



Pinelands Preservation Alliance Analysis of and Comments on the Land Acquisition Terms of the Proposed Intergovernmental Memorandum of Agreement To Authorize the South Jersey Gas Pipeline in the Pinelands Forest Area

December 13, 2013

Pinelands Preservation Alliance (PPA) has reviewed the proposed \$7.25 million payment from South Jersey Gas for land acquisition in the draft memorandum of agreement (MOA) for the proposed gas pipeline. Our review shows that the \$7.25 million amount and the proposed terms governing these funds are clearly insufficient to demonstrate equivalent, or even meaningful, protection as compared with implementing the Forest Area regulatory protections of the CMP.

On the contrary, these financial terms appear to be an arbitrary number that arose out of negotiations between Commission staff and South Jersey Gas, rather than an objective analysis of what is needed to achieve “equivalent protection” of Pinelands resources as the CMP requires.

1. The Draft MOA Does Not Require that Any Land Near the Pipeline Route Be Purchased

As Larry Liggett explained to the Policy and Implementation Committee at its December 4th meeting, the draft MOA does not require that any particular land, or any land at all, actually be purchased and conserved as a condition of building the pipeline. Instead, it merely identifies a secret list of preferred parcels, to which the public has been denied access, and then says the money can be used to buy forested land anywhere south of the Atlantic City Expressway – an area that today includes over 38,000 parcels covering over 76,000 acres that are not protected and are, therefore, subject to pressure to develop in ways inconsistent with the Pinelands Comprehensive Management Plan. (See Section 2 below.) Neither South Jersey Gas nor the Commission need protect a single acre of land under this MOA. As such, the MOA plainly does not ensure “equivalent protection” of Pinelands resources.

2. The Funds Are Sufficient To Buy Only a Modest Amount of Land in a Regional Context

Land in the Pinelands Forest Area has sold in recent years in the neighborhood of \$1,800-\$2,000 per acre. Mr. Liggett estimated that on the assumption land in the area could be purchased for about the same price, it could be expected to buy up to 2,000-3,000 acres. It is critical to recognize, however, that Mr. Liggett’s estimate does not account for transaction costs, and that other recent purchases have generally been of large parcels, which tend to reduce the price per acre and the associated transaction costs (time, appraisals, environmental checks, and so on) per acre. For example, the Lenape Farms acquisition in 2013 was for 5,079 acres at \$1,910 per acre that was contiguous and in common ownership. For small parcels, we can expect the transaction costs in many cases to actually exceed the land price itself. Given that, as explained below, the unprotected land in the area of the proposed pipeline is both large in total

quantity and highly dispersed among mostly small and very small parcels, the assumption that \$7.25 million can buy 2,000-3,000 acres is not reasonable. The actual buying power of these funds must be expected to be substantially less.

As detailed, below, the lands that could be subjected to development pressures in the area of the proposed pipeline are far larger in extent than even the most optimistic view of what \$7.25 million could buy there. Within 1 mile of the pipeline, there are more than 13,000 acres of Forest Area land that is not in conservation today; within 10 miles, there are more than 80,000 acres of such land. South of the Atlantic City Expressway, there are more than 76,000 acres of forested lands in the Pinelands.

In addition, the draft MOA does not account for the fact that at this time there are no realistic options for matching funds from other state and local sources. The Garden State Preservation Trust Fund is depleted, and the legislature has not passed a renewal of Green Acres funding. Few municipalities in the area have their own open space funds, and none are likely to devote what funds they have to this kind of project. There is also no reason to assume or believe that the counties in this area will provide open space funds to match or supplement the MOA funds.

3. The Un-Conserved, Not-Protected Lands in the Area Are Very Extensive and Difficult To Buy

PPA conducted a Geographic Information Systems analysis to identify the parcels potentially at issue for development pressures resulting from the construction of infrastructure in violation of the CMP’s Forest Area protections, and of the forested land south of the Atlantic City Expressway identified in the draft MOA. Since the concern is that infrastructure will bring pressure to develop at higher intensities than current CMP rules would permit, even when the Commission chooses to enforce those rules, the analysis must include both improved and unimproved parcels in the Forest Area. (Our methodology is described in the last section of this report.)

