Environmental Issues at Joint Base McGuire-Dix-Lakehurst

by Rich Bizub, Director for Water Programs

This article is the first of a three part series that will look into key environmental issues at Joint Base McGuire-Dix-Lakehurst, formerly known individually as McGuire Air Force Base, Fort Dix and Lakehurst Naval Air Station.

Joint Base McGuire-Dix-Lakehurst (JBMDL) is located in Burlington and Ocean Counties and spans 20 square miles. The base is located almost entirely in the Pinelands National Reserve. As a result, the location and extent of JBMDL plays a critical role with regard to maintaining the integrity of the area’s natural resources and archaeological, historic and cultural landmarks.

The oldest portion of the base began operations in 1917 as an ammunition proving ground near the town of Lakehurst. The Dix portion of JBMDL was also formed that year to serve as a training and staging location to support the needs of World War I. Since its inception JBMDL has remained an active facility. Even though the base predates the Pinelands Comprehensive Management Plan (CMP), it was included in the Pinelands because of its vast holdings of Pine Barrens habitat. The base has a CMP management area designation of Military and Federal Installation Area. The only other such facility with this designation in the Pinelands is the FAA Technical Center and Atlantic City Airport in Atlantic County.

It’s not hard to imagine that after 100 plus years in operation a lot has happened at the base. For example, numerous structures have been built and torn down during this time. This includes supporting infrastructure such as above and below ground storage tanks containing fuel oil and solvents, and thousands of feet of piping to move these liquids from one place to another. In addition, decades of daily operations have resulted in soil and groundwater contamination. As a result, today there are many environmental issues that need to be addressed at the

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I am thrilled to be joining the PPA team in the role of Policy Advocate! As a native New Jerseyan, the work done by PPA, partners and residents to protect the Pine Barrens is very personal to me. I still have friends and family living in Upper Township, where I grew up climbing the oak and pine trees, chasing frogs and lizards, and digging in the sandy soil. These experiences instilled in me not only a love of nature, but the understanding that we are part of it; humans affect nature as it affects us, and my childhood microcosm taught me that a balance is possible.

I received my Bachelor of Science degree in biology from West Chester University with a minor in psychology. During college, I gravitated towards ecology classes, spending both in-class and out-of-class time exploring the woods, streams and lakes of southeast Pennsylvania. After graduation, I served for 2 years in the AmeriCorps program focusing on environmental restoration and conservation: one year in the Berkshires of Massachusetts, and one near Yakima in Washington.

After a 2 year hiatus from the west coast (in Boston), I moved back, this time to Portland, Oregon where I spent 5 years working for an environmental non-profit, SOLVE. During this time, I discovered my passion for community-based restoration: the notion that volunteers of all ages and backgrounds can accomplish high-priority, high-quality restoration work while learning about and experiencing nature, and becoming stewards.

After returning to the tri-state area in 2014, I again put that passion to work for the National Audubon Society, managing the restoration, education and engagement programs in Philadelphia. Working closely with the City demonstrated to me the nuanced impact, positive or negative, that regulations can have on environmental conservation, and I began to look for an opportunity to influence policy, and affect on-the-ground work in a different way.

I started with PPA in September 2018, and am eagerly diving into the business of protecting the Pinelands. I will represent PPA at Pinelands Commission and Municipal Council meetings, so if you attend, please say hello! I will be working to get activists involved with the Pinelands Reserve, the Municipal Council, and the Pinelands Commission at the county level through the Pinelands Watch Activist Network.

If you are interested in Pinelands issues, engaging with local planners and officials, and advocating for Pinelands protection, please contact me by email at RhyanG@pinelandsalliance.org or by phone 609-859-8860 ext. 122.
Developing Coping Skills through Mindfulness in Nature

by Becky Free, Director for Membership & Communications and Ivette Guillermo-McGahee, CEO Allies in Caring

Recently, Allies In Caring, teamed up with Pinelands Adventures and the Center for Hispanic Policy, Research and Development to offer a week-long EmpoderArte Mindfulness Summer Day Camp in the heart of the Pinelands. Fifteen youth, aged 12 - 15 years, participated in a week of adventures all built around mindfulness training designed to help improve the youth’s ability to manage their emotions and respond more positively to stressors.

