaking is included in Appendix A, the NRCS is not required to consult further with the SHPO/Indian tribe for that undertaking. Also listed in Appendix A are undertakings that have potential to affect historic properties and these practices will follow the procedure outlined in Stipulation V.c.
b. The list of undertakings provided in the Appendix A may be modified through consultation and written agreement between the NRCS State Conservationist and the SHPO/Indian tribe without requiring an amendment to this Washington Prototype Agreement. The NRCS State office will maintain the master list and will provide an updated list to all consulting parties with an explanation of the rationale (metadata) for classifying the practices accordingly. This review of Appendix A shall be undertaken at least every 2 years in consultation with the SHPO/Indian Tribes.
c. Undertakings identified in Appendix A as having potential to affect historic properties shall require further review as outlined in Stipulation V.c. The NRCS shall consult with the SHPO/Indian tribe to define the undertaking's APE, identify and evaluate historic properties that may be affected by the undertaking, assess potential effects, and identify strategies for resolving adverse effects prior to approving the financial assistance for the undertaking.

1. NRCS shall provide its proposed APE, identification of historic properties and/or scope of identification efforts, and assessment of effects in separate transmittals.
2. The NRCS shall attempt to avoid adverse effects to historic properties whenever possible; where historic properties are located in the APE, NRCS shall describe how it proposes to modify, buffer, or move the undertaking to avoid adverse effects to historic properties.
3. Where the NRCS proposes a finding of "no historic properties affected" or "no adverse effect" to historic properties, the SHPO/Indian tribe shall have 30 calendar days from receipt of this documented description and information to review it and provide comments.

The NRCS shall take into account all timely comments.

i. If the SHPO/Indian tribe, or another consulting party, disagrees with NRCS' findings and/or determination, it shall notify the NRCS within the 30 calendar days of receipt. The NRCS shall consult with the SHPO/Indian tribe or other consulting party to attempt to resolve the disagreement. NRCS shall notify the DAHP of the dispute. If the disagreement cannot be resolved through this consultation, NRCS shall follow the dispute resolution process in Stipulation VIII below.

ii. If the SHPO/Indian tribe does not respond to the NRCS within the 30 calendar days of receipt and/or the NRCS receives no objections from other consulting parties, or if the SHPO/Indian tribe concurs with the NRCS' determination and proposed actions to avoid adverse effects, the NRCS shall document the concurrence/lack of response within the review time noted above, and may move forward with the undertaking.

4. Where a proposed undertaking may adversely affect historic properties, NRCS shall describe proposed measures to minimize or mitigate the adverse effects, and follow the process in 36 CFR Part 800.6, including consultation with other consulting parties and notification to the ACHP, to develop a Memorandum of Agreement to resolve the adverse effects.

VI. Emergency and Disaster Management Procedures (Response to Emergencies)

a. NRCS shall notify the SHPO/Indian tribe immediately or within 2 business days of the emergency determination, following the NRCS' Emergency Watershed Program (EWP) final rule (see Section 216, P.L. 81-516 Final Rule, 7 CFR Part 624 (April 2005).

b. The NRCS State office shall prepare procedures for exigency (following the rules for NRCS' (EWP) regarding immediate threat to life and property requiring, response within 5 days) in consultation with the SHPO/Indian tribes within 3 months of final signature of this agreement. These procedures shall be appended to this document and reviewed at least every 2 years.

c. If the NRCS State office has not developed specific procedures for responding to exigencies, the NRCS shall follow the recently approved guidelines for Unified Federal Review issued by the Department of Homeland Security, Federal Emergency Management Service (DHS, FEMA), the Council on Environmental Quality (CEQ), and the ACHP in July 2014, or the procedures in 36 CFR Part 800.12(b).

VII. Post-review discoveries of cultural resources or historic properties and unanticipated effects to historic properties

Where construction has not yet begun and a cultural resource is discovered after Section106 review is complete, the NRCS shall consult to seek avoidance or minimization strategies in consultation with the SHPO/Indian tribe, and/or to resolve adverse effects in accordance with 36 CFR Part 800.6. The NRCS shall ensure that every contract for assistance includes provisions for halting work/construction in the area when potential historic properties are discovered or unanticipated effects to historic properties are found after implementation, installation, or construction has begun. When such a discovery occurs, the producer who is receiving financial assistance or their contractor shall immediately notify the NRCS State Conservationist's Office, CRS, supervisory NRCS personnel for the area, and the landowner/applicant. NRCS CRS shall inspect the discovery within 24 hours, if weather permits, and in consultation with the local NRCS official (field office supervisor or District or Area Conservationist), concerned Indian

tribes, the SHPO, the NRCS State engineering or program supervisor, as appropriate), the landowner/producer (whomever NRCS is assisting), the CRS shall establish a protective buffer zone surrounding the discovery. This action may require inspection by tribal cultural resources experts in addition to the CRS.

All NRCS contact with media shall occur only under the direction of the NRCS Public Affairs Officer and the State Conservationist with technical guidance from the CRS.

1. Security shall be established to protect the resources/historic properties, workers, and private property. Local law enforcement authorities will be notified in accordance with applicable State law and NRCS policy in order to protect the resources. Construction and/or work may resume outside the buffer only when the State Conservationist determines it is appropriate and safe for the resources and workers and following consultations detailed in this agreement.
2. NRCS CRS shall notify the SHPO/Indian tribe and the ACHP no later than 48 hours after the discovery and describe NRCS' assessment of the National Register eligibility of the property, as feasible and proposed actions to resolve any adverse effects to historic properties. The eligibility determination may require the assessment and advice of concerned Indian tribes, the SHPO, and technical experts (such as historic landscape architects) not employed by NRCS.
3. The SHPO/Indian tribe and ACHP shall respond within 48 hours from receipt of the notification with any comments on the discovery and proposed actions.
4. NRCS shall take any comments provided into account and carry out appropriate actions to resolve any adverse effects.
5. NRCS shall provide a report to the SHPO/Indian tribe and the ACHP of the actions when they are completed.

VIII. Post-review discoveries of HUMAN Remains and unanticipated effects to Human Remains and Graves

a.When human remains are discovered, the NRCS shall follow all applicable federal, tribal, and state burial laws and ordinances, including the Native American Graves Protection and Repatriation Act, and implementing regulations, when on tribal or federal lands, and Washington State Laws RCW 27.44, RCW 68.50 and RCW 68.60 when on non-federal lands. NRCS shall also refer to the ACHP's Policy Statement regarding Treatment of Burial Sites, Human Remains and Funerary Objects and the ACHP's Section 106 Archaeology Guidance. NRCS shall also follow USDA and NRCS policy on treatment of human remains and consultation consistent with Washington State Law.

IX. Dispute resolution.

a. Should any consulting or signatory party to this Washington Prototype Agreement object to any actions proposed or the manner in which the terms of the agreement are implemented, the NRCS State Conservationist and CRS shall consult with such party to resolve the objection. If the State Conservationist determines that such objection cannot be resolved, he or she will:

1. Forward all documentation relevant to the dispute, including the State Conservationist's proposed resolution, to the NRCS FPO and Senior Policy Official (SPO Deputy Chief for Science and Technology) and the ACHP. The ACHP shall provide the FPO, SPO, and State Conservationist with its advice on the resolution of the objection

within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, NRCS shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP and any signatory or consulting parties, and provide them with a copy of this written response. NRCS will then proceed according to its final decision.

2. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, NRCS may make a final decision on the dispute and proceed. Prior to reaching such a final decision, NRCS shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and consulting parties, and provide them and the ACHP with a copy of the written response.

b. The NRCS Washington State Office responsibility to carry out all other actions subject to the terms of this agreement that are not the subject of the dispute remains unchanged.

c. Any consulting party to Washington Prototype Agreement may request the ACHP provide its advisory opinion regarding the substance of any finding, determination, or decision regarding compliance with its terms.

d. At any time during the implementation of the State-base Prototype Agreement, a member of the public may submit an objection pertaining to this agreement to the NRCS State Conservationist, in writing. Upon receiving such an objection, the State Conservationist shall notify the NRCS SPO and FPO, the SHPO/Indian tribe, take the objection into account, and consult with other consulting parties as appropriate to resolve the objection. The NRCS State Conservationist shall notify the SPO, FPO, SHPO/Indian tribe of the outcome of this process.

VIII. Public Involvement

The NRCS State Conservationist will ensure the public is involved in the development of this Washington Prototype Agreement and participates in Section 106 review as set forth above in Section V (reference to other parties).

IX. Annual reporting and monitoring.

a. Every year following the execution of this agreement, commencing December 1, 2015, until it expires or is terminated, the NRCS Washington State Conservationist shall provide all consulting parties (including those parties who participate in the consultation but do not sign the agreement) and the FPO a summary report detailing work undertaken pursuant to its terms, including a list of undertakings falling under Appendix A as well as undertakings that required further review; a summary of the nature and content of meetings held with SHPO/Indian tribes; and an assessment of the overall effectiveness of the Washington Prototype Agreement. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in NRCS' efforts to carry out the terms of this agreement.