The results are summarized in the following tables:

Table 1: Pinelands Forest Area, Not-Protected Parcels within 1 and 10 Miles of Proposed Pipeline Route

	Area (acres)	No of Parcels
Forest Area Parcels within 1 Mile of Proposed Route		
Atlantic County	3,377.52	317
Cape May County	8,535.72	5,725
Cumberland County	1,716.90	480
Subtotal	13,630.14	6,522

Forest Area Parcels within 10 Miles of Proposed Route

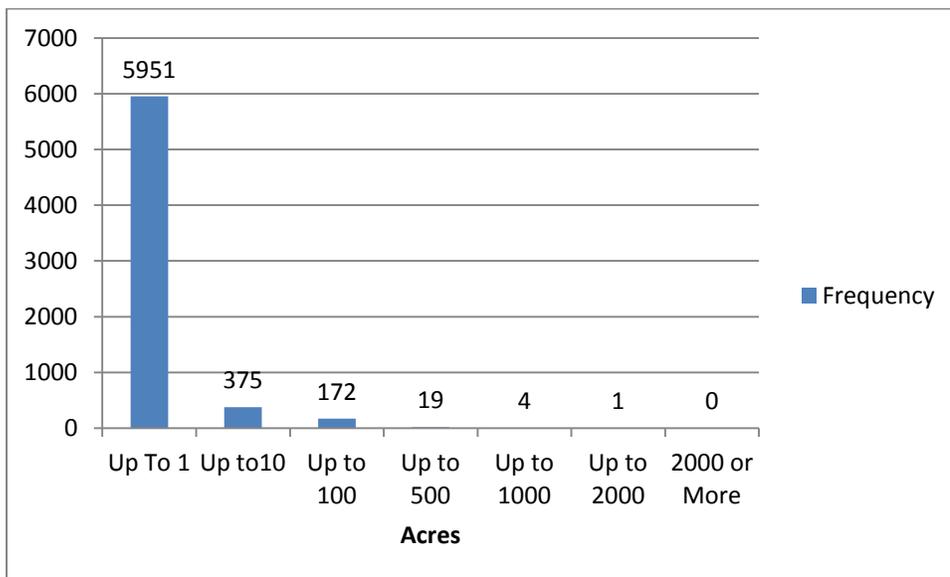
Atlantic County	28,547.08	9,309
Cape May County	34,085.74	9,750
Cumberland County	17,832.12	3,590
Subtotal	80,464.95	22,649

Table 2: Summary of Forested, Not-Conserved Parcels South of the Atlantic City Expressway

	Acres	Count
Atlantic County	51,104	28,255
Cape May County	12,698	7,535
Cumberland County	12,841	2,510
Total	76,643	38,300

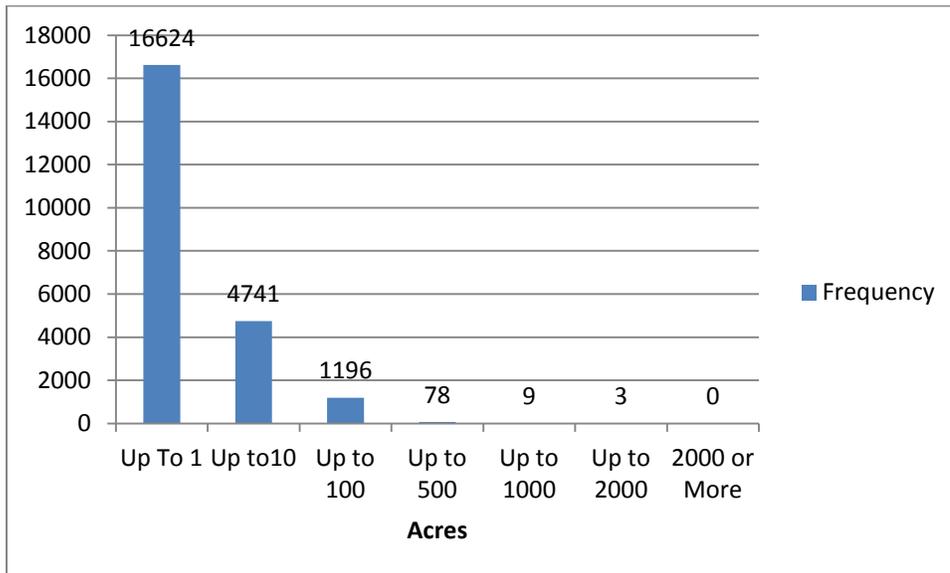
The challenge in protecting land potentially affected by this infrastructure development is made far greater by the fact that there are very few large parcels. For example, looking just at Forest Area parcels within 1 mile of the proposed pipeline route, we find:

