

## Part 600 – Watershed Program Management

### Subpart A – Program Criteria

#### 600.0 Authority, Purpose, and Scope

##### A. Authority

The National Watershed Program Handbook (NWPH) is intended for use by persons providing technical and financial assistance authorized by either of the following:

- (i) Public Law 83-566 (as amended), the Watershed Protection and Flood Prevention Act of 1954.
- (ii) Public Law 78-534, the Flood Control Act of 1944.

##### B. Purpose

The purpose of this handbook is to provide guidance and procedures for the delivery of the policy in the Title 390, National Watershed Program Manual (390-NWPM). The Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended) is codified in 16 U.S.C. Sections 1001 to 1008, 1010, and 1012, which is in 390-NWPM, Part 506, Subpart A, Section 506.0, and will be referred to in this document as Public Law 83-566. 7 CFR Part 622, “Watershed Projects,” sets forth the general policies for planning and carrying out watershed projects under Public Law 83-566, and flood prevention projects under Public Law 78-534 (see 390-NWPM, Part 506, Subpart A, Section 506.1).

##### C. Scope

- (1) The NWPM sets forth the policy for all watershed plans developed under the Watershed Program, this includes projects which are earmarked or funded in any other way.
- (2) Federal laws, Executive orders and regulations found in 390-NWPM, Part 500, Subpart D, Section 500.32, can be located at the following Web sites:
  - (i) Public laws can be found at <http://www.law.cornell.edu/uscode>. For Public Law 83-566, Watershed Protection and Flood Prevention Act, select “All Titles, Title 16, Chapter 18,” and all sections except 7 and 11 of the statute will be listed, including amendments since the original law was authorized. Also see 390-NWPM, Part 506, Subpart A, Section 506.0.
  - (ii) Further information about the CFR can be found at <http://www.gpoaccess.gov/cfr/index.html>. For Public Law 83-566, select “most current data,” enter “7 CFR 622,” and “submit.” Then choose “Part 622–Watershed Projects.” Also see 390-NWPM, Part 506, Subpart A, Section 506.2.
  - (iii) Further information about specific executive orders, secretarial orders, and presidential memoranda can be found at <http://www.usa.gov>. Find “search” on the page and enter “Executive order and the topic.” For example, enter “Executive order floodplain management.”
  - (iv) Further information about departmental regulations can be found at <http://www.ocio.usda.gov/directives>. For example, in the search line, enter “1350-001” for Departmental Regulation 1350-001, “Tribal Consultation.”

## 600.1 Watershed Program Overview

- A. See 390-NWPM, Part 500, Subpart A, Section 500.1, for general description of the Watershed Program.
- B. Congress made it clear that the authority provided under Public Law 83-566 should be used to “supplement both our present agricultural soil and water conservation programs and our programs for development and flood protection of major river valleys. It will bridge the gap between these two types of programs and greatly enhance the ultimate benefits of both” (House of Representatives Report No. 1140, 83d Congress, 2d Session).
- C. “Federal help under the Act is available only to assist local organizations to plan and install needed water management and flood prevention measures that cannot feasibly be installed under other current Federal conservation programs” (Committee Print, H.R. Committee on Agriculture, August 25, 1954, 83d Congress, 2d Session, Watershed Conservation and Flood Prevention, answer to question 4).
- D. Interpretation of Public Law 83-566 by the Office of the President is in Executive Order 10584, reprinted in 390-NWPM, Part 506, Subpart A, Section 506.3.

## 600.2 Relationship to Other Programs

Watershed projects should be developed when land or water resource issues in a watershed cannot be adequately addressed by individuals or groups making use of other USDA conservation programs. Projects should not be developed for the purpose of providing higher cost-sharing rates than those available through other USDA conservation programs.

## 600.3 Eligible Purposes

### A. General Purposes

The general purposes of the Watershed Protection and Flood Prevention Act are stated broadly in the act itself (see 390-NWPM, Part 506, Subpart A, Section 506.0). They provide for a wide range of activities related to land and water resources within the limits related to watershed size (250,000 acres) and reservoir storage capacity (25,000 acre-feet total).

### B. Authorized Project Purposes

Sections 3 and 4 of Public Law 83-566 provide for Federal assistance for the following authorized project purposes:

- (i) Flood Prevention Flood Damage Reduction
- Flood damage reduction or flood prevention measures are defined in 390-NWPM, Part 500, Subpart A, Section 500.3 B(1).
  - Conservation practices that protect the watershed should be considered and evaluated. These practices reduce the rate and amount of runoff and erosion, thereby resulting in the reduction of downstream flood peaks, sedimentation, and the delivery of other damaging material carried by floodwater.
  - Measures that alleviate flood losses by modifying the susceptibility of land, people, and property to flood damage or by modifying the impact of flooding should also be considered.
  - Measures to acquire, perpetuate, restore, and enhance the natural capability of wetlands and floodplains to retain excessive floodwaters, improve water

quality and quantity, and provide fish and wildlife habitat should also be considered for inclusion in project plans.

