



2015 Annual Report



The Meadowlands
Economic Engine, Environmental Jewel
Sports and Entertainment Destination

MESSAGE FROM WAYNE W. HASENBALG

NJSEA President and CEO

On behalf of the New Jersey Sports and Exposition Authority (NJSEA), I am pleased to present our 2015 Annual Report. This document chronicles an exciting, landmark year in the history of the NJSEA.

In February 2015, the Authority absorbed the former New Jersey Meadowlands Commission (NJMC) to create a singular State agency representing the Meadowlands region.

Our primary goal was to operate more efficiently at a reduced cost to taxpayers while maintaining a commitment to fostering economic growth in the Meadowlands District and protecting and improving the region's unique environment. The NJSEA has met these benchmarks through a remarkably quick and seamless transition.

In 2015, the NJSEA created a leaner, stronger Meadowlands authority that requires less taxpayer funding from the State budget. The NJSEA Board of Commissioner's prudent planning resulted in a projected \$16 million savings in fiscal year 2016, a 48 percent reduction.

In January 2015, the NJSEA and NJMC had a combined 255 full time employees. By December, 2015, the staff count of the merged agencies stood at 139. Additional savings were realized from the temporary closure of the Meadowlands Arena, reductions in utility costs, and elimination of redundancies.

This significant achievement was realized thanks to the exceptional leadership of the NJSEA Board and the hard work and dedication of our newly combined staff,

which showed enthusiasm and teamwork from the start. As a result, the NJSEA realized great strides in crucial areas such as economic development and continued its critical environmental research without disruption.

Economic growth in the Meadowlands District has flourished since the merger. Goya Foods opened its new 634,000-square-foot headquarters and distribution center in Jersey City and work continued at the Teterboro Landing Development. Walmart and Costco both opened stores in Teterboro, and the NJSEA granted approval to allow 11 restaurants to operate at the site.

Several companies made the strategic decision to move to or expand within the Meadowlands District, taking advantage of the region's ideal location for business. For example, FedEx Ground received zoning approval to construct a 307,247-square-foot warehouse in Jersey City.

We also continued to upgrade traffic signals around the region through our Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR) project. This large-scale undertaking reduces traffic delays and congestion, helping commerce to flow more smoothly.

The new NJSEA has also strengthened relationships with constituents by reaching out to developers and business owners to better understand their concerns. Several developers and municipalities have praised the Authority's efforts in working to approve new development and expansion in a time-efficient manner.



In addition to fostering economic growth, the NJSEA continued to carry out the former NJMC's mission of protecting and enhancing the Meadowlands District's environment.

The Natural Resources Department and Meadowlands Environmental Research Institute (MERI) moved forward with critical joint studies examining the health of the region's vital wetlands and the Hackensack River. MERI also continues to monitor the region's air, soil and water quality while Natural Resources studies Meadowlands wildlife and vegetation.

These are just some examples of the great successes that the NJSEA has accomplished in a short time frame since merging with the former Meadowlands Commission. The NJSEA is committed to building upon this solid foundation for an economically vibrant and environmentally healthy Meadowlands in the years to come.

Explore the Meadowlands • Carlstadt • East Rutherford • Jersey City • Kearny • Little Ferry • Lyndhurst • Moonachie • North Arlington • North Bergen • Ridgefield • Rutherford • Secaucus • South Hackensack • Teterboro

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AGENCY OVERVIEW



The New Jersey Sports and Exposition Authority (NJSEA) provides for the ongoing operation of the MetLife Sports Complex, an internationally renowned sports and entertainment hub featuring a stadium, racetrack and arena. The Authority provides support to MetLife Stadium, New Meadowlands Racetrack and the American Dream Meadowlands project.

These functions are provided through the NJSEA's Engineering, Site Operations, Security, Emergency Medical Services, Fire, and Arena side Traffic and Parking Operation departments. Included in these services is power distribution to the facilities; storm water control systems; emergency response during both event and non-event periods; and management of the Sports Complex Rail Station.

The NJSEA was created by an act of the State Legislature in 1971. In 1976, the NJSEA opened the then-named Meadowlands Sports Complex. The Authority also built the Atlantic City Convention Center and the Wildwood Convention Center, completed an extensive renovation of Atlantic City's historic Boardwalk Hall, and is the former owner of Monmouth Park racetrack.

In February 2015, the New Jersey Sports and Exposition Authority (NJSEA) absorbed the former New Jersey Meadowlands Commission (NJMC) and took on its responsibilities, including land use and solid waste management as well as environmental research.

The Authority is the planning and zoning agency for the 30.4-square-mile Meadowlands District, which consists of portions of 14 municipalities in Bergen and Hudson counties. The NJSEA also works to improve and conserve the region's unique urban eco-system through its Natural Resources Management Department and Meadowlands Environmental Research Institute.

The former New Jersey Meadowlands Commission was created by an act of the State Legislature in 1968 and tasked with a three-fold mandate: to provide for orderly development of the region, to provide facilities for the sanitary disposal of solid waste, and to protect the delicate balance of nature.

