

# TENNESSEE



**Thirty-five million acres** of wetland forests provide valuable ecosystem services for people living in the US South, including:

- Protection from extreme events
- Recreation, tourism, and aesthetics
- Water filtration and waste treatment
- Food and pollination
- Climate regulation
- Raw materials.

**Wetland forest ecosystem services are worth more than \$500 billion per year.** But wetland forests are constantly under siege by external forces, including urban expansion, invasive species, increased demand for timber, conversion to intensively managed plantations or

agriculture, pollution, sea-level rise, and the changing climate. Over the next 30 years, how will we protect the valuable services our Southern wetland forests provide? What can we gain if we do the right thing? And what do we stand to lose if we do not invest in our forests?

We investigated how the value of wetland forests in the US South would increase if we protected more land, extended natural riparian buffers, and managed forests more responsibly. Here are the best facts from Tennessee.

### **Tennessee's Wetland Forests Are Worth \$7.8 Billion**

- Worth could increase up to \$930 million by investing in conservation
- Wetland Forest Gem: Chickasaw National Wildlife Refuge
- 627,000 acres of wetland forest, including 41 named swamps and 9,833 named streams in the state<sup>1</sup>

### **Protection From Extreme Events: Tennessee's Wetland Forests Provide \$2.3 Billion**

- Value in protection from extreme events and water flow regulation could increase up to \$270 million by investing in conservation
- Since 1851, there have been 14 major Mississippi river floods, impacting states along the river like Tennessee<sup>2</sup>
- Three flood events cost over a billion dollars in damages each since 1980<sup>3</sup>

### **Aesthetics, Tourism, and Recreation: Tennessee's Wetland Forests Provide \$1.9 Billion**

- Value in aesthetics and recreation could increase up to \$250 million by investing in conservation
- Tennessee had 105.3 million visitors in 2014, which contributed \$18<sup>4</sup> billion in visitor spending and supported 157,400 tourism jobs<sup>4</sup>
- Over half of residents participated in wildlife-related recreation, spending \$2.9 billion in 2011<sup>5</sup>

### **Water Supply and Waste Treatment: Tennessee's Wetland Forests Provide \$1.8 Billion**

- Value in water supply and waste treatment could increase up to \$220 million by investing in conservation
- Over three-fourths of residents rely on public sewer systems. Many public facilities rely on natural infrastructure to reduce costs of waste and water treatment<sup>6</sup>
- Over ten percent of residents rely on private water sources like wells. Residents rely on forests to naturally filter pollutants from their water supply<sup>6</sup>

### **Food and Pollination: Tennessee's Wetland Forests Provide \$1.1 Billion**

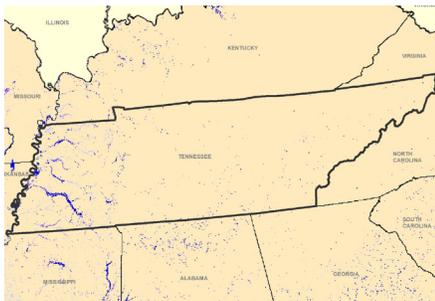
- Value in food and pollination could increase up to \$140 million by investing in conservation
- Wetland forests provide habitat for pollinators of agricultural crops
- Over 900,000 residents in the state hunt or fish<sup>5</sup>
- In 2016, hunters purchased 250,000 deer hunting licenses<sup>7</sup>
- In 2016, hunters harvested over 200,000 ducks and geese within the state<sup>8</sup>

## Regulating Services: Tennessee's Wetland Forests Provide \$629 Million

- Value in climate regulation, air quality, soil formation, and erosion control could increase up to \$32 million by investing in conservation
- There are an estimated 24 million megagrams of carbon stored in the state's wetland forests, and continual carbon storage reduces the worst impacts of climate change

## Raw Materials: Tennessee's Wetland Forests Provide \$36 Million

- In 2011, there were 254 forest product mills (e.g., pulp and timber) employing 4,973 people in the state<sup>9</sup>
- Wetland forests currently provide raw materials worth \$36 million in ecosystem services value, and investing in conservation could increase the worth to \$40 million



There are 24,015,000 megagrams of carbon stored in Tennessee wetland forests.



Tennessee has 627,000 acres of protected wetland forest (green), with an additional 166,000 acres of wetland forest proposed (purple) to be protected.

## REFERENCES

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