



TOWNSHIP OF HOPEWELL

MERCER COUNTY

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September 13, 2016

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**Re: Docket CP15-558-000
Proposed Gas Pipeline
PennEast Pipeline Company LLC
Hopewell Township, Mercer County**

Dear Ms. Bose:

Yesterday the attached report was electronically filed as comment on the DEIS. I am the signer of the filing.

I personally began the electronic filing process only minutes before 5:00 pm cutoff. By the time I configured the report to make it acceptable filing and completed the electronic submission, the FERC time was 5:03 pm. I filed reports on behalf of Hopewell Township throughout the day yesterday and was making a good faith effort to meet FERC requirements for all filings, this 5:03 pm filing included.

The impacts of this project in Hopewell Township are great. This report is of significant import to Hopewell Township. I, therefore, respectfully petition FERC to accept this report for DEIS comments on behalf of Hopewell Township.

Thank you.

Sincerely,

Paul E. Pogorzelski, P.E.
Township Administrator/Engineer

C: Hopewell Township Committee

Paul Pogorzelski

From: eFiling@ferc.gov
Sent: Tuesday, September 13, 2016 8:32 AM
To: paulpogo@hopewelltwp.org; eFilingAcceptance@ferc.gov
Subject: FERC Acceptance for Filing in PF15-1-000

Acceptance for Filing

The FERC Office of the Secretary has accepted the following electronic submission for filing (Acceptance for filing does not constitute approval of any application or self-certifying notice):

-Accession No.: 201609135095
-Docket(s) No.: PF15-1-000
-Filed By: Hopewell Township, Mercer County -Signed By: Paul Pogorzelski -Filing Type: Comment on Filing -Filing Desc: DEIS Comments-Planning Report on Pipeline Impacts under PF15-1.
-Submission Date/Time: 9/12/2016 5:03:28 PM -Filed Date: 9/13/2016 8:30:00 AM

Your submission is now part of the record for the above Docket(s) and available in FERC's eLibrary system at:

http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20160913-5095

If you would like to receive e-mail notification when additional documents are added to the above docket(s), you can eSubscribe by docket at:

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Thank you again for using the FERC Electronic Filing System. If you need to contact us for any reason:

E-Mail: efiling@ferc.gov <mailto:efiling@ferc.gov> (do not send filings to this address) Voice Mail: 202-502-8258.

**EXAMINING THE DRAFT
ENVIRONMENTAL IMPACT
STATEMENT (DEIS)**

**FOR THE PENNEAST PIPELINE
PROJECT**

**FROM A NEW JERSEY LAND USE
PLANNING PERSPECTIVE**

September 12, 2016

Prepared by Francis J. Banisch III, PP/AICP
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Introduction

The Federal Energy Regulatory Commission (FERC) has issued under Docket CP15-558-000 the PENNEAST PIPELINE PROJECT Draft Environmental Impact Statement (DEIS) which is intended to “be used as an element in (FERC’s) review of the project to determine whether a Certificate (of public convenience and necessity) would be issued”¹.

The purpose of this report is to review the DEIS prepared by FERC for the PennEast pipeline in the context of the New Jersey’s planning and zoning enabling statute and the land use planning policies and regulations of three New Jersey municipalities affected by the pipeline and its potential impacts that could undermine these planning policies.

Along the route between the Delaware River and its terminus in Hopewell Township, the PennEast pipeline would traverse the townships of Hopewell, West Amwell, Delaware, Kingwood, Alexandria and Holland.

Each of these municipalities has adopted a master plan and zoning ordinance pursuant to New Jersey’s Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.).

NEPA, the NGA and the PennEast Pipeline

Before any natural-gas company can lawfully engage in the transportation or sale of natural gas, or undertake the construction of natural gas pipelines, the FERC must first issue a certificate of public convenience and necessity. As part of the process of reviewing the application for a Certificate, FERC must prepare an Environmental Impact Statement in compliance with the National Environmental Policy Act and related Federal regulations. The DEIS for PennEast purports to address these requirements, although it is incomplete in many respects.

Section 7(e) of the Natural Gas Act (NGA) requires FERC to issue a certificate to an applicant when it finds that the proposed facility or service “is or will be required for the future public convenience and necessity”. In light of the broad implications and ramifications of a finding that enables construction of a new pipeline, it is important to find measurable standards that can be reflected in the balancing test needed to evaluate the proposal. Unfortunately, there is no clear definition of “public convenience and necessity”. Rather, it is regarded as “flexible,” although the lack of clear standards is very troubling.

Planning, Zoning and the Municipal Land Use Law

The Municipal Land Use Law (MLUL) provides that New Jersey municipalities may utilize the state police powers to regulate land use provided they have adopted basic elements of a municipal master plan.

The intent and purposes of the MLUL, reflected in N.J.S.A. 40:55D -2 (see Attachment A) acknowledge the broad and multifaceted protections intended as the basis for using

¹ PENNEAST PIPELINE PROJECT Draft Environmental Impact Statement (FERC, July 2016)

the powers of the Municipal Land Use Law. This intent, in the context of land use planning and the PennEast pipeline, can be briefly summarized as follows:

- *secure safety from disasters;*
- *provide adequate light, air and open space;*
- *promote the well-being of communities and regions;*
- *preserve the environment;*
- *provide for the agricultural, recreational, and open space needs;*
- *promote a desirable visual environment;*
- *conserve historic sites/districts, open space, energy and valuable natural resources;*
- *prevent degradation of the environment;*
- *promote utilization of renewable energy resources; and*
- *promote the maximum practicable recovery and recycling*

Viewed together, these purposes are a mandate to use the powers of the State - extended to municipalities to plan and regulate land use - to protect the public health and safety and advance the general welfare, regardless of the proposed land use. These concerns are heightened when the use and/or its location brings a level of risk to the community and region.

The State legislature has expressed its clear intent to expand the use of renewable energy through land use planning and regulation. The statute also repeatedly cautions against the loss of finite resources, and the caution about protecting finite resources are repeated several times in the purposes of the MLUL. It is for these purposes that legitimate local land use regulations may be enacted.

New Jersey's Supreme Court has repeatedly shown its respect for planning as the basis for land use regulation. It encouraged the legislative enactment of the MLUL, the State Planning Act and the Fair Housing Act and has emphasized that planning is "the cornerstone of sound governmental policy in this area." *Kaufmann v. Planning Bd. For Warren Tp.*, 110 N.J. 551, 557(1988).

New Jersey is also a national leader in State and regional planning, having created a number of planning regions with special powers (Pinelands, Highlands, Meadowlands, CAFRA) and adopted the State Development and Redevelopment Plan (2001) with broad stakeholder support. A portion of the PennEast Pipeline traverses the NJ Highlands in Hunterdon County.

The various plans at the local, regional and State level bear a striking similarity in their intent and strategies. This vertical policy alignment, affirming shared objectives at all levels, affords a coherent approach to land development that is attentive to the health and safety of all New Jersey residents in this most densely-populated state in the nation.

Municipal Master Plans

The municipal master plan is authorized by N.J.S.A. 40:55D-28, enabling municipalities to adopt a master plan that protects the public health and safety and promotes the general welfare as the basis for zoning.

40:55D-28. Preparation; contents; modification. a. The planning board may prepare and, after public hearing, adopt or amend a master plan or component parts thereof, to guide the use of lands within the municipality in a manner which protects public health and safety and promotes the general welfare.

