

# NEPA CAPABILITIES & SERVICES

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# About Us

Johnson, Mirmiran & Thompson (JMT) is a multidisciplined engineering, environmental, and architectural firm serving clients throughout the United States since 1971.

Currently ranked No. 57 on Engineering News-Record's list of the top 500 design firms and No. 155 in the top 200 environmental firms, JMT has a strong reputation of providing quality services to a variety of clients across multiple sectors: transportation, buildings and facilities, water/wastewater and utilities, energy, federal, regulatory and rulemaking, and ecosystem restoration.



# US 50 Crossing Study of Sinepuxent Bay

EIS, Section 106 and 4(f)

Worcester County, MD



## Project Highlights

- Collaboration between state and federal agencies.
- Evaluation of possible environmental and cultural effects to improvements on historic Harry W. Kelley Memorial Bridge.
- Challenge of constructing an adjacent replacement bridge while preserving the existing structure to serve the tourist area of Ocean City.

JMT was contracted by the Maryland State Highway Administration (SHA) to perform a detailed crossing study of the Harry W. Kelley Memorial Bridge and roadway approaches of U.S. Route 50 into Ocean City, MD. This study was completed under the auspices of the Federal Highway Administration (FHWA) and SHA as lead agencies, and the U.S. Army Corps of Engineers (USACE), U.S. Coast Guard, Environmental Protection Agency (EPA), the U.S. Fish &

Wildlife Agency (USFWS), and the Maryland Department of the Environment (MDE) as cooperating agencies.

JMT prepared a full planning evaluation and EIS for this gateway to Ocean City. The EIS examined the potential environmental and cultural/historic impacts from bridge and roadway improvements to both the historic bridge and U.S. 50 as it enters Ocean City. This effort required several large technical studies that permitted decision makers to select a reasonable alternative that balanced the needs of the state with the environmental impacts resulting from the project. Studies involved a complete historic determination of the bridge, including an archaeological and cultural resources assessment under Section 106 of the National Historic Preservation Act of 1966 (NHPA), specifically for impacts related to the Kelley Memorial Bridge. The one-half-mile-long historic structure is a major collector for millions of visitors to the Ocean City resort area each year. Great care was taken in considering how best to preserve the bridge as a bike and pedestrian pathway and fishing bridge while constructing a replacement structure directly adjacent to the existing bridge.

Other unique aspects of the study included:

- A socio-economic study in accordance with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898).
- A comprehensive threatened and endangered species evaluation that included a sand migration study of Sinepuxent Bay and Skimmer Island to protect state-listed threatened and endangered colonial nesting waterbirds.
- An essential fish habitat review for more than a dozen fin fish species known to occur or reproduce in the Sinepuxent Bay and the Ocean City Inlet, and related consultation with the National Marine Fisheries Service under the Magnuson-Stevens Fishery Conservation and Management Act.
- Emissions studies related to traffic and construction in accordance with the Clean Air Act of 1970.
- Noise monitoring and studies for traffic and potential construction-related impacts under the Noise Control Act of 1972, and recommendations for noise abatement

under the Maryland State Procedures for Abatement of Highway Traffic Noise and Construction Noise and the SHA Sound Barrier Policy (May 1998).

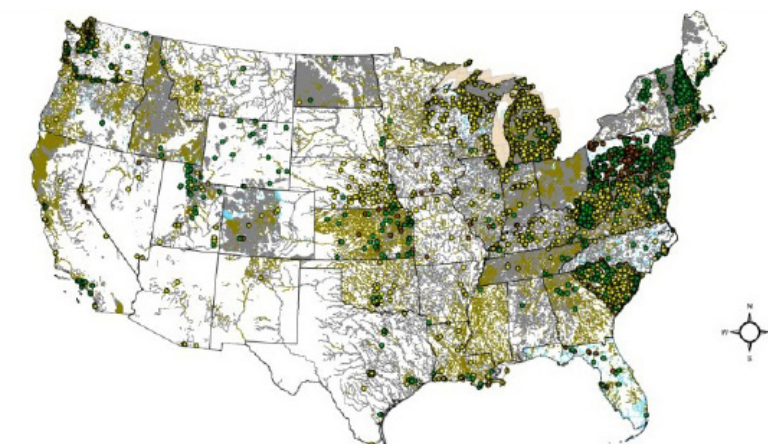
- Consultation with the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays under the Atlantic Coastal Bays Protection Act, and under the Coastal Zone Management Act.
- Wetland investigations and permitting through the State of Maryland and the U.S. Army Corps of Engineers under Section 401 and 404 of the Clean Water Act.
- A study of the seasonal demands of the Ocean City resort area, including transportation, boating channel, and fishing activities.
- A detailed analysis of possible bridge and roadway construction implementation schemes.