At the time of the agency's creation, the Meadowlands District was marred by dozens of illegal landfills. Efforts in cleaning up these landfills resulted in an extraordinary economic and environmental transformation. The Meadowlands, once blighted and polluted, is now an economic engine, environmental jewel and educational resource.

The NJSEA and former NJMC's tireless efforts have helped attract billions of dollars in new development to the area. In addition, the agency has invested tens of millions of dollars in infrastructure improvements over the past four decades that have benefited District municipalities, residents and businesses.

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BOARD OF COMMISSIONERS



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ECONOMIC GROWTH

In 2015, the Authority's ongoing commitment to promoting economic growth, development and investment in the Meadowlands District continued to produce great results.

During the year, businesses opened new facilities and began construction or neared completion of projects on Meadowlands District properties. In addition, several companies relocated to or expanded within the District, taking advantage of its ideal location. The Meadowlands District lies within one of the nation's busiest economic corridors, with close proximity to New York City and major roadways, airports, rail lines and seaports.

The NJSEA prides itself on being a customer service-oriented agency and promotes a business-friendly atmosphere. Staff assistance is available to businesses as they progress through the development application process.

BUSINESS GROWTH

Goya Foods is a recent example of the robust economic growth taking place in the region. Goya opened its new 634,000-square-foot headquarters/distribution center in Jersey City. The company is also upgrading and maintaining its 240,000-square-foot facility on Seaview Drive in Secaucus, also located within the District.

Many companies in 2015 moved to or expanded within the Meadowlands District, realizing that the region's many unique attributes best suit their business needs. Some examples are listed as follows:

- FedEx Ground received zoning approval to construct a 307,247-square-foot warehouse, 5,180-square-foot maintenance garage, 2,940-square-foot gateway building and a fueling station, with associated site improvements, on Secaucus Road in Jersey City.

- Wacoal received approval to construct 78,656 square feet in warehouse additions at its current location on Polito Avenue in Lyndhurst.

- Construction has begun on StorQuest, a 151,500-square-foot self-storage facility located on Tonnelle Avenue in Jersey City.

- Construction has begun on Aloft, a 175-room boutique hotel located on Harmon Meadow Boulevard in Secaucus.

- CHI Overhead Doors received approval to occupy 40,243 square feet of warehouse/distribution space in Lyndhurst.

- Sun Noodle received approval to occupy a 41,738-square-foot warehouse on Kero Road in Carlstadt.

- On County Road in Secaucus, two warehouse/distribution buildings were approved with a total of 203,600 square feet of ground floor area along with associated site improvements.

- PSE&G received approval for the portion of its Bergen to Linden Corridor Upgrade Project within the Meadowlands District. The project includes building a 345 kilovolt transmission system running from PSE&G's Bergen Switching Station in Ridgely to its Linden Switching Station. It will improve electric system capacity in Northern New Jersey, providing better power quality in the region.

- On Palmer Terrace in Carlstadt, approval was granted for the demolition of an existing 46,545-square-foot office building and the construction of a new 53,152-square-foot warehouse and distribution facility with associated site improvements.

- The International Longshoreman's Union has completed construction on a 9,242-square-foot third-floor addition and 432-square-foot lobby addition to their existing headquarters in North Bergen.



Goya distribution center in Jersey City



StorQuest storage facility in Jersey City



Aloft boutique hotel in Secaucus

REDEVELOPMENT

In June 2015, the NJSEA awarded a contract for the sale of part of the Kingsland Redevelopment Area to Kingsland Development LLC, a joint partnership between Russo Development of Carlstadt and Forsgate Industrial Partners of Teterboro.

In addition, work continues at Teterboro Landing, part of the NJSEA Teterboro Industrial Avenue Redevelopment Area. Walmart and Costco stores both opened in 2015, as did a 156,000-square-foot warehouse and distribution facility for paper and packaging distributor Lindenmeyr Munroe. Phase 3 of the project received zoning approval in 2015 and will include 11 restaurants and a Petco store.



Kingsland Redevelopment Area in Lyndhurst

RESIDENTIAL DEVELOPMENT

In Lyndhurst, a new 192-unit residential development located at 240 Chubb Avenue has been completed. Construction has begun on a 62-unit residential development on the former Hess property in Secaucus. Construction continued at the Xchange at Secaucus, with 1,387 of 2,035 units completed or under construction.