- Measures for this purpose include, but are not limited to the following:

- **Removal or Relocation of Existing Floodplain Properties**

- Moving residential, commercial, industrial, and farm buildings may be the most economically, socially, and environmentally acceptable means of reducing or preventing flood damage. Relocation of existing floodplain properties is intended to reposition buildings into flood-free areas of the landowner's property or on other flood-free land. Land that is evacuated for relocation must have some type of deed restriction to prohibit building on that land. Where State law prohibits building on floodplains, deed restrictions are not required. If floodplain properties are historic properties, historic property consultation is required and mitigation may be needed.

- **Flood Warning System**

- Wherever properties remain in a flood-prone area, a flood warning system should be used in conjunction with other measures to reduce flood damage. A flood warning system may include monitoring of weather or stream conditions coupled with a projection of anticipated flood depths. An alert or warning system may be included to notify floodplain occupants in time to protect property from damage, to evacuate the area, or both.

- **Floodproofing**

- This measure applies to individual buildings. It includes dikes for individual buildings, blocking off low-level entrances and windows, installing one-way valves in drains, strengthening walls and foundations, installing protective walls, elevating the building or contents to minimize flood losses, and other appropriate measures. Individual buildings must be evaluated to determine if they are historic properties prior to floodproofing.

- **Floodplain and Wetland Acquisition**

- Floodplain acquisition consists of purchasing residential and commercial properties that have been subjected to repeat flooding.
    - Perpetual easements on floodplains and wetlands in undeveloped areas offer the opportunity to perpetuate, restore, and enhance the natural capability of wetlands and floodplains to retain excessive floodwaters.

- **Other Engineered Practice Measures**

- Floodwater retarding structures, channel work, dikes, floodways, floodwater diversions, sediment basins, grade stabilization structures, stream bank stabilization, and other engineering practices are all commonly used practices for flood damage prevention. These practices and their appropriate uses are described in the National Handbook of Conservation Practices (NHCP).

- (ii) Watershed Protection

- Watershed protection consists of onsite treatment of watershed natural resource concerns for the primary purpose of reducing offsite floodwater, erosion, sediment, and agriculture-related pollutants. Watershed protection plans may include ecosystem restoration. Any practice or combination of practices listed in the NHCP may be considered for inclusion in the systems of practices included in a watershed protection project plan. Project

measures for watershed protection include land treatment practices installed to conserve and develop any of the following:

- Soil
- Water quality and quantity
- Woodland
- Fish and wildlife habitats
- Energy
- Recreation and scenic resources
- The area needed to meet the 50-percent land treatment requirement cited in 390-NWPM, Part 506, Subpart A, Section 500.3B(2), should be determined by measuring the land within a detention structure drainage area, not including the land under the structure itself or its retention reservoir. Stream bank erosion within the drainage area should be considered and treated as part of the project action.
- In the case of channels, land treatment should be provided that helps ensure a stable channel without excessive sediment accumulation. Stream dynamics should be carefully considered in determining the amount and kind of land treatment needed. The amount of land treatment needed to help ensure a stable channel should be considered an integral part of the channel measure.
- Assistance for ecosystem restoration measures may be provided under this purpose.

(iii) Public Recreation

Recreation measures include any practice that creates or improves a water resource or surrounding area for recreational purposes and the facilities needed to realize the recreational potential of the water area.

(iv) Public Fish and Wildlife

- Public fish and wildlife measures include any practice that creates or improves a water resource or other area for fish and wildlife habitat and the associated facilities necessary for the intended use of the water resource for fish and wildlife. Examples include, but are not limited to the following:
  - Water level control structures
  - Fish ladders and shelters
  - Marsh and pit development to provide fish pools in marshes
  - Breeding and nesting areas for migratory waterfowl, terrestrial and aquatic wildlife, amphibians and reptiles
- Assistance for ecosystem restoration measures is also provided under this purpose.