1. The NRCS FPO shall use the state reports to provide, through the NRCS SPO, an annual report to the ACHP.

2. The State Conservationist shall use the state report to assess the need for annual meetings with the SHPO/Indian tribes each fiscal year.

b. The State Conservationist will participate in an annual review with the NRCS Regional Conservationist regarding the effectiveness of the prototype agreement and submit a written (email) report following this review to the SPO (Deputy Chief for Science and Technology).

c. The NRCS State Conservationist, SHPO, Indian tribes may request that the ACHP

participate in any annual meeting or agreement review.

X. Compliance with applicable State law and Tribal law (when on Tribal lands).

NRCS shall comply with relevant and applicable state law, including permit requirements on state land, and with relevant and applicable tribal law, when on tribal lands.

XI. Duration of Prototype Agreement.

This Washington Prototype Agreement will be in effect for 10 years from the date of execution unless amended or terminated pursuant to Stipulation XIII below.

XII. Amendment and termination.

a. This Washington Prototype Agreement may be amended if agreed to in writing by all signatories. The amendment will be effective on the date a copy, signed by all of the signatories, are filed with the NRCS FPO, SPO, and the ACHP.
b. If any signatory to this Washington Prototype Agreement, or the ACHP, determines that its provisions will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation XII.A. If within 30 calendar days, or other time period agreed upon by the signatories, an amendment cannot be agreed upon, any signatory or the ACHP may terminate the agreement upon written notification to the other signatories.
c. If this Washington Prototype Agreement is terminated, or expires without being extended via the amendment process described above, and prior to continuing work on any undertaking, NRCS shall comply with 36 CFR Part 800 for all individual undertakings in Washington State.
NRCS will consider requests from other USDA agencies to become a signatory to the State-based Prototype Agreement following formal written requests and appropriate discussion with and approval by the NRCS FPO and SPO, and joint USDA Agency -NRCS State Office consultation with the ACHP, NCSHPO, and Indian tribes/THPOs, and other consulting parties, as appropriate. Such inclusion of the USDA agency may require amendment to this Washington Prototype Agreement.

Execution of this Washington Prototype Agreement by the NRCS and SHPO and implementation of its terms is evidence that NRCS has taken into account the effects of its undertakings in Washington State on historic properties and afforded the ACHP a reasonable opportunity to comment.

Signatory Parties

Roylene Rides at the Door — 6/29/2015
DATE

Roylene Rides at the Door
State Conservationist
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7/6/15
DATE

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APPENDIX A

List of NRCS Undertakings in Washington State

Attachment A is a comprehensive table of NRCS conservation practices, enhancements and conservation activities currently available in Washington State. Some undertakings are listed as "Undertakings with little to no Potential to Affect Historic Properties" as determined by qualified NRCS Cultural Resource Specialists (CRS) as described in Stipulation II.b. Specific conditions must be met for some of these undertakings and are described in Appendix A. When these practices are planned and meet the stated conditions, consultation under Section 106 will not be initiated. If the planned practice implementation does not meet the stated conditions, the practice will require review by a Cultural Resource Specialist (CRS). Practices listed as "Require Cultural Resources Specialist Review" have been determined to have a higher potential to cause effects to historic properties. These practices therefore will always be referred to a CRS for review. Upon review of the project, the CRS will initiate Section 106 consultation unless the undertaking meets any of the follow conditions as determined by the CRS only:

- When practice installation does not extend beyond the previously tilled zoned and is installed in lands that have an agricultural history of tillage (tilled > 20 times) and falls in *very low to moderate probability* using the DAHP predictive model.
- Flood damage repairs to roads, bridges, water control structures, or dams when the facility is not of historic significance and the rehabilitation is to the previously disturbed area.
- In-stream structures that do not involve ground disturbance activities.
- Removal of modern dumps (less than 50 years old) not associated with historic properties.
- Removal of non-historic structures or buildings less than 50 years old where there will be no ground disturbance.
- Replacement of existing structures as they pertain to farm and ranch access roads (culverts, roads, cattle guards, and water control structures) as long as construction does not exceed previous disturbance. When the replacement of these structures will exceed previous disturbance, the NRCS Cultural Resource Specialist will do archaeological review on a case by case basis and send this information and recommendation via letter to consultation partners for their review and comment. Historic Property Inventory (HPI) forms will be prepared if the culverts, roads, cattle guards, or water control structures are eligible on their own under one of the National Register criteria.
- In forest lands where pruning and thinning of pre-commercial sized trees is undertaken using hand loppers, chainsaws or hand saws and where the dispersal of forest debris is left lying where it falls, is chipped, or is hand stacked (not for burning). When no tracked vehicles are utilized unless over frozen ground with protective snow cover. Other vehicles (such as ATV or pickups) may be used to access or transport prunings as they will have minimal impacts to the surface.

Definition of terms used in Appendix A:

- *Conservation Practice*: A specific treatment, such as structural or vegetative measure, or management technique, commonly used to meet specific needs in planning and implementing conservation, for which standards and specifications have been developed.
- *Conservation Enhancement:* A type of conservation activity used to treat natural resources and improve conservation performance. Enhancements are directly related to a practice standards and are installed at a level of management intensity which exceeds the sustainable level for a given resource concern.
- *Conservation Activity:* A general category of NRCS undertakings not otherwise covered under conservation practices or enhancements.

Code	Conservation Activity, Conservation Practice, or Conservation Enhancement	Undertakings with little to no Potential to Affect Historic Properties	REQUIRES CULTURAL RESOURCE SPECIALIST REVIEW (Cultural Resource Specialist will initiate consultation unless meets criteria described in Appendix A preface)	DESCRIPTION
			Conservation Activites	
NA	Technical Assistance	*When NRCS provides no financial assistance for implementation of conservation activities or otherwise exercises no control over implementation.*		Advice or technical assistance, including the development, review and/or approval of conservation plans or technical designs.
NA	Technical Determinations	*X*		Technical determinations based upon empirical or factual findings and determinations of compliance or non-compliance including, but not limited to, wetlands determinations, determinations of highly erodible land, certification of the existence of a wetland or highly erodible land, determination of prime and unique farmland, and the like.
NA	Information gathering activities	*When there is no ground disturbance or when there are no known sites and activity is limited to small scale field investigations such as shovel holes, auger holes, probe holes, and/or core holes.*		Includes resource inventory, monitoring, field trials and other research or information gathering.
NA	Development or revision of Technical Documents	*X*		Includes conservation practice standards, specification, implementation requirements, and techical notes and tools.
NA	Soil Survey	*When there is no ground disturbance or when there are no known sites and activity is limited to small scale field investigations such as shovel holes, auger holes, probe holes, and/or core holes.*		The process of classifying soil types and other soil properties in a given area and geo-encoding such information.
NA	Easement Acquisition	*X*		Financial assistance to provided to partners to purchase easements that protect the agricultural use and conservation values of eligible land.
NA	Conservation Activity Plans (CAP)	*X*		A conservation plan developed for producers to identity conservation practices to address specific resource concerns.
			Conservation Practices	
201	Edge-of-Field Water Quality Monitoring– Data Collection and Evaluation (Interim Practice)	*X*		Water quality monitoring and evaluation under this conservation activity standard are the actions and activities, using acceptable tools and protocols, by which a producer will measure the effectiveness of conservation practices and systems.
202	Edge-of-Field Water Quality Monitoring– System Installation (Interim Practice)		*X*	This conservation activity standard addresses the system installation associated with edge-of-field water quality monitoring.
309	Agrichemical Handling Facility (No.)		*X*	A facility with an impervious surface to provide an environmentally safe area for the handling of on-farm agrichemicals.
310	Bedding (Ac.)		*X*	Plowing, blading, or otherwise elevating the surface of flat land into a series of broad, low ridges separated by shallow, parallel channels with positive drainage.
311	Alley Cropping (Ac.)		*X*	Trees or shrubs are planted in sets of single or multiple rows with agronomic, horticultural crops or forages produced in the alleys between the sets of woody plants that produce additional products.
313	Waste Storage Facility (No.)		*X*	A waste storage impoundment made by constructing an embankment and/or excavating a pit or dugout, or by fabricating a structure.
314	Brush Management (Ac.)	*When practice installation involves hand operations, chemical treatments or surface mowing.*		The management or removal of woody (non-herbaceous or succulent) plants including those that are invasive and noxious.
315	Herbaceous Weed Control (Ac.)	*X*		The removal or control of herbaceous weeds including invasive, noxious and prohibited plants.
316	Animal Mortality Facility (No.)		*X*	An on-farm facility for the treatment or disposal of livestock and poultry carcasses for routine and catastrophic mortality events.
317	Composting Facility (No.)		*X*	A structure or device to contain and facilitate the controlled aerobic decomposition of manure or other organic material by micro-organisms into a biologically stable organic material that is suitable for use as a soil amendment.
318	Short Term Storage of Animal Waste and Byproducts (Cubic Yards)		*X*	Temporary, non-structural measures used to store solid or semi-solid, organic agricultural waste or manure (stackable livestock and poultry manure, bedding, litter, spilled feed, or soil mixed with manure) on a short-term basis between collection and utilization.
319	On-Farm Secondary Containment Facility (No.)		*X*	A permanent facility designed to provide secondary containment of oil and petroleum products used on-farm.
320	Irrigation Canal or Lateral (Ft.)		*X*	A permanent channel constructed to convey irrigation water from the source of supply to one or more irrigated areas.
324	Deep Tillage (Ac.)		*X*	Performing tillage operations below the normal tillage depth to modify adverse physical or chemical properties of a soil.
326	Clearing and Snagging (Ft.)		*X*	Removal of vegetation along the bank (clearing) and/or selective removal of snags, drifts, or other obstructions (snagging) from natural or improved channels and streams.
327	Conservation Cover (Ac.)		*X*	Establishing and maintaining permanent vegetative cover.
328	Conservation Crop Rotation (Ac.)	*X*		A planned sequence of crops grown on the same ground over a period of time (i.e. the rotation cycle).
329	Residue and Tillage Management, No-Till/Strip Till/Direct Seed (Ac.)	*X*		Limiting soil disturbance to manage the amount, orientation and distribution of crop and plant residue on the soil surface year around.

