



Natural Resources Conservation Service  
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**NATIONAL HANDBOOK OF CONSERVATION PRACTICES**

**450 – NHCP  
NOTICE 173**

**July 5, 2022**

**Purpose.** This notice transmits revised national Conservation Practice Standards (CPSs), along with an updated index for insertion into the National Handbook of Conservation Practices (NHCP). Notes are included to highlight key changes made to each CPS. States have until October 1, 2023, to adopt these changes into the state editions of these standards

**Effective Date.** This notice is effective October 1, 2022.

**Explanation of Changes.** New and revised national CPSs are as follows:

**Clearing and Snagging (Code 326):** The definition has been changed to clarify that the term stream includes channels. The purposes have been reworded to better clarify the resource concerns being addressed by the standard. Changes have been made in the Criteria section to the capacity analysis to add flexibility for emergency work and to clarify hazardous materials such as propane tanks and car bodies for debris disposal.

**Constructed Wetland (Code 656):** Changes were made to the Purposes and Conditions Where Practice Applies section of the standard to clarify that the practice can be used to treat tile drainage outflow. References were added and the formatting and writing style were updated to meet current agency requirements. Minor revisions were made for clarity and readability.

**Dike and Levee (Code 356):** This revision retitles CPS 356 from Dike to Dike and Levee to allow distinction between dikes and levees. A clear distinction is drawn between what is a dike and what is a levee based on purpose and levee hazard potential. This distinction is necessary to align with the definition of a levee used by other Federal agencies. Potential future revisions include splitting this standard into two separate standards after National Levee Safety Guidelines are developed, but the timeframe for that is currently unknown.

**Diversion (Code 362):** The purposes were consolidated from nine statements to three statements. In the Criteria section, the subsection for cross section would provide additional protection for sensitive sites and vegetative establishment subsection changes would clarify non-vegetated diversions are allowable. The Considerations section addressing potential wetland impacts was expanded to include subsurface seepage and to address the potential water quality impacts of concentrating flows.

**Emergency Animal Mortality Management (Code 368):** One Purpose was separated into two purposes. The two new purposes now address surface water and ground water separately. Minor

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wording changes were made to Criteria, Considerations, for clarity and specificity. More significant changes were made to Operation and Maintenance to add specific items for Burial and add more items to Composting. New references were added to the References section.

**Feed Management (592):** Multiple changes and additions were made throughout the standard to meet current agency requirements and language updated to improve clarity. The purpose for Air Quality was expanded to include ammonia, volatile organic compounds, greenhouse gases, and dust to be consistent with the Air Quality policy.

**Field Operations Emissions Reduction (376):** Changed the definition to “Adjusting field operations and technologies to reduce emissions of particulate matter (PM) and oxides of nitrogen from field operations.” Added the additional purpose of reduce emissions of oxides of nitrogen to cover the expanded definition. Changed the “Condition Where Practice Applies” to “This practice applies to cropland” since another practice exists for performing these activities on other land uses and it is more appropriate to focus this practice on cropland.

**Fishpond Management (399):** There were no major changes to this standard. The three purposes were combined into one. Three additional considerations were added regarding addition of submerged habitat, removal of accumulated debris or sediment, and use of biological and/or mechanical methods to control nuisance aquatic species. The references section was updated to delete outdated references and include new documents.

**Forest Farming (code 379):** The practice name was changed from Multi-Story Cropping to Forest Farming. Definition and purposes were restructured and expanded to align with the new name, payment scenario narratives and resource concerns. Criteria, considerations, plans and specifications, operation and maintenance, and references were refined (from passive to active voice), consolidated and updated as necessary.

**Grazing Land Mechanical Treatment (548):** Minor Changed the definition by removing equipment listed. Added equipment list to criteria separated by soil or plant disturbances. Reduced safe slope work from 30 to 20%. Changed some associated practices to updated purpose.

**Hillside Ditch (Code 423):** Minor revisions were made for clarity and readability. The Capacity subsection of Criteria was revised to remove specific limitations for stable channel grade and expanded to be the Channel Stability and Capacity subsection. The required capacity was reduced from conveying runoff from a 10 year, 24-hour storm to a 5 year, 24-hour storm.

