

Craney Island is an active Army Corps of Engineers civil works project. The site is on the north side of Portsmouth, Virginia and consists of approximately 2,500 acres for the management of dredged material. The site is served by a perimeter road approximately eight miles in length near the shoreline. The site has a primary containment dike approximately eight miles in length and two division dikes that divide the site into three sub-containment areas. Each sub-containment area has two spillways on the west side of the containment site.

SITE OVERVIEW

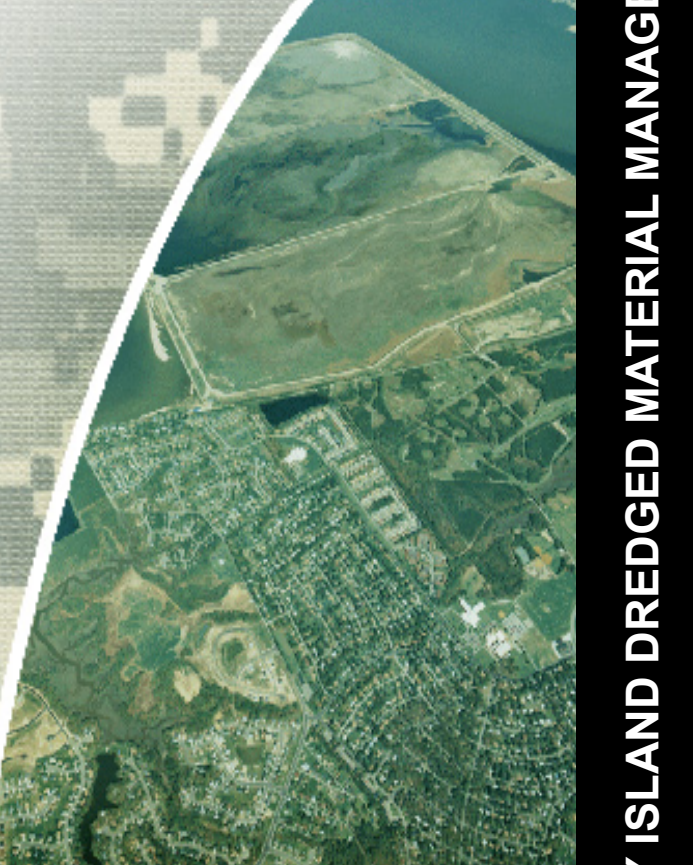


Presently, the area is known as the Craney Island Dredged Material Management Area, commonly referred to as Craney Island or CIDMMA. It is under the operation of the U.S. Army Corps of Engineers and is an active deposition site for dredged material from the Hampton Roads navigation channels.

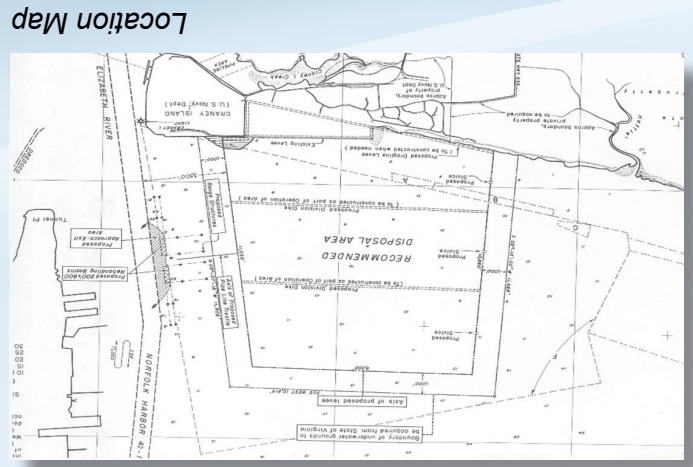
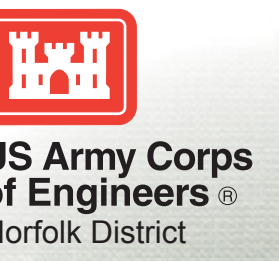
The project office is located near the entry gate at 4599 River Shore Road, Portsmouth, Virginia. Natural resources visitation for authorized visits can be arranged in advance by contacting the chief of the Craney Island project office.

INTRODUCTION TO CRANEY ISLAND

It is said that Craney Island was named by early English settlers who mistakenly identified the large number of birds they observed on the island as cranes. As a result, the name of the area became known as "Crayne" or Craney Point. It is believed that the "cranes" viewed there are the blue and white herons present in the region today.