JMT provided National Environmental Policy Act (NEPA) compliance services for the US Food and Drug Administration (FDA) that culminated in the publication of the agency's first-ever Environmental Impact Statement (EIS).

The EIS was prepared to support the agency's proposed rulemaking for growing, harvesting, packaging, and holding of raw produce for human consumption. The FDA's new rule impacts farms worldwide in how they perform activities such as irrigation, application of biological soil amendments (manure), monitoring animal intrusion on produce fields, and administrative actions such as recordkeeping and rule compliance measures. The scope of the EIS was focused on the U.S., its territories, and certain transboundary effects related to aquifer depletion impacts with Mexico.

JMT prepared mapping and data analysis including for 303(d) impaired waters (right) across the US due to nitrate exceedances. This was overlaid with USDA census data on produce farms to help identify farms potentially affected by FDA's proposed rule that may have poor irrigation water quality and high bacteria and pathogen content.



The proposed rule was designed to minimize foodborne illnesses from pathogens such as Salmonella and E. coli during the growing, harvesting, and handling activities related to certain produce commodities that are normally consumed raw, as authorized by Congress under the Food Safety Modernization Act of 2011. JMT assisted the FDA with evaluating the environmental (including human) and socioeconomic impacts for provisions of the proposed rule that may significantly impact the environment. JMT evaluated the potential impacts of the rule to human health and safety; water resources; biological and ecological resources; waste generation, disposal, and use; air quality and greenhouse gases; soils; cultural resources; and socioeconomic and environmental justice (economic impacts to farmers and minority and low-income farm workers).

During the NEPA process leading up to the publication of the final EIS, JMT planned and coordinated multiple public meetings with a fully-integrated webinar component that allowed participants from across the country, U.S. territories, and foreign nations to view a presentation and provide public comment on the proposed rule, as well as exchange questions with a panel of FDA subject matter experts. JMT assisted FDA in the review of more than 17,000 comments on the proposed rule, which aided in further defining the scope of the EIS. We worked together with FDA attorneys, scientists, and policy experts to prepare responses to several legal comments received on the draft EIS. The final EIS and Record of Decision (ROD), along with the produce safety final rule, were released in Winter 2015. Throughout the project, JMT directly supported consultation with the Council on Environmental Quality on the scale of the EIS, the U.S. Department of Agriculture as a

cooperating agency, various state Departments of Agriculture, and the U.S. Fish and Wildlife Service and National Marine Fisheries Service on potential impacts to threatened and endangered species.

## Project Highlights

- Approval of FDA's first-ever EIS and ROD.
- Fully-integrated web-based public scoping meeting facilitated attendee participation from locations worldwide.
- Successfully implemented a produce safety rule that benefits consumer health.
- Minimized of potential economic impacts to small farmers.
- Adopted strategy avoided and minimized adverse impacts to water quality and aquatic species by reducing the need to change water sources (switch from surface water irrigation to groundwater irrigation) or to chemically treat agricultural irrigation water to kill-off harmful pathogens.

# FDA Environmental Impact Statement

for the Proposed Produce Safety Rule

Nationwide



# NPS Watergate and Arnott Fen Compensatory Wetland Mitigation Projects

Delaware Water Gap National Recreation Area, PA and NJ



## Project Highlights

- Restores approximately 5,800 feet of streams and more than 60+ acres of wetlands.
- Designs for specific habitats of critically endangered and threatened species.
- Restores cold water, native trout fisheries.
- Enhances recreational and educational opportunities.
- Provides ecological uplift and enhances the cultural landscape through preservation of cultural resources and restoration of historic landscapes.
- Provides NEPA compliance on two distinct sites within the park.

