



NEW JERSEY SPORTS AND EXPOSITION AUTHORITY
2018 ANNUAL REPORT



The New Jersey Sports and Exposition Authority (NJSEA) holds the land lease for and provides for the ongoing operation of the internationally renowned MetLife Sports Complex and is the regional planning and zoning authority for the Meadowlands District, which consists of parts of 14 towns in Bergen and Hudson counties.

Over the past five decades hundreds of millions of people from all over the world have experienced world-class sporting matches concerts and other events at the Sports Complex, which includes MetLife Stadium, the Meadowlands Racetrack, the Meadowlands Arena and the American Dream entertainment and retail complex scheduled to open in Spring 2019.

The Sports Complex has hosted such spectacular events as Super Bowl XLVIII, WrestleMania 29, World Cup Soccer, a Papal mass, and concerts by the biggest names in the entertainment industry such as Bruce Springsteen, The Rolling Stones and U2. The stadium is home to pro football's New York Giants and New York Jets. The Meadowlands Racetrack is the site of the prestigious Hambletonian Stakes, which takes place on the first Saturday of every August.

Upon completion, American Dream is estimated to create 16,000 new, permanent jobs and will attract 40 million visitors from around the world

Sports Complex operations include site management, an engineering department, operation and maintenance of the Meadowlands Rail Station, a fire department, EMS services, parking and traffic operations, and the agency's IT Department.

The Authority also owns the Wildwood Convention Center and holds the land lease for the Monmouth Park Racetrack in Oceanport; the Favorites off-track wagering facility in Woodbridge; and the Atlantic Health Jets Training Center in Florham Park.

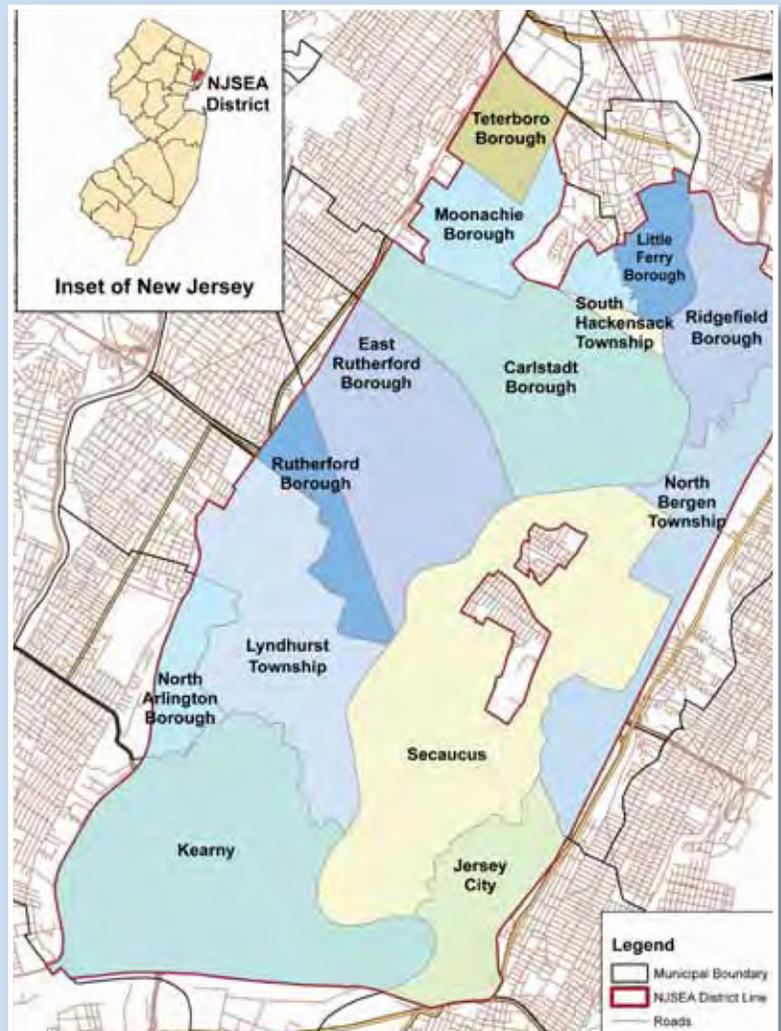
As a regional planning and zoning agency, the NJSEA promotes economic growth and environmental preservation in the Meadowlands District. Through appropriate, smart planning, the agency and its predecessor, the New Jersey Meadowlands Commission, over the past five decades have attracted billions of dollars in economic growth to the District, establishing the area as a major economic engine in northern New Jersey. Today the Meadowlands is a hub for warehouse and distribution centers, data centers and office space.



At the same time, the agency has cleaned up and closed more than 50 orphaned landfills, protected more than 3,500 acres of environmentally sensitive wetlands and contributed to the region's remarkable environmental renaissance. The Meadowlands, once scarred by blight and pollution, today is teeming with wildlife and natural beauty and is a nationally recognized birding hotspot.

The NJSEA's DeKorte Park headquarters in Lyndhurst houses its Land Use Management Department, Solid Waste and Natural Resources Department, Administrative Department and executive offices. It is also home to the Meadowlands Environmental Research Institute (MERI), which is operated in partnership with Rutgers University. The agency's Meadowlands Environment Center provides environmental education programs to students in Grades K-12 through an agreement with Ramapo College of New Jersey.

The Meadowlands District municipalities in Bergen County are Carlstadt, East Rutherford, Little Ferry, Lyndhurst, Moonachie, North Arlington, Ridgefield, Rutherford, South Hackensack and Teterboro. Hudson County municipalities in the District are Jersey City, Kearny, North Bergen and Secaucus. ❖



MESSAGE FROM THE CHAIRMAN



JOHN BALLANTYNE
Chairman

I'm pleased to report that 2018 was a great year for the New Jersey Sports and Exposition Authority, as the agency continued to demonstrate that economic growth and environmental preservation in the Meadowlands District go hand-in-hand.

Over the past 12 months there has been a significant increase in the creation of good, well-paying, construction jobs in the District, a trend that will continue into the future. These jobs that support our middle-class families came as the build-out of the American Dream project at MetLife Stadium entered its final stages and the Meadowlands Arena continued to host concert rehearsals and television productions.

