



PINELANDS
PRESERVATION
ALLIANCE

Jan - Feb 2010
Issue 53

INSIDE:

Upcoming Pinelands
Commission meeting
dates 3

New PPA Website
information 3

**Upcoming
Pinelands
Event**

**Pinelands Short
Course**

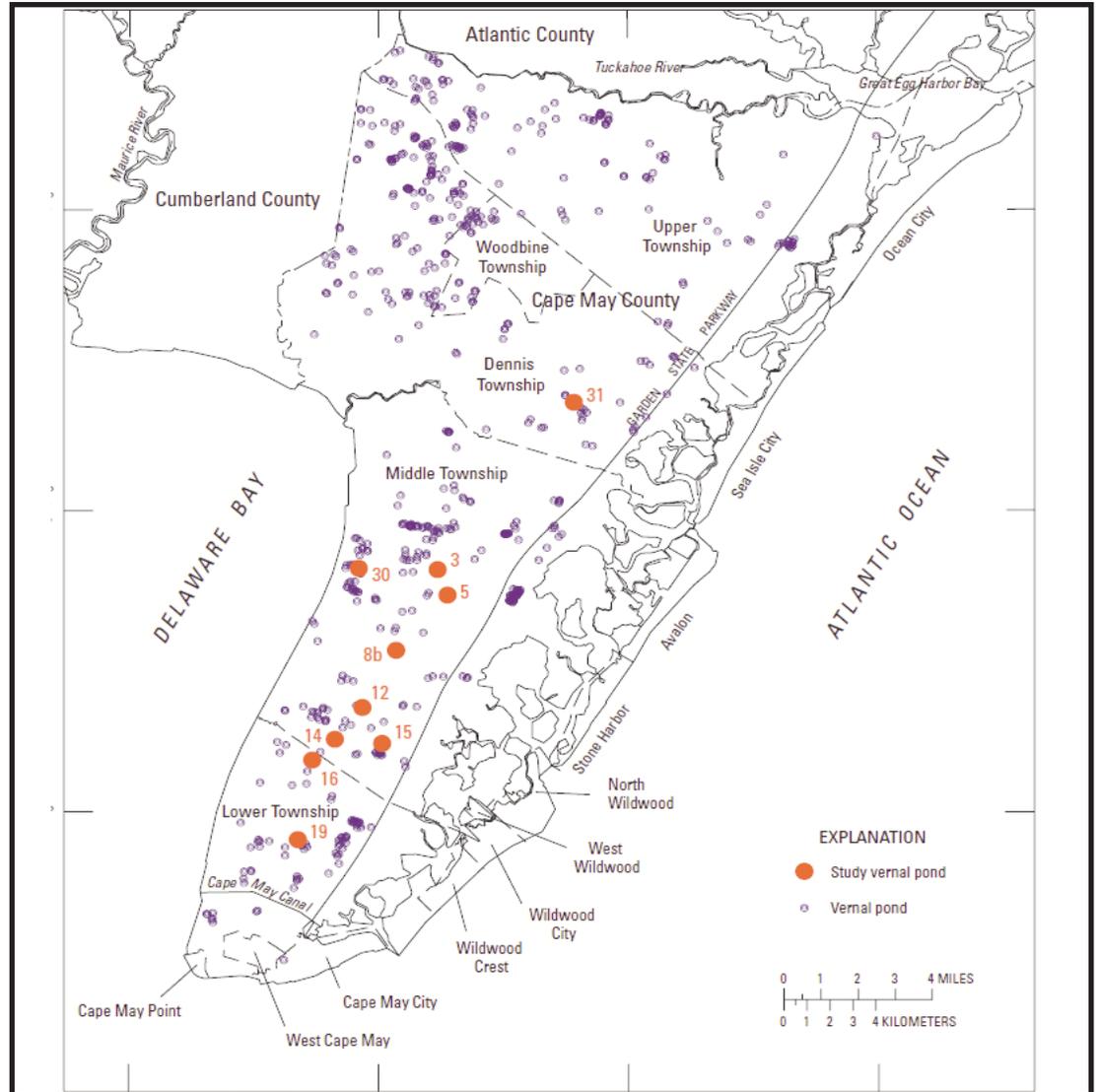
will be held at
Burlington County
College on

March 20, 2010

more information at
www.state.nj.us/pinelands

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PINELANDS WATCH



Vernal ponds in Cape May County, New Jersey (From New Jersey Department of Environmental Protection, Division of Fish and Wildlife, 2002). Page 61 of the Future Water-Supply Scenarios report.