Code	Conservation Activity, Conservation Practice, or Conservation Enhancement	Undertakings with little to no Potential to Affect Historic Properties	REQUIRES CULTURAL RESOURCE SPECIALIST REVIEW (Cultural Resource Specialist will initiate consultation unless meets criteria described in Appendix A preface)	DESCRIPTION
330	Contour Farming (Ac.)	X		Aligning ridges, furrows, and roughness formed by tillage, planting and other operations to alter velocity and/or direction of water flow to around the hillslope.
331	Contour Orchard and Other Perennial Crops (Ac.)		X	Planting orchards, vineyards, or small fruits so that all cultural operations are done on the contour.
332	Contour Buffer Strips (Ac.)		X	Narrow strips of permanent, herbaceous vegetative cover established around the hill slope, and alternated down the slope with wider cropped strips that are farmed on the contour.
340	Cover Crop (Ac.)	X		Grasses, legumes, and forbs planted for seasonal vegetative cover.
342	Critical Area Planting (Ac.)	*When practice installation or site preparation does not involve earth movement such as blading or machine machine scalping.*		Establishing permanent vegetation on sites that have, or are expected to have, high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.
345	Residue and Tillage Management, Reduced Till (Ac.)	X		Managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting the soil-disturbing activities used to grow and harvest crops in systems where the field surface is tilled prior to planting.
348	Dam, Diversion (No)		X	A structure built to divert all or part of the water from a waterway or a stream.
350	Sediment Basin (No)		X	A basin constructed with an engineered outlet, formed by an embankment or excavation or a combination of the two.
351	Water Well Decommissioning (No.)	*When any windmill or well house associated with well is less than 50 years old AND when use of heavy equipment or access roads and creation of staging areas will not exceed previous disturbance in area.*		The sealing and permanent closure of an inactive, abandoned, or unusable water or monitoring well.
353	Monitoring Well (No.)	X		A well, or wells, designed and installed to obtain representative groundwater samples and hydrogeologic information.
355	Ground Water Testing (Ac)	X		Testing the physical, biological, and chemical quality of groundwater from a water well or spring.
356	Dike (Ft)		X	A barrier constructed of earth or manufactured materials.
359	Waste Treatment Lagoon (No.)		X	A waste treatment impoundment made by constructing an embankment and/or excavating a pit or dugout.
360	Waste Facility Closure (No.)		X	Waste facility closure is the process of removing the long-term accumulation of sludge, floating matter, and wastewater from waste impoundments (animal waste lagoons or storage ponds) in an environmentally safe manner.
362	Diversion (Ft.)		X	A channel constructed across the slope with a supporting ridge on the lower side.
366	Anaerobic Digester (No.)		X	A component of a waste management system that provides biological treatment in the absence of oxygen.
367	Roofs and Covers (No.)	X		A fabricated rigid, semi-rigid, or flexible membrane over a waste treatment or storage facility.
371	Air Filtration and Scrubbing	X		A device or system for reducing emissions of air contaminants from a structure via interception and/or collection.
372	Combustion System Improvement	X		Installing, replacing, or retrofitting agricultural combustion systems and/or related components or devices for air quality and energy efficiency improvement.
373	Dust Control on Unpaved Roads and Surfaces	*When practice installation or site preparation does not involve earth movement such as blading or machine scalping.*		Controlling direct particulate matter emissions produced by vehicle and machinery traffic or wind action from unpaved roads and other surfaces by applying a palliative on the surface.
374	Farmstead Energy Improvement	*When building is less than 50 years old. If building is over 50 years old, when practice is installed on the interior of building.*		Development and implementation of improvements to reduce, or improve the energy efficiency of on-farm energy use.
375	Dust Control from Animal Activity on Open Lot Surfaces	*When practice does not extend to undisturbed strata below feedlot.*		Reducing or preventing the emissions of particulate matter arising from animal activity on open lot surfaces at animal feeding operations.
378	Pond (No)		X	A water impoundment made by constructing an embankment or by excavating a pit or dugout.
379	Multi-Story Cropping (Ac.)	X		Existing or planted stands of trees or shrubs that are managed as an overstory with an understory of woody and/or non-woody plants that are grown for a variety of products.
380	Windbreak/Shelterbelt Establishment (Ft.)	*When practice installation or site preparation does not involve earth movement such as blading or machine machine scalping.*		Windbreaks or shelterbelts are single or multiple rows of trees or shrubs in linear configurations.
381	Silvopasture Establishment (Ac.)	*When practice installation or site preparation does not involve earth movement such as blading or machine scalping.*		An agroforestry application establishing a combination of trees or shrubs and compatible forages on the same acreage.
382	Fence (Ft.)		X	A constructed barrier to animals or people.

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383	Fuel Break (Ac.)	*When dozer or track vehicle not used.*		A strip or block of land on which the vegetation, debris and detritus have been reduced and/or modified to control or diminish the risk of the spread of fire crossing the strip or block of land.
384	Woody Residue Treatment (Ac.)	*When there is no piling for burning.*		The treatment of residual woody material that is created due to management activities or natural disturbances.
386	Field Border (Ft.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine scalping.*		A strip of permanent vegetation established at the edge or around the perimeter of a field.
388	Irrigation Field Ditch (Ft.)		X	A permanent irrigation ditch constructed in or with earth materials, to convey water from the source of supply to a field or fields in an irrigation system.
390	Riparian Herbaceous Cover (Ac.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine machine scalping.*		Grasses, sedges, rushes, ferns, legumes, and forbs tolerant of intermittent flooding or saturated soils, established or managed as the dominant vegetation in the transitional zone between upland and aquatic habitats.
391	Riparian Forest Buffer (Ac.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine machine scalping.*		An area predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.
393	Filter Strip (Ac.)		X	A strip or area of herbaceous vegetation that removes contaminants from overland flow.
394	Firebreak (Ft.)		X	A permanent or temporary strip of bare or vegetated land planned to retard fire.
395	Stream Habitat Improvement and Management (Ac.)		X	Improving a stream channel to make a new fish habitat or to enhance an existing habitat. Maintain, improve or restore physical, chemical and biological functions of a stream, and its associated riparian zone, necessary for meeting the life history requirements of desired aquatic species.
396	Aquatic Organism Passage (Mi.)		X	Modification or removal of barriers that restrict or impede movement or migration of fish or other aquatic organisms.
397	Aquaculture Ponds (Ac)		X	A water impoundment constructed and managed for farming of freshwater and saltwater organisms including fish, mollusks, crustaceans and aquatic plants.
398	Fish Raceway or Tank (Ft and ft3)		X	A channel or tank with a continuous flow of water constructed or used for high-density fish production.
399	Fishpond Management (Ac.)	X		Managing impounded aquatic habitat and water quality for the production of fish.
402	Dam (No & Ac-ft)		X	An artificial barrier that can impound water for one or more beneficial purposes.
410	Grade Stabilization Structure (No)		X	A grade stabilization structure is a structure used to control the grade in natural or constructed channels.
412	Grassed Waterway (Ac.)		X	A shaped or graded channel that is established with suitable vegetation to convey surface water at a non-erosive velocity using a broad and shallow cross section to a stable outlet.
422	Hedgerow Planting (Ft.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine scalping.*		Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.
423	Hillside Ditch (Ft)		X	A channel that has a supporting ridge on the lower side constructed across the slope at definite vertical intervals and gradient with or without a vegetative barrier.
428	Irrigation Ditch Lining (Ft)	*When irrigation ditch is less than 50 years old.*		A lining of impervious material or chemical treatment, installed in an irrigation ditch, canal, or lateral.
430	Irrigation Pipeline		X	A pipeline and appurtenances installed to convey water for storage or application, as part of an Irrigation water system.
432	Dry Hydrant (No.)		X	A non-pressurized permanent pipe assembly system installed into water source that permits the withdrawal of water by suction.
436	Irrigation Reservoir (No & Ac-ft)		X	An irrigation water storage structure made by constructing a dam, embankment, pit, or tank.
441	Irrigation System, Microirrigation (No. and Ac.)		X	An irrigation system for frequent application of small quantities of water on or below the soil surface: as drops, tiny streams or miniature spray through emitters or applicators placed along a water delivery line.
442	Sprinkler System (No. and Ac.)		X	A distribution system that applies water by means of nozzles operated under pressure.
443	Irrigation System, Surface and Subsurface (No. and Ac.)		X	A system in which all necessary earthwork, multi-outlet pipelines, and water-control structures have been installed for distribution of water by surface means, such as furrows, borders, and contour levees, or by subsurface means through water table control.
447	Irrigation System, Tailwater Recovery (No)		X	An irrigation system designed to collect, store, and convey irrigation tailwater and/or rainfall runoff for reuse in irrigation.
449	Irrigation Water Management (Ac.)	X		The process of determining and controlling the volume, frequency, and application rate of irrigation water.
450	Anionic Polyacrylamide (PAM) Erosion Control (Ac.)	X		Application of water-soluble Anionic Polyacrylamide (PAM) to meet a resource concern.
453	Land Reclamation, Landslide Treatment (No & Ac)		X	Managing in-place natural materials, mine spoil (excavated over-burden), mine waste or overburden to reduce down-slope movement.