Among the policy statements authorized by the MLUL are a varied series of plan elements, which include:

- (1) A statement of objectives, principles, assumptions, policies, standards
- (2) A land use plan
- (3) A housing plan
- (4) A circulation plan
- (5) A utility service plan
- (6) A community facilities plan
- (7) A recreation plan
- (8) A conservation plan
- (9) An economic plan
- (10) An historic preservation plan
- (11) Appendices or separate reports containing the technical foundation for the master plan and its constituent elements;
- (12) A recycling plan
- (13) A farmland preservation plan
- (14) A development transfer plan
- (15) An educational facilities plan
- (16) A green buildings and environmental sustainability plan

To assure coordination of policies among separate government units, the MLUL requires a master plan to include a specific policy statement indicating how the development of the municipality according to the master plan relates to:

- (1) the master plans of contiguous municipalities,
- (2) the master plan of the county in which the municipality is located,
- (3) the State Development and Redevelopment Plan, and
- (4) the district solid waste management plan

This requirement affords continuing opportunities for inter-governmental coordination of land use policies.

Enabling Provisions of the MLUL

The MLUL requires linkage between a municipal master plan and its zoning ordinance. A municipal zoning ordinance carries a presumption of validity when it is based upon a duly adopted statement of objectives, land use plan and housing plan. Beyond these mandatory plan elements, a municipality may adopt any or all of the optional elements of a master plan and each of the New Jersey townships traversed by the proposed PennEast pipeline has adopted the following key plan elements that relate to concerns about the pipeline. The most relevant plan elements include:

- Land use
- Conservation
- Farmland Preservation
- Recreation (and open space)
- Historic Preservation

The activities on land that fall under the jurisdiction of a municipality exercising its authority under the MLUL are specified in N.J.S.A. 40:55D-4 and seen in the very broad definition of a "development" and a "developer."

“Developer” means the legal or beneficial owner or owners of a lot or of any land proposed to be included in a proposed development, including the holder of an option or contract to purchase, or other person having an enforceable proprietary interest in such land.

“Development” means the division of a parcel of land into two or more parcels, the *construction*, reconstruction, conversion, structural alteration, relocation or enlargement *of any building or other structure*, or of any mining excavation or landfill, and any use or change in the use of any building or other structure, or land or extension of use of land, for which permission may be required pursuant to P.L.1975, c.291 (C.40:55D-1 et seq.).

Clearly the construction of a natural gas pipeline falls within the MLUL definition of development, since it involves construction of a structure, defined as any “combination of materials to form a construction for occupancy, use or ornamentation whether installed on, above, or below the surface of a parcel of land.”

In New Jersey, as in most states, a developer must own or have an enforceable interest in the land upon which a development application is presented. It does not appear that Penn East qualifies as a “developer” according to the MLUL, since the company is not the legal or beneficial owner of the land in the proposed development, nor is it the holder of an option or contract to purchase or other enforceable for proprietary interest.

Legal Basis & Process – DEIS and Issuance of Certificate of Public Convenience and Necessity

As noted in the DEIS, the FERC is “responsible for evaluating applications for authorization to construct and operate interstate natural gas pipeline facilities,” and will issue a Certificate “if the Commission determines that a project is required by the public convenience and necessity.” According to the DEIS, the FERC prepares the EIS “in compliance with the requirements of NEPA, the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (Title 40 Code of Federal Regulations [CFR] Parts 1500-1508 [40 CFR 1500-1508]) and the FERC’s regulations implementing NEPA (18 CFR 380) (DEIS pg. 1-4)

40 CFR 1502.16 (c) notes that the DEIS shall include discussion of “possible conflicts between the proposed action and the objectives of federal, regional, state, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.”

The DEIS for the PennEast Pipeline project includes a section entitled “Land Use,” but does not include an analysis or discussion of the conflicts between the proposed pipeline and the land use planning policies at each level. This document aims, without being exhaustive, to highlight some of these land use planning conflicts.

The Environmental Impact Statement is a critical tool in making the determination of public convenience and necessity, as it is intended to balance the “purpose and need” for the proposed project (as described by the applicant) with the environmental impacts of said project. Without complete information on environmental impacts, it is not possible for the FERC to make the determination of public convenience and necessity. The DEIS openly acknowledges that much data is missing or incomplete.

According to 40 CFR 1500.1 (b), NEPA procedures must “insure that environmental information is available to public officials and citizens *before* decisions are made and *before* actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” (emphasis added)

The DEIS also acknowledges that in New Jersey, a large percentage of the proposed pipeline’s route has not yet been surveyed. When information is lacking, the CEQ Regulations are clear that “If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.” (40 CFR 1502.22 [a])

40 CFR 1502.14 states that the section of the DEIS presenting alternatives to the proposed action is the “heart of the environmental impact statement.” As noted by many intervenors, the “Alternatives” section of the DEIS is inadequate.

Interestingly, 40 CFR 1502.7 states that “The text of final environmental impact statements (...) shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages.” The DEIS prepared for the PennEast Pipeline Project contains 417 pages, which is surprising given the amount of environmental information that is missing and “still being collected” by PennEast.

III. Municipalities in New Jersey Crossed by the Proposed PennEast Pipeline

In New Jersey, the proposed route for the PennEast Pipeline will traverse the following municipalities, located in Hunterdon and Mercer Counties:

Alexandria Township
Delaware Township
Holland Township
Hopewell Township
Kingwood Township
West Amwell Township

This section of New Jersey is blessed with a pastoral environment that has not been degraded by the explosion of suburban sprawl that overtook other areas of New Jersey. Residents of these communities have chosen to live and invest in these special places because of the rural character and the rich and varied ecology.

As noted in Hopewell Township’s LUP, “the rural character that pervades much of Hopewell Township, embodied in the scenic vistas, wooded hillsides, agricultural fields and historic settlement patterns, is highly susceptible to degradation.” (Hopewell Township LUP pg. 4)

New Jersey’s State Development and Redevelopment Plan

New Jersey’s State Development and Redevelopment Plan (SDRP or “State Plan”) establishes a state-level planning policy, and aims to guide local governments and State agencies toward smarter growth. The Plan advocates for collaborative planning, and one of its policies is to “collaborate with federal agencies to ensure that federal comprehensive and functional plans, investments, regulations and programs **are consistent with the State Plan and other state policies.**” (SDRP pg. 113)

The State Plan includes seven Planning Area (PA) designations. The Plan defines “Environs” as “areas outside of Center Boundaries” and states that “all uses seeking to locate in the Environs should meet the Policy Objectives of the relevant Planning Area and should be consistent with the appropriate Statewide Design policies.” (SDRP pg. 252)

The majority of the corridor of the proposed PennEast Pipeline passes through lands categorized in the SDRP as Planning Area 4B (PA4B), Rural/Environmentally Sensitive. These are lands in the Rural Planning Area that “have one or more environmentally

sensitive features” and contain “valuable ecosystems or wildlife habitats.” (SDRP pg. 214) The State Plan asserts that “any development or redevelopment planned in the Rural/Environmentally Sensitive Area should respect the natural resources and environmentally sensitive features of the area” and should “follow the Policy Objectives presented in the (...) section for the Environmentally Sensitive Planning Area (PA5).” (SDRP pg. 215)