CRANEY ISLAND DREDGED MATERIAL MANAGEMENT AREA



The planned capacity of the facility was to be 96 million cubic yards with an expected useful life of 20 years. The facility consisted of approximately eight miles of sand perimeter dikes enclosing a

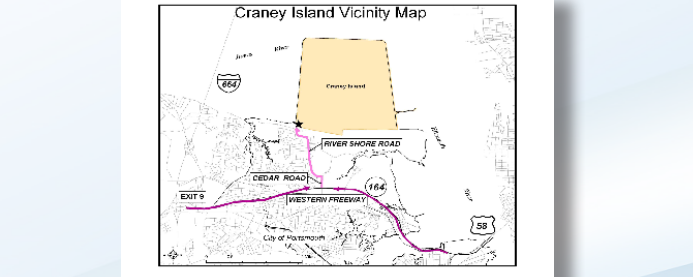
The three-year project was completed in 1957 at a cost of approximately \$6 million. Perimeter dikes were constructed by pipeline dredges pumping sand from underwater borrow areas and depositing it along the proposed alignment until it was above high tide elevation. The material was then shaped by dragline cranes into the desired sections. The project was immediately successful, and users started depositing dredged material from dump scows even before construction was completed.

Design and Authorization

HISTORY OF THE CRANEY ISLAND DREDGED MATERIAL MANAGEMENT AREA

The Craney Island Dredged Material Management Area was conceived in the early 1940's. In years past, the general vicinity had been used on occasion for deposition of dredged bottom sediments. The original design concepts were contained in the House Document No. 563, 79th Congress, 2nd Session, and authorized by Congress in the Rivers and Harbors Act of July 24, 1946. The authorization allowed Craney Island to collect to be used to offset the costs for both the construction and operation of the facility.

DIRECTIONS TO CRANEY ISLAND



DIRECTIONS TO CRANEY ISLAND

Traveling from Norfolk, take the Midtown Tunnel, bear right onto the first exit, SR 164, Western Freeway. From North or South Interstate 664, take exit 9 East onto SR 164, Western Freeway.

From SR 164, Western Freeway, take the Cedar Lane exit; bear left on exit ramp and take a left at light onto Cedar Lane. Take left at light onto River Shore Road. Continue on River Shore Road approximately 1.5 miles. The Craney Island Project Office driveway and entrance gate will be on the right side.

Normal operating hours are 7:00 a.m. - 3:00 p.m., Monday - Friday, excluding federal holidays.

For Further Information

U.S. Army Corps of Engineers
Craney Island Project Office
Chief, Craney Island Project Office
4599 River Shore Road
Portsmouth, VA 23703-1546
Office Telephone: 757-484-1021
Internet: <http://www.nao.usace.army.mil>

Public Affairs Office
Norfolk District,
U.S. Army Corps of Engineers
803 Front Street
Norfolk, VA 23510-1096
Office Telephone: 757-201-7606



Periodic surveys showed that the capacity of Craney Island continued to increase. A management plan, dated December 1981, called for new spillways, completion of the sub-cross dikes, annual rotational use of the containment cells, more active dewatering by increased ditching, raising and stepping-in dikes, greater use of geotechnical fabric, and several other similar activities. Many of these techniques were variations or continuations of procedures currently in effect.

Construction



After Congress passed a law in 1976 extending the useful life of disposal facilities throughout the United States, the Norfolk District began to examine ways to increase the life of Craney Island. The District conducted a study to consider the feasibility of further increasing the capacity of the facility by raising the levees above the design elevation. Test borings and calculations showed that by stepping the levees in away from the shore, it would be possible to build them to a height of 30 feet. The levees were raised in increments in order to allow them to stabilize as the level of dredged material inside increased.

CRANEY ISLAND IN THE FUTURE

A vital mission of the partnership between the COE and VPA is to generate jobs, provide Federal and State/regional benefits and grow the economic benefits accruing to the Commonwealth from maritime commerce. Jobs in the wide-ranging maritime industry include the service providers that are involved in handling and processing goods imported to Virginia — such as distribution center and warehouse workers, logistics professionals, and truck drivers. Exclusive of the jobs emerging from the Craney Island Eastward Expansion, The Port currently generates over 343,000 maritime industry jobs throughout Virginia. In fact, 1 out of 11 jobs in Virginia is attributed to Port-related economic activity. The Craney Island Eastward Expansion will increase The Port's capacity to handle containerized cargo, therefore increasing the number of Virginia jobs generated from maritime commerce. Workers will be needed to build new roads and rail, transport increased numbers of containers, and support distribution and retail trade. Specific to the Craney Island Eastward Expansion, from the start of construction, to full terminal build-out, over 54,000 jobs with annual wages of over \$1.6 billion will be produced.