Building American Dream generated thousands of construction jobs. In December alone thousands of construction workers were onsite every day. Once completed in 2019, American Dream is estimated to create more than 16,000 permanent jobs.

Through Governor Phil Murphy's renewal of incentives for film production companies, NBC began shooting the spy thriller, "The Enemy Within," at the Meadowlands Arena. By filming "The Enemy Within" at the Arena and other locations throughout the area, NBC and Universal Television will spend more than \$50 million for the purchase of goods, services, and payments to workers in New Jersey. NBC's investment will also bring over 300 jobs to New Jersey and will purchase approximately 1,500 hotel nights over the course of filming. Much of this economic activity will take place in the Meadowlands District.

Businesses in 2018 moved to and expanded within Meadowlands District municipalities. These companies, have made the wise decision to take advantage of the region's prime location near New York City and its easy access to major highways, air and seaports, and mass transportation.

The Authority takes special pride in its commitment to smart growth. While encouraging economic development, the NJSEA has maintained its dedication to ensuring the protection, preservation and enhancement of the District's environmentally-sensitive wetlands, the Hackensack River and the overall environment.

The NJSEA also gave back to the public through its pontoon boat rides, nature walks and special events through partnerships with the Bergen County Audubon Society and Hackensack Riverkeeper.

This is an exciting time for the Authority and we have every reason to be confident in our future. With our Board and staff's dedication to our goals of economic growth and environmental preservation, the agency is poised in the months and years ahead to further strengthen its already solid foundation. ❖

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VINCENT PRIETO
President and CEO

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Photo courtesy of Ron Shields

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MESSAGE FROM THE PRESIDENT AND CEO



VINCENT PRIETO
President & CEO

On behalf of the New Jersey Sports and Exposition Authority, I'm proud to present the NJSEA 2018 Annual Report. Our vibrant, unique and multi-faceted agency has seen substantial progress in several important areas over the past 12 months.

We have witnessed tremendous economic growth and development success stories such as the rapid pace of construction at the American Dream retail and entertainment tourist destination at the MetLife Sports Complex. The international entertainment and retail destination that is expected to attract 40 million international visitors a year once it opens in 2019.

In its role overseeing operations at the MetLife Sports Complex, the NJSEA is thrilled that the world-class site continues to thrive. The introduction of sports betting in New Jersey in 2018 has helped the Meadowlands Racetrack raise its profile. MetLife Stadium, the home of the New York Giants and New York Jets, continues to stage world-class football games, soccer matches and concerts by the biggest names in music.

There are also very exciting times ahead for the Sports Complex. MetLife Stadium will host WrestleMania 35 in April 2019, the Transplant Games in 2020 and the Army-Navy football game in 2021. The Stadium is also a leading contender to host World Cup soccer matches in 2026.

The NJSEA also made advancements over the past year in its commitment to preserving the Meadowlands District's critical urban eco-system. The Meadowlands Environmental Research Institute has employed the use of

advanced drone technology to provide data that helps to improve the health of the District's critical wetlands.

Our Natural Resources Management Group performed valuable surveys on wildlife and marshes to help inform the Authority on how to leverage the Meadowlands' natural resources to provide healthy habitats for endangered species, filter pollutants and curb the emissions of greenhouse gases.

Through the agency's partnership with Ramapo College of New Jersey more than 20,000 students in Grades K-12 in 2018 participated in Meadowlands Environment Center school programs. All classes incorporate STEM education, which Governor Murphy has recognized as crucial for the State to become a leader in the national and international economy. In September, the MEC acquired a Mobile Food Lab, bringing an exciting new way to study food science and food literacy to school districts throughout the region.

The NJSEA's success and achievements are a testament to the hard work and dedication of its Board of Commissioners and staff. We look forward to continuing to help grow the District's economy, improve the environment and enhance residents' quality of life. ♦♦



EXECUTIVE TEAM

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Director of Solid Waste and Natural Resources

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Director of Human Resources

Chief Compliance Officer

Giuseppina Coppa

*Director of Information Technology
& Telecommunications*

METLIFE SPORTS COMPLEX OPERATIONS



ENGINEERING

The Engineering Department oversees the NJSEA operations at the MetLife Sports Complex and handles all facilities and site engineering as well as maintenance. It is responsible for regulatory compliance and environmental obligations and issues at the Complex.

SITE OPERATIONS

This Department is tasked with operating the Sports Complex as required under the various lease agreements between the NJSEA and Complex tenants. A team of operating engineers maintains the NJSEA and Meadowlands Racetrack vehicle fleets and heavy equipment. This group also performs snow removal on the NJSEA portion of the property and loads road salt for the entire site.

Agency electricians are responsible for covering the Complex's 26Kv service and distribution to all site facilities. Electricians also cover all MetLife Stadium events. Meadowlands Racing & Entertainment, the New York Giants and American Dream utilize the electricians on an as needed basis. Site laborers maintain all agency grounds, including the New Jersey Transit Rail Station, and work all events.

RAIL STATION OPERATIONS AND MAINTENANCE

Under the NJSEA's agreement with New Jersey Transit, the Authority maintains the rail station and platform at the Sports Complex and provides power to the station and the rail line.

MEADOWLANDS ARENA

Presently the Meadowlands Arena is home to the NJSEA Medical Services Staff, which provides EMS assistance to Sports Complex leaseholders on a daily basis and at all Complex events. The Arena is also used by the NJ State Police as a station house. In addition, the NJSEA leases Arena space for various entertainment uses, including television show production and concert rehearsals.

ARENA PARKING & TRAFFIC OPERATION FOR METLIFE STADIUM EVENTS

The NJSEA has operated the overflow parking needs for MetLife Stadium events since 2011 and is required under its lease with the stadium to provide 4,065 spaces on NFL game days.



FORMER RACETRACK GRANDSTAND

The former racetrack grandstand is utilized for some IT operations for the NJSEA and Meadowlands Racing & Entertainment as well as communications for the Complex and the rail station.

FIRE DEPARTMENT

The NJSEA's Meadowlands Fire Department covers the entire Sports Complex 24 hours a day, 7 days a week.

MAINTENANCE BUILDING

The Sports Complex maintenance building is housed in the racetrack backstretch. Currently the building is shared by the NJSEA, MetLife Stadium and Meadowlands Racing & Entertainment maintenance and operations groups. The three entities maintain the Complex from this building and repair their fleet vehicles and equipment there.