Allies in Caring is a New Jersey nonprofit organization that provides mental health counseling and educational services for Latino, Deaf and other underserved populations. Their EmpoderArte program, which translates to the “the art of self-empowerment,” is a mindfulness program for young adults that uses mindfulness practices to help young people develop healthy coping skills when faced with the inevitable stressors that come from being a young person especially in tough circumstances.

The program that was offered from August 20th to 24th in the Pines combined mindfulness practices with staff from Allies in Caring and nature experiences led by staff from Pinelands Adventures and the Pinelands Preservation Alliance.

Participants took a hike between the Mullica and Batsto rivers with Director of Conservation Science, Dr. Ryan Rebozo. They created a list of over 40 species found during the hike including a coastal plains milk snake. They worked on a stewardship project to protect a rare plant from off-road vehicle damage. And participants canoed on a Pine Barrens river with Pinelands Adventures. If you have done any canoeing on a Pine Barrens river you know there is no such thing as straight! There are twists, turns and obstacles to navigate as you move through the cool water.

How do you respond when you encounter an obstacle in the river? Do you make negative predictions and let frustration take over or do you slow down and assess? Do you communicate with the other person in the canoe or just take control? These experiences in the woods and on the river allowed these young people to have real life experiences in nature and reflect on them.

Under stress, humans cope in a variety of ways. One coping tendency is to avoid or suppress difficult emotions, such as frustration, jealousy or fear. Substance abuse can become a preferred way to cope because it temporarily reduces the intensity of difficult feelings. To prevent addictions youth need to develop skills to deal with emotions. These skills may be fostered through Mindfulness and Nature-based experiences. Nature-based programs can support the skill to move “outside” of oneself and broaden one’s mental and emotional perspective. A youth for example during our program realized that while he was kayaking he was not focused on his worries. Another skill is the ability to be mindful - aware of present-moment experience without trying to push it away or over-engage. A youth discovered that being aware of his body while walking and noticing the patterns of the trees helped him manage his social anxiety, relax and felt more at peace.

Ivette Guillermo-McGahee, the founder and CEO of Allies In Caring, Inc and board member with the Pinelands Preservation Alliance said, “In our work with children and youth who are challenged with mental health, behavioral issues and/or substance abuse we have incorporated outdoor experiences and mindfulness as part of our therapeutic interventions because we find that these contribute significantly to improve mental health and overall health, fostering stress recovery and optimizing cognitive function as well as improved emotional regulation. I care about the preservation and maintenance of the Pinelands because I believe that a ‘dose of nature’ can directly improve quality of life and help reduce the health care burden. I am interested in spreading awareness of the direct positive effects of being in nature and helping create a coherent plan of action in New Jersey, both to improve the physical and mental health of our communities through nature-based programs and to get other fields to support our efforts to maintain the Pinelands.”

Cassandra, who participated in this program said the following. “My favorite part of the program was learning about the Pine Barrens, making new friends and learning how to canoe/kayak. I liked learning about the Pine Barrens because when I grow up I want to help the environment and teach people or kids that nature is important in life and it helps us live. I also like making new friends because I get to communicate with other people that are close to my age and I learn how to get along with different types of people. A cool thing I learned was how the lake water is actually groundwater and that it has iron in it - that is why it has a red and orange color, and how the Lenni Lenape used to use nature’s items to survive. I would do this program again because it is fun and I get to learn about nature and I get to experience new things also I get to meet new people and make friends.”

To learn more about the programs offered by Allies In Caring you can visit them on the web at www.alliesincaring.org.
The fall season in New Jersey brings with it cooler weather and earlier sunsets. This time of year also triggers the change in leaf color for deciduous trees in the state. In the Pinelands, much of our forest is dominated by evergreen pines and, to a lesser extent, cedars. But one habitat type, the hardwood swamp, is dominated by deciduous trees and exhibits an impressive seasonal change in color.