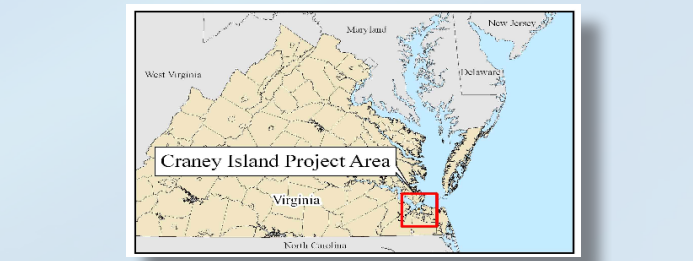


Practices to Extend the Useful Life of Craney Island

Because of its unique design features, large size, and successful operation, Craney Island became a prototype for similar facilities. The site has been frequently visited by various departments within the Army Corps of Engineers, port authorities from the United States and abroad, and other navigational interest groups. The Army Corps of Engineers Research and Development Center, or ERDC, has been involved with Craney Island throughout its life span. Many of the ERDC dredged material research program reports were based on work done at Craney Island.

The Norfolk District has multiple contracts to control mosquito populations at Craney Island and the adjacent Navy Fuel Depot. This contract includes both surveillance activities, including adult mosquito traps and larval monitoring, and also control activities, including larvicides applied by hand, back-pack, and aerial application.

The United States Air Force conducts aerial spraying targeting adult mosquitoes when regional mosquito populations on Department of Defense bases and facilities warrant an aerial spray mission.

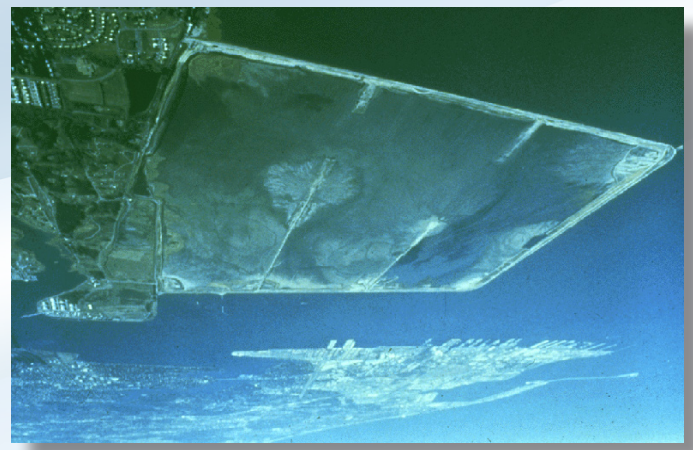


Location Map



With the construction of the north and south division dikes in 1984, the facility was divided into three separate containment cells. Because of operational improvements, the dikes were constructed at a reduced cost and provided additional space inside the containment area. As a result, Norfolk District personnel received congratulatory letters from President Ronald Reagan. The construction of six new weirs in the western corners of the sub-containment cells in 1987 completed the division dike project.