(v) Agricultural Water Management

- Drainage
  - Drainage projects include measures planned primarily to increase the efficiency of land use on farms or ranches by the rehabilitation and improvement of existing drainage systems or the construction of new drainage systems to serve cropland, woodland, and grassland. Drainage is accomplished by lowering the water level in areas where naturally high water tables, normal precipitation, normal tidal action, seepage, or excess irrigation water limit agricultural production. Drainage projects include measures planned for surface drainage, subsurface drainage, or both.
  - Surface drainage is the removal of excess water above the surface of the ground. Subsurface drainage is the removal of excess ground water below

the surface. Such projects are in watershed or subwatershed areas composed partially or totally of lands that have been drained or are proposed to be drained. The area may be a water problem area whose boundaries consist of artificial barriers that prevent the inflow of water originating outside of the area. Drainage facilities are primarily for rural areas. Measures for drainage could include, but are not limited to the following:

- Construction or rehabilitation of artificial channels
  - Construction or rehabilitation of subsurface tile drains
  - Restoration and improvement of natural channels
- Drains may have gravity outlets or may convey drainage water to pumping plants for disposal.
- Ground Water Recharge
  - Measures include recharge of ground water aquifers for use by rural communities, use by livestock, orchard and crop spraying, and similar agricultural uses.
  - Measures for ground water recharge could include, but are not limited to the following:
    - Water supply reservoirs
    - Water spreading systems
    - Other measures to recharge groundwater
- Irrigation
  - Projects to improve irrigation include measures planned primarily to increase the efficiency of water use on cropland, grassland, and woodland and to obtain the maximum practical benefits for existing investments in irrigation. Such projects involve watershed or subwatershed areas composed partly or totally of lands irrigated or proposed to be irrigated. Project areas could be water problem areas whose boundaries might or might not coincide with surface drainage divides.
  - Land treatment practices are needed to ensure that the irrigation benefits are realized. They include those needed for on-farm irrigation, those needed to reduce erosion and sedimentation of structural measures, and channels installed to supply irrigation water.
  - Measures for irrigation water conservation include, but are not limited to the following:
    - Water supply reservoirs
    - Diversion dams
    - Pumping plants
    - Sluices
    - Land leveling
    - Canal headworks
    - Canal and laterals
    - Main distribution system pipelines to convey project water to each farm unit or noncontiguous tract within a farm unit
    - Canal lining and lining or sealing storage reservoirs
    - Appurtenant sediment control and stabilization measures
    - Measuring devices
    - Other measures needed to conserve and efficiently use present and potential water supplies and to convey them to individual farms with the least practical loss
- Agricultural Water Supply

- Agricultural water supply measures include those installed for the establishment of group water supplies primarily for agricultural use in rural areas. This includes all uses of water in rural areas to meet the needs of households, farmsteads, or community facilities. Rural areas are those areas where residents live on farms or in small towns where agriculture provides the primary employment base. Rural areas include communities having a population of less than 50,000 according to the latest decennial census of the United States.
- Project measures normally consist of measures to provide a dependable water supply to meet existing needs. Measures include providing storage capacity in surface reservoirs, intake structures, and associated diversion works and transmission lines to a treatment plant. Although treatment facilities and transmission lines from the treatment plant need to be considered in developing the proposal, they are considered nonproject (associated) measures.
- Land treatment measures to protect and improve water quality should also be considered in the formulation of plans for developing agricultural water supplies.

- Water Conservation

Water conservation measures include those that increase the efficiency of use of agricultural water so that more is available for other uses.

- Water Quality

Water quality measures include those that reduce water quality impairments by trapping or reducing pollutants from primarily agricultural land, or that benefit agriculture.

(vi) Municipal and Industrial Water Supply

There is no further guidance in the handbook corresponding to this section in the manual.

(vii) Water Quality Management

There is no further guidance in the handbook corresponding to this section in the manual.

(viii) Watershed Structure Rehabilitation

There is no further guidance in the handbook corresponding to this section in the manual.

## **600.4 Project Scope**

### **A. Maximum Watershed Size**

- (1) The maximum watershed size or subwatershed area authorized is 250,000 acres, in accordance with Public Law 83-566, Section 2. Please note that the Public Law 83-566 stipulates, if the Sponsoring Local Organization (SLO) so desires, a number of subwatersheds that are less than 250,000 acres in size may be planned together if they are component parts of a larger watershed. Public Law 78-534 does not limit the size of the subwatersheds developed for the 11 authorized watersheds.
- (2) A watershed area comprises all land and water within the confines of a drainage divide and must follow hydrologic boundaries. In the case of irrigation or salinity

projects, the watershed boundary can be based on the irrigation problem area or subsurface hydrologic area, respectively. A watershed area can comprise the land and water of two or more minor drainageways that are separate tributaries to a stream, artificial waterway, lake, or tidal area. Areas from which water is brought in by diversion can be excluded from the watershed if these sources of water have no significant effect on the flood prevention and water management problems of the watershed area. The watershed area should include all direct tributary drainageways and lands from which, after project installation, water and sediment could adversely affect proposed measures included in the plan, such as an irrigation or drainage canal, floodways, or floodwater retarding structures. However, no single plan can be submitted for a watershed or subwatershed area exceeding 250,000 acres.