STORM WATER PUMP STATION AND LAGOON SYSTEM

This critical facility handles the millions of gallons of storm water for the site by storing and transporting the water into nearby Berry's Creek.

MONMOUTH PARK STORM WATER PUMP STATION

Under the lease agreement with Darby Development, the NJSEA operates and maintains the critical storm water pump station at Monmouth Park. The station sends Concentrated Animal Feeding Operations (CAFO) effluent to the Two Rivers Water Reclamation Authority in order to comply with State and Federal regulations when horses are on premise. ❖



LAND USE MANAGEMENT

The Land Use Management (LUM) Division's many responsibilities include reviewing development applications within the Meadowlands District for regulatory/zoning conformance; Uniform Construction Code (UCC) plan review; creating redevelopment plans; performing site inspections; transportation planning; and updating the District Master Plan. LUM staff is available to meet with developers and businesses to guide them through the agency's development application process.



DEVELOPMENT APPLICATION REVIEW

The Site Plan Review group is responsible for establishing and enforcing the zoning and subdivision regulations of the District. All plans and property improvements, including redevelopment projects, are reviewed in accordance with NJSEA regulations, which effectuate the Meadowlands Master Plan to ensure orderly development. Public hearings are held for applications involving variances or special exception requests. The Site Plan Review group reviews land use applications

and forwards conforming applications to the Chief Engineer for approval. The Plan Review group is responsible for reviewing all proposed development in accordance with New Jersey's Uniform Construction Code.

MASTER PLAN UPDATE

The NJSEA staff has begun work on the Hackensack Meadowlands District Master Plan 2020, which will serve as an update to the 2004 District Master Plan. Completion of the Plan is anticipated in Spring 2020. ❖

ECONOMIC GROWTH



AMERICAN DREAM

Construction at American Dream in East Rutherford progressed at a rapid pace in 2018. The entertainment and retail tourist destination developed by the Triple Five Worldwide will attract 40 Million visitors annually consisting of local, regional and international visitors and boost local and state economies. During the fourth quarter of 2018 the site was bustling with thousands of construction workers (per day). Upon completion, the project is estimated to create 16,000 new, permanent jobs.

Since Triple Five Worldwide acquired and re-envisioned the property, a strong partnership developed among the many building and construction trades and continues to this day in conjunction with Governor Phil Murphy and the NJSEA. Overall this investment and collaboration with the State of New Jersey is paving the way for this world-class destination to open in 2019.

Once complete the approximately 3 million square foot project will offer a unique combination of retail, dining, entertainment and attractions - all in one location. Anchor tenant Saks Fifth Avenue along with over 450 retail, food and specialty shops will

be complimented by 18 acres of entertainment including: North America's largest fully enclosed indoor DreamWorks Water Park and Nickelodeon Universe Theme Park; a 16-story Big Snow Indoor Ski & Snow Park; Kidzania; a live Performing Arts Theater; 285-foot tall Observation Wheel; Munchies Food Hall, luxury movie theatres by CMX; Sea Life Aquarium, Lego Discovery Center; NHL-size Ice Rink; and miniature golf attractions. The center also features The Collections, an separate and distinct shopping environment dedicated to luxury shops, iconic brands and new to market fashion-forward retail. The Dining Terrace will offer fifteen full-service restaurants showcased in one location.



ADDITIONAL ECONOMIC DEVELOPMENT HIGHLIGHTS FOR 2018

- Teterboro Landing, a redevelopment project on the former Honeywell site in Teterboro, was completed. The mixed-use development includes approximately 400,000 square feet of new commercial space, multiple restaurants, approximately 136,000 square feet of light industrial space and 20,000 square feet of office space.
- StorQuest, a 151,500-square-foot self-storage facility on Tonnelles Avenue in Jersey City, was constructed.
- A new 302,727-square-foot warehouse building on Meadowland Parkway in Secaucus, was completed and is occupied by Union Beer and Restoration Hardware.
- An existing building at 390 Murray Hill Parkway in East Rutherford was expanded and converted to establish the new 86,600-square-foot Meadowlands Area YMCA.
- The Winston, a new, 218-unit multifamily development catering to both market rate and affordable renters at 120 Chubb Avenue in Lyndhurst, was opened.
- On County Road in Secaucus, a project encompassing two warehouse/distribution buildings totaling 203,600 square feet of ground floor area was approved and is nearing completion.
- The Frank J. Gargiulo Campus of the Hudson County Schools of Technology, located in Laurel Hill Park in Secaucus, opened in September.
- Construction is ongoing at Aloft, a 175-room boutique hotel located on Harmon Meadow Boulevard in Secaucus.
- UPS received approval to expand their package distribution operation within their 170,000-square-foot, newly-renovated facility on Valleybrook Avenue in Lyndhurst.
- An application for Bolero Snort, a craft brewery to be located in Carlstadt, is under review.
- The NJSEA is reviewing a 149-room Marriott Springhill Suites hotel planned for Carlstadt.
- An application for a 92,795-square-foot warehouse (Phase 1) and a 55,845-square-foot-warehouse (Phase 2) on Paterson Plank Road in East Rutherford, is under review. ❖

REDEVELOPMENT

The Authority's NJ-licensed professional staff prepares in need of redevelopment studies, holds public hearings, and prepares redevelopment plans and amendments in accordance with N.J.A.C. 19:3-5.1 et seq. Staff recommendations are presented in resolutions to the Board of Commissioners for their action. In need of redevelopment studies are initiated by NJSEA staff or by petition from the constituent municipalities or the public.

The redevelopment process has proven beneficial for District municipalities in which the redevelopment areas are located, as well as for the overall region. As brownfields and areas of contamination and dilapidation are rehabilitated through the redevelopment process, the region reaps the benefit of cleaner, aesthetically-enhanced sites and the economic benefit of increasing the value and usefulness of underutilized properties.

The NJSEA works closely with its constituent municipalities to identify sites in need of redevelopment and prepare redevelopment plans in a public forum, with input from government entities and the public at-large.

The newest redevelopment area in the District is the Schmitt Realty Redevelopment Plan in Secaucus, which was adopted in 2018. The plan proposes a market-rate and affordable multifamily residential development on the site of a former concrete plant.

