January 19, 2012

VIA OVERNIGHT MAIL
Ocean County Section Chief
Division of Land Use Regulation
Department of Environmental Protection
501 East State Street - 2nd Floor
Post Office Box 420, Mail Code 501-02A
Trenton, New Jersey 08625

Re:  Jaylin Holdings, LLC File # 1500-04-0001.2, APL 100001, FWW090001
Township of Toms River, Ocean County, New Jersey
Block 505, Lots 14 & 15
Township of Manchester, Ocean County, New Jersey
Block 44, Lots 2,3,4(part) & 5

Dear Sir:

Enclosed please find the Response of Pinelands Preservation Alliance and report of Joanna Burger, Ph.D. with regard to the above referenced Notice of Intent to Settle CAFRA Permit.

Very truly yours,

R. S. GASIOROWSKI

RSG./DMS
enc.

cc: Carlton Montgomery
    Joanna Burger, Ph.D.
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Re: Jaylin Holdings, LLC File # 1500-04-0001.2, APL 100001, FWW090001
Township of Toms River, Ocean County, New Jersey
Block 505, Lots 14 & 15
Township of Manchester, Ocean County, New Jersey
Block 44, Lots 2,3,4(part) & 5

Dear Sir:

I have been hired by Pinelands Preservation Alliance to review the above referenced Notice of Intent to Settle CAFRA Permit. In my review of the New Jersey Department of Environmental Protection Notice of Intent to Settle CAFRA Individual Permit, I have noted various problems with the submittal. I am concerned that some of the data provided is not complete and therefore additional work must be performed prior to a settlement. I have detailed these concerns below.

1. Threat to Endangered Species Habitat

Known Pine Snake habitat will be destroyed.

The previous Addendum referenced on page 4 that the department asserted that this project would result in the direct loss of approximately 50% of the on site threatened species habitat which is prohibited by this rule. The applicant has asserted that this prohibition is true unless it can be demonstrated through an Endangered or Threatened Wildlife or Plant Species Impact Assessment as described at NJAC 7:7E-3C.2 that endangered or threatened wildlife or plan species habitat would not directly or through
secondary impacts on the relevant site or in the surrounding area be adversely affected (emphasis added).

The important part of this regulation is on the site or in the surrounding area. The applicant has noted that this is a direct loss of approximately 50% of the on site threatened species habitat. The applicant has stated that they have provided An Endangered or Threatened Wildlife Habitat Impact Assessment by Ecol Sciences, Inc. dated November 29, 2010 to support this applicant and decreased buffer. This revised report notes that the Pine Snake often nests communally at elevations above forty feet. The property in question is noted to have had two adult male pine snakes captured on site on May 31 and June 15, 2005. The revised report states on page 13:

“Site plan activities will impact this pine snake habitat.”

In addition, the NJDEP letter from Dave Jenkins to Dave Fanz dated December 20, 2011, goes into great detail as to the work to be done to safeguard Pine Snakes as construction is performed on site, because this is actual Pine Snake habitat. The best protection for the Pine Snake would be to deny the application.

The applicant indicates that since the proposed development of only 14.9 acres of the 43 acre site will be developed with impervious coverage and because this is in an outlying area of the mapped Pine Snake habitat, the impact is expected to be negligible. That this is a critical habitat area cannot be disputed - there are pine snakes on the property. This isn’t just prime critical habitat. The Pine Snakes are there. This area was noted on NJDEP maps to be critically sensitive albeit in an outlying area. In addition, the applicant continually discounts the fact that wetlands are not Pine Snake habitat, yet there is no attempt to discount the significant amount of wetlands on the property in question or on the parcels of land provided in mitigation. Thus, while the applicant notes that only 14.9 acres of the 43 acre site will be developed with impervious coverage, the applicant fails to indicate that the majority of the remainder is wetland or wetland buffer that is undevelopable and not prime Pine Snake habitat. Thus, the majority of the uplands that are prime Pine Snake habitat will be destroyed.

The applicant proposes large areas of land that will be modified to provide habitat improvements for Pine Snakes. It should be noted that the NJDEP letter by Eric Virostek dated August 31, 2011, notes on page 5, that some of these required habitat improvements will not be completed for 5 years. Any approvals, if given, should as a minimum wait until all mitigation improvements are completed prior to any work on the site. This would be consistent with the NJDEP letter by Eric Virostek dated August 31, 2011, that states on page 10:

“In order for “no net loss” of pine snake habitat to be achieved, the implementation of the propose habitat acquisition and enhancements must be carried out and completed prior to the initiation of the proposed development.”

The applicant has proposed the addition of off site property to make up for the taking of existing known Pine Snake habitat areas that have Pine Snakes without an
evaluation of the amount of wetlands or existing Pine Snake areas on the proposed mitigation site, and not just identifiable with prime habitat.

2. Deficient Buffer

A 150 foot buffer will be provided instead of a 300 foot buffer as required.