- (3) If a plan calls for the Watershed Program's contribution to construction costs to exceed \$5 million, it must be approved by the appropriate Senate and House of Representatives committees (Public Law 83-566, Section 2).

#### **B. Maximum Structure Size**

- (1) The reservoir capacity is limited by the single-structure size—no more than 12,500 acre-feet of floodwater detention capacity or no more than 25,000 acre-feet of total capacity may be included in the plan. Total capacity is defined as the total volume of space available for water and sediment upstream of a dam below the elevation at which discharge begins in the primary auxiliary spillway. Plans with a single-structure capacity exceeding 2,500 acre-feet must be submitted to the appropriate Senate and House of Representatives committees for approval. Public Law 78-534 does not limit the reservoir capacity developed for the 11 authorized watersheds.
- (2) The Public Law 83-566 limits the floodwater detention capacity to 12,500 acre-feet between the principal spillway and the crest of the auxiliary spillway. For a multipurpose structure, the total capacity is limited to 25,000 acre-feet. The structure may include 2,500 acre-feet for sediment storage, 5,000 acre-feet for recreation, 7,500 acre-feet for water supply and 10,000 acre-feet for floodwater detention for a total capacity to 25,000 acre-feet. Public Law 83-566 sets two separate limiting criteria for single-structure capacity.

#### **C. Economic Analysis**

- (1) Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G) are cited in the NWPM, and will be used to formulate and evaluate all water resources projects. The principles are intended to ensure proper and consistent planning by Federal agencies in the formulation and evaluation of water and related land resources implementation studies. The guidelines (chapter I of P&G) establish the procedures for use in water resource planning and implement the principles.
- (2) Benefits and costs are estimated using the best current techniques and are calculated accurately, consistently, and in compliance with P&G and other economic evaluation requirements. These National Economic Development (NED) procedures are found in chapter II of P&G.

#### **D. Recreation Development Limitations**

- (1) Pursuant to specific language in the Public Law 83-566 Section 4(1b), recreational development can only be provided to the extent that is demonstrated by need. Therefore, recreational development plans must take into account the anticipated use (measured in user-days), and existing regional outdoor water-based recreational developments.

- (2) P&G Chapter II, Section VIII, provides detailed guidance on procedures that can be used to evaluate the demand and potential use for recreational measures in a project. This information can be used as part of the economic evaluation of the project. Although P&G provides guidance on how to assign economic values to user days, other publications, studies, websites, etc. dealing with the value of recreational development can also be used as part of the economic evaluation. However, be sure the information in such materials is actually applicable to the location and attributes of the designated project area.
- (3) The improvement must be available to the general public (not limited to certain classes or organized groups) unless the improvement is for fish and wildlife propagation, preservation, or protection. This includes real property rights that guarantee public access to the entire reservoir area and access corridors to one or more locations on the reservoir perimeter of adequate width and quality to safely accommodate public use of the site. It also includes real property rights to provide space for parking areas and sanitary or other facilities needed to accommodate the public.
- (4) Adequate sanitary facilities should be provided to serve the public use contemplated. If public use is not contemplated, adequate provisions should be made to exclude the public, if necessary, to prevent the creation of unsanitary conditions. The provisions for water pollution control set forth in Executive Orders 11507 and 11514 must be satisfied. In the absence of adequate local standards, those recommended in the Department of Health and Human Service's Publication (HSM) 72-10009, Environmental Health Practices in Recreational Areas, will be used as a guide for planning, design, operation, and maintenance.
- (5) Areas developed as recreational facilities for which Federal cost sharing is provided must be designed and constructed to ensure accessibility and usability by individuals with disabilities in accordance with 36 CFR Part 1195, the Architectural Barriers Act (Public Law 90-480); the Americans with Disabilities Act of 1990, as amended; and the Accessibility Guidelines for Outdoor Developed Areas. Facilities and elements such as visitor centers, parking lots, plumbed toilets and bathing facilities, drinking fountains, recreational boating facilities, and fishing piers and platforms must comply with the Architectural Barriers Act Accessibility Guidelines issued in 2004.

#### **E. Water Quality Management Reservoir Storage Limitations**

There is no further guidance in the handbook corresponding to this section in the manual.