duck foods (Bellrose et al. 1979).

Sedimentation, resulting from erosion of farmlands, bluffs, and stream banks, has affected the productivity of the Illinois River. From 1965 to 1976, Upper Peoria Lake was filling at an average of 1.2 inches per year; its biological life was predicted to be 24 years; and it had lost 72 percent of its volume. (Bellrose et al. 1983; Bhowmik and Adams 1989). Most lakes in the Illinois Valley were less than 2.0 feet deep at normal water levels during the late 1970s (Bellrose et al. 1983), and since then they have filled in even more. Unless sedimentation rates are reduced, what is left of the bottomland lakes will disappear in our lifetime as they become filled by sedimentation and colonized by willows. The river will remain because of the navigation channel, but the lakes are destined for extinction.

The drastic decline of the (migratory) Lesser Scaups and Canvasbacks in the Illinois River region during the 1950s and the subsequent increase then ensuing decline in numbers of these species in the central Mississippi River region are particularly noteworthy. The plant and animal food resources utilized by Lesser Scaups, Canvasbacks, and other species of diving ducks began to disappear from the upper Illinois River valley in the mid 1950s and have not recovered (Table 1). The aquatic plants in the Illinois Valley were affected by sedimentation (Bellrose et al. 1979; Havera and Bellrose 1985), and the benthic macroinvertebrate community may have been affected by high concentrations of ammonia or other toxic substances (R.E. Sparks, Illinois Natural History Survey, pers. comm.)

The most reasonable means of creating waterfowl habitat in the Illinois Valley is through the restoration of wetlands in selected drainage and levee districts where the wetlands can be protected by levees from sediment, pesticide, and nutrient loads and from the unnaturally fluctuating levels of the river.

Wetland management

Wetland acquisition and development programs for waterfowl in Illinois generally are directed at providing adequate migration habitat for ducks and wintering habitat for Canada Geese. However, management programs often include measures to increase Wood Duck and Giant Canada Goose production. Managing water levels planting agricultural crops, and creating refuges are techniques commonly used to provide adequate habitat resources for migrating and wintering waterfowl. Between 1994 and 1996, over 220,500 acres of waterfowl habitat were found in Illinois on 85 state and federal areas. Additionally private duck clubs controlled 61,000 acres of land in the Illinois River Valley. Of the wetland habitat on state and federal lands, 8 percent was managed for moist-soil plants, 10 percent for flooded timber and 3 percent for flooded cropland.

Canvasbacks

				Mississippi River			Central and Southern	
Years	Northeast[a]	Illinois River	West-central[b]	Northern[c]	Central	Southern[d]	Cooling Lakes[e]	Reservoirs[f]
1948–1952		57,378			13,338			
1953–1957		40,344			15,262			
1958–1962		2,096			15,107			
1963–1967		1,389			51,154			
1968–1972		513			122,948	0	60	750
1973–1977	218	1,683			82,125	70	137	366
1978–1982	1,509	3,808	225	4,138	146,002	815	260	1,005
1983–1987	403	3,701	15		83,753	313	62	768
1988–1992		3,566			32,064	224	75	1,205
1993–1996		3,350			23,869	43	188	550

[a]1976–1982, 1984–1985.
[b]1981–1984.
[c]1980, 1982.
[d]1972–1984, 1987–1996.
[e]Includes Clinton Lake 1978–1984, 1987–1996; Sangchris Lake 1972–1984, 1987–1996; Newton Lake 1978–1984, 1987–1996; Coffeen Lake 1972–1979, 1987–1994; Baldwin Lake 1972–1984, 1987–1996.
[f]Includes Lake Shelbyville 1976–1984, 1987–1996; Carlyle Lake 1972–1984, 1987–1996; Rend Lake 1972–1984, 1987–1996.

Five-year averages of peak numbers of Canvasbacks during fall for the inventory regions of Illinois, 1948-1996.