This is verifiable Pine Snake habitat and a documented Pine Snake hibernaculum, so the applicant has proposed a permanently preserved 50 meter radius open space buffer. Page 5 of the CAFRA Addendum to the Previously Submitted Statement of Compliance for the Proposed Wal-Mart, notes that, “there is no specific buffer that must be established around endangered and threatened species.” First, all buffers are by definition permanent and preserved, but buffers from known hibernaculums and environmentally sensitive areas are usually afforded a 300 foot radius permanently preserved open space buffer in the Pinelands and CAFRA areas. Why should this site, which is a known and proven hibernaculum, be treated so deficiently with only 50% of the normally provided buffer, contrary to the other dedicated buffers in the CAFRA and Pineland areas? Shall all of the other 300 foot buffers now be reduced to allow denser development on existing sites? The applicant does not provide sufficient justification for a 150 foot buffer versus a 300 foot buffer.

The reduced buffer will directly and adversely impact Pine Snake habitat.

3. Violation of the Coverage Requirement for the Proposed Wal-Mart Store

The coverage requirements are not met.

The applicant, Wal-Mart, is proposing a store in the CAFRA area. The building and parking is in Toms River Township. The applicant is asserting that the Toms River portion of the site is in the CAFRA Coastal Center Zone and has a right to coverage of 80%, and the remainder and mostly undeveloped portion of the site is in Manchester Township in a Suburban Planning Area with a right to coverage of 30%. The applicant addresses coverage percentages beginning on page 7 of the CAFRA Addendum.

The NJDEP had previously indicated that the Toms River Coastal Regional Center designation expired on February 7, 2005 and was readopted on March 16, 2006. I believe that Manchester Township has always concurred that the portion of the site in Manchester Township is a Suburban Planning Area. The area of the site in Manchester Township is shown on the existing NJDEP maps as a Suburban Planning Area with potential critical environmental site and therefore requires a maximum impervious coverage of 30%; this should be reduced to 3% if the area is identified as Coastal Environmentally Sensitive Planning Area.

The Toms River Township portion of the site is shown on the existing NJDEP maps as a Suburban Planning Area as well, and it appears that some maps of the NJDEP show portions of this area as environmentally sensitive. While the NJDEP indicated that the
Toms River portion of the site was in the Toms River Center Designation, I don’t believe that Toms River Township has formally adopted this portion of the site with a Center designation, although the site was proposed to have a Center designation. Thus, this site should be identified as a Suburban Planning Area until all approvals are in place and should not be acted on retroactively. The applicant, Wal-Mart, has proposed in their application that this area was designated as a Center and was allowed to have 80% coverage. Since the area is not a formally designated Center by Toms River Township, the 80% coverage should not be allowed. If a formal designation by Toms River Township is in fact in effect, please have your office provide us with a copy of the formal Toms River resolution of approval or concurrence.

4. The Permit Extension Act Does Not Apply

The Permit Extension Act does not apply.

The applicant has claimed that the permit extension act of 2008 is applicable for this project on page 8 of the CAFRA Addendum. Wal-Mart is claiming that the Center designation should be extended by the Governor’s Permit Extension Act. I find that this is not possible, since the portion of the site in Toms River was never formally approved with a Center designation by Toms River, and in addition, it doesn’t meet NJDEP criteria for allowing the Permit Extension Act to apply.

If for some reason the Toms River portion of the site was considered a Center at the time of the application, it still should not be allowed to be maintained with a Center designation under the Permit Extension Act. The NJDEP criteria for a Center designation to be allowed to be extended under the Permit Extension Act requires that the area be identified as a Center, which it is not, and even if it was designated a Center, the Center designation area cannot be extended if the area is identified as a critically environmental site. Portions of the site in Toms River are environmentally sensitive due to wetlands and high water tables on the Toms River portion of the property and Pine Snake habitat and sightings on the site. One of the criteria of determining if an area was a critical environmental area is depth to ground water. The Report of Geotechnical Investigation and Stormwater Management Area Evaluation by Whitestone Associates dated August 31, 2009 identifies numerous areas of groundwater encountered at 2.5 feet to ground water and less. This meets the requirements of the NJDEP of environmental sensitivity defined in Section 7:7E-5A.3 which defines high environmental sensitivity at a depth of 3 to 4 feet or less to the seasonal high water table.

The portion of the site in Manchester Township is identified as potential critical environmental sensitive on current NJDEP maps. Since the maps are not finalized, the areas are identified as “potential critical environmental sensitive”, and could easily extend onto the portion of the site in Toms River. In fact, the CAFRA and Freshwater Wetlands General Permit Number 6 Statement of Compliance for the Proposed Wal-Mart Supercenter prepared by Ecol Sciences, Inc. dated September 23, 2009 states on page 9 that the Letter of Interpretation (LOI) issued by the NJDEP on May 18, 2004
(File Number 1500-04-0001, FWW 040001) was extended by the Permit Extension Act until December 31, 2010. This interpretation identified 0.47 acres of isolated wetlands for the construction of a truck turn-around. The area of the truck turn-around was inspected by the NJDEP and determined to be vernal habitat. For the above noted reasons, I believe this would not allow the NJDEP to extend the Center Designation since there would be an environmentally sensitive area on site. Therefore, a Center designation cannot be allowed by other CAFRA/NJDEP criteria. The environmental sensitivity of the site should be evident from the high water table, the wetlands and the Pine Snake habitat and Pine Snake sightings.