Table 3: Histogram of Pinelands Forest Area, Not-Protected Parcels within 1 Mile of Proposed Pipeline Route Showing Distribution by Parcel Size



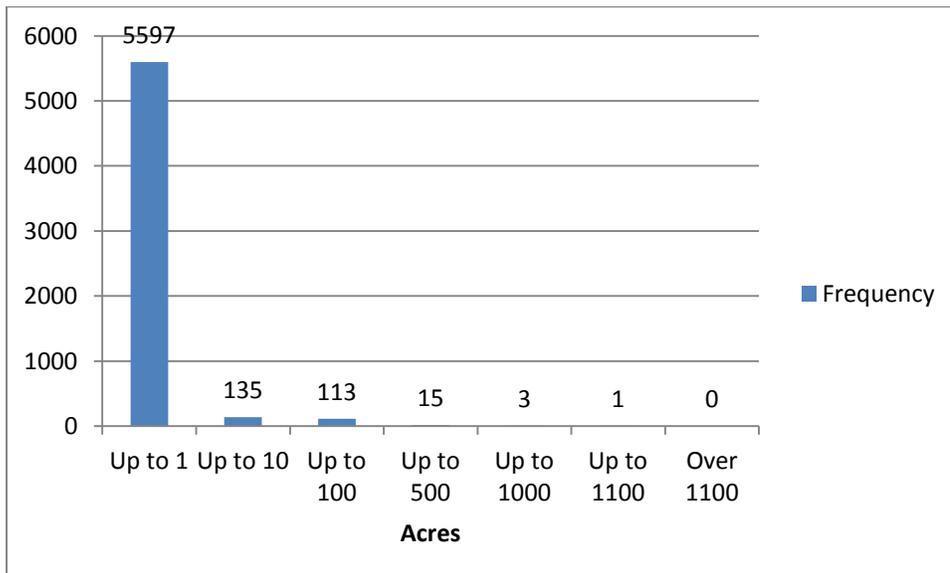
The situation is yet more challenging when we extend the analysis to 10 miles either side of the pipeline route:

Table 4: Histogram of Pinelands Forest Area, Not-Protected Parcels within 10 Miles of Proposed Pipeline Route Showing Distribution by Parcel Size