Hardwood swamps in the Pinelands are lowland forests that have a canopy made up of mostly Trident Red Maple (Acer rubrum var. trilobum) and Black Gum (Nyssa sylvatica). Other trees common in these swamps are Sweet Bay Magnolia (Magnolia virginiana), Pitch Pine (Pinus rigida) and Sassafras (Sassafras sassafras), with Gray Birch (Betula populifolia) and Atlantic White Cedar (Chamaecyparis thyoides) occasionally found in these swamps. While Sweet Gum (Liquidambar styraciflua) is also occasionally encountered in some Pinelands lowlands, this species was historically found along the periphery of the Pinelands. These areas also serve as important habitat for a wide diversity of wildlife. Mammals, reptiles, amphibians and birds such as the state threatened Barred Owl can be found in hardwood swamp habitats.

Hardwood swamps can be found all along our major rivers in the region, typically with an understory of shrubs like Sweet Pepperbush (Clethra alnifolia), Buttonbush (Cephalanthus occidentalis), Highbush Blueberry (Vaccinium corymbosum), and Dangleberry (Gaylussacia frondosa). These habitats typically have a more established shrub understory than nearby open bog savannahs and Atlantic White Cedar swamps. Savannas and cedar swamps are habitat for many mosses, lichens and herbaceous plants like our native orchid species, which also utilize hardwood swamps under the appropriate conditions. It is believed that the extensive harvesting of Atlantic White Cedar in this region has led to an increase of hardwood tree species as they were able to establish in areas that historically were dominated by cedar.

For this reason, our distribution of lowland habitat is very much tied to the health of our aquifer in terms of water quantity and quality. Drawing down our shallow Kirkwood-Cohansey aquifer can dry up Pinelands wetlands. Being mindful of how we use and treat our groundwater in the Pinelands will not only help maintain wetland areas, but will also ensure a long-term supply of freshwater for residents and farmers to use.
Environmental Issues at the Joint Base
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assessing the environmental problems at the base did not start in earnest until approximately ten years after the first Earth Day in 1970. For example, at McGuire Air Force Base the first environmental assessment consisted of a records search in 1982. That effort identified 16 sites that required further study. Additional studies in 1984, 1989 and 1998 brought the total to 36 sites that needed further investigations at McGuire. Similar activities were conducted at Fort Dix and Lakehurst Naval Air Station.

Two primary federal environmental laws govern the investigation and cleanup of contaminated sites at JBMDL. They are known as the Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). CERCLA, also known as Superfund, was created in 1980 and amended in 1986. This law addresses environmental releases or threatened releases to the air, surface water, groundwater, sediment and soil but does not include releases of petroleum used for fuel. In conjunction with state regulations, RCRA is generally used at the base to address releases of petroleum, oil or lubricants. In addition to these federal laws, state environmental laws also apply to environmental issues on the base. As a result, some sites are under the review and regulatory jurisdiction of the United States Environmental Protection Agency (EPA) and others by the New Jersey Department of Environmental Protection (NJDEP). Since the base is in the Pinelands, the Pinelands Commission also has a responsibility to make sure that the CMP is followed. This includes the CMP’s strict groundwater quality standards.

With regards to Superfund, EPA uses a national hazard ranking system known as the National Priorities List (NPL) to prioritize their efforts. The NPL is intended primarily to guide the EPA in determining which nationwide sites warrant further investigation. McGuire was placed on the NPL in 1999. Dix was placed on the NPL in 1984 for their sanitary landfill. Since then environmental work has been conducted to the satisfaction of EPA, and Dix has been removed from the NPL. Lakehurst was placed on the NPL in 1987. Like Dix, Lakehurst has taken all of the required cleanup measures as they relate to the NPL.

PPA monitors environmental investigation and cleanup activities at JBMDL and provides written and oral testimony as needed. PPA has also been a member of the Restoration Advisory Board (RAB) for many years. The Department of Defense requires a RAB to be established where there is sufficient interest in an installation's environmental restoration program. This is certainly the case at JBMDL. Prior to becoming JBMDL, McGuire, Dix and Lakehurst had individual RAB's and PPA participated in all three. Today they have been merged into one RAB.

The next installment of this series will focus on what are known a Perfluorinated Compounds (PFC's). These compounds associated with the base have been found in drinking water, surface water and fish. PFC's are a large group of environmentally persistent chemicals used in industrial applications, fire fighting foam and consumer products. These chemicals are very stable, slow to degrade in the environment and can lead to potential adverse health effects in humans and wildlife. At the base PFC's are primarily from the use of fire fighting foam.

State of the Pinelands
Coming Soon!