NJSEA REDEVELOPMENT AREAS

- 16th Street Redevelopment Area (*North Bergen*)
- Belleville Turnpike Redevelopment Area (*Kearny*)
- Hartz Carpet Center Redevelopment Area (*Secaucus*)
- Highland Cross Redevelopment Area (*Rutherford*)
- Kearny Area Redevelopment Area (*Kearny*)
- Kingsland Redevelopment Area (*Lyndhurst, Rutherford, North Arlington, Kearny*)
- Koppers Coke Peninsula Redevelopment Area (*Kearny*)
- Lyndhurst Block 228, Lot 3 (*Lyndhurst*)
- Paterson Plank Road Redevelopment Area (*Carlstadt, East Rutherford*)
- Route 3 East Redevelopment Area (*East Rutherford*)
- Secaucus Transit Village Redevelopment Area (*Secaucus*)
- Schmitt Realty Redevelopment Area (*Secaucus*)
- Teterboro/Industrial Avenue Redevelopment Area (*Teterboro*)
- Vincent Place Redevelopment Area (*Teterboro*) ❖



TRANSPORTATION PLANNING



The Hackensack Meadowlands Transportation Planning Act (Act), effective June 24, 2005, established a Transportation Planning District within the Meadowlands District. The Act requires the creation of a comprehensive District-wide Transportation Plan that designates transportation projects and associated funding needed to sustain future economic growth. It empowers the New Jersey Sports and Exposition Authority to assess fees on future District development based upon a technical analysis of its projected impact upon the transportation system.

MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION (MASSTR)

The NJSEA's award-winning MASSTR project is an excellent example of a District-wide transportation initiative funded by the Transportation Planning District Fund. MASSTR upgraded 124 signalized intersections throughout the region through an intricate network of technology to continuously adjust traffic signal timings based upon the changing flows of traffic in real-time.

MASSTR uses traffic signal controllers, detection devices, radio transmitters, antennas, and a mix of wireless and fiber-optic communication to keep traffic flowing smoothly. By changing traffic signals from operating on fixed timings to a real-time system, MASSTR has brought a tremendous improvement to the quality of life of those who traverse Meadowlands roadways. It is the first adaptive signal system of its kind in New Jersey and the largest system to be implemented at one time in the country.



The project, completed in 2017, is expected to annually reduce vehicle delays by 1.2 million hours, gasoline consumption by more than 1.2 million gallons, and harmful greenhouse gas emissions by more than 11,000 tons. ❖

SOLID WASTE AND NATURAL RESOURCES

The Solid Waste and Natural Resources Department oversees the operation and maintenance of the NJSEA Keegan Landfill and the agency's closed landfills. The Department is also responsible for floodplain maintenance and flood control projects. The Natural Resources Management group supports improvements to the Meadowlands' unique urban ecosystem through its wetlands enhancement work, and surveys and studies on area wildlife and marshes.

SOLID WASTE

The NJSEA operates the Keegan Landfill in Kearny, a regional site serving the northern half of the State. The Keegan Landfill is the only regional landfill in Northern New Jersey that accepts construction and non-hazardous wastes. The landfill takes in Types ID 13 (Bulky waste), ID 13C (Construction and Demolition waste), ID 23 (Vegetative waste) and ID 27 (Dry Industrial waste) materials. The Authority continues to manage closed Meadowlands District landfills. They are the 1E Landfill in Kearny and North Arlington; the 1A Landfill in Kearny; Rutherford East and Rutherford West in Rutherford; and the Erie, Lyndhurst and Kingsland Landfills in Lyndhurst.

As part of its work in maintaining the former landfills, the agency collects and treats more than 500,000 gallons of leachate daily. Leachate is the liquid created by rainfall mixing with decomposing garbage in landfills. The Authority pumps the leachate to a regional sewage facility, where it is treated. The NJSEA has intergovernmental agreements with State agencies and counties for waste disposal and leachate treatment. Before the agency began remediating the landfills, leachate flowed into and contributed to the degradation of the Hackensack River.

Controls are also in place on the landfills to prevent the emission of hazardous greenhouse gases into the atmosphere, primarily methane. Under the methane recovery process, landfill gas is extracted under a vacuum from wells located at the various landfills and piped to processing plants.



SOLID WASTE TRANSFER STATION

The agency leases a trash transfer facility in North Arlington to a private operator. The transfer station, commonly known as The Baler, is used to move municipal solid wastes out-of-state. Trucks pick up waste to bring to trains that transport the material. This reduces the amount of trucks on the road and accompanying greenhouse gas emissions.

In addition, the NJSEA leases a vegetative waste transfer facility at its closed 1E Landfill. County, municipal and commercial entities use the site. They deposit leaves, grass and brush that are transferred to and composted at a separate location. This transfer site provides a local destination so that this material can be processed into mulch and soil, keeping it out of landfills. ❖

FLOODPLAIN MANAGEMENT

In 2005, the former New Jersey Meadowlands Commission prepared the Hackensack Meadowlands Floodplain Management Plan, creating a baseline that remains relevant today by assessing and identifying flood hazards in the Meadowlands District. This foundation evolved into multi-step, coordinated initiatives that have been undertaken by the agency since 2005 to address flooding in the District.



DePeyster Creek Pump Control Station



East Rutherford Tide Gate downstream at low tide

This approach has been effective, as evidenced by the low number of repetitive losses in the District. Prior to 2012, there were fewer than 10 repetitive loss properties. After Superstorm Sandy in October 2012 the number of repetitive loss properties increased. However, no buildings constructed under agency zoning regulations were flooded by the storm.

FLOOD INSURANCE DISCOUNTS



The NJSEA participates in the Federal Emergency Management Agency's (FEMA) voluntary Community Rating System (CRS) program. As a result, property owners, businesses and tenants located in Special Flood Hazard Areas within the Meadowlands District are eligible for 15 percent discounts on National Flood Insurance Program policies issued through FEMA. The discounts are applicable when property owners purchase or renew their policies.