**Irrigation System, Surface and Subsurface (443):** Fixed grammatical errors within the draft conservation practice standard. The Definition was simplified to remove the extended list of example components described in the Criteria section. Added utility location responsibility statement. Criteria for zero-runoff systems (e.g., ebb-and-flow systems, flood floor systems) has been added.

**Land Reclamation, Landslide Treatment (453):** Minor revisions were made for clarity and readability. Minor technical additions were included in the Criteria and Considerations sections. Lists of required items were added to the Plans and Specifications, and Operation and Maintenance sections. References were updated.

**Mine Shaft and Adit Closing (457):** Minor revisions were made for clarity and readability. Criteria Section - The Safety subsection was reorganized to emphasize testing and personnel entry in accordance with MSHA requirements. New subsections entitled “Bats and other wildlife” and Access, were added to improve the organization and flow of information. New subsections entitled “Discharge” and “Monuments” were added to provide new guidance. The Design references subsection was deleted, removing the Agricultural Engineering Note 1 reference. The Bat and Mines (Tuttle) reference was moved to the new “Bats and other wildlife” subsection. The reference section was updated.

**Pond (Code 378):** Minor revisions were made as new information became available, for improved organization and clarity. Revisions were made to table 1 to keep the data within the scope of the practice standard. Statement about complying Federal, State, and local laws was added to the General Criteria section. Added changes to Filter Diaphragm to improve technical clarity. Instructions were added to indicate where anti-seep collars may be used.

**Range Planting (Code 550):** The Definition and Conditions Where Practice Applies sections were edited for clarity. In the Criteria section, the general criteria applicable to all purposes was edited for completeness and a multi-year seeding strategy was added to Considerations. References were updated to include a Conservation Effects Assessment Project (CEAP) study and the PLANTS database.

**Stream Crossing (578):** This standard has a few major changes including increases siting flexibility, and the addition of vented fords as an alternative where frequent overtopping is expected.

**Subsurface Drain (606):** Fixed grammatical errors within the draft conservation practice standard. The definition was expanded to address “soil water conditions,” rather than just “excess water.” An additional purpose of addressing animal health and productivity due to adverse soil conditions was added. The conditions where practice applies was revised to encompass “adverse” soil conditions, rather than specifically the “wet” condition. Wetland conservation has been elevated to the General Criteria subsection. Filter and envelope terminology has been revised to align with recently released NEH 650, Chapter 14, Drainage.

**Tree/Shrub Pruning (660):** Purpose and criteria sections were further refined. Criteria were adjusted to match changes in purposes. Considerations and plans and specifications sections were further refined. New references added.

**Vegetated Treatment Area (635):** This standard has update with no changes to the criteria and only minor wording changes.

**Vertical Drain (630):** This standard has update with no changes to the criteria and only minor wording changes

**Wetland Creation (658):** Added an additional purpose of creating a native plant community adapted to growth and regeneration in anerobic conditions. Establishment of hydric soil was removed as a purpose. Minor changes were made to better describe the practice definition, purpose, criteria, and consideration. All references to permitting requirements was removed, as those requirements are provided by NRCS National conservation planning policy. The Plans and Specifications section was strengthened.

**Pen and Ink Changes.** There are several conservation practices that have minor Pen and Ink changes to the standard. Standards with a Pen and Ink change have an “R” after the release date on the national standard.

**Denitrifying Bioreactor (Code 605)** – under General Criteria, the woodchip selection criteria was updated from an average effective diameter description to a range of acceptable length description.

**Livestock Shelter Structure (Code 576)** – The following Statement has been added to the definition “Structure will have less than four walls; this structure is not to be construed to be a building. “. Changed the referenced figure in Table 3 from figure 3 to figure 1

**Pumping Plant (Code 533)** - The following has been added to Conditions Where Practice Applies “manure or” to transfer wastewater. The following statement has been added to Considerations “To reduce energy imported on a farm, consider developing and using on-farm solar, wind, or other renewable energy resource for the pump power unit.”

**Water Harvesting Catchment (Code 636)** - The last bullet in the considerations section of 636 reads “Elevated roof structures or storage tanks may require additional...” has been changed to “Storage tanks, such as above-ground polyethylene tanks, may require additional...”