**JMT is providing comprehensive services to the National Park Service (NPS)** in support of the compensatory mitigation associated with impacts to wetland and stream resources at the Delaware Water Gap National Recreation Area (DEWA). The project includes stream and wetland restoration design to be used as mitigation for impacts associated with the construction of the new Susquehanna to Roseland Electric Transmission Line. The project will restore essential habitat for rare, threatened, and critically endangered species in two states, and includes supporting cultural resource investigations; wetland, forest, fisheries and benthic studies; permitting; modeling; and NEPA evaluations. The project occurs in diverse and sensitive locations at two sites within DEWA - one in Pennsylvania, the other in New Jersey – and is part of a \$66 million compensatory mitigation package funded by Pennsylvania Power and Light Electric Utilities and the Public Service Electric and Gas Company. These projects are currently the largest wetland and stream restoration projects being managed by NPS service-wide, and the first NPS ecosystem restoration projects designed with climate resiliency in mind.

As a key component of each project, JMT is proposing the removal

of historic impacts from road building, dam construction, and agriculture/deforestation, which will allow ecosystems to self-form and adapt towards a stable equilibrium, remedying centuries of impact due to unsustainable land use practices.

The Arnott Fen site is located in Pennsylvania and restores approximately two acres of prime habitat. This sensitive area has historically been the home of multiple highly-sensitive and rare species. Restoration activities at the Arnott Fen will focus on the removal of an internal road that has disrupted the hydrology of the larger system. Data is currently being collected and will be used to determine design methodologies to restore species-specific habitats, and naturalize historic impacts.

The Watergate site is located in the New Jersey portion of DEWA along Van Campens Brook, which is one of the highest quality brook trout and wood turtle watersheds in the state of New Jersey. The topography and hydrologic regime of this site was heavily altered by owners previous to NPS, installing 13 dams and associated ponds, and limiting aquatic organism passage. Additionally, deforestation and agriculture have impacted the site, accumulating sediments and burying historic floodplain wetlands. The proposed

improvements to Watergate include restoring fish passage to Van Campens Brook by removing the intact and remnant pieces of dams, enabling brook trout populations to freely move through the reach for the first time since the dams were installed. The proposed restoration design will also include the reconnection of Van Campens Brook to the floodplain, creating opportunities for wetland creation and habitat improvements, wood turtle foraging and nesting locations, over approximately a 60-acre footprint.

**As a result of the project, JMT will help NPS achieve the following goals:**

- Fulfillment of compensatory mitigation goals.
- Restoration of unique habitat disturbed through centuries of historic impacts.



# BOA Infrastructure and Environmental Assessment

DC Water and Sewer Authority

Washington, DC



## Project Highlights

- NEPA Communications Plan establishes standard operating procedures and templates for all communications with agency and public stakeholders for future CIP projects requiring NEPA compliance.
- NEPA training course for DC Water staff on NEPA regulations, processes, documentation, and requirements. Due to the success of the training, DC Water indicates future trainings may be requested for additional DC Water staff and executives.

As part of a Joint Venture, JMT provided design and environmental services for the District of Columbia Water and Sewer Authority (DC Water) for projects requiring compliance with the National Environmental Policy Act (NEPA) under Basic Ordering Agreement (BOA) DCFA #461.

As part of its Capital Improvements Program, DC Water is implementing repair, rehabilitation, and/or replacement projects of sewer infrastructure with defects to reduce the potential for sanitary sewer overflows and protect the health of the public and wildlife. Additionally, some projects include the repair of municipal separate storm sewer system (MS4) outfalls that contribute to water quality degradation per requirements of the District of Columbia's National Pollutant Discharge Elimination System, MS4 permit. Because some project improvements involve federal property (National Park Service parkland) and federal actions, JMT provided NEPA services that involved the delineation of natural resources (e.g., wetlands), applications for special use permits from the National Park Service (NPS), Section 106 coordination with the NPS and District of Columbia Historic Preservation Office, preparation of an environmental assessment, public and agency scoping, and archaeological monitoring during construction.

Engineering services under the BOA included the assessment and inspections of sewer infrastructure, preparation of sewer repair, rehabilitation, and/or replacement design alternatives, preparation

of engineering design submittals from concept finalization report through contract documents ready for bidding and procurement, and geomorphic assessments of stream reaches in areas of exposed sewer assets, along with stream stabilization designs to provide long-term protection of sewer infrastructure.