This annual review of state, federal and local agencies is a thorough account of the public policy actions that affected the Pinelands National Reserve over the last year.

It will be mailed to members in place of your Dec./Jan. newsletter.

It will also be available here:
www.PinelandsAlliance.org

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PILOT stands for Payment in Lieu of Taxes. The PILOT program was started in 1970 to help municipalities offset loss in tax revenue from open space acquisitions. Many municipalities in the Pinelands have large tracts of open space, and PILOT has helped these towns meet their revenue needs for several decades.

Over time, budget allocations for the PILOT program have greatly decreased, and payments are now “frozen” at 2010 rates, resulting in inequities. Some municipalities are receiving no payments for more recent acquisitions while other municipalities receive more than originally projected (as rates prior to the freeze were intended to decline over time). PPA, as part of the NJ Keep It Green Coalition (NJ KIG), is launching a campaign to restore funding levels and resolve inequities for municipalities.

NJ KIG is a state-wide collection of over 150 groups that campaign for open space funding and protection. The Coalition was successful in helping to pass statewide bond measures, such as those in 2009 and 2011, which together provided $600 million for the State Green Acres, Farmland Preservation and Historic Preservation programs. NJ KIG led the campaign to secure a long-term, sustainable source of funding to ensure permanent protection of critical lands and waters throughout the state.

In 2014, New Jersey voters overwhelmingly approved a measure to dedicate existing Corporate Business Tax funds to sustainably provide long-term open space, park, farmland, and historic preservation efforts. This measure will provide $1 billion dollars every 10 years for preservation and stewardship, but did not include specific provisions for PILOT.

Towns in the Pinelands that receive PILOT payments include:

Atlantic County
Corbin City, Estell Manor City, Hamilton Township, Hammonton Township, Mullica Township

Burlington
Bass River Township, Shamong Township, Tabernacle Township, Washington Township, Woodland Township

Camden County
Waterford Township, Winslow Township

Cape May County
Dennis Township, Lower Township, Upper Township

Cumberland County
Downe Township, Maurice River Township

Ocean County
Berkeley Township, Jackson Township Lacey Township, Little Egg Harbor Township, Manchester Township, Stafford Township

There are 26 municipalities in New Jersey that receive over $100,000 through PILOT with 10 receiving over $200,000 and 4 receiving over $300,000. Under the Christie administration, PILOT suffered about a $3,000,000 decrease. As PPA and NJ KIG launch this campaign, we will need support from municipal boards and commissions. We also need individuals to weigh in with the new administration on how important PILOT is to the community. More information will follow, but in the meantime, you can visit www.njkeepitgreen.org or contact me at 609-859-8860 ext 118 or jaclyn@pinelandsalliance.org.

Thank You!
We are amazed by all the people who choose to become members of the Pinelands Preservation Alliance. You really make a difference!
The events listed below are offered by Pinelands Adventures and other organizations. Enjoy!

At Pinelands Adventures you can rent a canoe or kayak, take a guided tour, and so much more. Join us today! Pinelands Adventures is an initiative of PPA.

Learn more on the web: PinelandsAdventures.org
Pre-Registration is required for all trips and rentals and can be done online or by calling 609-268-0189.

Industry in the Pines (Small Bus Trip)
Nov. 17. Guide Jeff Larson. Trip is from 10am to 3pm. Meet at Pinelands Adventures, 1005 Atsion Rd, Shamong NJ

The Pine Barrens are a post-industrial forest. It has been said that by 1850 no trees existed between the Delaware River and the Atlantic Ocean due to over harvesting and industry in the Pine Barrens region. While such a claim is slightly exaggerated, it is difficult to imagine that the pine wilderness was once a major industrial center. Evidence of bygone eras still lie hidden along the quiet stream beds and below the thick patches of wild huckleberry. We will make several stops to explore on foot.

Cost is $60 per person.

Journey Between Two Rivers (Hike)
11/10 and 12/1. Trip is from 9am to 2pm. Meet at Pinelands Adventures, 1005 Atsion Rd, Shamong NJ

Join Pinelands Adventures Naturalist, John Volpa, for a four-mile hike at an easy pace between the Mullica and Batsto Rivers. Explore the uplands and river edges for native plants and animals while learning about the unique features of the Pine Barrens and its history. Bring a picnic lunch!