The SDRP states that “Environmentally Sensitive Planning Areas are characterized by watersheds of pristine waters, trout streams and drinking water supply reservoirs; recharge areas for potable water aquifers; habitats of endangered and threatened plant and animal species; coastal and freshwater wetlands; prime forested areas; scenic vistas; and other significant topographical, geological or ecological features,” and that “these resources are critically important not only for the residents of these areas, but for all New Jersey citizens.” (SDRP pg. 215)

The State Plan notes that the “Environmentally Sensitive Planning Area is highly vulnerable to damage of many sorts from new development in the Environs, including fragmentation of landscapes, degradation of aquifers and potable water, habitat destruction, extinction of plant and animal species and destruction of other irreplaceable resources which are vital for the preservation of the ecological integrity of New Jersey’s natural resources. **Perhaps most important, because the Environs in Environmentally Sensitive Planning Areas (And Rural/Environmentally Sensitive Planning Areas) are by definition more sensitive to disturbance than the Environs in other Planning Areas, new development in these Environs has the potential to destroy the very characteristics that define the area.**” (SDRP pg. 216)

The “Land Use” Policy Objectives for PA5 include:

- **Protect natural systems and environmentally sensitive features by guiding development and redevelopment into Centers** and establishing Center Boundaries and buffers and greenbelts around these boundaries.
- Maintain open space networks, **critical habitat** and large contiguous tracts of land in the Environs by a variety of land use techniques.
- Development and redevelopment should use creative land use and design techniques to **ensure that it does not exceed the capacity of natural and infrastructure systems and protects areas where public investments in open space preservation have been made.**
- Development and redevelopment in the Environs should **maintain and enhance the natural resources and character of the area.** (SDRP pg. 218)

The “Public Facilities and Services” Objectives include:

- Phase and program for construction (...) **to protect large contiguous areas of environmentally sensitive features and other open spaces; to protect public investments in open space preservation programs”** (SDRP pg. 219)

The SDRP also notes that “the Environmentally Sensitive Planning Area must be managed so that critical and irreplaceable natural resources, which support growth in other parts of New Jersey, are protected.” (SDRP pg. 219)

The State Plan contains a list of Statewide Policies that are to be followed in all Planning Areas. This includes the policy to “Plan, design, construct and maintain infrastructure in accordance with capital plans that **protect the functional integrity of natural resources from the impacts, including direct, indirect and cumulative**, of installing the infrastructure and induced development.” (SDRP pg. 123)

Highlands Water Protection and Planning Act

The "Highlands Water Protection and Planning Act", enacted by the New Jersey Legislature to protect the sensitive natural resources and water supply and quality , declared that “...the New Jersey Highlands is an essential source of drinking water, providing clean and plentiful drinking water for one-half of the State's population, including communities beyond the New Jersey Highlands, from only 13 percent of the State's land area; that the New Jersey Highlands contains other exceptional natural resources such as clean air, contiguous forest lands, wetlands, pristine watersheds, and habitat for fauna and flora, includes many sites of historic significance, and provides abundant recreational opportunities for the citizens of the State”.

The Highlands Regional Master Plan (RMP) guides implementation of the Highlands Water Protection and Planning Act of 2004. The Highlands Act required creation of the RMP and specified its goal: “The goal of the regional master plan with respect to the entire Highlands Region shall be to *protect and enhance the significant values of the resources thereof* in a manner which is consistent with the purposes and provisions of this act.” The RMP was adopted by the Highlands Council on July 17, 2008 and provides detailed information and guidance about managing the fragile resources of the Highlands, particularly water resources.

Portions of the PennEast Pipeline traversing Alexandria and Holland Townships are situated in the Highlands region, and are governed by the policies and standards of the Highlands RMP.

New Jersey Municipalities

The following section examines the specific areas of concern raised by Delaware Township, Hopewell Township and Kingwood Township and discuss the land use plans and policies that are in place on a local and regional level that must inform FERC’s ultimate decision.

IV. Areas of Concern

This document will examine the specific areas of concern in three affected municipalities (Delaware Township, Hopewell Township, Kingwood Township) from a land use planning perspective. Hopewell Township's Land Use Plan concisely describes the role of land use planning, which it states "represents a municipality's basic statement about the future disposition of land and the physical form of the community" and "respects and responds to the capabilities and limitations of the natural conditions – groundwater quantity and quality, surface water resources, agricultural use opportunities, soils, steep slopes, woodlands, wetlands and flood prone areas." (Hopewell Township 2009 LUP pg. 2)

Land use planning is about responsible stewardship of the land, and aims to implement "sustainable development policies" that "provide a land use framework that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Hopewell Township 2009 LUP pg. 2)

Hopewell Township's Conservation Plan rightly notes "the inherent limitations of our ability to disassemble the natural world and put it back together again. It argues in favour of a lighter touch on the land, one that is more respectful of natural systems, and that limits the resource commitments and impacts of human intervention. This calls for a systems approach to natural resource conservation, where interconnected natural systems are viewed as a collective resource, not a series of separate features." (Hopewell Township 2002 MP pg. 35)

The following analysis outlines the policy and regulatory objectives of these municipalities into "areas of concern." Nonetheless, it is important to acknowledge the interconnectedness of natural resources, which means that impacts upon one natural feature can also have repercussions for seemingly unrelated natural features.

The SDRP prioritizes renewable resources, with a Statewide Policy to "promote and encourage development and expanded use of environmentally sensitive, renewable energy resources and energy conversion processes that reduce the demand for fossil fuel consumption and the byproducts created during the combustion of fossil fuels." And another to "support a shift from virgin extraction and imported fossil fuels to renewable, domestic energy supplies through energy conservation programs." (SDRP pg. 156)

1. Impacts on Ground Water

Concerns have been raised regarding area aquifers and private wells. The DEIS notes that the proposed pipeline route would cross several Sole Source Aquifers (designated as critical resources) and Wellhead Protection Areas. The DEIS acknowledges that the information it had at the time of the preparation of the DEIS was deficient, stating that "PennEast has not identified private wells in the vicinity of the Project in New Jersey, but

would identify private wells along the New Jersey segment of of the pipeline using available public records and interviews with existing homeowners.” (DEIS pg. 4-31)

FERC recommends in the DEIS that **prior to construction**, PennEast should “complete all necessary surveys for water supply wells and groundwater seeps and springs, identify public and private water supply wells within the construction workspace, and file with the Secretary a revised list of water wells and groundwater seeps and springs within 150 feet of any construction workspace (500 feet in areas characterized by karst terrain).” (DEIS pg. 4-32)

This is critical information that must be available prior to finalization of the EIS. Decision making regarding public convenience and necessity must be made after all necessary information is presented, not “prior to construction”. Issuance of a Certificate before reviewing the information regarding private wells precludes any meaningful analysis of the impacts to private wells that could be affected by the pipeline route.

The DEIS also does not discuss how blasting along the proposed pipeline route could disrupt ground water flow to aquifers and wells. (more details on this?)

