

# ILLINOIS RIVER: IMPORTANCE OF THE BASIN

The Illinois River and its Basin tributaries touch the lives of millions of Illinois citizens daily. Its importance both in terms of its economic value and its environmental significance is immeasurable. The following section describe some of the many important River uses that are relied on by a large percent of the state's citizenry:

## **Aquatic Habitat**

The Illinois River and its tributaries are home to over 100 species of fish, and side channels and backwaters serve as nurseries and spawning areas. Sport fish at home in the Illinois include white bass, largemouth bass, bluegill, and black crappie; there are also channel catfish, carp, buffalo, bullhead, walleye, sauger, and many other warm-water species. Although many fish in the upper river suffer from poor water quality, improving conditions since the 1970's have resulted in increased populations of largemouth bass and black bullheads and in the appearance of white bass, especially around Starved Rock. The middle river has historically been the most productive because of the aquatic habitat in the backwater lakes and wetlands along its banks. The lower river, from Beardstown to Grafton, features about the same mix of fish species as the middle river, but populations are smaller. Even though water quality is better than in the middle river, fish populations are constrained because of the lower river is channelized behind levees, and very few backwater habitats are accessible for breeding.

## **Wildlife Habitat**

Approximately 20 species of waterfowl, primarily ducks and geese, make their home in the Illinois River Basin. Hundreds of thousands of birds migrate along the Illinois River each year, resting temporarily in the wetlands, sloughs and backwater lakes in the Basin. The Illinois River Valley is part of the Mississippi Flyway, the route followed by migratory waterfowl between Canada and the Gulf Coast. As of 1983, about half of the floodplain of the Illinois River was suitable for waterfowl habitat.

The Illinois River has also been important historically to a multitude of avian species. The backwaters of the Illinois also serve as habitat for 20 to 30 species of shorebirds and 15 species of gulls and terns. The cottonwoods and black willows along the middle and lower river and its wetlands are host to various types of herons egrets, plovers, sandpipers, and other migrating wading shorebirds, as well as gulls and terns. Wading shorebirds represent the farthest ranging visitors to the Illinois River Valley, traveling between the Arctic and Chile and Argentina yearly. The river valley is a major wintering ground for the endangered bald eagle. In recent years as many as 375 bald eagles have been counted annually, which represents about 3% of the total wintering population of bald eagles in the lower 48 states.



## **Forestland Habitat**

Over 4.26 million acres of Illinois land is in forest. Much of it is located on or adjacent to the Illinois River and its tributaries. Forest product utilization and management is important to the Illinois economy and environment. Forested riparian areas adjacent to the Illinois River and its tributaries provide a necessary buffer for surface water drainage and the serves as the transition zone between land and water. Water quality benefits associated with the riparian forest are critical to the well-being of the tributary watershed. Many aquatic and terrestrial wildlife species utilize and depend upon the riparian forest found in the Illinois River Valley.

## **Natural Areas**

Examples of major natural areas along the Illinois River and its major tributaries include Allerton Park and Carpenter Park Nature Preserve on the Sangamon River; Spring Bay Fen, Miller-Anderson Woods, Robinson Park, Forest Park and Starved Rock nature preserves on the Illinois River; Momence Wetlands and Kankakee River Nature Preserve on the Kankakee River; Ryerson Woods and Lockport Prairie nature preserves on the Des Plaines River and a host of wetlands including Volo Bog in the Upper Fox River basin. Portions of the Mackinaw and Kankakee rivers themselves are designated natural areas.

## **Commercial Fish and Mussels**

Although fish and mussels are still being harvested commercially from portions of the Illinois River Basin, the importance of these industries to the Basin's economy has declined significantly over the past 70 years due to man's use, abuse or total disregard of its valuable natural resources. The waters of the Illinois River Basin have the potential of producing and yielding greater economic and recreational benefits for its citizens, but such is not likely to occur until the many problems and issues regulating these valuable resources are dealt with in a bold, forthright and constructive manner.

## **Water Supply**

The Illinois River also serves as the source for public water supply systems throughout a vast region of the state. Peoria is the largest user, but the cities of Elgin, Kankakee, Pontiac, Streator, Decatur, Taylorville, Springfield, Jacksonville, and Canton also use water from tributaries of the Illinois River. Moreover, the Commonwealth Edison Company uses Illinois River water for cooling purposes.

## **Wastewater Disposal**

The Illinois River is a major conduit for the transport of treated waste throughout Illinois. It is estimated that 2,109 outfalls are located in the Illinois River Basin today. Illinois has taken significant steps to obtain compliance for effluent limitations by dischargers in the basin. From the municipal facility perspective, the State and Federal government has expended \$2.3 billion for treatment facility construction in the Illinois River Basin alone. It can be safely estimated that several hundred million dollars have also been expended by industrial dischargers. Although the Illinois River ranks among our state's top recreational resources, it has also been a primary channel for the transport of human, animal, industrial, and agricultural wastes.

## **Commercial Navigation**

Based on national projections, Illinois River commodity movement is expected to exceed 55 million tons by 1999. That will continue to make it fourth in tonnage, exceeded only by the Mississippi, Ohio and the Gulf intracoastal Waterway. It now carries 8 percent of the total tons carried on the inland waterways. That's as much as the Missouri, Arkansas, Columbia, and Cumberland Rivers combined. The Illinois Waterway is indeed a major transportation resource for this state.