Cost is $35 Adults | $20 Children Ages 8 to 15 years.

Pine Barrens Habitats (Small Bus Trip)
11/10, trip departs at 10am. Meet at Pinelands Adventures, 1005 Atsion Rd, Shamong NJ

To many, the Pine Barrens appear as a monotonous expanse of sugar sand and pine trees. However, a closer look reveals a multifaceted environment comprised of unique habitats. This trip will be an exploration into the various habitats that exist in the pinelands. Characteristics of each habitat will be discussed including flora, fauna, natural and human influence. Areas to be visited include upland pine-oak communities, lowland pine communities, spungs, savannas, hardwood (gum) swamps, and other aquatic environments. Cost is $60 per person.

Owls in Autumn
11/16 at 6pm Offered by Woodford Cedar Run Wildlife Refuge (Medford, NJ - www.cedarrun.org)

Program begins inside the nature center for an up-close experience with resident owls followed by a hike on the trail in search of our local species. Suitable for ages 8 and up. $12/Cedar Run member, $15/non-member. This program will fill up! Advanced registration required. Register online or call 856-983-3329.

Hunters of the Sky
11/21 at 11am and 1pm Offered by Woodford Cedar Run Wildlife Refuge (Medford, NJ - www.cedarrun.org)

All ages welcome. Program included with the price of admission. Kids can also make a holiday craft inside the nature center. Register online or call 856-983-3329.

Blueberry Music Jam
11/4, 11/18 from 11am to 2pm in Whitesbog Village, Brendan Byrne State Forest, 120 West Whitesbog Road, Browns Mills, NJ - www.whitesbog.org

Sponsored by the Whitesbog Preservation Trust.

Calendar of Events
Pinelands Trips & Events
Fall 2018

Open to all to listen or play along, look for the group on the porch of the General Store or in the Barrel Factory, just down the road on the left. Visitors are free to drop in to listen anytime.

Moonlight Hike
Nov. 24th at 6pm in Whitesbog Village, Brendan Byrne State Forest, 120 West Whitesbog Road, Browns Mills, NJ - www.whitesbog.org

Sponsored by the Whitesbog Preservation Trust.

Come explore the village and the bogs by moonlight, this special opportunity is as close to the full moon as possible. An experienced guide will share insights about Whitesbog and the nature. Meet your guide in the General Store before the start time. All walks are 3-5 miles in length. Dress weather appropriate.

Reservations are made by leaving your name, phone number and number of people at 609-893-4646, the walk is $5/person.

History Hike
Dec. 1st from 1pm to 3pm in Whitesbog Village, Brendan Byrne State Forest, 120 West Whitesbog Road, Browns Mills, NJ - www.whitesbog.org

Sponsored by the Whitesbog Preservation Trust.

Stroll the Historic Village, learn about Whitesbog’s role in history and visit Sunigive, the worker’s cottage and other museums, buildings and farm landscapes that speak to Whitesbog’s heritage. $5.00 donation/person. You can arrive at 12:30 - 1:00 to let the guide know you will be attending and pay the General Store shopkeeper your $5.

History Hikes take place on the First Saturday of each month from 1-2 pm and meet in the General Store.

Do you have an event that takes place in the Pinelands?
Let us know so we can put it on our calendar.

Email: becky@pinelandsalliance.org with the details.
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Membership Categories
Basic ☐ $35
Family ☐ $60
Sponsor ☐ $100
Patron ☐ $250
Benefactor ☐ $500
Chairman’s Circle ☐ $1,000
Other ☐

ALL MEMBERS RECEIVE:
• PPA membership card
• Year-long subscription to Inside the Pinelands
• PPA window sticker
• 10% off at Pinelands Adventures and on PPA merchandise

Sponsors receive a copy of The Pine Barrens: Up Close & Natural DVD
Patrons receive John McPhee’s seminal book The Pine Barrens
Benefactors receive The Pine Barrens of New Jersey, a photographic history of this region
Chairman’s Circle members receive the book Seasons of the Pines and a personalized tour of the Pinelands

Our mission is to protect and preserve the natural and cultural resources of New Jersey’s Pinelands.

Please Recycle this newsletter! When finished give it to a friend or neighbor and encourage them to learn about PPA’s mission and programs.