Teterboro Landing



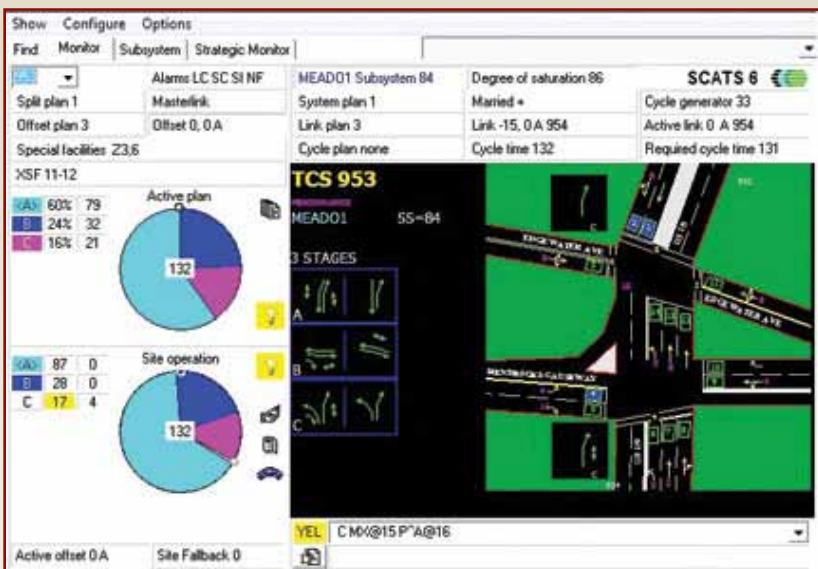
The Station at Lyndhurst, Chubb Avenue



Xchange at Secaucus



Installation of wireless communication transceiver



Sites are monitored through the adaptive traffic signal control system



Monitoring intersections in real time

TRANSPORTATION

The Meadowlands is home to a vital transportation network responsible for moving people and goods throughout one of the East Coast's busiest economic centers. This makes the smooth and steady flow of traffic and commerce crucial to keeping the District's economic engine humming. More than 700,000 private, public and commercial vehicles travel daily through the Meadowlands' transportation corridors, including the New Jersey Turnpike and Routes 1&9, 3, 17, 46, and 120.

MASSTR

The NJSEA in 2015 made great strides toward the full implementation of its multiple award-winning Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR) project. MASSTR entails the modernization of 128 signalized intersections throughout the Meadowlands region to reduce traffic delays, congestion and airborne emissions. 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.

Using an intricate network of technology, including traffic signal controllers, detection devices, radio transmitters, antennas and a mix of wireless and fiber-optic communication, transportation engineers program traffic signals to continuously adjust their timings based upon the changing flows of traffic in real-time. Staff is also able to make adjustments from the Traffic Management Center.

The NJSEA has completed work on Phases 1 through 4 of the 5 phase project. The final phase of the project is scheduled to be completed in 2017. The signals in this final stage are predominantly located along Route 46 in Little Ferry, Teterboro, South Hackensack and Ridgefield Park. Additional signals are in Carlstadt, Moonachie, North Bergen, Secaucus, Lyndhurst and Fairview.

Upon completion, the MASSTR project 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.

Implementation of the \$12.5 million MASSTR project was made possible through a highly competitive \$10 million U.S. Department of Transportation TIGER 2 grant awarded in 2010. The NJSEA is funding the remaining \$2.5 million through its Meadowlands Transportation Planning District fund and other resources.

LANDFILL MANAGEMENT

When the former New Jersey Meadowlands Commission was formed in 1969, dozens of orphaned landfills tarnished the District, polluting air, soil and water. By cleaning up these landfills and providing facilities for solid waste disposal, the agency provided the foundation for the region's environmental transformation and economic development.

Today, the NJSEA operates the Keegan Landfill in Kearny. The site takes in construction and demolition debris and certain non-hazardous industrial waste. The NJSEA also continues to collect leachate at seven closed Meadowlands District landfills, preventing the release of contaminants into the area's waterways. In 2015, more than 200 million gallons of leachate was collected and pumped to a regional sewage facility. Controls are also in place to stem the emission of gases such as methane and carbon dioxide, and to control stormwater discharges.

The Authority leases a trash transfer facility in North Arlington. The trash transfer station, known as the baler, is used to move municipal solid wastes out-of-state. In addition, the NJSEA leases a vegetative waste transfer facility at its closed 1E Landfill in Kearny. County, municipal and commercial entities use the vegetative waste transfer facility. They deposit leaves, grass and brush that are transferred and eventually composted at a separate location. This local transfer site enables public and



Aerial of the Keegan Landfill in Kearny

commercial entities to drive a short distance to dispose of their vegetative waste, saving thousands of dollars in fuel costs and reducing associated pollution.

FLOODPLAIN MANAGEMENT

The NJSEA monitors 33 flood control structures in the Meadowlands District. The Authority has occasionally, when funding is available, undertaken specific flood control projects to assist residents and businesses in the District.

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.



West Riser tide gates, Moonachie and Wood-Ridge border

The agency 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 Authority has been recognized by FEMA for its actions in areas including flood data maintenance, open space preservation, stormwater management standards and drainage system maintenance.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

The NJSEA provides important resources to Meadowlands District municipalities through its Meadowlands Environmental Research Institute's (MERI) digital mapping program. The high-tech, web-based maps produced by MERI's Geographic Information Systems (GIS) group help first responders protect communities and assist local governments in operating more efficiently. The GIS team uses cutting-edge technology to create, maintain and update comprehensive, web-based digital maps and mapping tools for every property in each Meadowlands District municipality.

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

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 can produce property listings utilizing a buffer tool which can save time in notifying residents of variance requests or other proposed changes to surrounding properties. Emergency responders and municipal officials are kept informed of new capabilities and upgrades to GIS programs through continuing comprehensive training sessions, technical support and refresher seminars.