5. This is a Limited Growth Area

The site is in a limited growth area.

The site is in the area defined as the “Western Ocean Region”, the land within the upland waterfront development area that is within Ocean County, west of the Garden State Parkway and south of Route 37. This area is defined in 7:7E-5A.2.(d).3. This region is assigned an extension growth rating per 7:7E-5A.2.(e).2.i., but one could argue that this area should be assigned a limited growth rating as it is an upland waterfront development area that contains large environmentally sensitive areas per 7:7E-5A.2.(b).3. Environmental sensitivity is defined in Section 7:7E-5A.3 in terms of depth of water table. High environmental sensitivity is a depth of 3 to 4 feet or less to the seasonal high water table and type of soil. One of the criteria of determining if an area is a critical environmental area is depth to ground water. The Report of Geotechnical Investigation and Stormwater Management Area Evaluation by Whitestone Associates dated August 31, 2009 identifies numerous areas of groundwater encountered on the site at 2.5 feet to ground water and less. This meets the requirements of the NJDEP of environmental sensitivity defined in Section 7:7E-5A.3.

To allow a major commercial site to be developed in a region with a limited growth or extension growth rating, and this site definitely has one of these ratings, a major commercial development must be within two miles of an existing intersection with a limited access highway per 7:7E-5A.6(b).4.i. This project does not meet this condition, as the Parkway is approximately 3.7 miles from the site. Thus, the site should be identified as a medium potential development at the most, and if the water table is high or the area is critical environmentally, as a low development potential site. These categories affect the coverage requirements. Table E for an unforested site with a medium density development due to the violation of the required distance of less than 3 miles to a limited access highway and environmentally sensitive ground, would allow a maximum of 40 percent impervious coverage. See 7:7E-5A.9 Table E.

Section, 7:7E-5B.4 Table H shows that for a Coastal Suburban Planning Area within a sewer service area, the maximum impervious coverage allowed is 30%. This should be the most coverage that is allowed on the site, since it is noted to be in a Coastal Suburban Planning Area in both Townships at this time, and the Permit Extension Act should not apply as noted above.
6. Coverage Requirements are Not Documented

Coverage requirements are not met.

Section 7:7E-5B.4(e) sets the limit of impervious cover in Table H as 30% for a Coastal Suburban Planning Area where this site is located. The area coverage is 30% of the net area, not the total site area. The net area is defined as the total area less wetlands and wetland buffers (See 7:7E-5.3). The coverages should be calculated and shown separately for each Township to assure the impervious coverages and forest coverages are met accurately.

Stormwater management facilities are not counted as impervious coverage, however, I would argue that it should, if it is under a parking lot. In addition, the .47 acres of wetlands that are to be filled should be addressed.

A copy of the coverage noted on the site is not calculated or shown on the site plan submitted to the Townships. To follow the NJDEP criteria, it would have to exclude the wetlands and buffers on the site, so I am not sure that the coverages shown are correct. Documentation should be provided to the NJDEP and the Townships, tabulated and summarized by Township and for the total site, to verify that coverages of forested lands and wetlands are accurately calculated and are not credited incorrectly. In this analysis, a 300 foot buffer should be used versus the 150 foot buffer proposed from critical areas.

7. The Traffic Report is Incomplete

There are significant traffic improvements that are required at the intersection of Northampton Boulevard and Route 37 that were not addressed!

The updated Wal-Mart traffic report by Orth Rodgers in 2009 does not include the traffic generated by the recently approved Wawa at the intersection of Route 37 and Northampton Boulevard. This Wawa in Toms River Township is now open and was approved by the NJDOT prior to 2009, but not built in 2009. The Wawa and Wal-Mart will both have direct access to this critical intersection. The Wawa Traffic Report dated January 22, 2007 and revised July 2, 2007 by Shropshire Associates indicates that the Wawa will generate 538 AM, 460 PM and 499 Saturday peak hour trips. The applicant has not accounted for this traffic in his report and traffic analyses of future conditions with full buildout. While some of these trips are new trips and some are pass-by trips, they will all have to enter and leave the Wawa and go through this same critical intersection of Route 37 and Northampton Boulevard. This will put a substantial burden on the intersection and must be provided for to maintain a safe intersection without a degradation of air quality due to congestion. There are significant backups on Northampton Boulevard at this time and the proposed improvements will not address these backups.

Background Traffic Growth Rates states:

"Background traffic growth rates do not include specific developments. Applicants shall add to background traffic the average anticipated traffic from major traffic generators, located on the State highway system and within the study area, which...were issued an access permit by the Department since the applicant took traffic counts."

The applicant’s traffic study by Orth Rodgers dated September 2004 indicates that there will be a total of 1,050 PM and 1,440 Saturday peak hour trips. The intersection will require significant improvements and when the Wawa trips, which are significant, are added to the intersection, they will create the need for additional improvements. The Wawa is approved for a right turn in and right turn out movement on Route 37. It appears that this may be required to be modified since any exiting traffic from the Wawa onto Route 37 would have to go through two right turn only lanes if the roadway modifications proposed by Wal-Mart are constructed. The Wal-Mart is proposing one right turn only lane to go north on Northampton Boulevard and one right turn only lane for traffic going west on Route 37 and entering the far side jughandle to go south on Northampton Boulevard. This would certainly create an unsafe condition at the Wawa drive on Route 37 if exiting westbound traffic were required to go through two right turn lanes.