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455	Land Reclamation, Toxic Discharge Control (No)		X	Control of acid or otherwise toxic aqueous discharge from abandoned coal mines or coal mine waste.
457	Mine Shaft & Adit Closing (No)		X	Closure of underground mine openings by filling, plugging, capping, installing barriers, gating or fencing.
460	Land Clearing (Ac.)		X	Removing trees, stumps, and other vegetation from wooded areas to achieve a conservation objective.
462	Precision Land Forming (Ac.)		X	Reshaping the surface of land to planned grades.
464	Irrigation Land Leveling (Ac.)		X	Reshaping the surface of land to be irrigated, to planned lines and grades.
466	Land Smoothing (Ac.)		X	Land smoothing is removing irregularities on the land surface.
468	Lined Waterway or Outlet (Ft)		X	A waterway or outlet having an erosion-resistant lining of concrete, stone, synthetic turf reinforcement fabrics, or other permanent material.
472	Access Control (Ac.)		X	The temporary or permanent exclusion of animals, people, vehicles, and/or equipment from an area.
482	Mole Drain (Ft)		X	An underground conduit constructed by pulling a bullet-shaped cylinder through the soil.
484	Mulching (Ac.)	X		Applying plant residues or other suitable materials produced off site, to the land surface.
490	Tree/Shrub Site Preparation (Ac.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine machine scalping.*		Treatment of areas to improve site conditions for establishing trees and/or shrubs.
500	Obstruction Removal (Ac.)		X	Removal and disposal of buildings, structures, other works of improvement, vegetation, debris or other materials.
511	Forage Harvest Management (Ac.)	X		The timely cutting and removal of forages from the filed as hay, greenchop, or silage.
512	Forage and Biomass Planting (Ac.)		X	Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production.
516	Livestock Pipeline (Ft.)		X	A pipeline and appurtenances installed to convey water for livestock or wildlife.
527	Karst Sinkhole Treatment (No.)		X	The treatment of sinkholes in karst areas to reduce contamination of groundwater resources, and/or to improve farm safety.
528	Prescribed Grazing (Ac.)	X		Managing the harvest of vegetation with grazing and/or browsing animals.
533	Pumping Plant (No.)		X	A facility that delivers water at a designed pressure and flow rate. Includes the required pump(s), associated power unit(s), plumbing, appurtenances, and may include on-site fuel or energy source(s), and protective structures.
543	Land Reclamation, Abandoned Mined Land (Ac)		X	Reclamation of land and water areas adversely affected by past mining activities.
548	Grazing Land Mechanical Treatment (Ac.) (548) (3/03)		X	Modifying physical soil and/or plant conditions with mechanical tools by treatments such as pitting, contour furrowing, and chiseling, ripping or subsoiling.
550	Range Planting (Ac.)	*When there is no surface disturbance such as harrowing or tilling.*		Establishment of adapted perennial or self-sustaining vegetation such as grasses, forbs, legumes, shrubs and trees.
554	Drainage Water Management (Ac.)	X		The process of managing water discharges from surface and/or subsurface agricultural drainage systems.
555	Rock Barrier (Ft.)		X	A rock retaining wall constructed across the slope to form and support a bench terrace that will control the flow of water and check erosion on sloping land.
557	Row Arrangement (Ac.)	X		Row Arrangement is a system of crop rows on planned directions, grades and lengths.
558	Roof Runoff Structure (No.)		X	A structure that will collect, control and convey precipitation runoff from a roof.
560	Access Road (Ft.)		X	An access road is an established route for equipment and vehicles.
561	Heavy Use Area Protection (Ac.)		X	Heavy Use Area Protection is used to stabilize a ground surface that is frequently and intensively used by people, animals, or vehicles.
562	Recreation Area Improvement (Ac.)		X	Established grasses, legumes, vines, shrubs, trees, or other plants or selectively reducing stand density and trimming woody plants to improve an area for recreation.
566	Recreation Land Grading and Shaping (Ac.)		X	Recreation Land Grading and Shaping is reshaping the surface of the land to support recreational land use.
568	Trails and Walkways (Ft.)		X	A trail is a constructed path with a vegetated or earthen surface. A walkway is a constructed path with an artificial surface. A trail/walkway is used to facilitate the movement of animals, people, or off-road vehicles.
570	Stormwater Runoff Control (No. and Ac.)		X	Controlling the quantity and quality of stormwater runoff.
572	Spoil Spreading (Ac.)		X	Disposal of surplus excavated materials.
574	Spring Development (No)		X	Collection of water from springs or seeps to provide for livestock and wildlife.
575	Trails and Walkways (Ft.)		X	A trail is a constructed path with a vegetated or earthen surface. A walkway is a constructed path with an artificial surface. A trail/walkway is used to facilitate the movement of animals, people, or off-road vehicles.
578	Stream Crossing (No.)		X	A stabilized area or structure constructed across a stream to provide a travel way for people, livestock, equipment, or vehicles.
580	Streambank and Shoreline Protection (Ft.)		X	Treatment(s) used to stabilize and protect banks of streams or constructed channels, and shorelines of lakes, reservoirs, or estuaries.
582	Open Channel (Ft)		X	Constructing or improving a channel either natural or artificial, in which water flows with a free surface.
584	Channel Bed Stabilization		X	Measure(s) used to stabilize the bed or bottom of a channel.
585	Stripcropping (Ac.)	X		Growing planned rotations of row crops, forages, small grains, or fallow in a systematic arrangement of equal width strips across a field.

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587	Structure for Water Control (No.)		X	A structure in a water management system that conveys water, controls the direction or rate of flow, maintains a desired water surface elevation or measures water.
588	Cross Wind Ridges (Ac.)	X		Ridges formed by tillage, planting or other operations and aligned perpendicular to prevailing wind direction during critical wind erosion periods.
590	Nutrient Management (Ac.)	X		Managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments.
591	Amendments for the Treatment of Agricultural Waste (AU)	X		The use of chemical or biological additives to change the properties of manure, process wastewater, contaminated storm water runoff and other wastes.
592	Feed Management (No. of Systems and AUs Affected)	X		Manipulating and controlling the quantity and quality of available nutrients, feedstuffs, or additives fed to livestock and poultry.
595	Integrated Pest Management (Ac.)	X		A site-specific combination of pest prevention, pest avoidance, pest monitoring, and pest suppression strategies.
600	Terrace (Ft)		X	An earth embankment, or a combination ridge and channel, constructed across the field slope.
601	Vegetative Barriers (Ft.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine scalping.*		Permanent strips of stiff, dense vegetation established along the general contour of slopes or across concentrated flow areas.
603	Herbaceous Wind Barriers (Ft.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine scalping.*		Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.
606	Subsurface Drain (Ft.)		X	A conduit installed beneath the ground surface to collect and/or convey excess water.
607	Surface Drainage, Field Ditch (Ft.)		X	A graded ditch for collecting excess water in a field.
608	Surface Drainage, Main or Lateral (Ft)		X	An open drainage ditch constructed to a designed cross section, alignment and grade.
609	Surface Roughening (Ac.)		X	Performing tillage operations that create random roughness of the soil surface
610	Salinity & Sodic Soil Management (Ac.)		X	Management of land, water and plants to reduce accumulations of salts and/or sodium on the soil surface and in the crop rooting zone.
612	Tree/Shrub Establishment (Ac.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine scalping.*		Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.
614	Watering Facility (No.)		X	A watering facility is a means of providing drinking water to livestock or wildlife.
620	Underground Outlet (Ft)		X	A conduit or system of conduits installed beneath the surface of the ground to convey surface water to a suitable outlet.
629	Waste Treatment (No.)	X		The use of unique or innovative mechanical, chemical or biological technologies that change the characteristics of manure and agricultural waste.
630	Vertical Drain (No)		X	A well, pipe, pit, or bore in porous, underground strata into which drainage water can be discharged without contaminating groundwater resources.
632	Waste Separation Facility (No.)		X	A filtration or screening device, settling tank, settling basin, or settling channel used to partition solids and/or nutrients from a waste stream.
633	Waste Recycling (Ac.)	*When waste is only applied to cropland.*		The use of the by-products of agricultural production or the agricultural use of non-agricultural by-products.
634	Waste Transfer (No)		X	A system using structures, pipes or conduits installed to convey wastes or waste byproducts from the agricultural production site to storage/treatment or application.
635	Vegetated Treatment Area (Ac)		X	An area of permanent vegetation used for agricultural wastewater treatment.
636	Water Harvesting Catchment (No.)		X	A facility for collecting and storing runoff from precipitation.
638	Water and Sediment Control Basin (No)		X	An earth embankment or a combination ridge and channel constructed across the slope of minor watercourses to form a sediment trap and water detention basin with a stable outlet.
640	Waterspreading (Ac)		X	A system of dams, dikes, ditches, or other means of diverting or collecting runoff from natural channels, gullies, or streams and spreading it over relatively flat areas.
642	Water Well (No.)		X	A hole drilled, dug, driven, bored, jetted or otherwise constructed into an aquifer for water supply.
643	Restoration and Management of Rare and Declining Habitats (Ac.)		X	Restoring, conserving, and managing unique or diminishing native terrestrial and aquatic ecosystems.
644	Wetland Wildlife Habitat Management (Ac.)	*When dozers, trenchers and earth moving equipment are not used.*		Retaining, developing or managing wetland habitat for wetland wildlife.
645	Upland Wildlife Habitat Management (Ac.)	*When harrows, dozers, trenchers and earth moving equipment are not used.*		Provide and manage upland habitats and connectivity within the landscape for wildlife.
646	Shallow Water Development and Management (Ac.)		X	The inundation of lands to provide habitat for fish and/or wildlife.