MERI elevation finder



MERI's ArcGIS online portal

Additional tools developed by the GIS team include the District Elevation Finder. This tool can be used to find elevations at points in the parts of towns that fall within the District. Using MERI's ArcGIS Online Portal, users can view FEMA's latest preliminary flood maps and their associated base flood elevations. These maps, and others, can be found at njsea.com under the MERI section.

In 2015, GIS worked with the NJSEA Land Use Management Department (LUM) to assist Bergen County in updating its Hazard Mitigation Plan. Using data gathered by LUM, GIS helped to update county maps, including the location of critical facilities and building footprints.

**Online maps and resources can be accessed at
meri.njmeadowlands.gov**



MERI's flood prediction map showing Kearny at a 4-foot sea surge

WATER LEVEL ALERT SYSTEM AND FLOOD PREDICTION MAPS

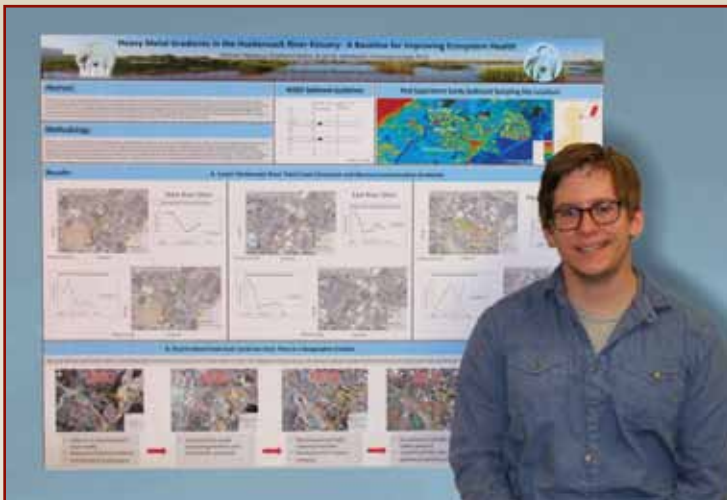
MERI provides a water level alert system and flood prediction maps to first responders and the public. The email and text-based water level alerts for Meadowlands District towns are sent when water levels reach 5.5 feet above sea level and continue to be relayed as levels rise.

In 2015, MERI expanded its interactive, web-based flood prediction maps to all areas of District municipalities. Previously the alerts covered only the District portion of the towns. The maps show the parts of municipalities that may flood from sea surge levels of up to 8 feet.

In addition, MERI loans towns portable Global Positioning System devices (GPS) that local officials use to map coordinates of catch basins, manholes and other locations that play important roles in floodwater management plans. The department also houses a special instrument known as a GPS Rover, which measures ground elevations.

In April, MERI took several top honors at the 28th Annual New Jersey Department of Environmental Protection GIS Mapping Contest. Michael Stepowyj was honored in several categories for his map, "Heavy Metal Gradients in the Hackensack River Estuary: A Baseline for Improving Ecosystem Health."

Stepowyj received the Gail P. Carter Award for "Best Application of Science and GIS" and took second place in "Data Integration" and "Best Newbie" group, for first time participants in the contest. More than 100 people submitted detailed web-based, digital maps at the competition, which was held in Trenton.



Michael Stepowyj was honored at a state mapping competition

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.



Jet-Vac truck available for municipalities in the District at no charge

PARKS

Since its formation in 1969, the agency has been a leader in developing and maintaining parks and natural areas within the Meadowlands District. As a result, the District now includes 21 parks and eight miles of walking trails on both sides of the Hackensack River. These facilities are maintained by a variety of public agencies and are enjoyed by tens of thousands of visitors each year.



DeKorte Park tidal estuary in Lyndhurst

DEKORTE PARK, LYNDHURST

The home of the NJSEA is a one-square-acre urban oasis featuring 3.5 miles of walking paths and panoramic views of marshes, all framed by the New York City skyline. There is an abundance of birds and waterfowl to be seen year-round, and majestic butterflies spread their wings during the spring and summer.

The Marsh Discovery Trail, the park's most popular walking path, is a half-mile boardwalk loop that extends over the park's Shorebird Pool and 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. It also gives an up-

close vantage point for visitors to observe and photograph the Meadowlands' spectacular wildlife and natural beauty.

Additional trails and features in DeKorte Park include the Lyndhurst Nature Reserve, the Shorewalk, the Kingsland Overlook, the Transco Trail, the World Trade Center Memorial Cove, and the Jill Ann Ziemkiewicz Memorial Butterfly Garden. Jill Ann, a Rutherford resident, was the youngest member of the flight crew assigned to TWA flight 800, which crashed into the ocean off Long Island on July 17, 1996.

In 2015, the Bergen County Audubon Society (BCAS) awarded the NJSEA several grants for new plantings in



Shorewalk Trail in DeKorte Park, Lyndhurst



Entrance to the Marsh Discovery Trail in DeKorte Park, Lyndhurst

DeKorte and other parks within the Meadowlands District. These include two grants totaling \$3,500 to fund plantings at the Lyndhurst Nature Reserve.