The NJDEP cannot rely on NJDOT agreements made prior to and without the inclusion of WaWa traffic. The additional WaWa traffic not accounted for will create a degradation of the level of service and force additional improvements beyond what is presently called for in the study, create congestion and a degradation of air quality in this area.

It is recommended that the NJDEP review these traffic studies independent of the NJDOT as it appears that the NJDOT has made commitments to the applicant to review the Wal-Mart study without the WaWa traffic.

8. An Air Quality Study is Required

An air quality study was not provided and is required.

CAFRA Addendum on page 12 indicates that the site does not comply with air quality standards. The NJDEP Bureau of Air Quality and CAFRA requires an air quality study and an air quality study was not provided.

N.J.A.C. 7:7-6.1:

"An Environmental Impact Statement (EIS) or Compliance Statement, which shall provide the information needed to evaluate the effects of the proposed development on the environment of the coastal area, is required for all coastal permit applications.

For CAFRA permit applications, the EIS or Compliance Statement shall demonstrate, as required by the Coastal Area Facility Review Act at N.J.S.A. 13:19-10 and in accordance with N.J.A.C. 7:7E-1.5(b), that the proposed development:
1. Conforms with all applicable air, water and radiation emission and effluent standards and all applicable water quality criteria and air quality standards;

2. Prevents air emissions and water effluents in excess of the existing dilution, assimilative and recovery capacities of the air and water environments at the site and within the surrounding region.”

The Orth Rodgers Study indicated that the intersection of Route 37 and Northampton Boulevard would operate at a LOS D in the future with site traffic and with improvements. I believe an air quality study would be required at this intersection in accordance with NJDEP requirements, since this meets the requirements outlined by the NJDEP Bureau of Air Quality Evaluation which requires air quality modeling for intersections with over 100 peak hour trips and a level of service D or worse in the build condition. This condition is met for the future Wal-Mart build condition according to the Orth Rodgers traffic study without the addition of the critical Wawa trips. With the addition of the Wawa trips to this critical intersection, the level of service is sure to be degraded to a worst level of service. The application does not address air quality requirements.

9. Basic Location Rule (7:7E-6.2)

The failure to comply with the basic location rule was never addressed or justified by the applicant.

The applicant never provided any justification for a waiver for a variance of the Basic Location Rule. On page 11 of the CAFRA Addendum, the applicant asserts that for the reason set forth in the *Endangered or Threatened Wildlife Habitat Impact Assessment*, the *Analysis of Conceptual Habitat Evaluation Method for Northern Pine Snakes* and the responses provided in the SOC and this addendum under the *Special Area Rules for Endangered or Threatened Wildlife or Plant Species Habitats*, the project complies.

This is not the case. This approval is not reasonably necessary to promote public health. On the contrary, air quality will be degraded and no study showing otherwise was provided; safety at the intersection of Route 37 and Northampton Boulevard will be degraded since the improvements did not take into account significant WaWa traffic, wildlife such as the Pine Snake will be directly adversely affected, and the natural environment of the site area will be developed in excess of allowable coverage requirements and further away from a limited access highway than allowed. The further a project is developed from a limited access highway, the more traffic will occur on the feeder highway back and forth between the development and the limited access highway.

10. Water Quality Standards Are Not Met

The CAFRA Addendum on page 12 indicates that the NJDEP indicated that the site does not comply with water quality standards.
One of the criteria of determining if an area is a critical environmental area is depth to
ground water. The *Report of Geotechnical Investigation and Stormwater Management*
*Area Evaluation* by Whitestone Associates dated August 31, 2009 identifies numerous
areas of groundwater encountered at 2.5 feet or less. This meets the requirements of
the NJDEP of environmental sensitivity defined in Section 7:7E-5A.3. The basins
should not be placed in environmental sensitive area.

11. Adverse Impact on Animal Life

**There will be an adverse impact on the Pine Snake.**

The CAFRA Addendum notes on page 13 that there is minimal impact on animal life. Page 13
notes that a threatened species, the northern Pine Snake, is potentially located within the site.
This is minimizing the fact there is a known denning site on the site. Page 13 also notes 50%
of the site will remain undeveloped to accommodate the Pine Snake, however, the majority of
this 50% is wetlands and not suitable Pine Snake habitat and/or a deficient wetland buffer. In
addition, the additional land proposed to be purchased to expand Pine Snake habitat is south of
a barrier, a railroad track, and also contains wetlands.