Condition where practice applies was changed to read “... to the collection and storage of runoff from areas such as watersheds, impervious surfaces, high tunnels, and other temporary structures. ...”

**Standards Being Archived (1).** **Windbreak/Shelterbelt Renovation (650)** will be archived since it has been combined into Windbreak/Shelterbelt Establishment and Renovation (380). These will be archived effective October 1, 2023.

**Discipline Lead Changes.** The following standards discipline lead or co-leads have been changed. These changes are reflected in the updated NHCP Index:

The following are changed to the Conservation Engineering Division-Agricultural Engineer (CED-AE)

**Subsurface Drain (606), Surface Drain, Field Ditch (607), Surface Drain, Main or Lateral (608), and Waterspreading (640)**

The following are changed to the Conservation Engineering Division-Conservation Civil Engineer (CED-CCE)

**Aquaculture Pond (397), Dam (402), Dam, Diversion (348), Dike (356), Grade Stabilization Structure (410), Irrigation Reservoir (436), Pond (378), Sediment Basin (350), and Structure for Water Control (587)**

The following are changed to the Conservation Engineering Division-Construction Engineer (CED-CE)

**Access Road (560), Heavy Use Area Protection (561), Land Clearing (460), Obstruction Removal (500), Spoil Disposal (572), and Waste Facility Closure (360)**

The following are changed to the Conservation Engineering Division-Design Engineer (CED-DE).

**Land Reclamation, Landslide Treatment (453), Mine Shaft and Adit Closing (457), Pond Sealing or Lining, Compacted Soil Treatment (520), Pond Sealing or lining, Concrete (522), Pond Sealing or Lining, Geomembrane or Geosynthetic Clay Liner (521), Roof Runoff Structure (558), and Roofs and Covers (367)**

The following are changed to the Conservation Engineering Division-Design Engineer and Ecological Sciences Division Agronomist (CED-DE) & (ESD-Agron).

**Land Reclamation, Abandoned Mined Land (543)**

The following is changed to the Conservation Engineering Division-Design Engineer and Ecological Sciences Division Animal Husbandry (CED-DE) & (ESD-AH).

**Livestock Shelter Structure (576)**

The following is changed to the Conservation Engineering Division-Engineering Geologist (CED-EG)

**Spring Development (574)**

The following are changed to the Conservation Engineering Division-Hydraulic Engineer (CED-HE).

**Channel Bed Stabilization (584), Clearing and Snagging (326), Dry Hydrant (432), Open Channel (582), Stormwater Runoff Control (570), Stream Crossing (578), Streambank and Shoreline Protection (580), Water and Sediment Control Basin (638), and Water Harvesting Catchment (636)**

The following is changed to the Ecological Sciences Division Agronomist and Conservation Engineering Division-Agricultural Engineer (ESD-Agron) & (CED-AE).

**Critical Area Planting (342)**

Removed the co-lead of the Conservation Engineering Division-Landscape Architect (CED-LA) from the following.

**Riparian Forest Buffer (391) and Tree-Shrub Establishment (612)**

**Filing Instructions.** If a hardcopy of the NHCP is maintained, replace the “Contents” section (pages i through vi, dated October 2022) with the revised pages found at <http://directives.sc.egov.usda.gov/viewerFS.aspx?hid=22299>

Replace the prior existing practice standards and archive, as appropriate, with the practice standards contained in this notice.

This notice and each of the conservation practice standards included with this notice can be accessed electronically through the NRCS website at [http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/cp/ncps/?cid=nrcs143\\_026849](http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/cp/ncps/?cid=nrcs143_026849)

*Federal Register* Notice

NRCS published a notice to solicit public comments about how to improve specific agency conservation practice standards in the *Federal Register* on March 9, 2021, and January 19, 2022, for a 30-day comment periods. Comments from the public were accepted during the comment period.

Guidance to the States and the Pacific Islands and Caribbean Areas for complying with the provisions of the 1996 Farm Bill that require advertising for public comment prior to revising NRCS State-level technical guides can be found in Title 450, General Manual, Part 401, Subpart B, Section 401.19.

/s/

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