The plantings included approximately 2,000 plugs of native grasses and herbaceous perennials including Switchgrass, Common Milkweed, Butterfly Weed, Gray Goldenrod, Black Chokeberry,

Shadblow Serviceberry, Gray Dogwood, Red-twig Dogwood and 200 native shrubs.

A separate \$3,780 grant was used for native plantings near the entrance to Mill Creek Marsh in Secaucus, including Red-Twig Dogwood, Witchhazel, Butterfly Weed, New York Aster, Gray Goldenrod, Switchgrass and Common Milkweed.



Planting in DeKorte Park, Lyndhurst

MILL CREEK MARSH

Repairs to damage at the Mill Creek Marsh trail caused by Superstorm Sandy were completed in 2015. The 209-acre site is a great place for bird watching. Green-winged Teal abound in the winter, along with Northern Pintails, Hooded Mergansers, and Ruddy Ducks. Summer is a time for sandpipers, yellowlegs, and Snowy and Great Egrets. The marsh's most enduring impression is the dozens of Atlantic White Cedar stumps that fill the wetlands. They are the last vestiges of a primeval forest that once covered a third of the Meadowlands for hundreds of years. The rot-resistant cedar stumps provide perches for egrets and shorebirds.

RIVER BARGE PARK

The NJSEA's River Barge Park and Marina is a 5.5-acre jewel located on the Hackensack River in Carlstadt. It provides much-needed public access to the river in southern Bergen County.

River Barge Park offers a variety of boating activities and splendid riverfront views. The park includes a boat ramp, docks, paddling and rowing launch points, a marina with 17 slips available for rent, a scenic promenade with picnic tables and paths lined by native plants.

The docks serve as the launch point for the Authority's highly popular pontoon boat cruises. The two-hour tours run from June through September and are led by experienced guides who explain the region's history and point out the area's wildlife and vegetation. The park is also a departure spot for NJSEA guided canoe tours.

Other popular parks in the Meadowlands District include Mill Creek Point Park and Laurel Hill County Park, both in Secaucus, and Losen Slote Creek Park in Little Ferry.



Planting by BCAS in Mill Creek Marsh, Secaucus - photo courtesy of M.E. Raines



Promenade at River Barge Park, Carlstadt

PUBLIC PROGRAMS AND EVENTS

The NJSEA raises public awareness and promotes enjoyment of the Meadowlands District's unique environment and history through its informative, family-friendly programs and special events held throughout the year.

PONTOON BOAT AND CANOE TOURS

Nearly 2,000 visitors experienced the beauty of the Hackensack River and its marshes up-close in 2015 on guided pontoon boat cruises and canoe tours. The Authority leads the leisurely, two-to-three hour excursions between June and September. Tours are led by experienced NJSEA staff who discuss the region's human and environmental history and point out birds and other wildlife along the way. The trips offer ideal opportunities to photograph the scenic landscapes and wildlife found on the river and in its marshes.

GUIDED NATURE WALKS

The NJSEA partners with the Bergen County Audubon Society (BCAS) to offer twice-monthly, free guided nature walks at locations throughout the Meadowlands District year-round. The BCAS leads two-hour walks at sites including DeKorte Park in Lyndhurst, Losen Slote Creek Park in Little Ferry, Harrier Meadow in North Arlington, and Mill Creek Marsh, Mill Creek Point Park, and Laurel Hill Park, all in Secaucus.

BCAS members help point out and identify birds and vegetation seen on the walks. There are more than 280 bird species that have been seen in the region, including 34 on the New Jersey threatened,



NJSEA Pontoon Boat tour on the Hackensack River

Photo courtesy of Joe Koscielny



Boat launch at River Barge Park, Carlstadt

endangered and species of special concern lists. The BCAS also offers “Birding for Beginners” workshops at the Meadowlands Environment Center.

The Meadowlands District in recent years has become a favorite destination for bird watchers, and DeKorte Park has been listed by Birder’s World magazine, a national publication, as a birding hotspot. In 2015, the wide array of birds seen in the Meadowlands ranged from Bald Eagles and migratory shorebirds in the spring and summer to Rough-legged Hawks and Canvasback ducks in the winter.

BUTTERFLY DAY

In July, 1,000 people attended the Sixth Annual Butterfly Day at DeKorte Park, the largest turnout to date for the Authority’s most highly-anticipated summer event.

Representatives from the Bergen County Audubon Society and the North American Butterfly Association (NABA) gave talks on the majestic winged marvels and led butterfly walks. The BCAS, NABA and the Monarch Teachers Network provided tips for identifying butterflies, brought examples of plants that attract butterflies to home gardens and provided literature on the species. The Red Admiral, Silver-Spotted Skipper and Pearl Crescent were among the species seen during the day.

Butterfly Day is especially fun for kids. The day included a butterfly costume contest, scavenger hunt, crafts, coloring and face painting.

MOTH NIGHT

The NJSEA hosted its annual Moth Night at DeKorte Park in July. The event is part of National Moth Week. Several founders of National Moth Week were on hand, as were some 175 nature lovers. The night began with a talk by moth experts on these lesser-known cousins of butterflies. Industrial-strength lamps, white sheets and sugar were used to attract moths. Two of the highlights: a Lunata Zale and a Chickweed Geometer.