12. Habitat Evaluation Model

**The Habitat Evaluation Model is uncalibrated and untested. It should be**
**calibrated using actual sightings and known denning sites, amount of high**
**ground, wetlands, etc., prior to its use here.**

The evaluation of Pine Snake habitat was modeled by Ecol Science and NJDEP
Endangered and Nongame Species Program personnel. The model used was to
determine the value of Pine Snake habitat on the site and then show that remediation
measures would provide at a minimum, the same habitat value. The model is a good
first step showing various criteria, but has not been calibrated or previously used by
the NJDEP and appears to omit some of the most important criteria as the actual
presence of hibernium, sightings of foraging Pine Snakes, as well as acreage with
elevations above 30 feet, wetlands, etc. The omission of these variables greatly skews
the results of the study. This is apparent on page 4 of the *Analysis of Conceptual*
Table 4 on page 4 of this text shows a much lower point score for a known Pine Snake
hibernium and area with known Pine Snakes than other areas without such definite
sightings of Pine Snakes. The model should be thoroughly reviewed by the NJDEP
prior to utilization and modifications as suggested, evaluated and the model calibrated
to accurately obtain correct habitat units.

This is verified in the NJDEP letter from Eric Virostek regarding this project dated August 31,
2011, which states on page 2:

"It must be understood, however, that HU's are not an exact or quantitative
measurement, but instead provide only a relative estimate of pine snake habitat value that
can be used to compare sites and management scenarios."

Page 9
The NJDEP has made an effort to add additional land to a protected status to mitigate the taking of the Pine Snake habitat. Unfortunately, this land is not presently prime Pine Snake habitat and requires significant improvements to be suitable for Pine Snakes. Even if improved, there is no way of knowing if this now unsuitable land will become frequented by Pine Snakes in the future. What is occurring is that known Pine Snake habitat with actual sightings is being destroyed for a shopping center, minimal buffers are proposed from actual denning sites, and substitute presently unsuitable land is being used for mitigation albeit with numerous improvements from planting grading, burnings, etc. to improve an unsuitable area for Pine Snakes. All this is being done with no firm substantiation that the land proposed for mitigation will actually provide Pine Snake habitat that will be suitable for Pine Snake habitation. The only documentation is an uncalibrated and untested model that does not account for actual denning activities, sightings, high water tables and wetlands.

It should also be noted, as previously discussed, that the actual improvements to the mitigation areas should be made prior to work on the project site and this may take 5 years to accomplish. The applicant proposes large areas of land that will be modified to provide habitat improvements for Pine Snakes. It should be noted that the NJDEP letter by Eric Virostek dated August 31, 2011, notes on page 5 that some of these improvements will not be completed for 5 years. Any approvals, if given, should as a minimum wait until all mitigation improvements are completed prior to any work on the site. This would be consistent with the NJDEP letter by Eric Virostek dated August 31, 2011, that states on page 10:

"In order for "no net loss" of pine snake habitat to be achieved, the implementation of the proposed habitat acquisition and enhancements must be carried out and completed prior to the initiation of the proposed development."

Thus, as flawed as this model may be, the NJDEP recommends substantial improvements on mitigation properties that must be accomplished not to improve the area but to "break even" and not lose any Pine Snake habitat. This appears contrary to some of the conditions of settlement that appear to allow site work prior to all work being done on mitigation properties. Indeed, page 14 states:

"Petitioner shall either complete the required remediation or establish and maintain a remediation funding source . . ."

This is not acceptable. All remediation must be accomplished first and prior to any site work.

In summary, the applicant has not met all of the conditions of a normal NJDEP approval such as traffic and air quality and has not asked for, or has the NJDEP proposed waivers for these items. In addition, the applicant has asked for waivers for the following coastal zone management regulations:

1. NJAC 7:7E-3.38 Endangered or Threatened Wildlife or Plant Species Habitat;
2. NJAC 7:7E-5B.4 Impervious Coverage Limits;
3. NJAC 7:7E-5B.5 Vegetative Cover Percentage;
4. NJAC 7:7E-5B.6 Mainland Coastal Centers;
5. NJAC 7:7E-6.2 Basic Location Rule;
6. NJAC 7:7E-8.4 Water Quality; and,
7. NJAC 7:7E-8.6 Groundwater Use;

The reason for all of these exceptions is that this project is too large for the site and is improperly located. This is verified by the basic location rule which shows the project is in the wrong location. The additional data shows that there is too much development on a small site. It is a small site because the amount of wetlands on site reduces the development potential and only through numerous and substantive waivers of standard NJDEP policies can this site be developed.

And while numerous waivers are proposed to be granted, Pine Snakes and Pine Snake habitat will be seriously affected. But worse yet, the failure to properly evaluate the traffic impacts will result in significant deterioration of traffic and create unsafe conditions and adversely affect air quality in the area. These impacts are still not addressed, even though they are required by the following regulations:

1. NJAC 7:7E-1.5(b) Air Quality
2. NJAC 16:47-4.38 Traffic

Thank you for your consideration of these concerns in regard to the present application. I would be interested in a response to these comments. Also enclosed is the expert report of Dr. Joanna Burger dated January 18, 2012.

If you should have any questions or require any additional information, please do not hesitate to call.