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647	Early Successional Habitat Development/Management (Ac.)	*When practice does not involve disking or tilling.*		Manage plant succession to develop and maintain early successional habitat to benefit desired wildlife and/or natural communities.
650	Windbreak/Shelterbelt Renovation (Ft.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine scalping.*		Replacing, releasing and/or removing selected trees and shrubs or rows within an existing windbreak or shelterbelt, adding rows to the windbreak or shelterbelt or removing selected tree and shrub branches.
654	Road / Trail / Landing Closure and Treatment (Ft)		*X*	The closure, decommissioning, or abandonment of roads, trails, and/or landings and associated treatment to achieve conservation objectives.
655	Forest Trails and Landings (Ac.)		*X*	A temporary or infrequently used route, path or cleared area.
656	Constructed Wetland (Ac.)		*X*	An artificial ecosystem with hydrophytic vegetation for water treatment.
657	Wetland Restoration (Ac)		*X*	The return of a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site.
658	Wetland Creation (Ac)		*X*	The creation of a wetland on a site location that was historically non-wetland.
659	Wetland Enhancement (Ac.)		*X*	The augmentation of wetland functions beyond the original natural conditions on a former, degraded, or naturally functioning wetland site; sometimes at the expense of other functions.
660	Tree/Shrub Pruning (Ac.)	*When slash is not piled for burning*		The removal of all or parts of selected branches, leaders, or roots from trees and shrubs.
666	Forest Stand Improvement (Ac.)		*X*	The manipulation of species composition, stand structure and stocking by cutting or killing selected trees and understory vegetation.
670	Lighting System Improvement	*When building is less than 50 years old. If building is over 50 years old, only when practice is installed in the interior of building.*		Complete replacement or retrofitting of one or more components of an existing agricultural lighting system.
672	Building Envelope Improvement	*When building is less than 50 years old. If building is over 50 years old, only when practice is installed in the interior of building.*		Modification or retrofit of the building envelope of an existing agricultural structure.
734	Fish and Wildlife Structure (No.)	*When practice installation or site preparation does not involve earth movement such as blading, grubbing, or machine scalping. When structures are installed on buildings less than 50 years old.*		A structure designed and installed specifically for fish or wildlife.
775	Drainage Ditch Covering	*X*		A fabricated rigid or semi-rigid cover installed over a drainage ditch.
798	Seasonal High Tunnel for Crop Production (No.)	*When there are no known sites and there is no underground anchoring system below previous tillage and when no drains are installed.*		A seasonal polyethylene covered structure with no electrical, heating, and/or mechanical ventilation systems that is used to cover crops to extend the growing season in an environmentally safe manner.
521A	Pond Sealing or Lining, Flexible Membrane (No.)	*X*		A manufactured hydraulic barrier consisting of a functionally continuous layer of synthetic or partially synthetic, flexible material.
521B	Pond Sealing or Lining, Soil Dispersant (No.)	*X*		A liner for a pond or waste impoundment consisting of a compacted soil-dispersant mixture.
521C	Pond Sealing or Lining, Bentonite Sealant (No.)	*X*		A liner for a pond or waste storage impoundment consisting of a compacted soil-bentonite mixture.
521D	Pond Sealing or Lining, Compacted Clay Treatment (No.)	*X*		A liner for a pond or waste storage impoundment constructed using compacted soil without soil amendments.
589C	Cross Wind Trap Strips (Ac.)	*X*		Herbaceous cover established in one or more strips typically perpendicular to the most erosive wind events.
			Enhancements	
AIR03	Replace burning of prunings, removals and other crop residues with non-burning alternatives	*When there is no use of track vehicles or if using over snow and frozen ground and when no burying of plant residue.*		The use of non-burning alternatives to dispose of prunings, removals and other crop residues from orchards, vineyards and other woody perennial crops. Non-burning alternatives include chipping, grinding, shredding, mowing or composting of these materials.
AIR04	Use drift reducing nozzles, low pressures, lower boom height, and adjuvants to reduce pesticide drift	*X*		Use drift reduction technologies to reduce the drift of agricultural chemicals away from the intended target when spraying.
AIR07	GPS, targeted spray application (SmartSprayer), or other chemical application electronic control technology	*X*		Utilize electronically-controlled or managed chemical spray application technology to more precisely apply agricultural pesticides to their intended targets.

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AIR09	Nitrification inhibitors or urease inhibitors	X		The use of an ammonia or ammonium fertilizers with a substance that inhibits the biological oxidations of ammoniacal nitrogen to nitrate nitrogen or the use of surface applied urea products with a substance that inhibits hydrolytic action on urea by urease enzyme that when applied to soils results in less urea nitrogen lost by ammonia volatilization (AAPFCO). This enhancement is only applicable to nitrogen applied within 30 days of planting or after consecutive warm days (i.e., greater than 75°F). This does not apply to "pop-up" or starter nitrogen sources applied at planting time.
AIR10	Discontinue burning crop residue	X		Utilize non-burning crop residue management techniques after a crop harvest.
ANM03	Incorporate native grasses and/or legumes into 15% or more of herbage dry matter productivity	X		Improve pasture by increasing native grasses and/or legumes to 15% of herbage dry matter (productivity by weight) using adapted species and varieties, appropriate seeding rates, and timing of seeding. Pastures containing about 15% native grasses and/or legumes by weight dry matter are approximately equal to 30% foliar cover.
ANM09	Grazing management to improve wildlife habitat	X		Implement a grazing management plan that will allow for rest periods to provide adequate residue for nesting and fawning cover and increase diversity of vegetation structure to benefit a variety of wildlife species.
ANM12	Shallow water habitat		X	Construct or renovate small, shallow sites to impound or hold water seasonally, typically from late winter through early summer (e.g., vernal pools).
ANM21	Prairie restoration for grazing and wildlife habitat	*When there is no harrowing or deep seeding.*		This activity consists of restoring/renovating prairie habitat by establishing native vegetation and managing the restored plant community.
ANM25	Stockpiling of forages to extend the grazing season	X		Livestock are excluded from forages on specified acres during the growth season. The "stockpiled" forages are grazed at a later time using strip grazing to allow animals to utilize the forage within a strip for a specified period of time.
ANM27	Wildlife friendly fencing	*When no new fence is installed.*		This enhancement involves the use of wildlife friendly fencing techniques that allow free passage of daily wildlife movement and seasonal migration; and/or increase visibility to prevent entanglement and mortality.
ANM29	On-farm forage based grazing system	X		A forage based grazing system that supplies all roughage (forage and supplemental hay) requirements for a livestock operation.
ANM31	Drainage water management	*When using existing water control systems.*		This enhancement consists of seasonal hydrology management during non-cropping periods for wildlife habitat on working lands.
ANM32	Extend existing filter strips or riparian herbaceous cover for water quality protection and wildlife habitat	X		Where existing filter strips or riparian herbaceous covers (i.e., buffers) are utilized, extend them to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals, and for wildlife habitat.
ANM33	Riparian buffer, terrestrial and aquatic wildlife habitat		X	This activity consists of managing riparian zones by utilizing select conservation measures (such as re-locating equipment operations, trails, or livestock; establishing diverse native vegetation and controlling invasive species; fencing; and extending the width of the riparian zone to enhance wildlife habitat adjacent to riparian zones of steams, ponds, lakes, or wetlands) to achieve stream side cover and vegetative diversity and structure to improve terrestrial and aquatic wildlife habitat.
ANM34	Leave standing grain crops un-harvested to benefit wildlife	X		Implement a crop management plan that will allow a portion of grain crops to be left in fields un-harvested to provide food and cover for wildlife during winter months.
ANM35	Enhance wildlife habitat on expired grass/legume covered CRP acres or acres with similar perennial vegetated cover managed as hayland	X		Implement a focused habitat management plan for the benefit of selected wildlife species on expired CRP grass/legume covered acres that has CRP conservation cover or acres with similar perennial vegetated cover managed as hayland.
ANM36	Enhance wildlife habitat on expired tree covered CRP acres or acres with similar woody cover managed as forestland	*When no prescribed burning is used*		Implement a focused habitat management plan for the benefit of selected wildlife species on expired CRP tree covered acres that has CRP conservation cover or acres with similar woody cover managed as forestland.
ANM37	Prescriptive grazing management system for grazed lands (includes expired CRP grass/legume or tree covered acres converted to grazed lands)	*When trees removed are not part of historic property or when trees are not removed by using heavy equipment to bulldoze or grub out roots. When no new fences are installed and when wildlife escape structures are retrofit on troughs less than 50 years old.*		Implement a prescriptive grazing management system for all grazed lands and for all eligible land uses in the operation. This includes expired CRP grass/legume or tree covered acres that are now converted to a grazing system.
ANM38	Retrofit watering facility for wildlife escape and enhanced access for bats and bird species	*When wildlife escape structures are retrofit on troughs less than 50 years old.*		Retrofit all existing watering facilities (troughs, tanks, etc.) to allow for the escape of wildlife that become trapped while trying to drink and to remove obstructions above the watering facility such as boards and wires.
ANM39	Extending riparian forest buffers for water quality protection and wildlife habitat	X		Where existing riparian forest buffers (i.e., buffers) are utilized, extend them to gain more efficiency in intercepting overland flow, reducing the transport of nutrients, pesticides, pathogens and agro-chemicals, and for wildlife habitat.
ANM40	Extending existing field borders for water quality protection and wildlife habitat	X		Where existing field borders are utilized, extend them to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides, pathogens and agro-chemicals, and for wildlife habitat.