Since Delaware, Hopewell and Kingwood Townships are rural in nature, nearly all residents rely on private wells for their water supply. These municipalities have raised the very valid concern that the construction and ongoing operation of the proposed pipeline will threaten the quality and/or the continuing availability of their residents’ well water. A detailed report prepared by Dr. Tullis Onstatt dated February 24, 2014(Attachment ??) argues that the pipeline presents a real threat to the surrounding wells, since “the proposed PennEast Pipeline route passes through some of the most arsenic-rich counties in New Jersey where sole source aquifers dominate.” (Onstatt Report pg. 2)

The DEIS goes on to conclude that “No long-term impacts on groundwater are anticipated from construction and operation of the Project because disturbances would be temporary, erosion controls would be implemented, natural ground contours would be restored, and the right-of-way would be revegetated. Implementation of PennEast’s E&SCP, as well as our recommendations, would limit impacts on groundwater resources.” (DEIS pg. 4-35)

FERC’s conclusion is perplexing since the DEIS has openly acknowledged the lack of information that would allow such a conclusion to be drawn.

Ground water is seen as a valuable resource in the SDRP, which asserts the importance of including “policies and standards for managing development and redevelopment in county and municipal master plans and development regulations to protect aquifer recharge areas and wellheads of public and private potable water supply systems.” The Plan also includes a policy to “manage the character, location and magnitude of development and redevelopment to prevent the discharge of pollutants that may adversely

affect wellfields and areas designated as existing or future water supply sources.” (SDRP pg. 149)

Delaware Township’s Plans and Policies – Groundwater

The 2004 Natural Resources Inventory provides a foundation for the policies and strategies governing land use and development in Delaware Township. The NRI cited a comprehensive evaluation on the geology and groundwater of Delaware Township entitled “Evaluation of Groundwater Resources of Delaware Township, Hunterdon County, New Jersey.” (M² Associates, Inc. 2004) This report acknowledged that all Delaware residents are served by groundwater and cited the susceptibility of this resource to contamination from the surface.

The Mulhall report concluded that:

Contamination of groundwater could also affect the long-term viability of this resource as well as require significant expenditures of public funds for remediation and/or improvement of water quality to meet appropriate State and Federal standards.

Mulhall also noted that:

Nitrate and other contaminants from septic systems are highly soluble, stable and mobile in groundwater and can migrate large distances

Given the linear nature of the pipeline excavation, new potential pathways of contamination from septic systems pose a threat to groundwater that is withdrawn through private wells.

Hopewell Township’s Plans and Policies - Groundwater

Hopewell Township’s 2009 Land Use Plan states that “a dominant theme in the planning process is the protection of water resources, with a particular emphasis on groundwater quantity and quality,” and notes the “critical importance of this resource.” It also notes that its groundwater resources “are of value not only to the current and future residents of the Township, but also to downstream consumer and ecological receptors.”

The Township’s 2004 Open Space and Recreation Plan notes that Hopewell “encompasses nearly all of the headwaters for surface waters flowing in its boundaries. This means that the Township cannot rely on upstream sources or conservation measures to ensure long-term adequate water supply,” and that “protecting and preserving open space areas will help to maintain and protect groundwater systems by creating areas of groundwater recharge.”

Hopewell’s code includes Chapter XVI Section 16-6, “Wells, Well Tests and Water Supplies,” which aims to “assure that adequate water supply is available without adverse

effect on others and to maintain the long-term natural equilibrium of the ground and surface waters of Hopewell Township.”

Kingwood Township’s Plans and Policies - Groundwater

Kingwood’s Conservation Plan calls particular attention to the fragile groundwater resources in this rural municipality, where all residents and businesses rely on well water. Very shallow bedrock is encountered in the northern portion of the pipeline route through Kingwood, with hard rock at the surface in some areas. Because Kingwood is underlain with Lockatong argillite and Brunswick shale, ground water is limited by fractures, which can be scarce in this dense bedrock.

A study by Dr. Robert Hordon, a Rutgers hydrogeologist, of the ground water resources of Kingwood in 1995 showed that Kingwood’s well depths range from 100 to 800 feet; that newer wells are being drilled deeper; that median yield is 5 gpm; and drawdown is high (i.e. when water is used, the well level rapidly decreases).² Dr. Hordon’s study confirmed an earlier study (1966) by Haig F. Kasabach, NJ State Geologist, that found the Lockatong aquifer to be one of the poorest yielding aquifers in NJ.³ An additional study conducted by Todd Kratzer, P.E. of continuous ground water level monitoring in a residential well found that the water level in the well dropped drastically as a result of pumping of nearby wells – in one instance the impact was from a well 0.8 miles away.⁴

This illustrates the susceptibility of Kingwood wells to impacts at surprisingly great distances from the water use or contamination; therefore the proposed pipeline could impact wells in the entire township, not just the wells of properties directly in the pipeline route.

2. Impacts on Surface Water

“In New Jersey, the mainline would cross the Lower Delaware River and Millstone River Watersheds. The Gilbert and Lambertville laterals would cross the Lower Delaware River Watershed.” (DEIS pg. 4-36) While portions of the Delaware River in New Jersey have been designated as a National Wild and Scenic River, the DEIS states that “proposed pipeline crossing would not cross the Delaware River within a designated NWSRS reach” and the river would be crossed by HDD, and “no in-channel disturbance would occur, nor are impacts anticipated on the lower NWSRS reach.” (DEIS pg. 4-38) The Delaware River has been identified as “supporting species federally listed as threatened, endangered, or species of concern.” (DEIS 4-50)

The DEIS states that “construction following the measures included in our Procedures would adequately minimize impact on Pennsylvania and New Jersey state-designated waters, including HQ, EV, and C-1 streams.” (DEIS 4-41) “Because of the numerous comments from municipalities including Kingwood, Holland and Hopewell Townships in New Jersey, the DEIS recommends that prior to the end of the draft EIS comment period, PennEast should file with the Secretary documentation of special construction procedures

and consultation with “appropriate federal and state agencies regarding C-1 streams, including identification of any agency recommendations and PennEast’s responses.” (DEIS 4-41)

The DEIS identifies the activities connected with construction of the Pipeline that could affect surface waters as “clearing and grading of streambanks, in-stream trenching, blasting, trench dewatering, inadvertent returns from HDD operations, and potential spills or leaks of hazardous materials,” with potential impacts on surface waters including “modification of aquatic habitat; increased runoff and the rate of in-stream sediment loading; turbidity; decreased DO concentrations; releases of chemical and nutrient pollutants from sediments; thermal effects; modification of riparian areas; and introduction of chemical contaminants such as fuel and lubricants.” (DEIS 4-55)

The DEIS concludes that “no long-term effects on surface waters are anticipated as a result of construction and operation of the project.”

Without having received the information that FERC requests in the DEIS (documentation of construction procedures, and especially documentation of consultation with federal and state agencies regarding C-1 streams and their recommendations), it is difficult to understand how FERC could have concluded that there will be “no long-term effects on surface waters.”

New Jersey’s SDRP prioritizes water resources, by “protect(ing) and enhance(ing) water resources through coordinated planning efforts aimed at reducing sources of pollution and other adverse effects of development, encouraging designs in hazard-free areas that will protect the natural function of stream and wetland systems, and optimizing sustainable resource use.” (SDRP pg. 147)

Additionally, it appears that the DEIS does not give adequate consideration to the myriad effects that the construction and operation of the pipeline could have on a variety of natural systems in these municipalities as a result of alterations to the riparian buffers, as is illustrated below.