### Program Management

- Developed a NEPA communications plan to guide DC Water staff in implementing agency coordination and public involvement for projects requiring NEPA compliance, with a focus on preparing Environmental Assessment and Environmental Impact Statement Documents.
- Identified and obtained environmental permits required for projects.
- Made recommendations to DC Water to better align their design process with NEPA compliance to facilitate effective delivery and efficient use of resources.
- Advised DC Water on requirements, timeframes, and processes for NEPA compliance and environmental permits, integrated these timeframes into project schedules, and assisted with NEPA compliance.

- Assisted DC Water in planning public outreach meetings for sewer improvement projects.
- Developed innovative design concepts for stream stabilization projects to address the need for long-term protection of exposed sewer assets.

### Program Controls

- Conducted a three-day NEPA training course for DC Water staff to assist with navigating the NEPA process during all phases of project delivery, including NEPA regulations, processes, documentation, and requirements.
- Developed internal guidance documents, project work plans, and project quality plans to outline and identify procedures to meet project requirements.
- Developed a NEPA Communications Plan that outlines best management practices and standardizes the how, when, and who for coordination with agency and public stakeholders for projects requiring NEPA compliance.
- Developed and maintained a documents library for all reports, meeting agendas/minutes, transmittals, design drawings and specifications, technical memoranda, and schedules.



# Site Redevelopment Design and NEPA Services

for Maryland Port Administration

Baltimore, MD



# Comprehensive Environmental Planning Services

BWI Thurgood Marshall and Martin State Airports

Baltimore, MD



**JMT is providing design, environmental permitting, NEPA documentation, and site redevelopment services for a new LEED® Silver-certified office building at the Dundalk Marine Terminal.**

The tenants who will occupy the new building are currently operating out of a 75-year-old aircraft hangar previously operated by the Maryland National Guard as a fighter squadron hangar. The building, which was converted to storage space and renovated to add office space, is now beyond its serviceable life. The Maryland Historic Trust (MHT) determined that the building was known as the 104th Fighter Squadron Hangar and eligible for the National Register of Historic Places. Our historic resources specialists are assisting with the Section 106 Consultation process, where we will negotiate mitigation for the demolition of the building.

During the early 1900s, the Dundalk Marine Terminal was subjected to hexavalent chromium contamination from the placement of chromium ore processing residue (COPR). While the existing building and the proposed redevelopment site may not be in COPR-contaminated areas, there is still a risk to construction workers and, therefore, the MPA requires procedures for handling and disposing of soils. JMT is also designing a stormwater facility to tie into the on-site treatment plant to ensure contaminated waters are remediated.

MPA applied for a Transportation Investment Generating Economic Recovery (TIGER) grant, and must complete the NEPA process. As part of the NEPA process, we coordinated with the TIGER grants office to identify potential NEPA requirements.

## Project Highlights

- NEPA document and environmental permitting
- Construction documents for bid
- Concept-level design and engineering feasibility study
- Sustainable design
- Geotechnical services
- Hazardous materials survey and utility investigations
- Laboratory and testing facility
- Stormwater drainage

JMT provided environmental support services to the Division of Environmental Planning, and assisted with the reconciliation of easements for compliance with Maryland's Forest Conservation Act.

This project has enabled the Maryland Aviation Administration (MAA) to develop portions of the BWI Marshall campus that were previously committed as forest mitigation. This effort included reviewing an inventory of all MAA-owned properties and associated forest resources, compiling all previously committed on-campus forest easements, and establishing more than 500 acres of formal forest conservation easements off-campus and non-developable areas on-campus.

JMT was tasked to perform the first year of monitoring for the recently-constructed Kitten Branch stream restoration project, which was provided as compensatory mitigation for the Runway Safety Area Program at BWI Marshall. Under this task, JMT collected benthic macroinvertebrates and in-situ water quality parameters, conducted a habitat assessment and collected cross-sectional and other data regarding the stream and structural elements of the design. This information was compared to baseline data to determine the project's success. Finally, in support of the next environmental assessment development at BWI Marshall, JMT provided traffic engineering support and coordination with the Maryland State Highway Administration related to landside development impacts.

**JMT also provided assistance for the Martin State Airport Environmental Assessment:**

- Reviewed previous studies for species composition to determine obstruction clearing/mitigation opportunities.
- Tabulated mitigation requirements to accommodate clearing associated with future development activities.
- Assisted with regulatory agency coordination, such as preparing meeting minutes and analyzing resources to refine potential impacts.
- Assisted with preparing forest conservation plans for development activities and a mitigation plan.
- Reviewed design packages for potential opportunities for additional avoidance and minimal impacts.
- Oversaw the airport's reforestation master plan update.
- Coordinated with NOAA-NMFS for essential fish habitat.
- Performed a survey of submerged aquatic vegetation.
- Prepared joint permit application and necessary documentation for compensatory mitigation.