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ANM41	Multi-species native perennials and native self-seeding annuals for biomass/wildlife habitat	*When seeding is accomplished by hand, with ATV or is aerial.*		This enhancement consists of establishing native perennial and native self-seeding annual vegetation for biomass production and wildlife habitat. The biomass may be harvested for renewable energy or forage, grazed, or left in place.
ANM42	Forest stand improvement for wildlife habitat and soil quality	*When live trees are not killed to create snags or the trees impacted are not culturally modified.*		This enhancement consists of the creation of snags, den trees, forest stand structural diversity, and coarse woody debris on the forest floor to a level optimum for native wildlife, ecosystem function, and long- term forest soil health. It may be implemented during thinning or harvesting, or it can be implemented separately.
ANM50	Control of undesirable woody vegetation in moist soil wetlands for wildlife		*X*	This enhancement is to remove or manage unwanted woody vegetation within moist soil wetlands in order to encourage growth of native grasses, sedges, herbaceous plants and other desirable vegetation.
ANM51	Establish and maintain early successional, naturally occurring vegetation in ditches and ditch bank borders for wildlife habitat and water quality protection	*X*		This enhancement is to encourage the establishment of early successional, naturally occurring vegetation in ditches, side slope and bank borders to provide cover, critical nesting and brood rearing habitat as well as filtering overland flow and improving water quality.
ANM53	Hinge cutting for wildlife	*X*		This enhancement creates hinge cuts for wildlife cover, resting or loafing areas while providing valuable browse and cover for several game and non-game species.
ANM55	Creation and retention of snags, den trees and course woody debris for wildlife habitat	*When no killing or cutting of live trees or impacts to culturally modified trees.*		This enhancement is to create and/or retain snags, den trees and coarse woody debris on the forest floor to reverse the leading cause of upland wildlife population decline – habitat loss.
ANM56	Increase summer roost habitat for forest dwelling bat species	*When live trees are not killed to create snags or the trees impacted are not culturally modified.*		This activity consists of managing forestland and forested riparian areas by creating new potential roost trees within a forest and associated riparian areas to achieve desired summer habitat for forest dwelling bat species.
ANM57	Removal of all threats to sensitive wildlife species on the operation		*X*	This activity consists of implementing all activities required to address all identified threats to sensitive wildlife species on the operation.
ANM58	Reduction of attractants to human-subsidized predators in sensitive wildlife species habitat	*When the reduction of attractants does not include the removal of planted trees, windmills, watering facilities or other human-built features over 50 years old.*		This activity consists of reducing artificial perching sites, nest sites, food, and water available to subsidized predators in areas where human-subsidized predators are a threat to sensitive wildlife species. Human-subsidized predators may include ravens, crows, magpies, coyotes, foxes, skunks, raccoons, and other species. Activities under this enhancement may include removal of non-native or invasive trees; removal of unused power poles, corrals, windmills, buildings, and other vertical structures; and/or removal or management of watering facilities, dead livestock, road kill, garbage, animal feed, dumps, and other non-natural food sources.
ANM59	Grazing management to improve Sage grouse habitat	*X*		Implement a grazing management plan that will allow for rest periods to provide adequate residue for nesting cover and increase diversity of vegetative structure to benefit a variety of wildlife species.
ANM60	Grouse friendly fencing	*X*		This enhancement involves the retrofit of existing fences to increase visibility and prevent grouse from collision and mortality. Selection of this enhancement requires all fences that are a high or medium risk to grouse be marked.
ANM61	Hosting a grazing related field day	*X*		This enhancement requires a producer to host a grazing field day. Grazing field days provide an opportunity for producers, state, and federal employees to visually learn grazing principles from others to help encourage, plan, and implement effective grazing management. Assistance from state/federal employees or other agriculture organizations is encouraged.
ANM63	Harvest crop in a manner that allows wildlife to flush and escape	*X*		Harvest crops (hay or small grains) using conservation measures that allow wildlife to flush and escape. These measures include timing of haying to avoid periods when upland wildlife are nesting or fawning, idling land during the nesting or fawning period, and applying harvest techniques that reduce mortality to wildlife.
ANM64	Managing livestock parturition to coincide with forage availability	*X*		This enhancement uses a controlled breeding season to match livestock nutrient requirements to available pasture forage and reduce supplemental feeding. This enhancement is applicable to all grazing livestock.
ANM65	Monitoring nutritional status of ruminant livestock using the NUTBAL system	*X*		Use the NUTBAL Online application to determine if the current diet is sufficient to meet ruminant livestock nutritional needs and develop a least cost nutrition management plan. This requires the collection and laboratory analysis of forage or fecal samples to determine the nutritional value of grazing forages.
CCR98	Improved Resource Conserving Crop Rotation (IRCCR)	*X*		Improving a resource-conserving crop rotation means strengthening an existing resource-conserving crop rotation to further: reduce erosion; improve soil fertility and soil health; interrupt pest cycles; andiln applicable areas, reduce depletion of soil moisture or otherwise reduces the need for irrigation.
CCR99	Resource-Conserving Crop Rotation	*X*		Resource-conserving crop rotation means a crop rotation that: Includes at least one resource conserving crop; reduces erosion; improves soil fertility and tilth; interrupts pest cycles; and in applicable areas, reduces depletion of soil moisture or otherwise reduces the need for irrigation.
ENR01	Fuel use reduction for field operations	*X*		This enhancement is for fuel savings of 20% or more achieved by a reduction in field operations when compared to existing management system.
ENR10	Using nitrogen provided by legumes, animal manure and compost to supply 90 to100% of the nitrogen needs	*X*		This enhancement involves using nitrogen (N) produced by legumes and/or available animal manure and compost to supply 90 to 100% of N nutrient needs for crops, hay and/or forages produced on the farm.