Water Supply Challenges—Cape May County!

There are only a few aquifers beneath the Pinelands and southern Cape May County that can produce reasonable amounts of water to meet the current and future water supply needs of the region. However, water levels in most of these aquifers are declining because of unsustainable usage. Unfortunately, this unhealthy condition also applies to the shallow aquifers that are critical for

ecosystem health. In the Pinelands the shallow aquifer is the Kirkwood-Cohansey aquifer, and in the southern portions of Cape May County the Holly Beach water-bearing zone.

Water from these aquifers provide from 80 to 95 percent of the water found in streams and wetlands of the area. As a result, for every gallon of

continued on page 2

water removed from these aquifers, it is that much less water available to replenish these surface waters. If water is removed from these aquifers too fast, it can actually result in a reversal of groundwater flow direction with water being taken from streams and wetlands. Removing too much water places the ecology, economy, and natural environment of the Pinelands and Cape May County at risk. Given that our limited aquifers are now being used in an unsustainable way, and that the demand for water will only increase with time, more pressure will be placed on using these shallow aquifers to meet future demands of the region.

Under state law, water can be exported 10-miles outside the Pinelands to other communities. In fact, a considerable amount of water pumped out of the Kirkwood-Cohansey aquifer is for people and businesses outside the Pinelands. So how water is used outside, but adjacent to the Pinelands impacts the Pinelands directly and indirectly. Until recently, a comprehensive study had never been

conducted to obtain the necessary hydrologic and ecological information upon which sound, long-term water supply decisions could be made. However, in 2001 the New Jersey Legislature passed Assembly bill A658 (P. L. 2001 chapter 165) to

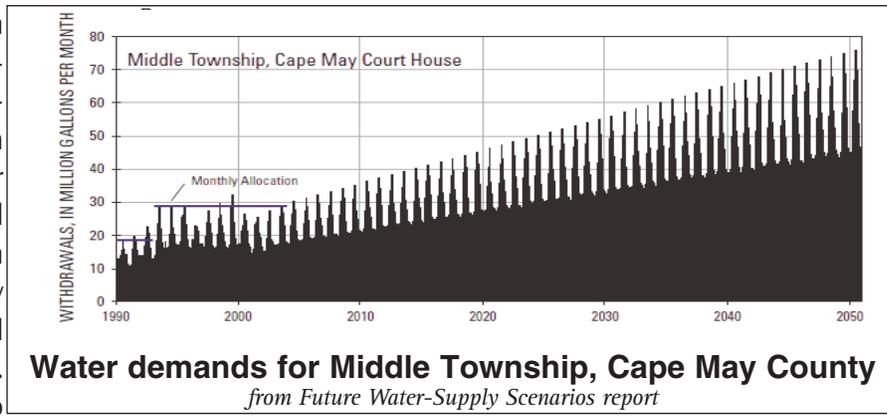
provide the necessary funding to conduct a comprehensive study of the Kirkwood-Cohansey aquifer of the Pinelands and various aquifers of Cape May County. PPA supported and worked with the bill's sponsor to make the funding available. It required that the Pinelands Commission, in cooperation with the Department of Environmental Protection (DEP), Rutgers, the State University, The United States Fish and Wildlife Service and the United States Geological Survey (USGS), to assess and prepare a report on the key hydrologic and ecological information necessary to determine how the current and future water supply needs within the Pinelands may be met, while protecting the Kirkwood-Cohansey aquifer system and at the same time avoiding any adverse ecological impact on the Pinelands. This study has been much delayed, but is now scheduled to be completed by the Pinelands Commission in 2010.