ADDITIONAL PROGRAMS

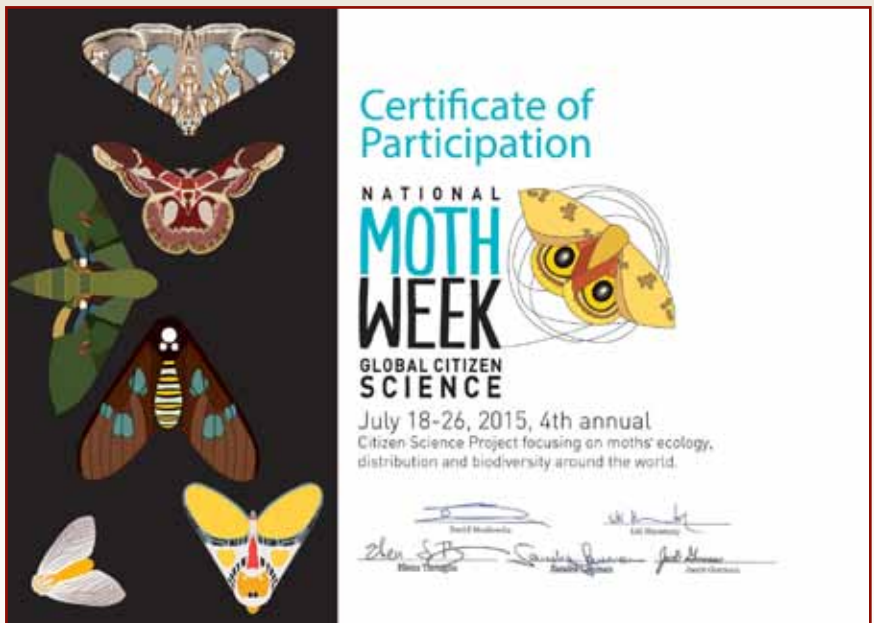
Public programming in 2015 also included the annual Independence Day concert, Halloween in the Meadowlands, Music by the Riverside at River Barge Park, workshops on planting and building butterfly gardens, lectures on the Meadowlands’ natural history, and talks on raptors and owls featuring live animals.



Nature walk at River Barge Park, Carlstadt



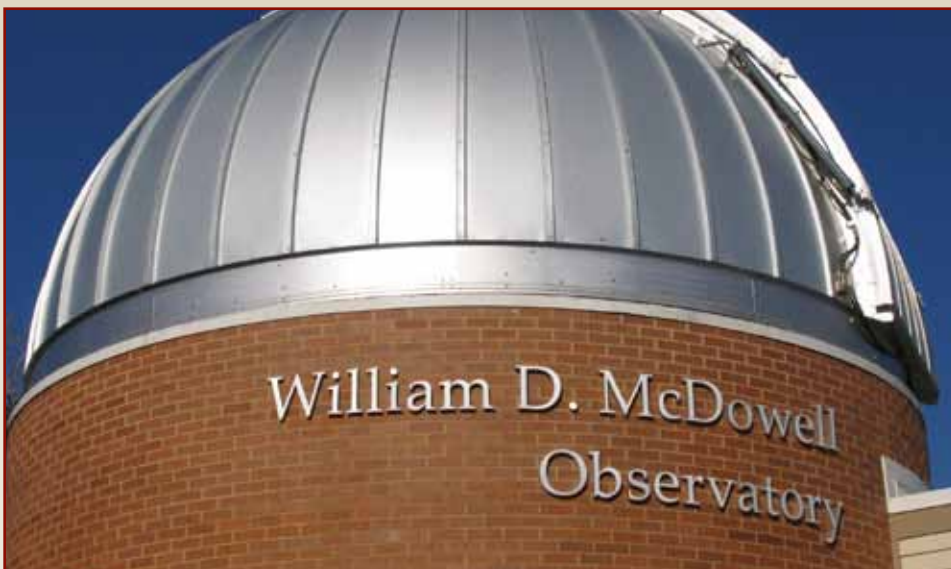
Annual Butterfly Day costume contest parade held in July at DeKorte Park, Lyndhurst



Annual Moth Night at DeKorte Park



Open public viewing at the Observatory



William D. McDowell Observatory

WILLIAM D. MCDOWELL OBSERVATORY

The NJSEA's William D. McDowell Observatory is open to the public for free stargazing every Wednesday evening, weather permitting. The Observatory is operated by Bergen Community College astronomers through a partnership with the NJSEA formed in 2015. The popular viewing nights attract some 3,000 residents to the Observatory each year to view and learn about planets, constellations and other celestial bodies. The Authority is especially pleased that the viewing sessions inspire a healthy curiosity and interest in science education among young people.

The research-grade instrument has a 20-inch mirror housed beneath a six-meter retractable dome that can capture objects millions of light years away. 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), which was created in 1969.

Hours vary by season. For more information visit njsea.com.