Delaware Township’s Plans and Policies - Surface Water

Figure 1 illustrates the extensive network of stream corridors in Delaware, almost all destined to deliver surface drainage to the Delaware and Raritan Canal and the Delaware River and the users of potable water from these sources. The Lockatong and Wickecheoke Creeks both traverse rugged terrain with steep slopes that affect the pipeline route and clearly indicates the locations of tributaries with very steep topography (red) to be crossed by the pipeline.

According to NJDEP’s Surface Water Quality Standards (N.J.A.C. 7:9B), most of Delaware Township drains to the Delaware and Raritan Canal and/or the Delaware River through the Alexauken, Wickecheoke and Lockatong Creeks and the Plum Brook, all classified as Category One (C1) waters. According to the NJDEP, Category One (C1) waters are designated through rulemaking for protection from measurable changes in water quality

because of their Exceptional Ecological Significance, Exceptional Water Supply, Exceptional Recreation, and Exceptional Fisheries to protect and maintain their water quality, aesthetic value, and ecological integrity (<http://www.nj.gov/dep/wms/bears/docs/2009%20antideg-Category%20one.pdf>).

The NJDEP Stormwater Management Rules require enhanced buffering for development projects that adjoin C-1 waters. **DEP determined that a 300-foot buffer is necessary to prevent water quality degradation and to protect the attributes for which Category One waters have been designated.**

Delaware's C-1 streams and other surface waters receive protection through local ordinances designed to limit disturbance and protect water quality. The ability of the landscape to maintain the water quality of the C-1 streams is challenged since the forest cover is very limited and the agricultural landscape has cleared most of the Township. Concern for water quality in Delaware has prompted adoption of ordinances to protect these waters, from the low density land use plan to the stream corridor protection regulations.

The Penneast Pipeline would traverse C-1 streams causing both temporary and permanent modifications to the watershed characteristics, contrary to the intent of Delaware's plan.

Noting that "The health of surface waters within the Township is relative to the health of the areas that surround them, commonly known as riparian areas", the NRI calls attention to the many beneficial functions of the riparian zone, including

- Maintenance of biodiversity
- Provision of forage and other food sources
- Protection of water quality
- Regulation of stream temperature
- Flood storage and release
- Provision of wildlife corridors
- Aquifer recharge and baseflow maintenance
- Terrestrial and amphibian habitat
- Recreation sites
- Stream bank stabilization
- Habitat for threatened and endangered species

Delaware Township riparian areas are comprised of streams and required 50 foot buffer (including the 100-year floodplain), wetlands and slopes greater than 15% adjacent to required stream corridor buffers. The NRI notes that the 50-foot buffer and slopes greater than 15% should be considered the minimum area of regulatory protection for riparian areas. Protection of adjacent forested areas will enhance water quality and stream health, both goals of the master plan.

Delaware notes that riparian areas occupy an important and vulnerable position in the landscape, since they convey a great amount of energy and nutrients but also makes them subject to a combination of effects related directly to human activities.

“Riparian areas serve a multitude of functions for surface waters, the most critical of which is to provide a transition area from surrounding land uses. A forested riparian area acts as a stream or river stabilizer in many ways: controlling water temperature, stabilizing the stream bank, filtering pollutants from runoff, controlling sedimentation and contributing organic matter to the stream ecosystem, and reduce flood impacts. Riparian forests are among the most healthy forest types, uniquely positioned to take advantage of abundant available water and receive the benefits of nutrient flow. They, in-turn, provide critical nutrients and woody debris which enhance stream health by providing habitat for in-stream organisms. This in turn enhances the overall health of the riparian ecosystem through ripple effects.” (NRI pages 27 and 28)

Loss of riparian areas has a number of negative impacts on surface waters that are cited by Delaware Township, including more sediment and non-point source pollution reaching the streams when vegetated buffers are lost, greatly impacting water quality. Additionally, the NRI notes that the introduction of sediment to the stream from off-site sources and the deterioration/elimination of stream-side/stream bank vegetation causes scouring, bank deterioration and further erosion and sedimentation. Particular caution is urged with regard to road and other crossings, like a pipeline, that create breaks in an otherwise uninterrupted riparian corridor.

Delaware defines stream corridors and limits permitted uses and prohibits all structures and any change in the surface of the land. No tree removal is permitted that is not part of an approved forest management plan. Delaware also requires conservation easements for all stream corridors whenever development includes these features and regulates permitted disturbance of steep slope areas (over 15%), prohibiting any disturbance of slopes over 25%.

Delaware also regulates the removal of woodland vegetation and only permits removal of trees over 10” diameter when such removal is necessitated by a duly issued construction permit.

Hopewell Township’s Plans and Policies - Surface Water

Figure 5 depicts the surface waters of Hopewell Township. Hopewell’s Conservation Plan Element notes that the Township is “laced with a network of headwater tributaries to the Delaware and Raritan Rivers.” The Plan notes that non-point pollution (construction activities) has become a major concern, and recommends that “water quality best management practices should be adopted or refined, to protect the quality of surface waters and promote maximum habitat values.”

The Plan recommends the following management approaches to protect stream corridors:

- Woodlands and other vegetated buffers should be maintained or established along all stream corridors.
- Where past land use practices have resulted in the removal of trees along stream corridors, management practices should include the reestablishment of the tree cover.
- A stream corridor protection ordinance, modelled after the programs established by the Delaware and Raritan Canal Commission and the Stony Brook-Millstone Watershed Association, which seeks to protect the stream corridor and adjacent wetlands, floodplains, and contributory uplands with steep slopes, has been developed
- Management and monitoring strategies should be developed for stream corridor areas.

Hopewell Township’s code includes Chapter XII Section 12-3 “Stream Corridor Protection,” delineates activities prohibited in stream corridors, including “Clearing or cutting of any vegetation, except for removal of dead vegetation, pruning for reasons of safety and harvesting of agricultural products.” Prohibited activities require a Stream Corridor Permit.

Kingwood Township’s Plans and Policies - Surface Water

The NJDEP Stormwater Management Rules require enhanced buffering for development projects that adjoin C-1 waters. DEP determined that a 300-foot buffer is necessary to prevent water quality degradation and to protect the attributes for which Category One waters have been designated.

From its point of entry in Kingwood’s northwest corner to the Delaware Township boundary, the pipeline crosses no fewer than 6 Category 1 tributary streams draining directly to the Delaware River. Kingwood prioritizes undisturbed stream corridors, in order to “(M)aintain stream corridor buffer areas to control stormwater runoff and *improve the health of Township streams* to support wildlife and enhance opportunities for passive and active recreation.”

Kingwood’s C-1 streams, as well as all of the Township’s surface waters, receive protection through local ordinances. The maintenance of surface water quality has a great impact on the levels of macroinvertebrate activity in the waterway, since macro-invertebrates are indicators of stream health, because:

- They are sensitive to changes in the ecosystem.
- Many live in an aquatic ecosystem for over a year.
- They cannot easily escape changes in the water quality.
- They can be collected very easily from most aquatic systems with

Waterway	Classification*
LITTLE NISHISAKAWICK CREEK (Frenchtown) - Entire length	FW2-NT(C1)
LOCKATONG CREEK (including Muddy River) (Kingwood) - Source to Idell Bridge (Raven Rock) - Idell Bridge to Delaware River	FW2-NT(C1) FW2-TM(C1)
NISHISAKAWICK CREEK (Frenchtown) - Entire length	FW2-NT(C1)
WARFORD CREEK (Barbertown) – Entire length	FW2-TP(C1)
WICKECHEOKE CREEK (Locktown) - Source to confluence with Plum Brook (Stockton) - Confluence with Plum Brook to Delaware River	FW2-NT(C1) FW2-TM(C1)

inexpensive or homemade equipment.