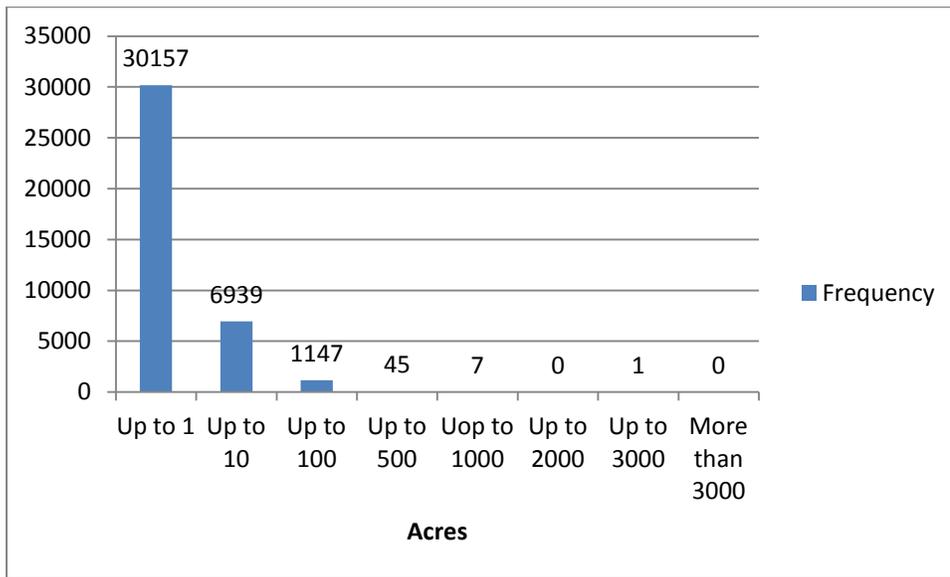
Even if we restrict ourselves to unimproved (vacant) parcels, the situation is just as difficult:

Table 5: Histogram of Pinelands Forest Area Unimproved, Not-Protected Parcels within 1 Miles of Proposed Pipeline Route Showing Distribution by Parcel Size



When we turn to all forested parcels south of the Atlantic City Expressway, the numbers continue to balloon:

Table 6: Histogram of Forested, Not-Conserved Parcels South of the Atlantic City Expressway



4. The Size of Available Parcels Constrains Ecological Value

In developing the Toms River Corridor Regional Natural Resource Protection Plan (2004), the Commission determined that a 600 foot buffer is required to protect forest interior ecological processes and habitat from fragmentation and ecological edge effects. This figure was arrived at from a wide variety of edge effect estimates for many wildlife species, and was thought to be a conservative estimate. Edge habitat is unsuitable for species that require interior forest habitat. Such interior forest species include those of Special Concern (Broad-winged hawk, Common nighthawk, Hooded warbler, Kentucky Warbler, Sharp-shinned Hawk, Veery, Whip-poor-will, Wood thrush, Eastern box turtle, Eastern king snake), Threatened species (Barred owl, Red-headed woodpecker, Northern pine snake, Pine Barrens tree frog), and Endangered species (Red-shouldered hawk). The amount of edge versus interior habitat in any given parcel is a factor of its size and geometry. A large parcel has a greater interior-to-edge ratio than a small parcel, and a square parcel has more interior-to-edge than a rectangular parcel. Below is a table of calculations to show the interior habitat acres and % interior habitat of square and rectangular (length = twice width) parcels of increasing size. These calculations use the 600' buffer as the distance needed to overcome deleterious edge effects, as employed by the Toms River Corridor study.

<u>Square Parcel Area (Acres)</u>	<u>Interior Habitat Acres</u>	<u>% Interior</u>
10	0	0
100	18	18
200	70	35
300	134	45
400	203	51
500	276	55
600	351	58
1000	669	67
2000	1518	76

<u>Rectangular Parcel Area (Acres)</u>	<u>Interior Habitat Acres</u>	<u>% Interior</u>
10	0	0
100	11	11
200	61	31
300	122	41
400	189	47
500	260	52
600	334	56
1000	647	65
2000	1488	74

Even in the best case scenario – the preservation of a 1000-2000 acre square-shaped parcel – only about 61% to 76% of the habitat acquired would be resistant to edge degradation and eventual loss of habitat value if adjacent unpreserved land is developed. If acquired parcels averaged between 300 and 500 acres and were of favorable shape, only about half of the acreage would resist edge effects. Given the relative paucity of available large parcels as indicated above, it is more likely that small parcels would be purchased, meaning interior habitat preservation would be significantly less. In fact, a square parcel would have to be more than 33 acres in size (1200' x 1200') in order to protect *any* interior habitat.

