

Production

WILDLIFE IN RELATION TO RIVER DEVELOPMENT PROGRAMS

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A river development program will inevitably have its affect on wildlife. The lives of many species are closely tied to water, and other species inhabit upland coverts which would be entirely inundated, or severely modified, by river basin projects. In previous river developments in the Mississippi Basin, wildlife has received scant consideration and consequently has suffered heavily. At the present time a new channel is being dug at the mouth of the Sangamon River which will drain some lakes and fill up others. If wildlife values had been considered, the project could not have been justified. The canalization of the Missouri River has eliminated the sand bars that formerly made it a prime waterfowl resort. Other river development work in that basin has consisted of the maintenance of drainage works in areas of the flood plain, formerly occupied by sloughs, lakes, and marshes. For the raccoon, the mink, the muskrat, and for myriads of waterfowl, such places were home. They were the recreational grounds for hunters, fishermen, and trappers, and they materially reduced floods through the natural storage of water.

Engineers, when adhering to a strictly professional beat, have looked upon water as waste unless of use for power, navigation, or irrigation. When water could not be used for one or more of those purposes, then it was drained away so that man could till the good earth.

While in many instances drainage of wet lands has been beneficial, the subsequent failure of many drainage enterprises in river flood plain areas has shown that often conservationists were correct in opposing them. However, all too frequently conservationists offer no facts or figures to show that a lake, stream, or marsh was of any particular value as a water area. When confronted with dollar value of claimed agricultural benefits at public hearings and before legislative committees, the intangibles of hunting and fishing often appeared to be of little worth to people accustomed to thinking of values only in the monetary sense.

The conservationists were not to blame for the inadequacy of their arguments. Most of them were laymen, giving their time and money on behalf of conservation, but making their livelihood in other fields. There were few professional conservationists, not all of them had been adequately trained.

However, during the past decade or so we have witnessed a renaissance of conservation; the birth of wildlife technology. With more than a score of universities annually turning out scores of trained technicians, conservation is fast becoming equipped with its operating tools. Because it is still in its infancy or youth, it has just begun to hoe the row. After one decade or so of operation, the field of conservation can be justly proud of the progress made and of the facts accumulated. No longer should conservation be regarded as the step-child of other interests.

Perhaps the Corps of Engineers realizes that fact and desires to work with conservation interests, rather than against them. I hope so, for with millions, if not billions, of dollars planned for flood control and other water projects, it behooves both groups to see that the public receives the greatest possible

benefits for every dollar spent.

In the past the public has seldom received just benefits from money spent for flood control. For instance, in the Illinois River valley, the old U. S. Bureau of Biological Survey and the Illinois Department of Conservation sought to restore waterfowl habitat through the purchase of levee districts, many of which have been "on the rocks" after levee breaks and during the depression. However, loans and refinancing by the R.F.C. and levee improvements by the Corps of Engineers amounting to about \$7,000,000 increased the prices of levee district lands so much as to make the cost prohibitive to the wildlife agencies. Nevertheless, the U.S. Biological Survey did manage to acquire the Chautauqua levee district near Havana in the mid-30's before any levee repair or improvement program was launched for it.

Congressman Everett M. Dirksen of Pekin, Illinois, introduced a resolution in the House of Representatives in 1937, urging that money should not be spent for diverse purposes on the levee districts of the Illinois River. He advised that levee districts be purchased for flood storage and wildlife. As a result of a resolution passed by the Committee on Rivers and Harbors, the Corps of Engineers made a study of the proposal, and in H. R. Document No. 692-77-2 declared that with the exception of one levee district the costs would outweigh the benefits. Listed among the costs were sizable sums for game wardens and mosquito control. Fish and wildlife received the ridiculously low value of \$1.00 per acre per year. No one challenged that value then, for no one had any data on such values; wildlife research programs were in their infancy.

Two years ago, the Corps of Engineers proposed a

\$100,000,000 plan primarily for flood control and secondarily for navigation water storage in the Illinois River Basin. The plan entailed the construction of 14 retention reservoirs on tributary streams and one lateral reservoir along the Illinois River at Lake Senachwine; 406 miles of tributary channel improvements; and \$15,000,000 for levee raising along the Illinois River.