NJDEP's Surface Water Quality Standards found at N.J.A.C. 7:9B, dated October 2006 provide the surface water classifications for the Township's surface water courses, as seen at right. (Fact Sheet about the Fresh Water Anti-degradation categories for New Jersey streams <http://www.state.nj.us/dep/wms/bwqsa/factsheet2.pdf>)

The ability of the landscape to maintain the water quality of the C-1 streams in Kingwood is remarkable, in light of the expansive agricultural landscape. Concern for water quality in Kingwood has prompted adoption of ordinances to protect these waters, from the low density land use plan to stream corridor protection.

“Stream corridors, maintained in their natural condition and with minimum disturbance, are instrumental in:

- Removing sediment, nutrients, and pollutants by providing opportunities for filtration, absorption, and decomposition;
- Reducing stream bank erosion by slowing stormwater velocity, which aids in allowing stormwater to be absorbed in the soil and taken up by vegetation;
- Preventing flood-related damage by storing stormwater and releasing it slowly;
- Providing shade that maintains cooler water temperatures needed by aquatic species;
- Providing habitat for terrestrial and aquatic species;
- Providing detrital food and nutrients to aquatic species;
- Maintaining biological diversity;
- Helping maintain adequate flows of water to underground aquifers; and
- Providing greenway corridors for wildlife.”

The importance of Kingwood's surface waters is evidenced by the fact that five Kingwood streams (and their named and unnamed tributaries) have been designated as Category One (C-1) waters by the NJ Department of Environmental Protection. This designation provides additional regulatory protection to prevent water quality degradation and discourages development where it would impair or destroy natural resources and environmental quality. The C-1 streams and their tributaries in Kingwood include Little Nishisakawick Creek; Lockatong Creek (Muddy Run tributary); Nishisakawick Creek; Warford Creek; and Wickecheoke Creek. The Penneast Pipeline would traverse C-1 streams causing both temporary and permanent modifications to the watershed characteristics, contrary to the intent of Kingwood's plan.

Kingwood Township was instrumental in obtaining the Congressional designation of the Lower Delaware as a Partnership Wild and Scenic River in recognition of its outstanding resource values, receives management support from the National Park Service. The Township Committee has resolved to abide by the River Management Plan and to actively participate in the Wild & Scenic Lower Delaware River Management.

Objectives for surface water protection in the adopted Conservation Plan include the following:

- Preserve and protect the high quality trout production and trout maintenance waterways in the Township from point and non-point source pollution. Wherever appropriate, require Best Management Practices (BMP's) such as, but not limited to:
 - Stream Corridor Protection Ordinance
 - Enhanced Buffering
 - Created wetlands
 - Multistage stormwater treatment systems
 - Drywell infiltration systems for recharge
 - Extended basins
 - Bioretention plantings in basins
- Implement a Township-wide greenway system that protects environmentally sensitive features by placing a variety of environmentally sensitive features into conservation easements whenever development is approved, such as over floodplain areas, stream corridors, wetland and their transition areas, as well as woodlands, steep slope areas, ridgelines, etc. (from critical habitat section)
- Preserve and maintain the interrelationships between land and water resources by reducing permitted residential density and impervious coverage standards that minimize potential negative impacts from non-point source pollution and that contributes to their functioning as an ecological system.
- Mitigate stormwater impacts through the use of non-structural solutions to control flooding and stormwater runoff.
- Ensure that Township activities do not impair surface water. For example, snow removal and preventative measures like sanding or salting can have an impact as snow melts and runs off into nearby water ways. Use products that are less corrosive and biodegradable so as to prevent harmful runoff into nearby waters.
- Develop guidelines for new developments that limit the widening of existing roadways adjacent to the new development. This practice typically occurs where a new development is proposed for a rural area.
- Reduce or eliminate the use of fertilizers and pesticides on municipally owned and maintained properties.
- Develop an education program to inform residents about protecting their local streams by reducing or eliminating the use of fertilizers and pesticides on their individual properties. Include other best management practices for homeowners such as water conservation and environmental stewardship strategies.
- Develop a monitoring system beyond the DEP's stormwater management rules to engage local citizens in becoming volunteer monitors. The program should require, as a minimum, biannual sampling of local waterways. Sampling locations should correspond to data provided in the township's Water Quality Management Plan, as well as the TMDL₁₅ report for the Lockatong and Wickecheoke Watersheds.
- Research grant programs through local non-profits that offer funding and volunteer resources to assist in developing monitoring and education programs.

Kingwood regulates the disturbance and development of habitat (§ 115-6.7 Threatened and endangered species) and requires a threatened and endangered species investigation including a State records search of NJDEP records and species survey by a qualified Surveyor during the time periods in which the targeted species can be readily observed and identified.

In the event that a threatened or endangered species and its habitat are identified on the subject property, the minimum protective measures required by the ordinance provide for Conservation easements around the threatened or endangered species habitat, protective fencing installed a minimum of 15 feet from the perimeter of the habitat and limiting the duration and timing of site disturbance, such as during hibernation.

Kingwood also requires a detailed environmental assessment for any combination of disturbance of and/or new impervious coverage for more than 1/4 acre of land (§ 115-6.6 Environmental impact analysis) and no application for development shall be approved if the proposed development would result in the erosion or degradation of areas of steep slopes; or the degradation of the quality of potable water supplies.

3. Impacts on Wetlands

PennEast “identified and delineated wetlands along the proposed pipeline route during field surveys in 2015 and 2016,” and where PennEast was unable to complete surveys, “remote-sensing resources were used to approximate the locations and boundaries of wetlands within the Project area.” (DEIS 4-65)

The DEIS calculates that 29.9 acres of wetland areas would be affected during construction, and 17.9 acres would be affected during operation, yet notes that “field wetland delineations are incomplete,” and recommends that “Prior to construction, PennEast should file with the Secretary a complete wetland delineation report for the entire Project that includes all wetlands delineated in accordance with the USACE and the applicable state agency requirements.” (DEIS 4-66)

Additionally, surveys were completed only for some areas that potentially contained vernal pools, and the DEIS recommends that “prior to construction, PennEast should survey all areas mapped as being potential vernal habitat and identify whether these areas contain vernal pool habitat that would be affected by the proposed alignment during construction or operation.” (DEIS 4-68)

Completing these surveys prior to construction is not adequate; wetland delineations and vernal pool habitat delineations must be provided prior to finalization of the EIS, so that complete information can be used when formulating a conclusion about the impacts to these resources.

The DEIS concludes that “while minor adverse and long-term effects on wetlands would occur, with adherence to PennEast’s E&SCP and FERC Procedures (...) construction and operation of the Project would result in minor effects on wetlands that would be appropriately mitigated and reduced to less than significant levels.” (DEIS 4-73)

This conclusion seems premature given the lack of precise information regarding the location and extent of wetlands and vernal pools. In addition, there is no precise definition of “minor effects,” or “less than significant levels.”