This analysis serves to show that although 2000-3000 acres might sound like a lot of habitat to be preserved, the perceived ecological value of this habitat is inflated given the realities of available parcel sizes and configurations. Under the best scenarios, and with no consideration of transaction costs, only about half to two-thirds of the "mitigation" dollars would go toward purchasing lands that are not subject to deleterious edge effects. If best case scenario parcels cannot be acquired, the bulk of the funds would be wasted on parcels that will continue to lose species and natural resource value due to fragmentation and edge effects over time. This approach does not achieve "equivalent protection."

5. The Amount of Funding Is Far from Sufficient To Counter Development Pressures Over Such a Large Area

In sum, even the unreasonably optimistic estimate of 3,000 acres of buying power means that the \$7.25 million provided in the draft MOA would only buy the following percentages of unprotected land at issue for development pressure:

As % of unprotected Forest Area land within 1 mile of the pipeline: 22%

As % of unprotected Forest Area land within 10 miles of the pipeline: 4%

As % of unprotected forested land south of the Expressway (inside the Pinelands): 4%

With more realistic assumptions that include transaction costs and the absence of matching funds, even these small percentages will fall much lower.

The draft MOA references Attachment C as a list of properties the Commission would like to see purchased, but the Commission has refused access to this list, so it is impossible for PPA to evaluate the meaning of the list or how it relates to the theoretical buying power of \$7.25 million. It is important to note, in addition, that the MOA does not *require* that even one acre of the land on this secret protocol be purchased.

The proposed acquisition funds, therefore, are far too little, and the terms of the MOA far too vague and permissive, for this provision to have any meaningful impact on countering development pressure in the area and cannot reasonably be said to bring protection of Pinelands resources that is equivalent to enforcing the Forest Area rules of the CMP as written.

6. Neither the Draft MOA Nor Any Documents in the Commission Files Provide a Justification for the Figure of \$7.25 Million

It is extraordinary that the draft MOA provides no rationale for the \$7.25 million figure, as opposed to any other figure, for land acquisition to meet the CMP equivalent protection standard. This is especially striking given the draft MOA has pages of justifications for other elements of the MOA. Mr. Liggett's presentation on the land acquisition funds to the Policy and Implementation Committee on December 4th also includes no effort to explain how the figure of \$7.25 million was arrived at or to compare it to an analysis of what is needed to achieve equivalent protection; the presentation simply made the conclusory statement that 2-3,000 acres need to be purchased. PPA has asked the Commission for any additional documents that justify

these figure or quantify the need, but has been given nothing whatsoever (we are still awaiting a written response to our request).

The only conclusion that can be reached is that this figure resulted from an economic negotiation between South Jersey Gas and the Commission staff. Such a negotiation based on the negotiating skills of the respective parties and the business plans of South Jersey Gas – and perhaps BL England’s owners – is not a rational basis for determining that the draft MOA includes measures sufficient to achieve “equivalent protection” to enforcing the CMP Forest Areas rules.

7. The Methodology for this Report

The parcel data for this report was identified by the following process, using ArcView GIS software: Beginning with the 2012 tax parcel data for each of the three counties in question (Atlantic, Cape May and Cumberland), we selected parcels by geography to create layer files that included only parcels within 1 and 10 miles of the proposed pipeline route with their centroids in the Pinelands Forest Area and not in conserved land. For the parcels south of the Atlantic City Expressway, we clipped the county tax parcel layers to the 2007 Forest land use/land cover layers for the relevant watershed management areas, then selected parcels that do not have their centroid in conserved land. Using the resulting lists of parcels, we created the histograms in the report using the data analysis package in Microsoft Excel. The sources for GIS data were: For parcel data, downloads from the NJGIN Information Warehouse and NJ Treasury Department; for Pinelands CMP boundaries, the NJ Pinelands Commission; for preserved land, the NJ Pinelands Commission’s 2011 preserved land layers and the NJDEP 2010 county preserved land layer, with the additional of the Lenape Farms acquisition parcels; for land use, the NJDEP 2007 land use layers. For the pipeline route, we created a shapefile based on the South Jersey Gas map found in the project files of the Pinelands Commission.