Very truly yours,

R. S. GASIOROWSKI

RSG/DMS
enc.

cc: Carlton Montgomery
    Joanna Burger, Ph.D.
REPORT OF DR. JOANNA BURGER
Distinguished Professor of Biology
Division of Life Sciences
  Department of Cell Biology and Neurosciences, and
  Department of Ecology, Evolution and Natural Resources
Rutgers University
burgert@biology.rutgers.edu

IN RESPONSE TO INTENT TO SETTLEMENT (CAFRA APPL. 1500-04-001.2)

DATE: January 18, 2012

PREPARED FOR: R. S. Gasiorowski, Attorney at Law
  Gasiorowski&Hokobinko
  54 Broad Street
  Red Bank, NJ 07701  Phone 732-212-9930
  732 212 9930  jiacoves@gmail.com

BRIEF BIOGRAPHY: I obtained my BS in Biology from the State University of New York
at Albany in 1963, my MS in Science Education and Zoology from Cornell University in 1964,
my PhD in Ecology and Behavioral Biology from the University of Minnesota in 1972, and an
Honorary PhD from the University of Alaska at Fairbanks in 2006. I have taught ecology,
behavior, and ecological risk at Rutgers University since 1973. My research interests are
primarily in ecology and social behavior of vertebrates, interactions between humans and other
organisms, eco-toxicology, ecological and environmental assessment and monitoring, and
ecological and human health risk assessment. I have over 400 papers in these fields, and
published or edited over 20 books. Whispers in the Pines is about pinelands ecology and
wildlife, including the New Jersey Pine Barrens (Rutgers University Press). I serve on the
Editorial Boards of several environmental and eco-toxicology journals, including
Environmental Research, Environmental Monitoring and Assessment, Science of the
Total Environment, Journal of Toxicology and Environmental Health, Environmental
Bioindicators, and Journal of Nuclear Energy and Power Generation Technologies. I
have served on committees for the National Academy of Sciences, Environmental Protection
Agency, and U.S. Fish and Wildlife Service, as well as serving on the Endangered and
Non-Game Committee for the State of New Jersey since the late 1970s. I am a Fellow in the
American Association for the Advancement of Science (AAAS), American Ornithologists
Union, International Ornithological Union, and the International Union of Pure and Applied
Chemistry. I have received the Brewster Medal from the American Ornithologists Union, and
the Distinguished Achievement Award of the Society for Risk Analysis for ecological and
environmental evaluations and risk assessment. I have authored, or co-authored more papers
on Northern Pine Snakes than any other scientist, and have worked with NJ Pine Snakes since
1985.

1
DOCUMENTS REVIEWED: I have reviewed the previous documents listed in my report of 24 February 2011. In addition I reviewed: 1) Letter of Dave Jenkins (and associated report from D. Golden) to Dave Fanz (Bureau of Coastal Regulation) on December 20, 2011, 2) Stipulation of Settlement (Agency Reg. No. 150040001.2 (CAF090001), and 3) Notice of Settlement.

ABSTRACT OF OPINION. I have been asked to review my previous report (24 February 2011), previous documents (referenced in my 24 February 2011 report, and recent documents submitted pursuant to the Stipulation of Settlement, including the letter of David Jenkins (dated December 20, 2011) and associated report from D. Golden (NJDEP, Division of Fish and Wildlife, Endangered and Nongame Species Program, Environmental Review).

After review of the relevant documents, it is my expert scientific opinion that the proposed measures are not scientifically justified, that the new measures implemented will not mitigate the objections I discussed in my previous report, and that the Pine Snake population on the current proposed site will be adversely affected by loss of habitat, both on the development parcel, and in the surrounding habitat. It is my expert opinion that the development and various habitat management and protective measures included in the proposed Settlement and permit will negatively affect the population and the habitat of Northern Pine Snakes on the proposed Wal-Mart development site and area abutting the site. More specifically I conclude that:

1. The “No Net Loss of Habitat Value” procedure remains untested and is new in New Jersey, and as such, should not be applied to a threatened species such as the Pine Snake. My earlier objections remain, and have not been addressed in the recent Jenkins and Golden memoranda.

2. The few changes set out in the recent Jenkins and Golden memoranda will not markedly improve the Pine Snake habitat on either the development lands or the mitigation lands.

3. The habitat management measures are largely directed toward a different meta-population than the one on the proposed Wal-Mart development site because these sites are (with one exception) at an excessive distance away, with fatal barriers to Pine Snake movement in between. Thus it is NOT the same population, as the State’s own documents verify.

4. The habitat management measures are unproven for Pine Snakes, with the sole exception of hibernacula construction, and in any case, have a lag time until they will be effective. In the meantime, destruction of existing habitat will severely impact Pine Snake habitat, providing no place for them to go. If the habitat management measures fail, it will be too late to reverse the damage and impossible for the developer to meet the stated purpose of the proposed permit conditions.

5. The changes in habitat management in the recent Golden and Jenkins documents mainly pertain to logistics and methods suggested in their previous report, and do not address concerns about effects on threatened Pine Snake
populations raised in my previous report.

6. The presence of snakes, and/or, the presence of known hibernaculum sites should take precedence over any scoring process that attempts to evaluate Pine Snake habitat, as the snakes themselves have already evaluated it.

It is both highly unusual and disturbing that a new and untried methodology such as the Conceptual Model and the No Net Loss of Habitat Value methodology for Pine Snakes, on which the proposed settlement relies, have not been presented to the NJ Endangered and Nongame Advisory Committee (a panel of experts established by statute, on which I sit), that the methodology has not been peer-reviewed, has not been tested in the field, has not been presented to the public as a general method for endangered and threatened species, and that a method which is generally qualitative has been turned into a quantitative methodology, giving the false impression of scientific rigor.