The Authority has participated in the CRS program since 2005. In order to qualify for the discount, the NJSEA must reach certain benchmarks that meet or exceed the point system established as part of the CRS. The NJSEA has been recognized by FEMA for its actions in areas including flood data maintenance, open space preservation, stormwater management standards and drainage system maintenance. ❖

NATURAL RESOURCES



Improvements to the Meadowlands District's unique urban ecosystem are supported by the work of the Natural Resources Management Department. The Department's surveys and studies on the region's flora, fauna, and critical wetlands help guide enhancement and protection of the environment. These efforts include researching the behavior of the District's avian and terrapin populations, and monitoring and managing invasive plant species such as the common reed *Phragmites*. Department staff also represents the Authority at interagency meetings on natural resources that address planning and regulatory issues.

HIGHLIGHTS OF THE NATURAL RESOURCES MANAGEMENT DEPARTMENT'S WORK IN 2018 INCLUDE THE FOLLOWING:

- Multiple projects were conducted concentrating on the habitation of the District's high marsh habitat by breeding birds, including Saltmarsh Sparrows. The Saltmarsh Sparrow is a species of special concern in New Jersey, as their preferred breeding grounds have been decreased due to human degradation. The NJSEA found breeding Saltmarsh Sparrows in three preserved Meadowlands marshes, giving hope for the bird's future.
- Pilot surveys on capped and vegetated landfills looked to address the use of these sites by grassland

birds. Grassland habitats, like marsh habitats, are becoming less common throughout the State. The preliminary surveys showed that these capped and vegetated landfills are providing a suitable breeding habitat for many grassland species. These surveys will inform future studies that will look to further explore avian use of landfills.

- As part of its Fishery Resource Inventory study of the Hackensack River, naturalists analyzed data from 312 collections of benthic organisms. The small invertebrates include crustaceans, snails, worms and clams that inhabit the mud on the bottom of wetlands and waterways within the Meadowlands region. Benthic organisms provide the base of the food chain for fish, crabs, birds and turtles. Studying the diversity

and numbers of benthic species collected and comparing the data to past studies helps the NJSEA monitor and measure the evolving health of the Hackensack River.

- The Department collected data on Diamondback Terrapins to help answer questions about the life history of terrapins in the Meadowlands, including population size, how far the turtles move within a marsh and their growth rate. Diamondback Terrapins are of particular interest because they are an iconic animal of many coastal salt marshes and near the top of the food chain in the Meadowlands' brackish marshes. Terrapins are relatively new to the District – they were first observed in the 1970s. ❖

PARKS

As the premier park system in southern Bergen County, the Meadowlands District draws tens of thousands of people each year to its 21 parks and natural areas and eight miles of walking trails. The agency over the decades has designed and created or contributed to the formation of the vast majority of these important open spaces.

DeKorte Park in Lyndhurst, the home of the NJSEA, is the jewel of the Meadowlands park network. Its namesake, the late State Assemblyman Richard W. DeKorte, was instrumental in the formation of the former New Jersey Meadowlands Commission, which merged with the NJSEA in 2015.



The park encompasses one-square-mile of scenic wetlands, nature trails, gardens and water views framed by the New York City skyline. Approximately 50,000 people visit DeKorte Park each year. It has been recognized as a birding hotspot in Birder's World magazine, a national publication. More than 285 species of birds have been observed in the Meadowlands region, and many migratory songbirds, raptors, shorebirds and waterfowl can be seen at DeKorte, both overhead and in the park's tidal impoundments.

In 2018, thanks to donations by the Bergen County Audubon Society and a private individual, the Authority planted hundreds of native species in DeKorte Park, including Purple Coneflower,

Swamp Milkweed, Butterfly Weed, Beebalm and Blue Vervain. These plants beautify the park while attracting pollinators and providing food for wildlife. Donations were also used for trail improvements and bank stabilization projects in tidal areas. These newly planted sites will help prevent the marsh edge from eroding and protect an upland portion of several gardens with native flowers and grasses.

The Marsh Discovery Trail, DeKorte's most popular walkway, is a half-mile boardwalk loop that extends over the park's wetlands. It includes four bird-blinds, two study docks, two shaded classrooms, two open classrooms and



several seating areas. The trail provides a tranquil setting for relaxation and environmental education as well as an up-close vantage point for visitors to observe and photograph the Meadowlands' wildlife and natural beauty. DeKorte Park is also home to the Meadowlands Environment Center, the Center for Environmental and Scientific Education and the William D. McDowell Observatory.

The NJSEA's River Barge Park in Carlstadt, another Meadowlands favorite, is a valuable recreational resource. The 5.5-acre park provides the only boating access to the

Hackensack River in the region from its western banks. The marina includes a boat ramp, docks, paddling and rowing launch points, 17 public boat slips, a scenic promenade with picnic tables, and an education pavilion. It is the launch point for the NJSEA's popular guided pontoon boat and canoe tours.

Additional gems parks in the Meadowlands District include Mill Creek Point Park and Mill Creek Marsh, both located in Secaucus. ❖

MUNICIPAL EQUIPMENT POOL



The NJSEA provides and maintains equipment to assist District municipalities in addressing flooding and sewer-line issues. These include a jet-vac truck, root cutter, two portable automatic self-priming pump systems and a trailer-mounted light tower. Pool equipment is staffed by NJSEA employees and available to towns free of charge. The shared Municipal Equipment Pool can potentially save District towns thousands of dollars. For example, renting a jet vac-truck typically would cost \$2,000 per day. ❖

MEADOWLANDS ENVIRONMENTAL RESEARCH INSTITUTE (MERI)



The NJSEA houses the Meadowlands Environmental Research Institute (MERI), which is operated through a partnership with Rutgers University. MERI is a premier institution whose scientists perform critical studies that have helped the Authority to better understand, manage and improve the Hackensack River, its critical wetlands, and the Meadowlands District's ecosystem.

MERI staff continually monitors and studies the region's water, air and soil quality through monitoring stations placed throughout the Hackensack River and its marshes. When adverse conditions are discovered, researchers study possible factors and formulate methods to mitigate negative influences. MERI's work has played a key role in the revitalization of the Meadowlands' unique urban ecosystem, leading to the return of birds, fish and other species of wildlife that now call the region home.



DRONE PROGRAM

In 2018 MERI used drone technology to collect precise data on the conditions of critical Meadowlands District wetlands and flood protection structures. Also in 2018, the NJSEA created a Municipal Drone Program through which Meadowlands District municipalities may request MERI to fly drone missions in their towns at no cost.

