The project purpose is to improve water quality by trapping sediment and nonorganic materials. The element included in this plan is one sediment retention structure.

The notice of a Finding of No Significant Impact (FONSI) has been forwarded to the Environmental Protection Agency and to various federal, state and local agencies and interested parties. A limited number of copies of the FONSI are available to fill single copy requests at the above address. Basic data developed during the environmental assessment are on file and may be reviewed by contacting Thomas W. Christensen.

No administrative action on implementation of the proposal will be taken until 30 days after the date of this publication in the Federal Register.

(This activity is listed in the Catalog of Federal Domestic Assistance under No. 10.904—Watershed Protection and Flood Prevention and is subject to the provisions of Executive Order 12372 which requires intergovernmental consultation with state and local officials.)

Thomas W. Christensen,

State Conservationist.

Finding of No Significant Impact (FONSI) for Lake Carlinville Watershed, Macoupin County, Illinois

Introduction

The Lake Carlinville Watershed is a federally assisted action authorized for planning under Public Law 83–566, the Watershed Protection and Flood Prevention Act. An environmental assessment was undertaken in conjunction with the development of a watershed plan. This assessment was conducted in consultation with local, state, and federal agencies as well as interested organizations and individuals. Data developed during the assessment are available for public review at the following location: U.S. Department of Agriculture, Natural Resources Conservation Service, 1902 Fox Drive, Champaign, Illinois 61820, 217–398–5267.

Recommended Action

Proposed is the installation of one sediment retention structure that controls 95 percent of the land draining into Lake Carlinville. This structure will have a significant impact on reducing sediment entering the lake. It will also reduce non-organic pollutants that enter the lake, such as nutrients being carried by the sediment. A straight gabion weir will be installed across the upper end of the lake. The structure will be built approximately seven feet higher than the existing Lake Carlinville water surface.

High storm flows will flow over the weir three or more times per year. Lower storm flows and base flows will be directed through a low flow pipe on the north end of the structure. A stop log depth control device will be installed on the front of the pipe to allow the city to control the water elevation above the weir.

Costs: Total project costs are $554,600. Average annual costs are $56,300, which includes $12,200 for operation and maintenance.

PROJECT COST

[Dollars in 1995]

Project investment	PL 566 funds	Other funds	Total funds
Construction	$203,000	$203,000	$406,000
Engineering Service	64,000	0	64,000
Project Administration	29,000	9,600	38,600
Land Rights	0	46,000	46,000
Total	296,000	258,600	554,600

Benefits: The estimated benefits for this alternative are $75,300 annually. These benefits are derived from maintaining the value of recreation activities associated with Lake Carlinville, extending the life of dredging activities,and reducing water treatment costs. The lake's fishery will improve, while the loss of habitat and fishing access due to sedimentation will be reduced. The decrease in turbidity will cause an increase in growth and numbers of fish. Fish populations will be easier to manage (less problems with reproduction). The improvement in the lake's fishery will increase the recreational use and value of the lake.

Effects: The retention structure will control a drainage area of 23.7 square miles or 95 percent of the watershed drainage area. Sedimentation deposited in the lake will be reduced from 15,300 tons to 3,000 tons annually, or 80 percent. This alternative significantly reduces the sediment and nutrients that would be delivered to the lake. The Trophic State index will be reduced from 70 to 59. This gives the lake a good chance to improve its transparency.

This alternative addresses resource concerns by improving recreational values, improving water quality, improving sports fishery populations, significantly reducing loss of fish habitat, and improving visual quality. This alternative would preserve fish habitat which would otherwise be lost throughout the 50 year life of the project.

Where tributaries empty into the lake, wetlands have formed on sediment. The mud flats are vegetated with reed canary grass, cattails, and willows. Slightly higher areas are vegetated with trees, which are mostly green ash and silver maple. Less than one acre of shallow lake will be displaced by the sediment basin structure.

An estimated 32 acres of shallow lake and marsh will fill with sediment over the life of the basin (50 years), and become vegetated with emergent wetland plants and willows or silver maple and green ash trees. Wetland hydrology will remain after the basin is full of sediment.

Approximately 51 acres of wet meadow and woody vegetation (willow, silver maple, and box elder) growing on mud flats will continue to grow upon sediment as the basin fills. The extent of this vegetation type will expand into areas that are now open water and marsh as the basin fills with sediment.

Approximately 53 acres of cropland, hayland, and mixed hardwoods (early successional), will make a transition into wooded wetland. The temporary inundation of these areas, due to the basin structure, is expected to average 6 to 10 days in duration 2 to 3 times during the growing season. This type of inundation will cause the slow transition of this area to species that can tolerate wetter conditions.

As the sediment retention structure fills, the base water level (water table)