It is usual practice for such weighty measures to be brought before the Endangered and Nongame Advisory Committee, for the procedures to be open and transparent to the public, and for methods to be published in the peer reviewed literature. While the State claims the proposed method is based on the USFish and Wildlife Service approach, there is a key difference: The USFWS approach relied on mitigation to the area “surrounding the area of adverse impact” (page 2 of D. Golden report), and the proposed settlement admits that the mitigation measures are largely “separate from, but within 6.5 miles of the development parcel” (top of page 10 of D. Golden report). The State proposes to use its No Net Loss method on a “relatively broad scale” (top of page 11, D. Golden report), and NOT, as the USFWS does, for “surrounding areas.” Thus they have not applied the USFWS approach, but have changed its essential meaning regarding protection of threatened and endangered species.

In addition, I provide updated data on Pine Snakes’ continued use of hibernation sites over time. Our data, published in peer reviewed journals, shows that a site can be abandoned for several years, and then re-used at a later point (Burger et al. 2011, in press). It is essential to understand that critical habitat for local Pine Snake populations includes established hibernation sites and their surrounding habitat, even though any given site may not be used every year.

Additional References for our Pine Snake Work


*Nova Science wanted to publish this as a separate book because of its importance and its usefulness as a model for conservation plans for reptiles and other vertebrates. ADDITIONAL COMMENTS ON DOCUMENTS

Letter of Dave Jenkins (20 December 2011) and Environmental Review (Dave Golden, 31 August 2011).

Most of the points made by Mr. Jenkins largely relate to logistics of site preparation, clearing, and construction. They deal with timing of measures suggested or required in the Golden Environmental Review (8/31/2011). Thus, they do not deal with the several fundamental issues: 1) The use of an untried, unproven, and unpublished No Net Loss of Habitat Value, 2) The inappropriate mitigation measures and improvement of lands distant from the development site, 3) The need for changes on the development site to ensure continued Pine Snake Use, or 4) The fact that Pine Snakes and a hibernaculum exist on the site – the best evidence of suitable Pine Snake habitat. Incredibly, the actual presence of Pine Snakes and a hibernaculum on the proposed development site do not enter the No Net Loss of Habitat Value computations.

Specific Comments follow (in reference to Jenkins letter dated 20 December 2011):

1. Timing of tree planting for any mitigation is (or would be) very important to reduce effects on wildlife, including snakes. Jenkins notes that Golden emphasized that tree planting should occur before any proposed development (a suggestion I agree with). But Jenkins continues to add that “we are agreeable to allowing site clearing and construction on the proposed Walmart site to precede tree planting, provided tree planting is completed within one year of the commencement of construction.”

The purpose of completed tree planting, and indeed other habitat management measures, is to make sure they are done, that they provide habitat for Pine Snakes during subsequent construction, and that the “tree planting” actually works. To allow construction before completion of mitigations measures is not prudent, precautionary, or protective of the threatened species at issue here.

This problem is related to the larger defect in the permit conditions: The permit allows construction, with its destruction and degradation of known Pine Snake habitat, before the method on which the permit is justified – the No Net Loss of Habitat Value – and the specific off-site habitat management methods approved in this case, have been applied and proven effective.
2. Jenkins proposes three measures to protect on-site wildlife during construction: 1) Exclusion fences, 2) Site survey prior to clearing, and 3) Timing restrictions.

   a. Three options are given for the exclusion fence: a fence that is monitored daily, the use of box (presumably funnel) traps to be monitored every 48 hours, and one-way fences. Experience at the Sanctuary development in Evesham Township shows that exclusion fences are probably not going to be effective, because snakes find ways over, under and around such fences. Such fences can also be harmful to snakes and other wildlife, as they can get caught in the fence while trying to climb over it and are exposed to predators while trying to navigate this obstacle to their normal movements. If a fence is to be used, I suggest that the second alternative is the best alternative because it does not rely on casual observations (the first option), and will provide data on what animals are there. However, the box or funnel traps must have cover inside to prevent undue exposure to heat and the elements. 48 hour check intervals is allowable ONLY if such protection is provided.

   b. While site inspection is a viable and necessary method, its success depends on season, and weather conditions. Pine Snakes spend a great deal of time below ground when it is cold or hot, or when they are not breeding. Therefore a site inspection will not necessarily find any snakes that are present. If the site inspection is going to occur during the snake activity seasons, then funnel traps should be placed on the inside of the area, and monitored for a period, to ensure no Pine Snakes are inside.

   c. For any measure aimed to help a species of wildlife, it is critical to get the timing right, but again, this depends upon the eco-receptors being protected. The activities described are restricted to August 1 to March 31 to protect migratory birds. However, there is a lot of Pine Snake activity from Late September to Early November, when snakes are searching for hibernation sites (and the Wal-Mart site has a hibernaculum). Further, any Pine Snakes using a hibernaculum on the proposed development site will be underground from November through as late as the end of April, and vulnerable to development.