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ENR11	Improving energy feedstock production using alley cropping systems with short rotation woody crops	X		This enhancement involves the use of short rotation woody plants that produce energy feedstock planted in multiple rows with crops or forages produced in the alleyways between the woody rows.
ENR12	Use of legume cover crops as a nitrogen source	X		This enhancement is for the use of legume cover crops as a primary source of nitrogen in a cropping system. Use of legume cover crops is applicable to conventional, specialty and organic crop production systems.
ENR13	Variable speed motor-drive systems	X		This enhancement activity is for upgrading of existing single speed motors through the addition of variable speed drives. A motor replacement may also be included in some cases. The primary use of this enhancement is for irrigation water pumping. This enhancement is not intended for farmstead or animal housing applications.
PLT02	Monitor key grazing areas to improve grazing management	X		Adjust grazing management based on monitoring data. Monitor key grazing areas to determine if current grazing management is meeting management goals and objectives. A key grazing area is a small area of a grazed field that is identified as being representative of the entire field.
PLT06	Renovation of a windbreak, shelter belt or hedgerow for wildlife habitat	*When tree removal and prep involves no mechanical blading, grubbing, or dragging of cut trees or use of track vehicles or intent to burn piled debris.*		This enhancement is for the renovation of existing sites that are declining in vigor, need additional woody plants (trees or shrubs) or otherwise no longer provide wildlife habitat benefits. Existing rows of woody plants may be thinned, removed or replaced with new plantings. Existing woody plants may be pruned, either branches or roots or both, to improve windbreak function, health and vigor.
PLT15	Establish pollinator and/or beneficial insect habitat	*When no blading, machine scalping, harrowing or tillage for first time.*		Seed or plug nectar and pollen producing plants in non-cropped areas such as field borders, vegetative barriers, contour buffer strips, grassed waterways, shelterbelts, hedgerows, windbreaks, conservation cover, and riparian forest and herbaceous buffers.
PLT16	Intensive rotational grazing	X		This enhancement is for the Uharvest efficiencyU of grazing livestock to increase forage harvest, and to improve forage quality and livestock health. The grazing system is managed to produce high quality, nutritious forage and maintain plants with sufficient energy reserves to recover quickly when adequate soil moisture is available for regrowth. Generally, livestock are rotated through pastures in the grazing system based on the physiological growth and nutritional stage of the forage plants and the daily dry matter intake and nutritional requirements of the animal. This enhancement is for: rotational grazing systems with increased numbers of pastures or paddocks, the accompanying required infrastructure, shorter grazing periods, and increased stock density.
PLT17	Creating forest openings to improve hardwood stands	*When there is no grubbing, blading, dragging of commercial size trunks and access is one time only with non-tracked vehicle*		Creating forest openings or patches is a silvicultural practice used to naturally regenerate over-mature and/or degraded hardwood stands while providing added cover and browse for several game and non-game species of wildlife.
PLT18	Increasing on-farm food production with edible woody buffer landscapes	*When site preparation does not include mechanical blading or machine scalping.*		This enhancement is for the enhancing of windbreaks, alley cropping, silvopasture, or riparian forest buffer systems with trees and shrubs that produce edible products for human or wildlife consumption.
PLT19	Herbicide resistant weed management	X		Adoption of multiple agronomic principles to manage herbicide resistant weeds in annually planted crop fields.
PLT20	High residue cover crop or mixtures of high residue cover crops for weed suppression and soil health	X		Utilize biomass from a cover crop or cover crop mixture as a living or killed mulch to suppress weed seed germination and to add carbon to the terrestrial carbon pool.
PLT22	Multi-story cropping, sustainable management of non-timber forest plants	X		This activity, sometimes called forest farming, involves the manipulation of forest species composition, structure, and canopy cover to achieve or maintain a desired native plant community to facilitate the sustainable management of native non-timber forest plant(s) (e.g., goldenseal, ramps, mushrooms, ginseng, ferns, "sugarbush", etc.).
PLT23	Conifer crop tree release	*When no burning or heavy equipment is used.*		Conifer Crop Tree Release (CCTR) is a silvicultural technique used to enhance the growth, health and productivity of individual trees, while improving other resources such as wildlife habitat, recreation, timber value, and aesthetics.
PLT24	Crop tree release in young hardwood stands	*When no burning or heavy equipment is used.*		Crop Tree Release (CTR) in young hardwood stands is a silvicultural technique used to enhance the health and productivity of individual trees, while improving other resources such as wildlife habitat, recreation, timber value, and aesthetics.
PLT25	Prune low density pine or hardwood trees to improve tree quality and wildlife habitat	*When dozers or other grubbing equipment are not used.*		This enhancement is to enrich the health and productivity of individual trees, while improving other resources such as recreation, timber value, and aesthetics through the use of a silvicultural technique--pruning.
PLT26	Forest stand improvement to treat understory vegetation to minimize the risk of damaging wildfires, and/or manipulate the density and composition of tree species to improve wildlife habitat and forest health	*When dozers or other grubbing equipment are not used.*		This enhancement is to manage the understory vegetation in a forested area with mechanical, chemical or manual methods to reduce the fuel load to lessen the risk of a wildfire, improve the plant species mix to benefit wildlife or to improve the health of the residual trees.
PLT27	Create small openings in pine stands to improve wildlife habitat or to prepare the area for natural regeneration	*When no grubbing, blading or dragging of commercial size trunks. When access is one time only with non-tracked vehicles and no burrning is used*		This enhancement is to create small openings in pine stands (i.e., one-half (0.5) to three (3) acres in size). The cleared area will have the vegetation removed through harvesting, mulching, or means compatible with the site.

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PLT29	Rehabilitating damaged or cut over stands	*When no grubbing, blading or dragging of commercial size trunks. When access is one time only with non-tracked vehicles and no burning is used*		This enhancement is designed to restore a forest that has been damaged or cut-over leaving very few desirable trees along with undesirable tree species. Action will be taken to reduce the undesirable tree species and promote the desirable tree species. Over time, the favoring of desirable species will bring the stand back to a productive and healthy forest.
PLT30	Monitor pasture health using pasture condition scores (PCS)	X		Evaluate current pasture productivity and stability of the plant community and soil resources; and utilize the information for management decision making.
SOE05	Intensive no-till (Organic or Non-organic systems)	X		This enhancement is for using an intensive no-till, strip till, or direct seeding method of planting throughout the planned rotation. A C:N ratio that builds soil health is maintained by including high residue and low residue crops in the rotation, and/or by using cover crops where needed. Termination of all cover crops is accomplished using chemical methods or non-chemical methods, such as flail mowing, roller crimper, and frost kill; not tillage.
SQL01	Controlled traffic system	X		Controlled traffic confines heavy traffic from tractor drive wheels/tracks, combine wheels, fertilizer or manure spreaders and grain carts to specific lanes in crop fields year after year.
SQL04	Use of cover crop mixes	X		This enhancement is for the use of cover crop mixes that contain two (2) or more different species of cover crops or cultivars of a single species.
SQL05	Use of deep rooted crops to breakup soil compaction	X		This enhancement is for the use of deep rooted crops to break up compacted soils and improve soil quality. Deep rooted crops can be perennial plants like alfalfa or annual plants like forage radish.
SQL08	Intercropping to improve soil quality and increase biodiversity	X		This enhancement involves the use of intercropping principles (i.e., growing two or more crops in close proximity to each other during part or all of their life cycles) to promote interactions that improve soil and water quality via increased biodiversity and contribute to pest management.
SQL09	Conversion of cropped land to grass based agriculture	X		Conversion of cropped land to grass-based agriculture is the establishment of mixtures of perennial grasses, forbs and legume species on cropland where annually-seeded cash crops have been grown in monocultures. Select perennial species based on species compatibility, forage quality potential, improvements to soil quality, beneficial effects for wildlife and/or production of biomass.
SQL10	Crop management system where crop land acres were recently converted from CRP grass/legume cover or similar perennial vegetation	X		Implement a prescriptive crop management system on crop land acres that have been recently converted from CRP grass/legume conservation cover or similar perennial vegetated cover to a rotation of annually planted crops. Note: this enhancement is limited to acres where the conversion event took place not more than 2 years prior (not including hayland).
SQL11	Cover cropping in orchards, vineyards and other woody perennial horticultural crops	X		Grow perennial or annual cover crop mixtures of grass, legumes, native flowering plants and/or other forbs year round to provide soil coverage, organic mulch, beneficial insect habitat, and other conservation benefits in orchards, vineyards or other perennial horticultural crops. Cover crops, once planted, are replanted annually or maintained year after year.
SQL12	Intensive cover cropping in annual crops	X		Grow and manage seasonal cover crops of grasses, legumes or forbs to maintain soil coverage and other conservation benefits during all the non-crop production periods in an annual crop rotation. Intensive cover cropping is applicable to conventional, specialty and organic crop production systems.
SQL13	Forest stand improvement for soil health	*When there is no subsoiling or other mechanical methods of breaking up compacted soils.*		This enhancement consists of forest management activities (planting, tending, and harvesting) to minimize impacts on forest soils and improve soil health.
SQL14	Integrate grazing into crop and forest systems	X		This enhancement integrates of grazing into land use systems where they are absent.
SQL15	Utilize the soil health nutrient tool to assess soil nutrient pools	X		Use a soil health nutrient tool to assess soil nutrient pools for soil health.
SQL16	High species diversity grazing lands	X		Warm-season perennial grazing lands will be overseeded with a multi-species diverse mixture of annual grasses, clovers, and broadleaf species.
SQL17	Placement of hay feeding areas on low fertility soils	X		This enhancement combines soil testing and remediation of low fertility grazing areas with targeted hay feeding sites. Selected sites will have the hay unrolled. Only specific grazing areas will be targeted instead of the entire farm.
SQL18	Soil health crop rotation	X		Implement a crop rotation which addresses the four principle components of a soil health: adds diversity to the cropping system; maintains residue throughout the year; keeps a living root; and minimizes soil chemical, physical and biological disturbance.
SQL19	Management for rangeland soil health	X		Professional assessment of rangeland health by evaluating the presence, descriptions and amounts of rills, water flow patterns, pedestals or terracettes, bare ground, gullies, wind erosion affected areas, litter movement, soil surface loss and resistance to erosion, plant community composition and distribution, compaction, functional/structural groups, plant mortality/decadence, amounts of litter, annual production, invasive plants, and reproductive capability of perennial plants; and implementing measures that help avoid degradation of the resource.
WQL03	Rotation of supplement and feeding areas	X		The proper location and regular movement of livestock concentration areas such as feeding areas and mineral blocks in a manner that will improve livestock distribution, reduce localized areas of disturbances and reduce impacts on water bodies.
WQL04	Plant tissue tests and analysis to improve nitrogen management	X		Use plant tissue tests to adjust nitrogen application rates.