Two Snowy Egrets and a Black-Crowned Night Heron perched on pilings

NATURE BLOG meadowblog.net

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

MEADOWLANDS RESEARCH

The Meadowlands Environmental Research Institute (MERI) and Natural Resources Management Department perform critical studies and surveys that help the agency to better understand, manage and improve the Meadowlands District's unique urban ecosystem, including its critical wetlands.

MERI scientists continually monitor and study the region's air, soils and water. Samples are analyzed in an onsite, state-of-the-art analytical laboratory. Staffers also collect data on wetlands sites through aerial balloon photography and conduct research to assess environmental conditions in the District.

MERI maintains a library of circulating and reference materials specific to the Meadowlands region, including current and archival books, periodicals, newspaper articles, research studies and photographs. Reference materials are available for review, copying and scanning by appointment.

The Natural Resources Management Department performs surveys on area habitats and wildlife and looks for ways to preserve and enhance natural habitats to protect native flora and fauna. These efforts include management of invasive plants such as Phragmites, or common reed; and Ailanthus, or Tree of Heaven.



NJSEA staffers conducting balloon photography

Benthic Biodiversity and Benthic Pollutant Loads in Emergent Marshes of the New Jersey Meadowlands

Natural Resources and MERI often work jointly to explore ways to improve and protect vital natural resources. In 2015, they worked together on a U.S. Environmental Protection Agency (USEPA) funded study, "Benthic Biodiversity and Benthic Pollutant Loads in Emergent Marshes of the NJ Meadowlands." Part of the study's objectives are to determine change in the diversity and density of benthic invertebrates – crustaceans, snails, worms, clams and other small creatures that inhabit the bottom of wetlands and waterways, providing food for fish

as well as birds. Sampling stations in 2015 were reestablished at Harrier Meadow in North Arlington and Mill Creek Marsh in Secaucus. Samples collected will be compared to specimens gathered during previous studies between 1999 and 2002.

Another component of the study is to determine the concentration of contaminants in the sediments at wetland sites in the Meadowlands, and the concentrations of contaminants in the benthic invertebrates living in those marshes. Data collected will provide information on the extent to which contaminants enter the ecological food web.



MERI carbon monitoring station



MERI staff performs maintenance on water quality sensor

In 2015, a bulk sediment sample of benthic invertebrates as well as salinity and temperature data was taken at three sites in Secaucus. The collections of benthic invertebrates are currently being identified at the lab of Dr. Robert Prezant, Dean of the College of Science and Mathematics at Montclair State University.

Measurement of Tidal Wetland Impairments for Acquisition and Enhancement in the New Jersey Meadowlands

The USEPA is funding another Natural Resources Management and MERI research project, "Measurement of Tidal Wetland Impairments for Acquisition and Enhancement in the New Jersey Meadowlands." Research was conducted at six sites in Lyndhurst and North Arlington. Vegetation surveys took place at these sites in 2014 and the locations were revisited in 2015 to clarify the identification of some plant species.

Dr. Claus Holzapfel of Rutgers University-Newark and his colleagues performed data analysis in 2015 and submitted a report to the NJSEA as a contribution to a larger study on "Floral Diversity and Vegetative Cover at Selected Wetlands." The NJSEA prepared a revised vegetation report with additional text on a Plant Stewardship Index at the study sites. The sites were ranked according to their plant communities using measures from this index.

Carbon Sequestration

In October, MERI received a \$368,000 grant from the USEPA to continue their ongoing study analyzing the extent to which Meadowlands wetlands are able to naturally store carbon dioxide to prevent the greenhouse gas from accumulating in the atmosphere. Prior MERI research has shown that Meadowlands marshes retain more carbon than they emit into the air. Data gathered will help determine the best ways for wetlands to increase carbon sequestration and minimize greenhouse gas releases.

Diamondback Terrapins

An ongoing Natural Resources Department study of the Diamondback Terrapin population involves collecting data on the species in the Meadowlands to help answer questions about the life history of terrapins in the region 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 – and have experienced a recent rapid growth in population.

Diamondback Terrapins captured during the study are marked and released, unharmed, where they were collected.

Staff also analyzed data from previous years to determine the population size in the Sawmill Creek area. The turtle study includes collaboration with scientists and students from The Wetlands Institute in Stone Harbor and Montclair State University.



Diamondback Terrapins sunning in the marsh



Bird banding and identification

Fishery and Benthic Invertebrate Inventory

Natural Resources staff continued to inventory fish and benthic invertebrates of the lower Hackensack River. A total of 60 fish collections and 78 benthic invertebrate collections were made. The study compares the diversity of species of fish and benthic invertebrates (animals without backbones that live in the mud on the bottom of the river, such as worms, clams, and crabs) and the number of specimens collected against inventories taken during 1987-1988 and 2001-2003. The 2001-2003 study showed a large increase in the abundance of certain species, including white perch, striped bass and bluefish, attesting to the improved water quality of the river.

