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WILDLIFE AND ASSOCIATED VALUES OF WETLANDS

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INTRODUCTION

Wetlands, what are they? Are they the vast coastal marshes that occur at the mouths of the many rivers that flow into the bays and estuaries along our nation's shores? Are they the silvery playa lakes that shimmer on the vast high plains region of western Texas, Oklahoma, Kansas and eastern Colorado and New Mexico? What about the verdant bottomland hardwoods that occur within the floodplains of the rivers that empty into the Gulf of Mexico. Or, are they the *bosques* of the Southwest? In truth, wetlands, by description, are many and varied. They are, in addition to the types previously mentioned, the peat-bogs, sloughs, bayous, back waters, marshes, swamps, and riparian areas scattered across these United States.

Do these wetlands have any value to Americans? President Bush thinks so. He has stated his interest in preserving these valuable resources in many public engagements. In one recent instance he stated:

"So any vision of a kinder, gentler America
-- any nation concerned about its quality

of life, now and forever -- must be concerned about conservation. It will not be enough to merely halt the damage we've done. Our natural heritage must be recovered and restored."

The president went on to state:

"It's time to stand the history of wetlands destruction on its head: from this year forward, anyone who tries to drain the swamp is going to be up to his ears in alligators. Our approach to wetlands conservation is driven by a new kind of environmentalism -- a set of principles that apply to all of the environmental challenges we face. We believe that pollution is not the inevitable by-product of progress. So the first principle is that sound ecology and strong economy can coexist. The fact is, our ecology and the economy are interdependent."

The president's feelings are supported by strong grass-roots support for environmental protection as revealed continually in recent public opinion polls.

condos to mud huts..." (Newsweek cover story: The Environment: Cleaning Up Our Mess, July 24, 1989, p.41).

WILDLIFE AND FISHERY VALUES

Wetlands are among the world's most biologically productive ecosystems and are crucial as habitats for fish and wildlife. Roughly two-thirds of the commercially important fish and shellfish species harvested along the Atlantic and Gulf coasts and half of the Pacific coast are dependent upon estuarine wetlands for food, spawning and/or nursery areas. A commercial marine fisheries harvest valued at over \$10 billion annually provides one economic measure of the significance of coastal wetland resources.

Wetlands are important as natural areas containing diverse plant and animal life. Since they constitute only 5 percent of the nation's lands in the contiguous United States, these communities are, in general, rare. Their importance resulting from their rarity and plant diversity is shown, for example, by the high percentage of wildlife species using these areas. For example, an estimated 80 percent or more of the wildlife species in the arid southwestern United States depend upon wetlands for all or some of their life requirements.

Essential breeding, spawning, nursery, nesting, migratory and/or wintering habitat for a major portion of the nation's migratory and resident fish and wildlife are provided by wetlands. Almost one-third of the nation's threatened and endangered plant and animal species depend heavily on wetlands. Of the approximately 108 species currently listed by the New Mexico Department of Game and Fish as endangered, almost 70 percent depend on wetland habitats for food, shelter, or breeding. Nationwide, millions of water-associated birds including waterfowl, shorebirds, wading birds, gulls and terns, rails and other groups depend on marshes, potholes, sloughs, swamps, mudflats, and other wetland types.

OUTDOOR RECREATION VALUES

Wetlands support boating, swimming, sport fishing, hunting, bird-watching, nature observation and study, and other wetland-related recreational activities that generate billions of dollars of expenditures annually. For example, 17.4 million hunters spent about \$5.6 billion on supplies, lodging, transportation and other related expenses in 1980. Of these totals, 5.3 million hunted waterfowl, spending about \$640 million. In total, fish and wildlife-related

recreation in 1980 was a \$41 billion industry, largely based on wetland resources.

Participation in water and wetland-related outdoor recreation by Americans twelve years and older was estimated in 1982-83 at 53 million for boating, 64 million for fishing and 22 million for bird-watching. Recreation in wetlands, such as hiking, nature observation and photography, swimming, boating, and ice skating is generally not evaluated in economic terms. Many people simply enjoy the beauty and sounds of nature and spend their leisure time walking or boating in or near wetlands observing plant and animal life. We are all aware of the thousands of people that picnic, walk, jog, bird-watch, or simply stroll along the Rio Grande Bosque in Albuquerque and the Santa Fe River in Santa Fe, and visit the Bitter Lake National Wildlife Refuge along the Pecos River just north of Roswell. The aesthetic value of wetlands is extremely difficult to evaluate or quantify monetarily. Nonetheless, it is an important aspect, because in 1980 alone, 28.8 million people (17 percent of the United States population) took special trips simply to observe or photograph wildlife.

WATER QUALITY VALUES

Wetlands can help maintain water quality or improve degraded water by removing, transforming and retaining nutrients, processing chemical and organic wastes and pollutants, and reducing sediment loads. Wetlands intercept runoff from uplands before it reaches the water and help filter sediments, nutrients and wastes from flood water. However, it is important to remember that wetlands have a finite capacity to perform this function.

Wetlands temporarily store flood water, slow water velocities, reduce bank and shoreline erosion, and slowly release stored water downstream, thereby saving lives and property. Inland wetlands located along major streams and around lakes stabilize shorelines and channel banks and buffer developed uplands from storm, wave or erosion damage. Coastal wetlands serve these functions as well as providing a buffer to reduce potentially devastating effects of storm surges.

Flood conveyance and reduction functions of wetlands relate to their capacity to store and slow flood water, thereby increasing the duration of the flow and reducing downstream flood peaks. Many cite the Corps of Engineers' 1972 study of the Charles and Neponset River watersheds in Massachusetts as a prime example of the socioeconomic values associated with protecting wetlands to maximize

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flood control benefits. In this study, the Corps estimated that loss of the 8,423 acres of wetlands within the basin would result in annual flood damages of over \$17,000,000.

SUMMARY

As we can see, the values of wetlands in this country are many. And there are many among us that appreciate those values and want to preserve and enhance them into the future. I believe if we work together we can stop the rate of loss of our nation's wetlands and achieve some gains for future generations of Americans.

REFERENCES

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