The drone flights allow MERI to analyze otherwise inaccessible areas of wetlands, ditches and berms to identify debris, blockages and erosion. The data allows NJSEA and District towns to maintain and improve their properties and structures most effectively. MERI also deploys drones after hazardous events such as brush fires in order to capture the extent of damage or identify existing hazards that can impact the site.

Gathering high-tech information on the structural integrity of man-made and natural berms and the ability of wetlands to absorb storm water is critical given the Meadowlands' vulnerability to flooding from rain events, storm surges and, at times, regular high tides. Drone flights enable the NJSEA as well as emergency responders and municipal officials to best strategize resiliency efforts.

MERI has a Certificate of Authorization from the FAA granting its licensed pilots permission to fly drones under the jurisdiction of the Teterboro Airport Traffic Control Tower. Drone pilots must receive permission from the FAA through Teterboro Airport to conduct any flights at least one day before each scheduled mission.

CURRENT STUDIES

MERI's current research includes studies of the amount of greenhouse gases sequestered and emitted by District wetlands; a joint wetlands study with the NJSEA Natural Resources Department examining the biodiversity and pollutant levels in macroinvertebrates and the sediments in which they live; mapping and monitoring marsh vegetation in the District; measuring and assessing marsh sediment quality near and around known contaminated sites; and measuring real time air and water quality data.

MERI LABORATORY

MERI's state-of-the-art, NJDEP-certified environmental and analytical laboratory houses 22 precision instruments used for chemical analysis and determining inorganic and organic pollutants in soil, water, air, and animal tissues. The state-of-the-art technology includes a Plasma Mass Spectrometer, Total Mercury Analyzer, and Gas and Ion Chromatography instruments.

Researchers use the lab to provide a general assessment of overall water, soil and air quality in the Meadowlands estuary. Water quality in the Hackensack River, including dissolved oxygen, salinity, turbidity and pH levels, is measured in real time, allowing MERI to continuously assess the water quality in the lower Hackensack River.



MERI LIBRARY

The MERI Library collection includes more than 12,000 hard copy and digitized documents, engineering reports, research studies, photographs, maps, newspaper articles, and other current and historical documents related to the Meadowlands region. The library is open to the public by appointment.

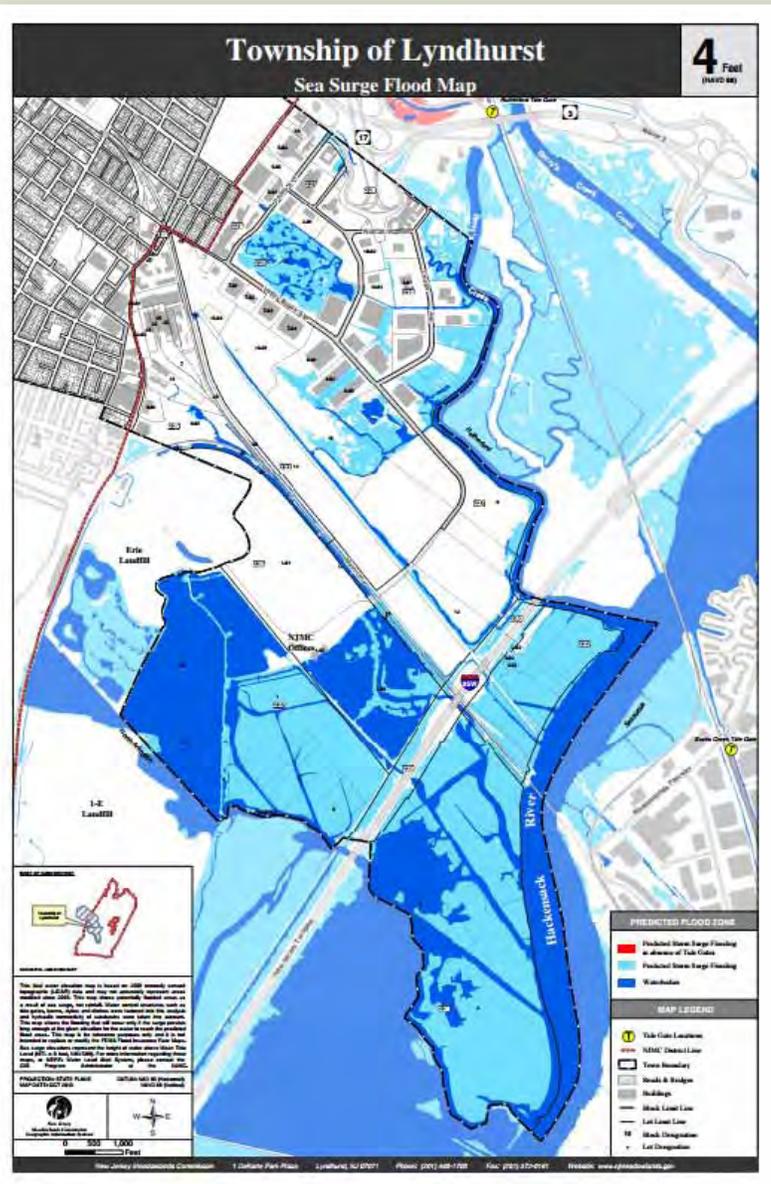
MERI GEOGRAPHIC INFORMATION SYSTEMS GROUP (GIS)

The Institute provides vital resources to Meadowlands District first responders and municipal officials through its Geographic Information Systems (GIS) digital mapping program. The GIS team uses progressive technology to create, maintain and update web-based digital maps and mapping tools for every property in each Meadowlands District municipality.

The maps provide emergency officials immediate access to critical information, including continuously updated data on hazardous materials stored in warehouse facilities, fire hydrant locations, incident reports, floor plans, turn-around space for firetrucks, and current and historical aerial imagery. This potentially life-saving information can easily be accessed from field computers, tablets and smartphones.

The online maps also provide information regarding owner, block and lot, easements, zoning and land use, acreage, and building footprint. Building code and tax officials use this data to produce property variance notifications to residents impacted by proposed or other possible changes to surrounding properties. Emergency responders and municipal officials are kept informed of new capabilities and upgrades to GIS programs through a continuing comprehensive training program that includes technical support and refresher seminars.

