United States Department of Agriculture

Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

OBSTRUCTION REMOVAL

CODE 500

(no)

DEFINITION

Removal and disposal of buildings, structures, vegetation, debris, or other materials.

PURPOSE

This practice may be applied to achieve one or more of the following purposes:

- Improve water quality for surface and ground water.
- Prevent potential flood damage.
- Facilitate other conservation practices.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to site conditions where obstruction removal is required to address a resource concern or support other conservation practices. This practice is not intended for removal of—

- Obstructions from natural or constructed channels.
- Trees, stumps, or other vegetation from wooded areas.
- Underground tanks.
- Unidentifiable or hazardous materials such as solvents, petroleum oils, and asbestos.

For removal and disposal of trees, stumps, or other vegetation from wooded areas, refer to NRCS Conservation Practice Standard (CPS) Land Clearing (Code 460).

For removal and disposal of obstructions from natural or constructed channels, refer to NRCS CPSs Clearing and Snagging (Code 326) or Aquatic Organism Passage (Code 396).

CRITERIA

General Criteria Applicable to All Purposes

Use methods that are appropriate for the obstruction to be removed, such as—

- Demolition.
- Excavation.
- Disassembly.
- Burning.

Plan removal to meet all Federal, State, and local laws and regulations. The landowner must obtain all necessary permissions from regulatory agencies, or document that no permits are required.

Conduct demolition work in accordance with the Occupational Safety and Health Administration (OSHA) requirements.

The landowner and/or contractor is responsible for locating all buried utilities in the project area, including drainage tile and other structural measures. Ensure that all utilities are shut off and disconnected from structures by a licensed electrician or utility company prior to removal.

If universal waste materials (e.g., batteries, pesticides, mercury-containing equipment, and lamps) or nonhazardous secondary materials (e.g., tires, asphalt shingles, treated wood, or contaminated construction and demolition materials) are expected or encountered, contact State or local solid waste management authorities for appropriate methods of handling and disposal.

Do not mulch, compost, or burn contaminated construction and demolition materials such as wood products treated with creosote, pentachlorophenol (PCP), or chromated copper arsenate (CCA).

Dispose of materials in sequence with the proposed construction schedule so that moved materials do not impede subsequent work. Materials such as rocks, timber, fence posts, lumber products, concrete, masonry, and metal may be disposed by recycling, reuse, burial, burning, or offsite transport to a regulated landfill or recycling facility. All disposal methods used must meet local laws and regulations.

Compact filled areas according to site specific requirements so the areas will drain and blend with the surrounding landscape. Maintain at least 12 inches of soil cover over buried foundations or other obstructions below ground which are not removed.

Vegetate and stabilize all disturbed areas as soon as possible after construction to prevent erosion and offsite sedimentation. Use NRCS CPSs Critical Area Planting (Code 342) or Mulching (Code 484).

CONSIDERATIONS

When applicable, consider recycling or reuse of materials as the first option for disposal of materials from obstruction removal.

Consider onsite or local disposal of wood that may be infected with transmittable insects or diseases.

When disposing materials by burning, use “Basic Smoke Management Practices” (O’Neill et al., 2011) for planning and mitigating smoke impacts.

Consider the use of dust suppression methods, such as the application of water, tackifiers, or polymers, if the demolition will generate objectionable levels of dust.

Obstruction removal can result in the disturbance of large areas that are subject to erosion during the demolition process. Where necessary, consider provisions in the plans to control erosion and offsite sedimentation. Consider providing an increased level of designed treatment for sites with high priority areas for source water protection or are upstream of community drinking water withdrawal sites.

Treated wood products can be difficult to identify by color, particularly when they are weathered. When in doubt, assume the wood is treated and select a different disposal method than mulch, compost, or burn.

When revegetation is needed, consider revegetating using species or diverse mixes that are native or adapted to the site and have multiple benefits. In addition, where appropriate, consider a diverse mixture of forbs and wildflowers to support pollinator and other wildlife habitat.

Obstruction removal often involves heavy equipment working in environmentally sensitive areas. Consider servicing and refueling equipment in a manner that minimizes spills and volatilization.

Obstruction removal can present hazards to those doing the work. Consider how the work will be performed, the hazards it will present to personnel, and what safety equipment and training may be appropriate.

Work performed in poorly ventilated areas can present hazards to workers. In areas that are potentially oxygen-deprived, provide workers with a supplemental oxygen breathing apparatus. In areas where there are concentrations of mice, roosting birds, and bats, airborne pathogens can be a problem. Provide workers with appropriate breathing protection to reduce risks from inhaled pathogens.

Old buildings, structures, and trees that are slated for removal can provide important habitat for some types of wildlife. Prior to removal, consider how to protect species that are identified.

PLANS AND SPECIFICATIONS

Prepare plans and specifications to address the requirements in this standard. As a minimum, include the following information on the plan drawings:

- Plan view showing the location and extent of the obstruction to be removed.
- Profile(s) showing the natural ground surface, anticipated depth of obstruction removal, soil cover, and final surface grading, if necessary.
- Details and site location for the disposal of materials from the obstruction removal.

As a minimum, include the following construction specifications that provide written instructions for:

- Suspend all construction activities if underground tanks or hazardous or unidentifiable materials are encountered during construction. Refer the owner to State or local solid waste management authorities.
- Proper handling and disposal of materials.
- Compacting all earthwork, if necessary.
- Providing temporary or permanent soil stabilization on removal and disposal areas.

OPERATION AND MAINTENANCE

Prepare a site-specific operation and maintenance plan for the landowner or operator. As a minimum, include—

- Periodic inspection for excessive settlement at removal and disposal areas which may cause ponding or equipment damage. Promptly fill areas with excessive settlement.
- Periodic inspection of disturbed areas for sheet and rill erosion. Repair any problems as soon as possible.
- Periodic inspection of vegetative cover. Perform needed maintenance of vegetative protection which may include mowing, fertilization, weed control, repair of seedbed damage, or reseeding of bare soil.

REFERENCES

Wood Preservative Science Council. 2008. CCA Treated Wood Disposal. Manakin-Sabot, Virginia. http://www.woodpreservativescience.org/disposal.shtml.

O'Neill, S., P. Lahm, and A. Mathews. 2011. Basic Smoke Management Practices. U.S. Forest Service and USDA-Natural Resources Service Report. Washington D.C. https://www.nrcs.usda.gov/wps/PA_NRCSConsumptition/download?cid=stelprdb1046311&ext=pdf

U.S. Department of Labor. Occupational Safety and Health Administration. Safety and Health Regulations for Construction, 29 CFR 1926. Washington, D.C.

U.S. Environmental Protection Agency. Official website: https://www.epa.gov/ingredients-used-pesticide-products and https://www.epa.gov/asbestos.