



**THE UNITED STATES VIRGIN ISLANDS
OFFICE OF THE GOVERNOR
GOVERNMENT HOUSE
Charlotte Amalie, V.I. 00802
340-774-0001**

EXECUTIVE ORDER NO. 533 – 2023

**BY THE GOVERNOR OF THE UNITED STATES VIRGIN ISLANDS
TO ESTABLISH NATURAL INFRASTRUCTURE IN THE UNITED STATES VIRGIN ISLANDS**

WHEREAS, pursuant to Virgin Islands Code, title 3 § 401, it is the duty of the Government of the Virgin Islands Department of Planning and Natural Resources to foster, promote, and undertake programs and projects for the conservation and development of the Virgin Islands' natural resources and to administer and enforce all laws that pertain to fish and wildlife, trees and vegetation and water resources, safe drinking water, water pollution and flood control, coastal zone management and environmental protection; and

WHEREAS, healthy coral reefs, mangroves, seagrasses, salt ponds, beaches and other currently and future identified natural infrastructure are among the most biologically diverse, culturally important, economically valuable ecosystems on Earth; and

WHEREAS, the health of coral reefs, mangroves, seagrasses, salt ponds, beaches and other currently and future identified natural infrastructure is degraded and compromised due to natural and anthropogenic stressors; and

WHEREAS, the Territory faces climate change-related risks and disaster events, including exposure to storms, high wave events, sea level rise, and flooding, and climate scientists and other experts predict an increase in the number and severity of hurricanes, higher levels of rainfall in fewer storm events, increasing sea surface temperatures, and increased ocean acidification, which will negatively impact natural infrastructure; and

WHEREAS, the health and sustainability of the Territory's communities and economy are closely intertwined with the health of our natural infrastructure and are being threatened by global stressors related to climate change, such as sea level rise, as well as coral bleaching, ocean acidification, and disease; and by local stressors from land-based sources of pollution,

development, unsustainable fishing practices, and invasive species; and

WHEREAS, many local, indigenous, and coastal communities have long maintained strong biocultural, spiritual, ecological, economical, and social connections to natural infrastructures critical to preserving cultures and cultural diversity; and

WHEREAS, natural infrastructure-lined communities with small size, low elevation, remote geographical location, and concentration of infrastructure along coastlines have underserved populations that are denser, growing faster, and composed of more people from lower-middle income groups than the global average, and are especially vulnerable to climate change impacts; and

WHEREAS, natural infrastructure degradation in the United States threatens vulnerable communities, including residents under sixteen and over sixty-five years of age, those with low income, and minority residents, especially in territories, and there are increasing calls for improving natural infrastructure conservation and restoration to enhance coastal resilience for these vulnerable communities; and

WHEREAS, in the United States, the estimated economic value of healthy coral reefs is \$3.42 billion annually, not including shoreline protection and hazard reduction values, and the value of U.S. coral reefs for flood protection has been quantitatively assessed at greater than \$1.8 billion dollars annually for the direct benefits of avoided flood damages to property. The value of the coastal protection services provided by reefs can be retained or enhanced through active coral restoration, a nature-based solution that seeks to meet conservation and hazard mitigation management goals; and

WHEREAS, the value of healthy coral reefs exceeded \$187 million annually in 2007 in the US Virgin Islands and included benefits to tourism, recreation, culture, amenities, commercial fisheries, and coastal protection; and

WHEREAS, healthy coral reefs in the Virgin Islands provided flood protection benefits worth an estimated \$47 million annually in 2010 in averted damages to property and economic activity; and

WHEREAS, the potential annual value of reef restoration for flood risk reduction across the Virgin Islands is currently being evaluated through a FEMA funded, collaborative project with the United States Geological Survey (USGS), the University of California at Santa Cruz, and the Nature Conservancy; and

WHEREAS, natural infrastructure, such as coral reefs, offer coastal protection services by reducing flooding and erosion through wave breaking and friction. Reefs behave as low-crested, submerged breakwaters, dissipating on average 97% of wave energy before it reaches coastlines; and