Division Dike Construction



Water Resources



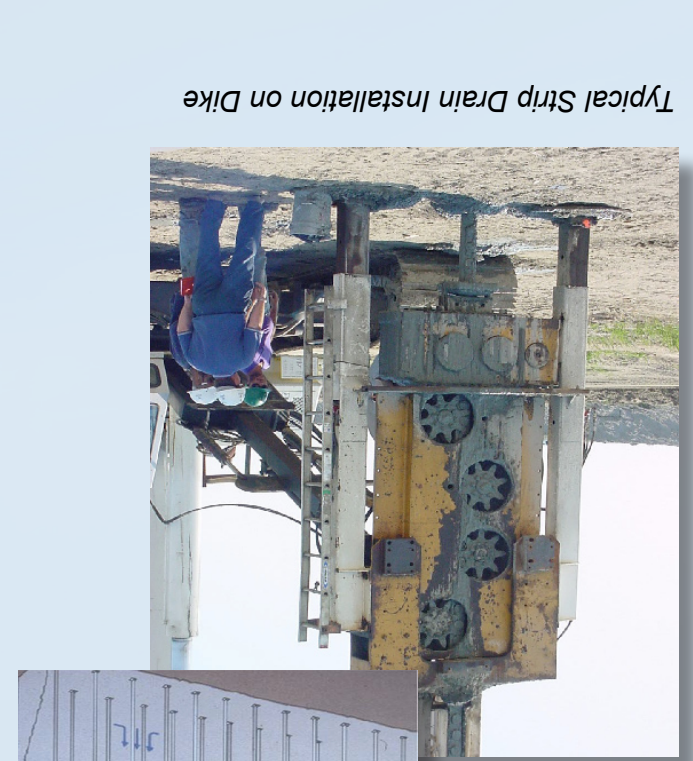
Spillway

The management and control of the effluent that is discharged from the containment areas is the responsibility of the permittees that are using the facility. To facilitate water quality management, each containment area is provided with two primary spillways, each having a crest length of approximately 85 feet and four, 36-inch diameter discharge pipes. These facilities allow for the removal of the solids from the discharge water and typically result in water that has less suspended solids than the receiving waters in the lower James River.

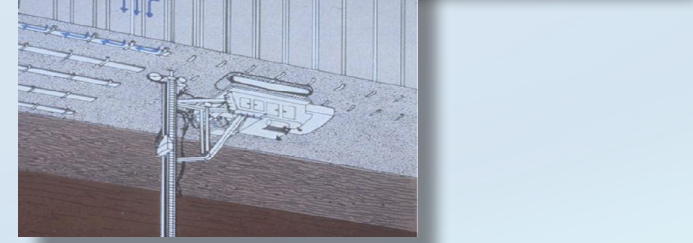


Mammals

Craney Island is home to a variety of species of mammals. These animals are elusive and are not readily seen by visitors. However, visitors to the island may have the opportunity to view such wildlife as rabbit, groundhog, river otter, raccoon, opossum, red fox, coyote and whitetail deer.



Typical Strip Drain Installation on Dike



Craney Island was only expected to last for another decade in 1990. Through a combination of innovation, teamwork and technical expertise, the Norfolk District with assistance from the Engineering Research and Development Center (ERDC) engineered a solution to extend its useful life. The installation of vertical plastic strip drains was completed in 1996. The drains have strengthened the foundation conditions beneath the perimeter dikes. The greater foundation strength allows the elevation of the dikes to be raised which increases the volume inside Craney Island for dredge material placement.

Vertical Plastic Strip Drains

CRANEY ISLAND TODAY

The CIDMMA is vital to Virginia's maritime economy. Sometimes called the "Jewel in the Port of Hampton Roads," its centralized location provides a low-cost placement option for material dredged from Hampton Roads navigation channels, as well as from private dredging projects. Hampton Roads is generally recognized as the southernmost boundary of the Boston - New York - Washington industrial, commercial, residential, and recreational complex. Commercial, agricultural, and industrial development in the Hampton Roads area, along with the movement of naval vessels, is dependent upon maintaining deep-draft navigation capability in the Hampton Roads channels.



Pontoon Ditcher

Modern dredged material management practices are used continually so the facility maximizes the capacity of dredged material storage. Practices include the rotation of dredged material placement between three sub-containment areas. Typically, a single sub-containment area is active for one year while the two inactive areas are extensively managed for water removal. This is accomplished with the use of both a pontoon excavator that constructs primary drainage ditches, and also a smaller pontoon ditcher that constructs a system of shallow interior ditches. Both aid in the dewatering and consolidation of dredged material. By 2010, Craney Island had received more than 253 million cubic yards of dredged material.