Bird Habitats

The department reviewed data collected from a 2008-2014 study on habitat use by birds at the Erie Landfill and Harrier Meadow natural area, an adjacent wetland ecological enhancement site. The study considered the importance of these sites as stopovers for migrating birds. The fieldwork associated with the study involved a significant bird banding program for the region and provided numerous data on avian diversity in the Meadowlands. The process of bird banding does not harm birds, nor do the bands cause physical discomfort.

Throughout this project, 33,520 birds of 135 species were banded. Of these, 3,131 birds were captured and released more than once, providing information on the duration of their stay at the site and returns over multiple years. Birds recaptured during this study were caught within the same year. Stopovers and repeat visits have positive implications about the value of the resources at the sites.

Hackensack River Water Quality

MERI monitors the Hackensack River estuary's water quality, 24 hours a day, 7 days a week, at four water monitoring stations in the lower Hackensack River. This monitoring network enables the Authority to detect any acute water quality problems in a timely fashion. Information gathered is transmitted by a cellular modem to the MERI laboratory. The

stations monitor dissolved oxygen, water elevation, acidity, electrical conductivity, turbidity, salinity and temperature.

The Authority also maintains a weather station in DeKorte Park in Lyndhurst. Data gathered there is included in the NJ Weather & Climate Network, which is managed by Rutgers University. Weather station data can be found at <http://bit.ly/2clOjtJ>.



HX Drawbridge, Lower Hackensack River

Site Visits

Natural Resources continued to make periodic site visits to undeveloped areas in the Meadowlands to gather details on physical and biological conditions. More frequent monitoring was carried out at enhanced wetlands owned by the NJSEA. Particular attention was given to adding to our understanding of the flora and avian fauna in the District. The monitoring allows for informed decision making on management issues such as controlling invasive plants.

Phragmites Management Program

The department completed a multiyear Phragmites management program for ecological enhancement at the Western Brackish Marsh in Secaucus. Phragmites is an invasive plant species, also known as common reed, which can choke out native vegetation. This project was conducted with support from Ducks Unlimited, a non-profit wetlands and waterfowl conservation organization.

Interagency Forums

Natural Resources Management staff represents the NJSEA in interagency forums on natural resources. These groups include the Meadowlands Interagency Mitigation Advisory Committee (MIMAC), which is chaired by the US Army Corps of Engineers with representatives from the USEPA, NOAA-National Marine Fisheries Service, US Fish and Wildlife Service and the NJDEP.

NEW JERSEY SPORTS AND EXPOSITION AUTHORITY FINANCIAL REPORT

COMBINED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

December 31, 2014

Operating Revenues

Arena	\$ 27,672,000
Convention Center	2,537,000
Entertainment Facilities	8,889,000
Other	14,383,000

Total Revenues	\$ 53,481,000
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Operating Expenses

Arena	\$ 24,752,000
Convention Center	6,238,000
Management & Administrative	30,837,000
Depreciation & Amortization	17,085,000
Payment In Lieu Of Taxes (PILOT)	11,083,000

Total Operating Expenditures	\$ 89,995,000
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Operating Loss	\$ (36,514,000)
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Non-Operating Income/(Expense)

Other Income	28,229,000
Tourism Tax Revenue	3,766,000
Interest Expense	(67,000)

Total Non-Operating Income/(Expense)	\$ 31,928,000
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Change in Net Position	\$ (4,586,000)
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NEW JERSEY MEADOWLANDS COMMISSION FINANCIAL REPORT

COMBINED STATEMENT OF REVENUES AND EXPENDITURES GOVERNMENTAL FUNDS

December 31, 2014

Revenues

Solid Waste Overhead Contribution	\$ 4,638,804
Grants	683,165
Fees & Charges	1,847,824
Lease Payments	877,377
NJDOT Pulaski Project	1,361,591
Interest Income	15,791
User Fees - NJMCEC	106,595
Revenues from Composting Operations	250,000
Other Income	840,881

Total Revenues	\$ 10,622,028
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Operating Expenditures

Commission Operations	\$ 8,845,970
Environment Center Operations	2,310,663
NJDOT Pulaski Skyway Expense	1,319,787
Grant Expenditures	675,075
Solar Array 1-A	20,000
Other Expenditures	239,970

Total Operating Expenditures	\$13,411,465
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Excess of Expenditures over Revenues prior to Non-Operating Costs	\$ 2,789,437
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Non-Operating Expenditures

MAGNET Grants	\$ 51,742
Amounts expended against prior year revenue allocations	481,620

Total Non-Operating Expenditures	\$ 533,362
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Net Excess of Expenditures over Revenues	\$ 3,322,799
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SOLID WASTE OPERATIONS STATEMENT OF REVENUES AND EXPENDITURES

December 31, 2014

Revenues:

Operating Revenue	\$ 26,598,516
Non-Operating Revenue	190,755

Total Revenues	\$ 26,789,271
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Expenses

General Operating Costs	\$ 9,761,888
Landfill Operations	5,893,553
Payments to County Utility Authority	5,916,791
MERI/Laboratory/Parks & Open Space	2,658,893
Closure Expenditures	1,673,870
Other Expenditures	1,131,423

Total Operating Expenditures	\$ 27,036,418
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Net Income	\$ (247,147)
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New Jersey Sports and Exposition Authority

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