MERI's GIS group also offers a water level alert system and flood prediction maps to first responders and the public. The email and text-based alerts for District towns are sent when water levels reach 5.5 feet above sea level and continue to be relayed as the levels rise. The interactive, web-based flood prediction maps include the parts of District municipalities that may flood from sea surge levels of 4 to 8 feet. The maps and alerts can be found at the MERI website, meri.njmeadowlands.gov. ❖



MEADOWLANDS ENVIRONMENT CENTER



Photo courtesy of ME Raine

The nationally recognized Meadowlands Environment Center (MEC) is operated by Ramapo College of New Jersey through a partnership with the agency initiated in 2003. The MEC today continues to be a leader in developing and expanding comprehensive environmental education programs for students in Grades K-12, the general public and people of all ages living with disabilities.

SCHOOL PROGRAMS

In 2018, more than 20,000 students from 81 school districts participated in MEC programs, including 15 urban/special needs districts. Thirty-two schools took part in MarshAccess activities for those with visual, hearing, mobility, mental/cognitive and age related disabilities.

MEC educators incorporate hands-on and inquiry learning and cross-curricular activities that use DeKorte Park as an outdoor classroom. These programs are focused on the Meadowlands' unique urban eco-system. Classes cover a wide array of scientific disciplines including ecology, chemistry, biology, physics, natural history and astronomy.

The MEC's extensive offerings include programs in environmental science, technology and engineering; Gifted and Talented Convocations; the national model MarshAccess program for people of all ages living with disabilities; family science nights and after school programs in partner school districts; scouting merit badge programs for Brownies, Cub, Boy and Girl scouts; educational summer camps; and professional development workshops for teachers.

MEC classes meet Next Generation Science Standards (NGSS) and NJ Core Curriculum standards that promote STEM education (Science, Technology Engineering and Math), whose standards have been championed by Governor Phil Murphy as a critical for the State to become a leader in the national and international economy. Environment Center staff continually updates and modifies programming to keep pace with curriculum developments at the State and federal levels



CENTER FOR ENVIRONMENTAL AND SCIENTIFIC EDUCATION

Education programs are held in the state-of-the-art NJSEA Center for Environmental and Scientific Education (Science Center). The facility was the first public building in New Jersey to achieve LEED (Leadership in Energy and Environmental Design) Platinum Certification, the highest rating, from the U.S. Green Building Council. The Science Center's many sustainable green building features include rooftop solar panels, recycled building materials, and energy-efficient heating and lighting systems.

The Science Center includes a full chemistry lab, amphitheater-style classroom for lectures and four classrooms designed for hands-on activities including microscopy; identification of flora and fauna of the marsh; daytime astronomy; and design and construction of engineering models. The rooms are equipped with computer assisted projection to examine live and preserved specimens and assistive technology for students with special needs.





MOBILE FOOD LAB

In 2018 the MEC received a grant from the REED Foundation for Autism to acquire a Mobile Food Lab, providing an exciting, multi-sensory and fun new way for students to study food science and food literacy. The retrofitted bus arrived at the Environment Center in September.

The Mobile Food Lab experience takes place in three interactive sessions: Science, cooking and art. Students find plants in an indoor growing system, a science lab with digital microscopes, a teaching kitchen and an art station. The colorful 50-foot classroom on wheels is designed to foster an interactive learning environment that engages students' senses and curiosity around food.

Programs are tailored to specific age groups. For instance, students in Grades K-2 will paint using herbs and spices while those in Grades 3-5 will explore flavors and make a fresh herb salad with home-made dressing. Sixth through Eighth graders will be introduced to Vertical Farming and the future of food. The Mobile Food Lab will travel to school districts throughout the region, bringing an invaluable learning experience directly to students who may otherwise not have the opportunity to participate.

The Mobile Food Lab is funded in part by a grant from the New Jersey State Health Department's Special Child Health and Autism Registry. The Meadowlands Environment Center received funding for the Lab program through REED Next, an initiative of the Oakland-based REED Foundation for Autism. The MEC is also working on its food literacy curriculum with Newark-based Philip's Education Partner's EcoSpaces Education, a non-profit organization.

The Mobile Food Lab will benefit the REED Next mission to support jobs for adults with autism. Adults in the REED Next Day program will have the opportunity to experience a variety of jobs in and around the Mobile Food Lab. ❖



Photos courtesy of Ramapo College

PUBLIC PROGRAMS



Photo courtesy of Joe Koscielny

The NJSEA attracts thousands of people to its family-friendly, environmentally-themed public programs at DeKorte Park and on the Hackensack River each year. The events are a great way to bring families to the park for the first time and discover the Meadowlands' natural beauty. They also foster a critical understanding of the importance of environmental protection and conservation, especially among young people.

Many of the events are co-sponsored with the Bergen County Audubon Society (BCAS). The NJSEA and BCAS also partner on guided nature walks of Meadowlands parks and natural areas twice each month. The walks explore locations including DeKorte Park in Lyndhurst, Mill Creek Marsh in Secaucus and Harrier Meadow in North Arlington.

PONTOON BOAT AND CANOE TOURS

The NJSEA's highly popular guided pontoon boat cruises and canoe tours of the Hackensack River, which run from June through September, provide a unique, up-close perspective of the District along the water. NJSEA staff lead the leisurely, two to three hour tours and discuss the region's human and environmental history while pointing out birds and other wildlife along the way. The trips also offer ideal opportunities to photograph the scenic landscapes and wildlife found on the river and in its marshes. In 2018, 800 visitors took boat and canoe tours.



BUTTERFLY DAY

In July 2018, a record 1,200 people attended the NJSEA/BCAS 9th Annual Butterfly Day at DeKorte Park. The family-friendly day featured butterfly walks and talks and kids' activities including a butterfly-themed costume contest, scavenger hunts, crafts and face painting.

Bergen County Audubon Society representatives gave talks on the majestic winged marvels, led butterfly walks and helped point out butterflies to visitors. They also gave away Milkweed plants that attract butterflies to home gardens.