Grain is the biggest commodity shipped on the waterway. Most of this grain goes to New Orleans



for export. The savings on one bushel of corn from Peoria to New Orleans is 23 cents. That doesn't sound like much until you realize that a barge holds 52,500 bushels and there were about 7,600 barge loads shipped down the Illinois Waterway last year. This is over \$90 million in cost savings that goes to Illinois corn producers and has positive impacts for the economy of Illinois and also for the U.S. balance of payments. Since Illinois is the nation's largest corn producer and nearly 70 percent of the corn exported is shipped from the Mississippi Gulf, the impact of barge transportation become fairly obvious. It costs \$14,000 to transport a barge load of grain compared to \$26,000 by rail.

The transportation cost savings from the Illinois Waterway is \$326 million annually. Over the next 50 years these benefits will grow to only \$383 million without any improvements on the waterway. If improvements are made as they are required, the benefits would exceed \$1 billion annually over the next 50 years.

The waterways of the Illinois River Basin are as economically important to us as the interstate highways. They carry 60 percent of the state's annual commodities tonnage; almost one-quarter of all the grain produced in the United States; as well as petroleum, chemical products, coal, sand and gravel, and salt. Nationally, the Illinois River waterways carry 9 percent of the total barge shipments.

### **Agriculture and Industry**

The region is an important agricultural area with livestock receipts of \$419,875,000 or 18 percent of the states' total. Crop receipts were \$1,001,739,000 or 17 percent of the states' total. The region is an important industrial area with about 58 percent of the construction and manufacturing employment of the state.

### **Economic Development**

The twenty-one counties adjacent to the Illinois River form an important economic and demographic region in the State of Illinois. The region contains more than half the state's population, although several counties in the region have no urban population. Although most of the region's counties are below the state average in per capita personal income, Cook County is above the average, and several of the counties had total personal incomes of more than one billion dollars. With Cook County, the region is an important industrial area, with substantial employment in all major industries. The services industry is the largest employer with 679,596, followed by manufacturing with 609,331. The region receives over 60 percent of statewide travel expenditures, with Cook County receiving the largest portion of that percent. Over two hundred industrial and agricultural processing and transport terminals are situated in the Illinois River Basin.

### **Recreation and Tourism**

Illinois' rivers and valleys are becoming increasingly important as recreation resources. River areas display scenic overlooks and geologic formations, harbor rich archaeological sites, and historic river towns. The rivers, backwater lakes, and forested bottomlands provide excellent opportunity for a variety of recreation activities.

Recreation today is seen as a major segment of the economy. Diverse, high quality recreation opportunities are attractive to Illinois' citizens, prospective businesses, and tourists. The "Study of the Economic Significance of Recreation in Illinois," conducted by the Department of Conservation discovered the following facts. Illinois residents spent over \$6.3 billion in 1985 on recreation. The recreation industry in Illinois employs approximately 150,000 people. Recreation expenditures produced tax revenues of almost \$1.8 billion in 1985.

Recreation also enhances the quality of life. The Illinois River basin provides recreation in both quality and quantity, and the people of Illinois recognize it as a significant recreational resource.

Recreation in the Illinois River basin includes water-dependent activities such as fishing, waterfowl hunting, boating, and swimming. Recreation also includes activities which are enhanced by proximity to

water such as hiking, picnicking, and camping. These types of recreation are provided by local, State, and federal agencies such as park districts, forest preserve districts, the Department of Conservation, and the U.S. Fish and Wildlife Service. In addition, many private concerns provide similar recreation opportunities.

In the Illinois River Basin, many recreational sites and facilities are focused on the water - rivers or lakes - for recreation. In addition, wildlife habitat and forests are concentrated along the rivers and lakes of the Basin. In urban areas, through urban waterfront renewal programs, riverfronts are being improved and made accessible to the public for recreation. Examples of riverfront development are Peoria's riverfront on the Illinois River and development on the Fox River at Elgin, Geneva, St. Charles, and the Rock River at Rockford.

### **Archeological and Historical Resources**

The study of archaeological, historical and paleo-biological resources provides a unique and unrenewable perspective on the natural and cultural history of the Illinois River Basin. In addition to their considerable scientific value, these resources are significant for their educational value, and they provide popular tourist attractions. Clearly their conservation is in the interest of Illinois' citizens.

The Illinois River Basin includes the Illinois River and its tributaries and their associated inter-fluvial uplands. Archaeological and historical sites (cultural resources) and fossil localities (paleo-biological resources) are found in all of these environmental settings. Archaeological sites, localities once occupied by prehistoric or historic peoples, have been documented along the river shoreline, on the floodplain, and in valley margin and upland settings. Camps and villages established near the river by Native Americans are buried in river-deposited sediment. Major villages were often established along the river valley margin. Over the millenia, sediments eroding from nearby bluffs slowly accumulated. Preserved in these deposits, separated by lenses of sediment, are the remains of village sites representing centuries of cultural development. Although the depositional context of upland environments is different, well preserved archaeological, historical, and fossil sites are found in the uplands as well.