# Environmental Engineering Master Services for the CoreCivic

Nationwide

## Project Highlights

- NEPA document preparation
- Phase 1 Environmental Site Assessments
- Section 106 consultation
- Environmental and engineering feasibility
- Wetlands and stream delineation
- Endangered species assessment
- Water/wastewater capacity analysis

JMT is providing environmental engineering services for the Corrections Corporation of America (CCA), now known as CoreCivic, for federal correctional and detention facilities operated by private correctional companies through federal contracts.

The contract includes comprehensive environmental engineering services across the U.S. for NEPA document preparation; Section 106 consultation under the National Historic Preservation Act for cultural resources; wetlands and stream delineation; endangered species surveys and Section 7 consultation; traffic impact studies, Phase 1 environmental site assessments; site plan preparation; road, wastewater, and water infrastructure assessment and preliminary engineering; stormwater management assessment and preliminary design; land use and zoning services; noise studies; and public involvement.

### Houston Processing Center; Houston, TX

For the first task under the contract, JMT completed several environmental and engineering studies for a detention facility in Houston, TX for criminal undocumented resident detainees under the jurisdiction of the U.S. Immigrations and Customs Enforcement (ICE).

The project included a feasibility analysis for a 1,037-bed facility, a 1,280-bed facility, and a 1,480-bed facility; preparation of three Environmental Assessments (NEPA documents); preparation of scoping letters to agencies and stakeholders; water/wastewater capacity analysis and conceptual engineering of the sewer and water line improvements; preliminary site plan; a Phase I environmental site assessment for property acquisition; stormwater management plan; a public involvement program for the expansion; wetland and stream mapping; endangered species habitat assessment; Section 106 cultural resource assessment

with the Texas State Historic Preservation Office; land use, site plan, and zoning analysis; and environmental assessments required by ICE for the proposed construction and operation of the facility. The NEPA document was prepared for the U.S. Department of Homeland Security's ICE, in accordance with their NEPA document regulations.



# Technical Support Services

## Natural Resources Investigations

- Wetlands and Waterways Assessment and Delineations
- Forest Stand Delineations
- Avoidance and Minimization Planning
- Biological Assessments
- Invasive Species Surveys
- Stream Assessment Surveys
- Water Quality Sampling
- Land/Wildlife/Timber Management Plans
- Coastal Zone/Critical Area Coordination
- Rare, Threatened, and Endangered Species Surveys

## Environmental Permitting and Compliance

- Wetlands and Waterways Permitting
- Tidal/Non-Tidal
- State/Federal
- Jurisdictional Determinations
- Coastal Zone Consistency Determinations
- Forest Conservation/Critical Area Permitting
- NPDES/MS4 Compliance
- Stormwater Pollution Prevention Plans
- Environmental Management Plans and Compliance
- Training
- Design-Build Projects
- Environmental Construction Inspections
- Phase I and II Environmental Site Assessments
- Lead-based Paint and Asbestos Management



## Cultural Resources

- Section 106 Coordination
- Section 4(f) Evaluations
- Historic Structures Surveys
- National/State Register Determination of Eligibility and Nominations
- Archaeological Surveys
- Programmatic Agreements

## Planning and Analysis

- NEPA Analysis and Training Classes
- Natural Environmental Technical Reports
- Section 4(f), 6(f)
- Alternatives and Socio-economic Analysis
- Environmental Justice
- Community and Stakeholder Outreach
- Public Scoping
- Administrative Record

## Ecological Restoration and Mitigation

- Stream Restoration Services
- Floodplain Reconnection
- Rosgen/Natural Channel Design
- Geomorphological Analysis
- Stream Corridor Assessments
- Sediment Transport Analysis
- Infrastructure Protection
- Streambank Stabilization
- Channel Relocations
- Stream & Wetland Crossings
- Daylighting of Streams
- Wetland Mitigation, Creation & Enhancement
- Mitigation Site Searches
- Lake Management Plans
- Watershed Assessments
- Mitigation Banking, Feasibility Studies, and Management
- Habitat Restoration & Enhancement





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