

# Environmental Compliance Improves Post-Disaster Restoration in Puerto Rico

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**SAN JUAN, Puerto Rico** - Safe access routes, electricity, drinking water and sanitation are all essential in the aftermath of a disaster. Less intuitive, yet every bit as essential to long-term recovery, is minimizing damage to wildlife and natural resources during the restoration of critical infrastructure.

In the context of repairing and replacing civil works, including transmission towers and levees, Best Management Practices must be used if U.S. federal funding pays for restoration. A Best Management Practice is typically an action determined to be an effective and reasonable means of preventing or reducing damage to natural resources and wildlife that may occur in the course of restoring critical infrastructure. These practices also deter unscrupulous activities, such as construction methods that can leave areas vulnerable to flooding and pose a threat to human lives and livelihoods.

The U.S. Army Corps of Engineers, under a mission assignment from FEMA, deployed hundreds of first responders to construct emergency access routes, demolish damaged structures, provide temporary, protective tarps for exposed roofs, and remove and dispose of debris. FEMA also directed USACE to provide temporary emergency power to critical facilities and later assigned USACE the largest emergency power restoration mission in U.S. history, in support of the Puerto Rico Electric Power Authority.

Among the first responders are environmental science and management professionals who inspect power restoration project sites daily to assess compliance with environmental regulations including the Clean Water, Endangered Species and Fish and Wildlife Coordination acts.

For up to 12 hours daily, through the rain and mud, and up and down hills, they observe and take notes, identify areas of concern and take pictures. When they



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come back from the field, they complete an inspection report that is provided to project managers for review and further action.

“Our priority is to safely restore power as quickly as possible, but we must be respectful of the ecology here in Puerto Rico,” said Tammy Turley, chief of the Regulatory Division at the USACE Nashville District. “There are a lot of protected areas in Puerto Rico and that’s because Puerto Ricans have decided these areas matter to them. We also have a list of best management practices that construction workers must follow to make sure we are protecting threatened and endangered species.”

On this particular day, Turley and other environmental professionals inspect power restoration project sites adjacent to El Yunque National Forest where unique species such as the endangered Puerto Rican Parrot and Puerto Rican Boa live. Silt fences, groundcover vegetation over bare soil, locating streams on a site before work begins, and maintaining protective buffers around known areas where species of concern live are all examples of best management practices environmental professionals may recommend.

To those who might bemoan the necessity for adherence to laws protecting natural resources, fish and wildlife in the aftermath of disaster, Chris Akios, a biologist with the USACE Buffalo District says, “Power restoration should be done in a way that will result in greater protection from future disasters. It’s tough to think about the future when the need for power restoration is so great now, but we must look at long-term consequences. Not using best management practices at infrastructure restoration project sites could, for example, result in erosion that may prevent communities from using land for agriculture.”

Harmful construction activities upstream could pollute and destroy resources downstream, eventually contributing to human suffering, explained Turley.

“Using best management practices in the repair and replacement of infrastructure doesn’t hinder infrastructure restoration, it actually makes that infrastructure more resilient while also protecting water and wildlife which in the long-run supports human lives and livelihoods,” Akios said.

**Courtesy Article, U.S. Army Corps of Engineers**



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Editor's note: The following link includes high resolution photos and captions to accompany this story: <https://www.dvidshub.net/image/4317931/environmental-compliance-improves-post-disaster-restoration-puerto-rico>

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