Typical Dredged Material Management Process



A
Floating dredge cuts and vacuums sediment from navigation channel bottom

James River



B
Dredged material is pumped into one of three active cells



C
Material flows down-slope to the west, depositing the heaviest particles first



D
Spillway allows the release of water after sediments have settled out



E
The clarified water is returned to the James River through outflow pipes



F
Pontoon Excavators create ditches to improve cell drainage



G
Coarse material is collected into piles for easy loading

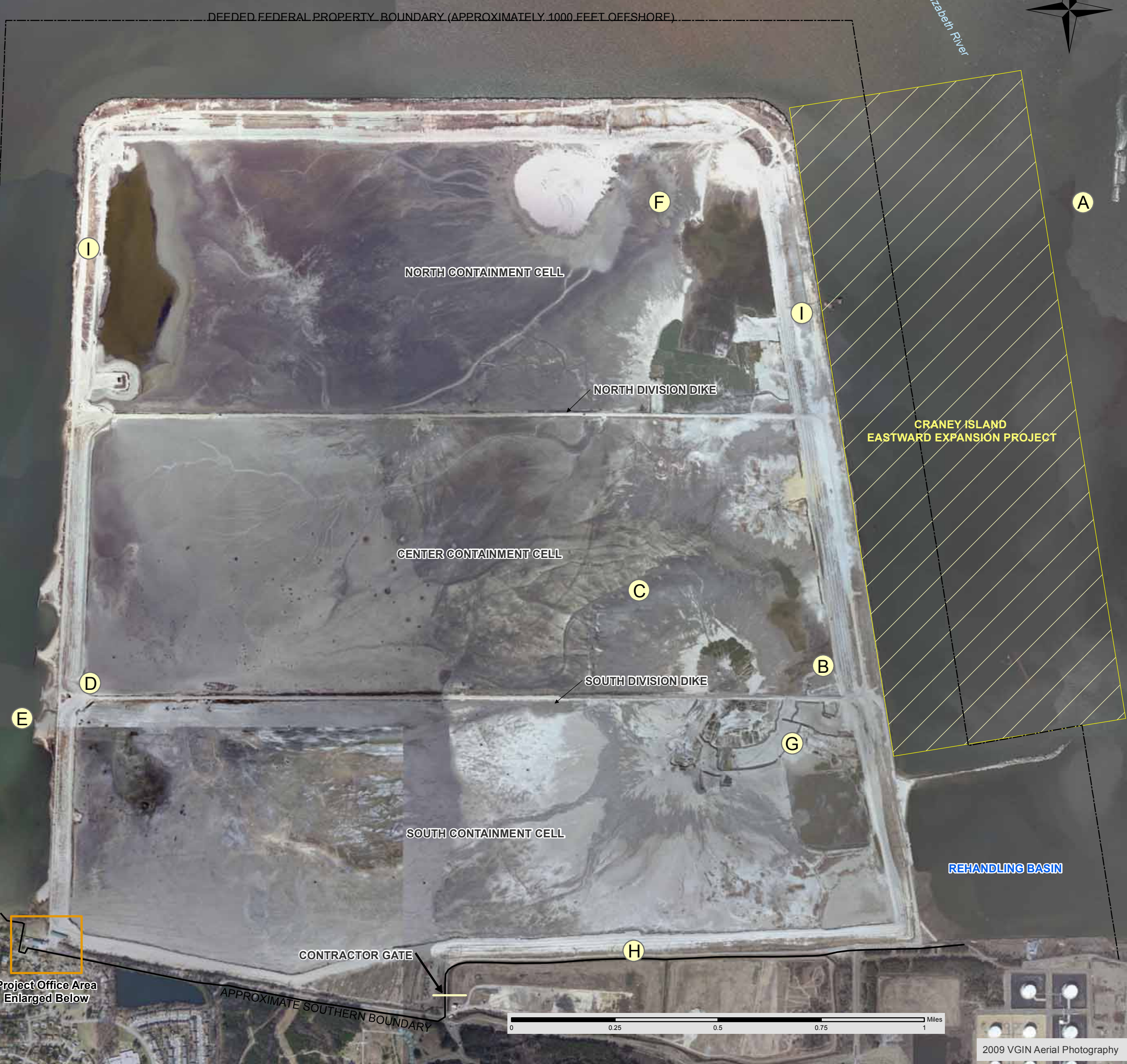


I
Raising construction on Perimeter DiKE



H
Material is transported to dike area

CRANEY ISLAND DREDGED MATERIAL MANAGEMENT AREA



RULES AND REGULATIONS
The Rules and Regulations for the authorized use of Army Corps of Engineers Water Resources Development Projects, including the Craney Island Dredged Material Management Area (CIDMMA), are set forth in Title 36 U.S.C., Chapter 111, Section 327 and summarized in Engineer Pamphlet 1165-2-316 dated May 2000. Special rules for the CIDMMA are set forth in this policy memorandum which also includes a list of items and activities that are specifically permitted or prohibited. In addition to the Federal rules and regulations, authorized users of Army Corps of Engineers projects are subject to all applicable state and local laws.

Procedures for the Authorized Use of the CIDMMA
Authorized uses include educational activities organized by public or private institutions of learning, organized environmental and natural resource groups, associations, and clubs for the purpose of nature study and observation, or other similar organized activities as approved by the Chief of the Craney Island Project Office.

Requests for authorized visitation or use of the CIDMMA should be submitted to the Chief of the Craney Island Project Office no later than two weeks prior to the date of the intended visit. The date and times available for authorized visitation will be determined based on site conditions, construction activity, and other operational factors. In most cases, authorized visits will be arranged for weekends to avoid conflict with construction operations.