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WQL05	Apply nutrients no more than 30 days prior to planned planting date	X		This enhancement is for applying nutrients from fertilizer, manures and/or compost no more than 30 days prior to the planned planting date of the crop.
WQL07	Split nitrogen applications, 50% after the crop emergence or pasture green up	X		Apply no more than 50% of total crop nitrogen needs within 30 days prior to planting or in the case of pasture or hay after green up of the dormant grasses. Apply the remaining 50% or more of the total nitrogen needs after crop emergence or pasture green up.
WQL09	Apply phosphorus fertilizer below soil surface	X		This enhancement is for the application of all phosphorus fertilizer at least 3 inches deep, including manure, or as a 2X2 row starter. Note: the use of this enhancement may require a revised Highly Erodible Land Conservation (HELC) plan.
WQL10	Plant a cover crop that will scavenge residual nitrogen	X		Plant a cover crop that will scavenge nitrogen remaining in the soil after the harvest of a previous crop. Suitable cover crops include those with at least a "Very Good" rating for scavenging nitrogen as documented in "Managing Cover Crops Profitably, 3rd Edition" (Sarrantonio, 1998), Chart 2 Performance & Roles, pg 67. Examples include cereal rye, barley, forage radish and sorghum sudan.
WQL11	Precision application technology to apply nutrients	X		The use of precision agriculture technologies to apply nutrients to fit variations in site-specific conditions found within fields.
WQL18	Non- chemical pest management for livestock	*When harrowing or mechanically treating manure piles do not dip below soil surface or when no dumping of deep spoils on previously unmanured or untilled areas.*		The use of management, monitoring, and prevention techniques to manage external livestock pests without the use of pesticides.
WQL19	Transition to ORGANIC grazing systems	X		"Transition to Organic Grazing Systems" supports the conversion of a conventional to an organic livestock grazing system. Key to the enhancement activity is following ecological and pasture-based grazing requirements, applying materials according to the National List of Allowed Synthetic and Prohibited Natural Substances, and managing livestock according to National Organic Program (NOP) rules (Subpart C – Organic Production and Handling Requirements) for organic certification. This enhancement activity facilitates compliance with NOP rules for organic certification.
WQL20	Transition to ORGANIC cropping systems	X		"Transition to Organic Cropping Systems" supports the conversion of a conventional to an organic cropping system. Key to the enhancement is the inclusion of management activities that improve water and soil quality in an "Organic System Plan (OSP)" that adheres to the National Organic Program (NOP) 205.201 criteria. Included in the plan are specifics on how producers will manage pests, weeds, diseases, and plant nutrients by following a crop rotation that incorporates cover crops and by using other cultural, biological and physical methods. The OSP also covers uses of manure and compost, measures to prevent exposure of organic crops and soils to NOP-prohibited substances, and seed sources.
WQL22	On-farm composting of farm organic waste	*When no site preparation is needed on a previously untilled or unhardened location.*		This enhancement consists of composting organic waste generated from the agricultural operation(s) on-farm. This includes animal manures, livestock mortality (where state or local laws allow), and waste from on-farm processing of agricultural products (e.g., slaughter by-products or vegetable culls removed from the field during harvest). It does not include any hazardous household waste, any general hazardous waste products or bio-hazard waste products. Yard waste such as grass clippings and leaves can be included but are not required.
WQL25	Split applications of nitrogen based on a PSNT	X		Use Upre-sidedressU soil nitrate test (PSNT) to determine the need and/or amount of additional nitrogen to be applied during a sidedress/topdress N application.
WQL26	Reduce the concentration of nutrients imported on farm	X		Grow at least 75% of feed for livestock on the farm and use manure from the livestock to supplement up to 50% of N, 90% of P and 90% K for crops grown on the farm.
WQL27	Drainage water management for nutrient, pathogen, or pesticide reduction	X		This enhancement consists of managing soil and/or surface water levels during the non-cropping season in order to reduce the loss of nutrients, pathogens, or/and pesticides from a crop field through drainage systems and into downstream receiving waters. This enhancement may also be utilized to reduce the oxidation of organic matter in the soil and/or reduce wind erosion or particulate matter (dust) emissions.
WQL28	Biological suppression and other non-chemical techniques to manage brush, herbaceous weeds and invasive species	*When no burning and no machine scalping or blading.*		This enhancement is for the reduction of woody brush, herbaceous weeds and invasive plants using non-chemical methods. Physical methods include burning, hoeing, mowing, mulching, pulling or other similar techniques. Biological methods include targeted livestock grazing, the use of natural enemies either introduced or augmented and planting desired species after weed/brush control measures. The addition of mineral amendments to favor desired plant species is recommended. Use of chemicals is prohibited with this enhancement.

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WQL29	High level Integrated pest management to reduce pesticide environmental risk	X		Utilize advanced Integrated Pest Management (IPM) prevention, avoidance, monitoring, and suppression techniques to eliminate or minimize the need for pesticide while maintaining satisfactory pest control. Apply pesticides in an environmentally sound manner only when monitoring indicates an economic pest threshold has been exceeded and other measures are not sufficiently effective. Choose the lowest risk pesticide available labeled for and effective against the target pest(s), and implement appropriate mitigation techniques to minimize environmental risks. Pesticide applications must follow all label requirements.
WQL30	Integrated pest management for ORGANIC farming	X		Managing pests on an organic farm, including farms transitioning to organic, with an Integrated Pest Management (IPM) system that relies on high level prevention, avoidance, monitoring, and suppression techniques that are based on an understanding of pest ecology. Organic IPM relies primarily on ecologically-based cultural and biological practices that result in healthy soil, healthy plants and habitat for beneficial organisms. Appropriate mitigation techniques are utilized to reduce environmental risks from selected suppression techniques.
WQL31	Land application of treated manure	X		This enhancement is for the use of manure that has been treated to reduce odors and/or pathogens prior to land application. Acceptable practices include controlled temperature anaerobic digestion (mesophilic or thermophilic), composting, and chemical treatment or amendment. Waste treatment lagoons and injection of manure alone do not qualify as acceptable practices.
WQL32	Apply enhanced efficiency fertilizer products	X		At least 50% of the pre-emergent and early post emergent nitrogen fertilizers, phosphorus fertilizers or manure used for production must include enhanced efficiency formulations.
WQL33	Use of non-chemical methods to kill cover crops	X		Use non-chemical methods to kill cover crops prior to no-tilling, direct seeding or strip-tilling the normal production crop. These methods include mowing, rolling, undercutting and weather kill.
WQT01	Irrigation system automation	X		This enhancement entails using GPS guided variable rate irrigation or other innovative technologies that allow irrigation water application based on variable site conditions within a field.
WQT03	Irrigation pumping plant evaluation	X		This enhancement consists of the evaluation of the irrigation pumping plant performance and efficiency using the Nebraska Irrigation Pumping Plant Performance Criteria.
WQT05	Remote monitoring and notification of irrigation pumping plant operation	X		A system for monitoring the status of an irrigation pumping plant and notifying the operator by a wireless connection of a change in the operating status of the irrigation system.
WQT07	Regional weather networks for irrigation scheduling	X		Crop evapotranspiration (crop ET) information from a regional weather network is utilized as a part of the irrigation water management plan for irrigation scheduling. Water use is planned and adjustments in application rates and timing are made using the regional weather network data.
WQT08	Decrease irrigation water quantity or conversion to non-irrigated crop production	X		This enhancement consists of reducing the total quantity of irrigation water used to produce crops and forages or the conversion of land to non-irrigated production.
WQT09	High level or advanced irrigation water management	X		This enhancement entails using high level irrigation water management (IWM) methods and other innovative technologies to evaluate precise soil and crop conditions. These will then be used to schedule irrigation water application based on variable site conditions within a field.
WQT10	Center pivot irrigation system end gun removal	X		This enhancement consists of removing the end guns from center pivot irrigation systems.
WQT11	Low energy precision application (LEPA) irrigation	X		This enhancement consists of converting existing conventional sprinkler irrigation systems to a low energy precision application (LEPA) irrigation system.
WQT12	Computerized hole selection for polypipe	X		This enhancement consists of calculating hole sizes for polypipe tubing using computer software to determine the optimal size hole per furrow in order to improve irrigation efficiency and decrease the quantity of irrigation water need per season.

APPENDIX B
GLOSSARY OF ACRONYMS USED IN THIS DOCUMENT

USDA	**United States Department of Agriculture**
NRCS	**Natural Resources Conservation Service**
ACHP	**Advisory Council on Historic Preservation**
NHL(s)	**National Historic Landmark(s)**
NRHP	**National Register of Historic Places**
SHPO	**State Historic Preservation Officer**
THPO	**Tribal Historic Preservation Officer**
NCSHPO	**National Conference of State Historic Preservation Officers**
NHO	**Native Hawaiian Organization**
NEPA	**National Environmental Policy Act**
CEQ	**Council on Environmental Quality**
DHS	**Department of Homeland Security**
FEMA	**Federal Emergency Management Agency**
NHPA	**National Historic Preservation Act**
FPO	**Federal Preservation Officer (Federal Preservation Officer)**
SPO	**Senior Policy Official (NRCS)**
NHQ	**National Headquarters (NHQ)**
APE	**Area of Potential Effect—from ACHP regulations 36 CFR Part 800**
CRS	**Cultural Resources Specialist (NRCS—meets Secretary of Interior's Professional Qualification Standards, generally an archaeologist or historian)**
EWP	**Emergency Watershed Program (NRCS program)**

APPENDIX C
TRIBAL CONTACT LIST

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