The SDRP includes a policy to “protect and enhance wetlands as a means of protecting and improving water quality, controlling floods and ensuring habitat diversity through watershed planning, local and regional land-use planning, incentives, education and regulation.” (SDRP pg. 148)

Delaware Township’s Plans and Policies - Wetlands

Delaware Township’s Natural Resource Inventory cites the importance of wetlands as aquifer recharge areas and as areas that trap and filter pollutants through natural bio-chemical processes. Noting that “(T)he filtering capabilities of wetlands are particularly useful along waterways where protection of existing water quality is desirable”, Delaware notes how these areas may serve as a buffer to harmful non-point source pollutants.

Noting that State regulations afford some protection for wetlands, but do not prevent destruction or disturbance, the NRI calls for additional environmental resource protection strategies that can build upon these State protections, including careful planning and location of development.

Figure 2 illustrates the land cover characteristics, including the distribution of wetlands in Delaware Township.

Hopewell Township’s Plans and Policies - Wetlands

Figure 3 illustrates the land cover characteristics, including the distribution of wetlands in Hopewell Township.

Hopewell Township’s Conservation Plan Element notes that “among the unique values of wetlands are the purification of surface water and groundwater resources; the mitigation of flood and storm damage through the storage and absorption of water during high runoff periods; the retardation of soil erosion; the provision of essential breeding, spawning, nesting and wintering habitats for the State’s fish and wildlife; and, the maintenance of critical base flows to surface waters through the gradual release of stored flood waters and groundwater.”

The Plan states that “permitted development should be arranged to avoid all significant wetlands, and when road crossing are unavoidable, they should be located at the point of minimum impact.”

The Plan also points out that “although the NJDEP mapping of wetlands and the soils’ map of hydric soils can provide guidance as to the location of wetlands, **only a field investigation** can substantiate the presence or absence of wetlands and the associated buffers.”

As mentioned, the DEIS noted that PennEast’s field delineations of wetlands are incomplete. This lack of information relating to wetlands, vernal pools and buffers precludes any meaningful analysis of the impacts of the proposed pipeline.

Figure 6 illustrates the land cover characteristics, including the distribution of wetlands in the Township.

Kingwood Township’s Plans and Policies - Wetlands

Kingwood’s Master Plan recognizes the important role that wetlands play in protecting water quality by absorbing storm surges and limiting flooding, filtering pollutants and providing important habitat for flora and fauna. Figure 6 illustrates the distribution of wetlands in Kingwood.

4. Impacts on Forests

The DEIS states that “about 452 acres of forest would be permanently converted to an herbaceous state.” The temporarily disturbed forested areas would be restored through natural recolonization but “would still require many years to re-establish to preconstruction conditions.” (DEIS 4-77) PennEast would actively replant only the areas within Green Acres properties in New Jersey with seedlings to speed up the process.

The DEIS indicates that “only the 30-foot-wide maintained operation right-of-way in upland forests and 10-foot-wide maintained operational right-of-way in wetlands would require the permanent removal of trees in these forested areas.” (DEIS pg. 4-124)

PennEast has not yet developed a restoration plan in accordance with NJDEP’s No-Net Loss Reforestation Act (NNLRA), so the DEIS recommends that PennEast develop and file such plan with the Secretary prior to construction.

The DEIS acknowledges that the Project would cross through “and impact areas that have been identified as regions that contain unique or exemplary wildlife habitats” including the Sourland Mountain Region and Baldpate Mountain.

PennEast has also identified threatened, endangered, and special status species potentially occurring in the Project Area. FERC recommends that prior to construction, PennEast should “file with the Secretary a comprehensive list of measures developed in consultation with applicable state wildlife agencies to avoid or mitigate impacts on state-listed species and state species of concern.” (DEIS pg. 4-118)

The DEIS notes that “long-term impacts on terrestrial wildlife could occur in forested areas due to the time required to restore the forested habitat to its preconstruction condition.” (DEIS 4-87) Also, “PennEast has only been able to survey a portion of the Project area (**approximately 7 percent**) due to lack of survey access permission granted by affected landowners.” (DEIS 4-89)

Delaware Township's Plans and Policies – Woodlands

Forested areas in Delaware Township are generally deciduous, although mixed coniferous and deciduous areas are found throughout the Township. The forested areas of Delaware Township play a vital role in many ecosystem functions cited in the NRI, including many that will be affected by the pipeline, including:

- Habitat for threatened and endangered species
- Stabilization of steep slopes and reduction of erosion and sedimentation
- Wooded wetlands, which act as headwaters to tributary streams
- Provision of riparian buffers
- Reduction of pollution
- Provision of privacy and screening

The Township's 2012 Master Plan Reexamination Report noted that "protection of woodlands promotes important planning goals and objectives, including maintenance of wildlife habitat, promotion of aquifer recharge, assistance with stormwater management, protection of air and water quality, stabilization of steep slopes, and enhancement of scenic views.

Hopewell Township's Plans and Policies – Woodlands

Hopewell Township's Conservation Plan Element notes the many important functions of woodlands and native vegetation:

"They reduce soil erosion and surface runoff, absorb pollutants and promote aquifer recharge, (...) provide habitats for plants and animals and provide open space and recreation lands. They enhance the visual character of scenic corridors, create a feeling of privacy and seclusion and reduce noise impacts. And they affect local climatic conditions near or within their boundaries, such as the cooling effect on trout streams. Woodlands and other native vegetation also provide visual diversity in the terrain, enhancing the value of property."

The Plan encourages the "preservation of habitat areas that are as large and circular as possible, gradual and undulating at the edges and connected by wildlife corridors wide enough to maintain interior conditions (i.e. 300' or more)." The Plan also states that "a construction mitigation plan, which minimizes and mitigates construction-related impacts on woodlands, should be required prior to disturbance of more than 10,000 square feet of woodlands."

The Township aims to “prohibit development which will result in adverse impacts on the survival of threatened, endangered and declining species” and “preserve nodes of biodiversity wherever they occur.”

Hopewell Township’s municipal code includes a section to protect forest resources, Chapter XII Section 12-4, “Forest Management and Tree Removal.”

Kingwood Township’s Plans and Policies – Woodlands

While Kingwood’s C-1 streams receive some measure of protection from the forest cover along their corridors, it is very limited in its extent and in its ability to protect water quality from the non-point runoff from surrounding farms.

5. Impacts on Open Space (Farmland, Conservation/Preservation Areas, Recreation Areas)

Table 4.7.1-1 in the DEIS is entitled “Land Use Types and Acreage Impacted by Construction of the PennEast Project,” and indicates that a total of 239.6 acres of agricultural land would be impacted by construction, while 105.5 acres would be impacted by ongoing operation of the pipeline. The table also indicates that 23.2 acres of “open land” would be impacted by construction, and 14.0 acres would be impacted by ongoing operation of the pipeline.