MOTH NIGHT

The NJSEA and BCAS in July also co-hosted our annual Moth Night at DeKorte Park. The event is part of National Moth Week and aims to raise awareness about the environmental importance of these lesser-known cousins of butterflies. The event, attended by 175 people, began with a talk by a moth expert. Visitors then walked the park, where industrial-strength lamps, white sheets and sugar were used to attract moths for viewing.



MEADOWLANDS BIRDING FESTIVAL

In October, the NJSEA and BCAS teamed up for the Meadowlands Birding Festival, which drew more than 500 people to the park. The day included guided bird walks, talks, a keynote speech by award-winning field guide author David Sibley, live raptor demonstrations and kids' activities. The NJSEA and the Hackensack Riverkeeper provided pontoon boat tours from River Barge Park in Carlstadt.

WILLIAM D. MCDOWELL OBSERVATORY

The NJSEA's William D. McDowell Observatory is open to the public for free stargazing every Wednesday evening. The Observatory is operated through a partnership with Bergen Community College. The popular viewing nights attract some 3,000 residents each year. Visitors see and learn about planets, constellations and other celestial bodies.

The research-grade telescope has a 20-inch mirror housed beneath a six-meter retractable dome. The precision telescope is equipped with a variety of tools, including specialized cameras, light-pollution filters, and devices that measure the brightness of stars and analyze wavelengths of light. The Observatory's namesake was the first Executive Director of the Hackensack Meadowlands Development Commission (now the NJSEA). Hours vary by season.



Photos courtesy of Joe Koscielny



Photos courtesy of Dede Kotler



HALLOWEEN AT THE MEADOWLANDS

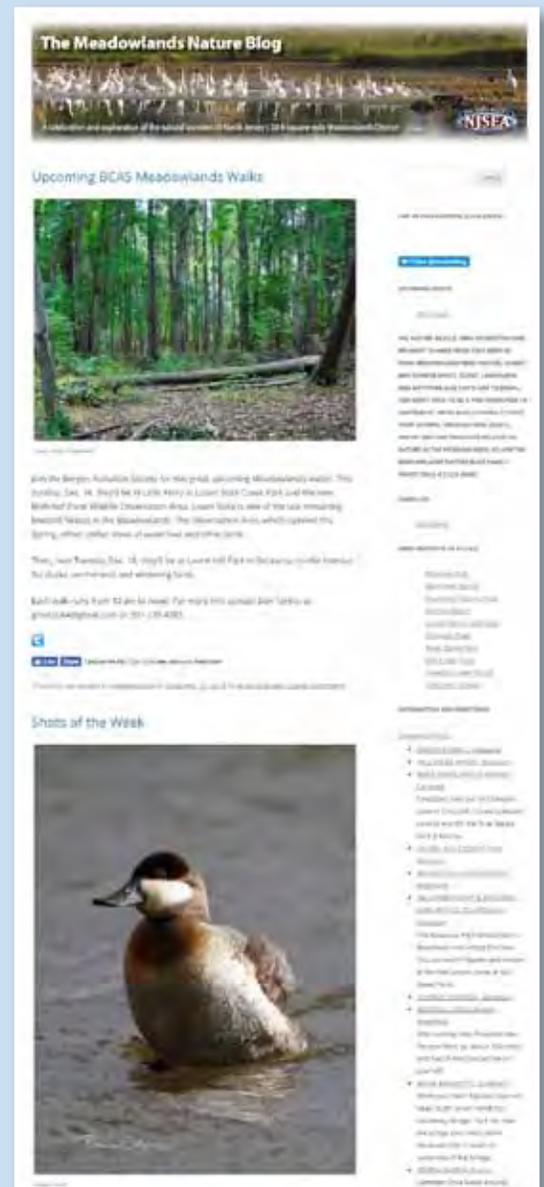
More than 250 kids and parents attended the annual Halloween at the Meadowlands event at the Meadowlands Environment Center. Participants were treated to a live wolf program where they learned about the environmental importance of the not so scary animal. They also took part in games and crafts.



NJSEA NATURE BLOG

meadowblog.net

The NJSEA Nature Blog promotes ecotourism and environmental conservation in the Meadowlands by providing the public with wildlife and landscape photos, links to articles about local events and environmental news, and other items. The blog is interactive; readers are encouraged to share their photos and report observations from around the region. NJSEA news and event information can also be found on the agency's Facebook page, The Meadowlands. ❖



FINANCIAL REPORT

STATEMENT OF REVENUES, EXPENSES & CHANGES IN NET POSITION GOVERNMENTAL OPERATIONS

December 31, 2017

OPERATING REVENUES

Expense Reimbursement	\$ 5,050,000
Fees & Charges	654,000
Lease Payments	912,000
Grants	8,000
Revenues from Composting Operation	193,000
Other	606,000
Total Revenues	\$ 7,423,000

OPERATING EXPENDITURES

Governmental Operations	\$ 7,915,000
Environmental Center Operations	750,000
Solar Array 1-A	20,000
Other Expenditures	48,000
Total Operating Expenditures	\$ 8,733,000

Excess of Revenues over Expenditures prior to Non-Operating Costs **(\$1,310,000)**

NON-OPERATING EXPENSES

MAGNET Grants	(\$3,000)
Total Non-Operating Expenses	(\$3,000)

Net Excess of Revenue over Expenses **(\$ 1,313,000)**

STATEMENT OF REVENUES, EXPENSES & CHANGES IN NET POSITION BUSINESS-TYPE OPERATIONS

December 31, 2017

OPERATING REVENUES

Sports Complex Revenues	\$ 19,897,000
Solid Waste Revenues	13,865,000
Convention Center	2,672,000
Other	8,865,000
Total Revenues	\$ 45,299,000

OPERATING EXPENSES

Sports Complex	\$ 32,454,000
Solid Waste	9,523,000
Convention Center	6,053,000
Depreciation & Amortization	9,342,000
Payment In Lieu Of Taxes (PILOT)	12,473,000
Total Operating Expenditures	\$ 69,845,000

Operating Loss **(\$24,546,000)**

NON-OPERATING INCOME/(EXPENSE)

Other Income	\$ 12,000,000
Tourism Tax Revenue	4,281,000
Interest Income/(Expense)	80,000
Total Non-Operating Expenditures	\$ 16,361,000

Change in Net Position **(\$ 8,185,000)**



NEW JERSEY SPORTS AND EXPOSITION AUTHORITY
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