

The Annual Cost of Corrosion to Ohio

	US		Ohio	
Overall Corrosion Cost	1998	\$276,000,000,000	1998	\$9,400,000,000
	2007	\$442,000,000,000	2007	\$15,000,000,000
Bridge Corrosion Cost	1998	8,300,000,000	1998	300,000,000
	2007	\$13,300,000,000	2007	\$500,000,000

Based on a report to Congress by the Federal Highway Administration (FHWA), the annual cost of corrosion nationally is **\$442 billion**, or **3.1% of the gross domestic product (GDP)**.

The FHWA report to Congress did not include a state-by-state breakdown of corrosion costs. However, because the initial costs are compared to GDP, one can estimate the cost to Ohio by considering its gross state product (GSP). Ohio's GSP is approximately 3.4% of the US GDP, so the **estimated annual cost of corrosion in Ohio is \$15 billion (\$442 billion x 3.4%)¹**.

When broken down, **the annual cost of bridge corrosion is \$13.3 billion annually**, according to the FHWA. According to the National Bridge Inventory, **Ohio has 3.8% of the nation's bridges**. Assuming the cost of bridge corrosion is proportional to its percent of the national bridge stock, **the annual cost of bridge corrosion in Ohio roughly \$500 million (\$13.3 billion x 3.8%)²**. This figure does not take into account external factors such as weather which affect corrosion. Because Ohio's bridges are regularly salted during the winter months, it is likely this figure is actually **higher**.

❖ What is **corrosion**?

- Corrosion can occur on bridges when moisture or salt come in contact with the steel reinforcement bar and structural members on bridges.

❖ What **threat** does corrosion pose to **Ohio's bridges and highway infrastructure**?

- Corrosion weakens metal, putting additional pressure on the concrete and compromising the structural soundness of the bridge.

❖ What **existing** corrosion mitigation technologies exist?

- Corrosion prevention and mitigation technologies include protective coatings, chemical inhibitors, and the use of construction materials less prone to corrosion.

❖ How many **taxpayer dollars** can be **saved** through implementation of existing technologies?

- Private industry has estimated that one-third of corrosion costs could be saved by applying existing corrosion control technology.
- The utilization of this technology is estimated to cost *less than 10 percent* of the costs to replace critical infrastructure.

¹ Estimate from NACE

² Estimate from NACE