The legislation also required an assessment and

report on sustainable water-supply alternatives for the non-Pinelands portion of Cape May County to determine the current and future needs of the county, while avoiding any adverse groundwater or ecological effects on the county. The USGS, in cooperation with the DEP, has completed its assessment and released its report. USGS and DEP took into account projected demands until 2050, considering ways to minimize adverse impacts on water sources and maintain ecological functions. They also considered potential impacts of saltwater intrusion, water-level declines of aquifers, premature drying of seasonal wetlands, delayed recovery of water levels in the water-table aquifer and reduced streamflow. To predict the effects of future actions on water supplies as a result of increased demand, three baseline and six future scenarios were created and simulated through computer modeling.

The findings of the study indicate what many people have suspected all along, that Cape May County has

some serious challenges ahead with regards to water supply sustainability and ecological health. For example, near the Wildwood well field in Middle Township, pumping has resulted in vernal ponds drying up sooner each summer,



and recovering later, compared to vernal ponds in other parts of the county. These are two harms to the environment that are occurring now as a result of the effects of groundwater pumping. Unless some alternative strategy is put in place, this situation will certainly worsen with time.

The USGS also looked at ways to minimize future impacts of pumping by considering a variety of scenarios. These included such things as different well locations, using different aquifers and new desalination plants. It is predicted that unless some of these options are implemented, serious negative effects could result, including a drop in the water level of the shallow water table aquifer of up to 0.7 feet. In addition, it is predicted that the base flow in streams could decrease between 3 to 26 percent. Computer modeling also indicates that saltwater intrusion could extent as much as 7,100 feet inland to contaminate production wells used by Lower Township, the Wildwoods, and domestic

wells.

In general, a number of practices will need to be implemented with a long-term vision in order to meet projected water supply needs and minimize ecological damage. These include increasing water conservation and reducing future growth in demand, relocating public supply wells to the interior of the county to lessen the impact of saltwater intrusion, using multiple aquifers to minimize any one aquifer from being overly stressed by pumping, locating wells further apart to reduce the amount of water level decline, making greater use of treated wastewater, storing water in select aquifers during the off-peak season, using more desalination, and adjusting the pricing of water to encourage greater water conservation. These are just some alternatives referenced in the report.

What can you do?

- Obtain a copy of the report from the United States Geological Survey and become familiar with the challenges ahead. The report is technical, but the Summary and Conclusions are short and readable. The report can be obtained from <http://pubs.usgs.gov/sir/2009/5187>.
- Contact the Cape May County Board of Chosen Freeholders and ask them to reconstitute the Water Resources Coordinating Council (WRCC). The County charged the WRCC in 1992 to serve as a regional entity to coordinate and support regional water supply initiatives and solutions. The Council has not met in years. The address for the Board of Chosen Freeholders is: Administration Building, 4 Moore Road, Cape May Court House, NJ, 08210.
- Ask the Cape May County Freeholders to charge the county planning department with making new county-wide growth and conservation plans, and work with the municipalities, to reduce future development and water demand in the county.

For more information about this study and water quality/supply issues in general contact Rich Bizub at PPA, 609-859-8860, ext. 16 or rich@pinelandsalliance.org

Check out our NEW WEBSITE!

www.pinelandsalliance.org

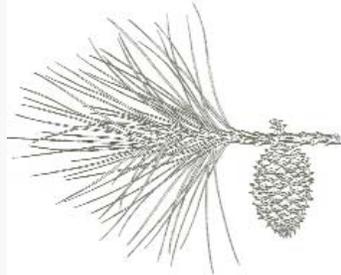


New features include:

Attractive new design / easy to navigate. Photo/information galleries of plants and animals. In-depth information on issues and campaigns. Pinelands Channel - stunning videos and photo slideshows. Things To Do - hiking, cycling, camping, canoeing, historic sites.

Bookmark our new website and share with friends!

And check out PPA on Facebook - become a fan!



Upcoming Pinelands Commission Meetings

Friday, January 15, 2010

Friday, February 19, 2010

Friday, March 12, 2010

Friday, April 9, 2010

Pinelands Commission meetings are open to the public. Agendas are posted one week prior to the meeting date at www.nj.gov/pinelands

Editor: Theresa Lettman

Distributed to members of the Pinelands Watch Network and other members of the public. If you would like to receive these alerts, please contact Theresa Lettman at (609) 859-8860 Ext 22 or theresa@pinelandsalliance.org.

Prior issues are available at: www.pinelandsalliance.org

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Water Supply Challenges – Cape May County!



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