WHEREAS, natural infrastructure, such as mangroves, offer coastal protection services by reducing flooding and erosion through wave breaking and stabilization of the soil. Mangroves improve water quality by filtering runoff and trapping sediment, toxins, and particles. Mangroves fight climate change by sequestering and storing large amounts of carbon dioxide. Mangrove forests serve as a nursing ground and habitat for commercially and recreationally important fish and crustaceans as well as nesting areas and habitat for protected and indigenous wildlife; and

WHEREAS, natural infrastructure, such as seagrasses, improve water quality by filtering and trapping sediment and particles in the water column. Seagrasses fight climate change by sequestering and storing large amounts of carbon dioxide. Seagrass beds offer coastal protection services by reducing flooding and erosion through wave breaking and by stabilizing submerged lands. Seagrass beds serve as a nursing ground and habitat for commercially and recreationally important fish and crustaceans as well as primary food sources for tourism important species, such as turtles and rays; and

WHEREAS, natural infrastructure, such as beaches, offer coastal protection of built infrastructure by mitigating wave action. Beaches are important nesting grounds and habitat for indigenous birds and turtles. Additionally, beaches have economic, recreational, and cultural importance as a place for the Virgin Islands community and tourists to visit and enjoy; and

WHEREAS, all current and future identified natural infrastructure coexist, and the productivity and efficiency of the natural infrastructure ecosystems' services are directly related to the interconnected nature of the ecosystems. For example, coral reefs together with mangroves and seagrass beds form one of the most complex, diverse, and productive coastal associations in the world; and

WHEREAS, all current and future identified natural infrastructure are critical for protections and benefits to the Virgin Islands environment and community; and

WHEREAS, other nature-based infrastructure, such as engineered landscapes or systems, including but not limited to, living shorelines, rain gardens, green roofs, bioswales and permeable pavement, is critically important for protecting and enhancing the Virgin Islands' natural infrastructure; and

WHEREAS, current and future identified natural infrastructure are critical for the protection of the Virgin Islands, and the coasts of the United States, and essential for their inherent relationship in the conservation of associated ecosystems and communities that depend on them.

NOW, THEREFORE, I, Albert Bryan, Jr., Governor of the Virgin Islands of the United States, by virtue of the authority granted to me by Section 11 of the Revised Organic Act of 1954, as amended, do hereby **DECLARE** and **ORDER** as follows:

SECTION 1. The Government of the Virgin Islands acknowledges the critical and diverse values of and threats to ecosystems in the Virgin Islands and declares ecosystems such as coral reefs, mangroves, beaches, seagrasses, salt ponds and other ecosystems identified currently or in the future by the Government of the Virgin Islands and/or the Virgin Islands Department of Planning and Natural Resources as natural infrastructure.

SECTION 2.


The Government of the Virgin Islands, including its agencies, bureaus, departments, and instrumentalities shall coordinate to seek increased funding from federal agencies to protect, conserve and enhance the Territory's natural infrastructure to the extent possible, especially before and after disasters.

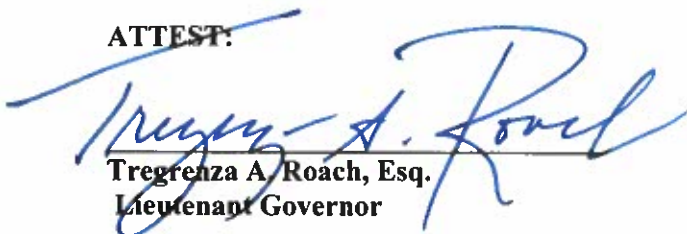
SECTION 3.

The Government of the Virgin Islands, including the Virgin Islands Department of Planning and Natural Resources, and other relevant government agencies, bureaus, departments, and instrumentalities are to take action to protect, maintain, conserve, enhance and utilize the natural infrastructure in the Territory, including by taking administrative, enforcement, conservation, and enhancement actions; and shall incorporate this directive and any forthcoming Virgin Islands natural infrastructure laws into policies and procedures, as well as rules and regulations wherever applicable.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the Government of the Virgin Islands of the United States to be affixed at Charlotte Amalie, St. Thomas, Virgin Islands, this 17th day of October, A.D., 2023.




Albert Bryan, Jr.
Governor

ATTEST:

Tregrenza A. Roach, Esq.
Lieutenant Governor