Access to the CIDMMA
Authorized visitors will be provided with instructions on how to access the CIDMMA or will be provided with an escort as determined by the Chief of the Craney Island Project Office.

Privately Owned Vehicle Requirements:
All privately owned vehicles must comply with all applicable state and local vehicle laws and regulations and must be insured for not less than the minimum limits required by law in the state the vehicle is registered. All operators of privately owned vehicles must be licensed in compliance with the applicable state motor vehicle operator laws and regulations. Vehicle operators may be required to show a valid operator's license, vehicle registration, and proof of insurance.

Release of Liability:
All authorized users, 18 years of age or older, are required to read and sign a "Release of Liability" form prior to any authorized use of the CIDMMA. The group leader shall provide a manifest of all persons in the group and submit the required release forms prior to the date of the visit.

Operation of Motor Vehicles on the CIDMMA:
All motor vehicles must be operated in compliance with all posted speed limits and traffic signs. In no case will vehicles be permitted to exceed 25 MPH.

Road Conditions:
The roads on the CIDMMA are primarily dirt and conditions may vary greatly. Authorized visitors are advised to check the conditions prior to using the roads with privately owned vehicles. Please note that government vehicles and personnel are not permitted to move or extract privately owned vehicles.

Safety and Accident prevention:
Authorized users should report any safety hazards, accidents, and injuries to the Chief of the Craney Island Project Office. There are no emergency services available at the CIDMMA. If emergency assistance is needed, authorized users should call 911 and follow the instructions of the emergency dispatcher.

Endangered and Threatened Species:
Several types of endangered and threatened species may use the CIDMMA for nesting and feeding. Authorized users should avoid any posted nesting areas and any non-posted areas where bird activity indicates possible nesting or if nests or young birds are observed.

Construction Activities:
Government and contractor operated heavy construction equipment and vehicles are working at the CIDMMA. Authorized users should make every effort to avoid areas with construction activities and exercise caution in the vicinity of construction equipment and vehicles.

SPECIFICALLY PERMITTED AUTHORIZED ACTIVITIES
Natural resource and environmental educational activities and studies:
Such activities should be in compliance with all Federal, state, and local laws and regulations and should be conducted so as not to disturb the wildlife in feeding or nesting areas. Other organized natural resource and environmental activities as approved by the Chief of the Craney Island Project Office.

SPECIFICALLY PROHIBITED ACTIVITIES
Strictly Prohibited - Unauthorized Access
Prohibited - Solicitation, vending, and commercial sales activities of any type.
Prohibited - The possession or introduction of any firearms, bows, crossbows, airguns of any type, paint-ball guns, fireworks, rockets, explosives, trapping devices, or any similar device capable of causing injury.
Prohibited - The possession or introduction of any alcoholic beverage, controlled substance, illegal drug, or other similar substances.
Prohibited - Hunting and trapping or any similar activity that may cause harm to wildlife on the CIDMMA and for a distance of approximately 1000 feet from the shoreline.
Prohibited - Swimming and other water sports
Prohibited - The operation of power boats, sailboats, para-sails, sail boards, personal watercraft (jet skis, jet boats, etc.), or other similar watercraft.
Prohibited - The operation of any model aircraft, model rockets, or other similar devices.
Prohibited - The possession or introduction of pets, domestic animals, falcons or other birds of prey.
Prohibited - The introduction or release of wildlife.

Prohibited - The operation of off road vehicles, all terrain vehicles, dirt bikes, and similar vehicles that are not registered and licensed for operation on public roads.
Prohibited - The damage, destruction, or removal of vegetation.
Prohibited - Damage or destruction of any gate, lock, camera system, or other security device.
Prohibited - The operation of privately owned vehicles on the containment area dikes and division roads.
Prohibited - Entering or otherwise disturbing posted bird nesting areas.
Prohibited - Littering
Prohibited - Interference with or failure to comply with the instructions of CIDMMA Government Employees.

The violation of these rules and regulations could result in the suspension or termination of the authorized use privileges at the CIDMMA. In addition, violation of the regulations set forth in EP 1165-2-316, Rules and Regulations Governing the Public Use of Corps of Engineers Water Resources Development Projects, could result in a fine of not more than \$5,000.00 or imprisonment for not more than 6 months, or both. Furthermore, all state and local laws remain in effect with respect to the authorized use of the Craney Island Dredged Material Management Area.



Craney Island Project Office Administrative Building
Entry Gate
River Shore Rd
Project Office Area
US Army Corps of Engineers
Norfolk District