Dave Golden Environmental Review (31 August 2011)

The updated Environmental Review mainly deals with logistics, methods and procedures to follow regarding the already proposed mitigation measures. The revision (8/31/2011) does not address my main concerns with the project noted in my previous report (24 February 2011). The main issues remain:
1. The proposed mitigation will not benefit the local population or meta-population of Pine Snakes on the proposed Wal-Mart site because the sites (with one exception) are separated by excessive distances, and as noted in the NJDEP report, are not within the main population.

2. The No Net Loss of Habitat Value methods are untested, and untried for Pine Snakes in particular, or any reptile in NJ.

3. The No Net Loss of Habitat Value methods DO NOT follow the USFWS process (as claimed in the Golden reports) because the mitigation measures are NOT within the “area surrounding the area of adverse impact.” (Golden report, page 2; 8/31/11).

4. The land management mitigation measures are untested for Pine Snakes, and the added detail is helpful and will improve their chances of success, but the mitigation measures are still unproven for Pine Snakes.

5. The value of the existing habitat on the development parcel, including known Pine Snake locations and a hibernaculum, was not adequately considered. In contrast, the mitigation parcels (except the adjacent one) are not known to be inhabited by Pine Snakes, and some parts of these parcels are not likely to be.

6. The No Net Loss of Habitat Value process was not meant to be used to evaluate habitats already inhabited by Pine Snakes, and it does not provide a rating for “actual” sites of Pine Snake, nests, or hibernacula on a site being considered for development. I was one of the people commenting on an earlier draft, and it was never presented as being used on a site with Pine Snakes.

7. The proposed development will damage the Pine Snake population using the existing habitat of the development parcel, and the “buffer” around the known Pine Snake hibernaculum on the development parcel is arbitrary and insufficient.

8. The new measures relative to the Exclusion Wall (Jenkins letter and Golden report) are not sufficient to ensure that snakes and other reptiles are protected.

My earlier report stands with respect to the main objections discussed above (as well as others mentioned in my report. Below I deal only with the changes from the initial report.

Changes in the “amended and supplemented August 31, 2011 Environmental Review” only occur in the Acquisition and Enhancement Parcels, and thus apply to potential improvements on the acquisition parcels. Comments on the new enhancements follow:

A significant proportion of the habitat management measures are to Block 77, lots 2, 4, 5, & 6. They relate first to the removal of all deciduous trees, and secondly, to the planting of Pitch Pine trees (with subsequent inspection by DEP staff). The intent of these measures appears to be to make a dense Pitch Pine forest, with sufficient cover that snakes do not remain close to the highway (reducing the possibility that snakes will cross the road and be killed). Nevertheless, the following issues remain:

1. Pine Snakes regularly move through dense Pitch Pine forests to get to appropriate
nesting, hibernation, and foraging sites. While they will not tarry to bask there, they readily move through. (In fact, at Well’s Mills the opposite strategy was followed – leave some open areas so the snakes bask in the adjacent forest and not on the road).

2. Planting between March 10 and April 21 is a problem, since this is the period when Pine Snakes normally exit from hibernation sites, and are moving and basking. This increases the possibility for injury or mortality of snakes.

3. Complete planting of pine trees should occur before any Wal-Mart site construction, as suggested in the Golden report. However, the Jenkins letter modifies this to allow construction to take place before tree planting is complete and shown to be successful.

4. No additions were made with respect to enhancing suitable nest sites, and the soil depth remains too shallow, and it will be many years before the enhanced nesting area will be used because of lack of soil compaction, a few low herbs to provide some root structure, and the soil has the right consistency for digging.

5. No new information was added about the creation of berms on road access points (page 7). Creation of these may also provide habitat for snakes to bask, nest or use for summer dens. This may draw snakes to the area, exposing them to yet more problems. It might be more effective to put up guard rails (previously we used such berms because the access roads were in state parks or other places where we could not put up guard rails).

Conclusion and Summary

A sentence on funding was added to the conclusions section, but it is not clear what significance this sentence will have in reality. Further, all mitigation measures should be monitored to ensure success, and studies of the hibernaculum on site should be conducted, both during and after any construction.

UPDATED DATA ON PINE SNAKE USE OF HIBERNATION SITES.

I include a revised Table 4 showing the continued use of hibernation sites for many years. The data clearly indicate that a hibernaculum can be abandoned and will then be reused several years later. This suggests that the hibernaculum on the proposed Wal-Mart site is important and should be protected to the full extent possible (Burger and Zappalorti 2011a, 2011b, in press).

TABLE 4 (from 24 February 2011 report); REVISED 10 JANUARY 2012 with 2011 data and all snakes (alive and found dead). Dead snakes are an indication of occupancy, and in most cases, had been crushed by much larger snakes (e.g. hatchlings weighing less than 60 grams), or were frozen (e.g. had emerged early and failed to go deep enough during freezing temperatures).
Table 4. Pine Snake use of Hibernation Sites. Locations are not given to prevent poaching. Given is the number of snakes found each year (after Burger et al. 2007, Burger and Zappalorti 2011).

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Note: In den 3, we missed the snakes because we dug them up in mid April, and had undoubtedly missed them because they had already left.