Arguments by opponents before the Board of Engineers at Springfield, Illinois, on May 31, 1946, resulted in the plan being sent back to the Division Engineer for restudy.

If the Corps of Engineers are earnest in their declared intent to cooperate with conservationists, we believe they should change the Illinois River Basin plans by using levee districts in the place of some of the tributary reservoirs for flood storage.

I make this assertion for the following reasons:

1. Levee districts are largely responsible for increased flood heights in the Illinois River valley for, with about half the floodplain withdrawn, the valley storage which formerly existed has been greatly reduced.
2. Storage of flood waters in reservoirs laterad to the main stem is feasible, as shown by the planned creation of a levee reservoir at Lake Senachwine; even though the area is now a natural flood reservoir, the conversion to an artificial one would be so beneficial as to provide the most favorable benefit-to-cost ratio.
3. Cost of proposed levee improvements per acre are only slightly lower than recent sale prices of leveed lands.
4. Under pre-war conditions, the Illinois Natural History Survey and the Department of Conservation calculated that value of a reflooded levee district would be \$25.39 per

acre per year. This was figured as follows: fur trapping \$1.58; pole and line fishing \$2.94; duck hunting \$9.70; commercial fishing \$11.17.

The U.S. Fish and Wildlife Service, in its report on the Illinois River basin, picked five levee districts for study. The agency found that a total yearly net gain of \$450,040 in wildlife values would result from the conversion of those five levee districts.

5. With two exceptions, the proposed retention reservoirs on the tributary streams would be detrimental to wildlife through loss in upland game cover. Replaced aquatic wildlife values occur in the two retention reservoirs with a permanent pool, but in general tributary stream reservoirs, even those with permanent pools, are of little value for waterfowl because of the great fluctuation in water level and the difference between the conformation of the pool basin and the basin of a levee district.

There are leveed areas along most of the major streams in the Mississippi drainage. All are not so well adapted for flood storage nor so valuable for wildlife as those along the Illinois River. In general, those areas that must resort to pumping their excess water over the levee rather than to draining by gravity are better adapted for flood storage and wildlife than for agriculture. Many districts along the upper Mississippi River are in the first category, and should be so considered by the Corps of Engineers in any program designed to reduce flood heights on that river.

That the wildlife value of a reflooded levee district would be just as great in the Mississippi basin as in the Illinois valley is shown by a study made in 1946 by Clair T. Rollings federal refuge manager of Spring Lake, a flooded levee district near Savanna, Illinois. He found that Spring Lake provided 28,000 man days of fishing with a catch of 644,000 fish for a calculated value of \$70,000. Fish transplanted from there by the Department of Conservation numbered 350,000 for a value of \$17,500. Picnic-campers numbered 2,300 man days, with the recreational value judged as \$1,150. Waterfowl hunting on a small public shooting ground at the upper end of the area totaled 2,297 man-days for a value of \$11,485. Rollings judged recreation through observation of waterfowl by 960 persons at \$240, and trapping at \$730, for a total recreation value of \$101,105 or about \$29 per acre for the entire refuge.

Conclusion

That the numbers of hunters and fishermen are increasing rapidly with each year is self-evident. That public waterfowl hunting grounds are already overtaxed is a fact all too apparent to conservation departments, which are aware of the necessity of providing additional hunting grounds. In much of the midwest, the most feasible areas for waterfowl are the leveed agricultural areas that have replaced lakes and marshes; yet public expenditures on those levees will make it necessary for the sportsmen to dig deeper into their pockets.

Levees have increased flood heights by confining flood waters; the same levees form the nucleus for reservoirs to store flood waters next to the main stream. The values of hunting and fishing and similar outdoor recreation are much higher than presumed. The earlier this is realized by those planning river development programs, the earlier the public will profit. As Congressman Dirksen said in a speech before the House of Representatives on March 31, 1937, "The problem of flood control and conservation should be solved by a single expenditure of money that will put title to these (leveed) lands in the Federal Government for the use of the people."