Wildland Ecosystem Services: Did YOU Know?

The Ecological Society of

America defines Ecosystem

Services as the processes by

which the environment

produces goods and benefits

often taken for granted, such

as clean water, fertile soils,

timber, habitat for wildlife and

fisheries, and pollination.

- The annual economic value for global ecosystem services is estimated at \$33 trillion!
- Nearly **1/4 of prescriptions** written in the U.S. are derived from wild species.
- Soil erosion leads to losses of services, such as nutrient storage valued at

\$27 billion per year for the United States alone.



POLLINATION

- For the U.S. alone, pollination of agricultural crops by wild pollinators has an estimated value of \$4.1 to \$6.7 billion per year.
- **80% of the world's crop species** (fruits, vegetables, coffee, tea, cocoa, spices) are pollinated by wild and semi-wild pollinators.
- Honeybee crop pollination services are 60-100 times more valuable than the honey they produce.



Water Purification, Commodity Production, Flood Control

- A Presidential science commission calculated that it would cost \$6 – 8 billion to construct a water treatment plant for New York City to replace wildland water purification services.
- A minimum of **\$5 million** would be required to replace the water purification services of the Congaree Bottomland Hardwood Swamp in South Carolina.
- The marshes of Louisiana produce over **\$200 million** in annual commercial fish and shellfish harvest.

The Army Corps of Engineers estimated \$17 million in flood damage if wetlands in the Charles River watershed in Massachusetts were destroyed.



RECREATION

- 77 million Americans spent \$101 billion in 1996 on wildlife-associated recreation, including bird watching, wildflower viewing, and hiking.
- Wildlife-associated recreation supported over
 1 million full and part time jobs nationwide in 1996.



FORESTS

- A 1989 study found that in the Pacific Northwest, harvest and sale of mushrooms and other non-timber forest products was a \$128.5 million industry employing more than 10,000 people.
- National Forest roadless areas in the 48 contiguous states have a value of \$1 \$1.5 billion per year in ecosystem services such as carbon storage, water purification and waste treatment.
- An average acre of sustainably managed tropical forest is worth approximately \$220 per year. This includes: \$69 from non timber forest products (mushrooms, fibers), \$17 from recreation, \$10 from watershed functions including flood control, and \$110 from timber.