The DEIS notes that “temporary impacts on agricultural land during Project construction could occur from removal of vegetation, disturbance of soils, and increased dust from exposed soils” and that “following construction, all affected agricultural land would be restored to preconstruction conditions to the extent possible, in accordance with PennEast’s E&SCP and Agricultural Impact Minimization Plan, (...) and with any specific requirements identified by landowners or state or federal agencies with appropriate jurisdiction.” (DEIS pg. 4-125)

The DEIS states that no federal lands in New Jersey would be crossed by or located within 0.25 mile of the Project, and no state parks or forests would be crossed by the Project, however the Project would “cross numerous parcels owned by NJDEP, 22 parcels associated with the Green Acres program, and lands managed by New Jersey Natural Lands Trust.” The document also indicates that “because there is no legal procedure in place by which PennEast could obtain the necessary easement rights across preserved lands, PennEast may pursue condemnation.” (DEIS pg. 4-143)

85% of the proposed route that crosses Green Acres lands and 2 miles out of the total 2.7 miles that cross New Jersey Natural Lands Trust lands would be “co-located with existing utilities” and the project would cross a portion of the Wickecheoke Creek Greenway that is preserved under a partnership with the NJ Conservation Foundation. (DEIS pg. 4-144)

The DEIS also discusses county and municipal lands and lands encumbered by private conservation easements and states that a total of 122.8 acres of these lands would be temporarily impacted and 47.4 acres would be located in the permanent right-of-way. The acres in the permanent right-of-way would lose their conservation status. Three USDA-encumbered parcels in New Jersey would be crossed by the current PennEast proposed route, but PennEast exploring avoidance of these parcels.

The SDRP's Statewide Policies under "Infrastructure Investments and Farmland and Open Space" include:

Policy 30, to "Protect recreational facilities and open space from direct, indirect and cumulative impacts associated with the installation of infrastructure and induced development,"

and

Policy 34, to "Acquire, develop and install infrastructure, related services and public and private utilities in ways that protect and maintain the functional integrity of contiguous open space areas and corridors, farmland and environmentally sensitive features, except where necessary to provide emergency access to existing uses to address immediate or emerging threats to public health and safety." (SDRP pg. 124)

Delaware Township's Plans and Policies – Open Space

The pipeline route is illustrated on Delaware Township's future land use plan (Figure 3). Figure 4 depicts the locations of preserved open space and farmland.

2012 Farmland Preservation Plan acknowledges the Township's location between the Highlands region to the north and the Sourland Mountain special resource area to the south. The goals and objectives outlined in the 2009 Master Plan reflect the Township's desire to protect natural and agricultural resources while allowing for limited development. These included:

Land & Water

- To preserve sensitive and aesthetic areas in their natural state and to protect natural resources. In particular, to minimize erosion, minimize depletion and prevent contamination of well water, maintain and improve the water quality of streams, and identify critical environmental or scenic areas for special preservation efforts.
- To identify and encourage the retention and expansion of significant woodlands in the Township.
- To provide for development location and density that respect environmental limitations.
- To carefully document the natural resources of Delaware Township.

Agriculture

- To encourage the agricultural diversity needed to produce a viable agricultural economy.
- To foster farmland preservation.

- To encourage farm development.

Housing

- To preserve our historic sites and encourage compatibility of new development with the character of the Township.
- To site new housing to preserve open space, to minimize environmental degradation and to minimize the visual impact of new prospective development.
- To promote conservation of energy.

Recreation

- To provide for parks and green spaces throughout the Township

The agricultural landscape in Delaware is a reflection of the highly productive soils in the Township, which is dominated by Soils of Statewide Importance, with prime farmland soils interspersed in concentrations in the central and southern portions of the township.

Delaware has designated two farmland preservation project areas, dividing the township from east to west between the hamlets of Rosemont and the village of Sergeantsville.

Hopewell Township's Plans and Policies – Open Space

The pipeline route is illustrated on Hopewell Township's future land use plan (Figure 7), while Figure 8 depicts the locations of preserved open space and farmland.

Hopewell's LUP states that "virtually all except the mountainous portions of Hopewell Township consist of important farmlands- prime soils, soils of statewide importance and soils of local significance. In addition, the vast majority of the land area in Hopewell Township is designated as an Agricultural Development Area (ADA) (...) The long-term utility and viability of this resource is enhanced if critical masses of agricultural lands and soils are maintained wherever they currently exist." (Hopewell Township LUP pg. 4)

In Hopewell Township, the majority of the route of the proposed pipeline crosses through the Mountain Resource Conservation District and the Valley Resource Conservation District before briefly crossing through the Office Professional District, R-100 Residential District and C-1 Neighborhood Commercial District.

The Land Use Plan states that "the preferred development alternatives for the Valley and Mountain Resource Conservation Districts will maintain large contiguous tracts of farmland and other open lands, promote continued agricultural use of prime agricultural lands and maintain the delicate balance among the various components of the natural systems." (Hopewell Township LUP pg. 8)

Hopewell Township's Conservation Plan Element notes that "the most effective way to protect farmland and natural resource lands is to buy the land or the development rights and manage the preserved resources. This approach permanently preserves these valuable features." Hopewell Township, "through its local open space assessment, support for a Mercer County open space assessment, and establishment of a regional Open Space

Advisory Committee with Hopewell and Pennington Boroughs, has demonstrated its commitment to open space acquisitions.” (Hopewell Township MP pg. 35-36)

Hopewell Township has also adopted an Open Space and Recreation Plan in 2004 (herein OSRP), which provides “guidance for current and future acquisition, preservation and management of open space and recreation areas in Hopewell Township.” (2004 Hopewell Twp OSRP pg. 2)

The goals of the Open Space and Recreation Plan include:

“To (...) establish and enhance recreational lands and public open space; to establish linkages of public spaces through the use of greenways, greenbelts, waterways, paths and bikeways; and, to establish as the highest priority for public acquisition, areas of critical recreational, scenic or environmental value,”

and

“To encourage the public acquisition of areas of exceptional recreational or scenic value, or environmental sensitivity, at all levels of government, with priority given to acquisition and development of land to meet current and future recreation needs, as well as, acquisition of land to protect water supply and State endangered species.” (pg. 2)

The OSRP goes on to assert that “safeguarding open space ensures the viability of fragile ecosystems that support the high environmental quality, and quality of life, that residents associate with living in Hopewell Township,” and that “Hopewell Township is host to a variety of environments and habitats that make protection of these areas not just a recreational incentive but also an important step to maintain the future ecological and biological base of the region and the State.” (pg. 23)

Farming is also an important and “enduring legacy” within Hopewell Township, and in 2012 the Township adopted its Farmland Preservation Plan. “Hopewell Township’s commitment to farmland preservation and preserving the Township’s historic agricultural base is witnessed in the Township’s rank as 10th in the State and 1st in Mercer County in active agricultural acres and over half of the Township is in farmland assessment.” A high priority is given to protection of these lands, as “the long-term utility and viability of this resource is enhanced if critical masses of agricultural lands and soils are maintained wherever they currently exist.” (Hopewell Township FPP pg. 73)

Kingwood Township’s Plans and Policies – Open Space

The pipeline route is illustrated on Kingwood Township’s future land use plan (Figure 11), while Figure 12 depicts the locations of preserved open space and farmland. Kingwood is blessed with a rich agricultural landscape composed almost entirely of highly productive farmland. Kingwood’s 2009 Farmland Preservation Plan delineated most (57%) of the Township within a farmland preservation project area spanning the northern and eastern portions of the Township.

In 2009, over 80% of Kingwood's 7,800 acres of farmland-assessed cropland and pasture land consisted of Prime Farmland or Farmland of Statewide Importance, important factors that make preservation of farmland a smart investment for the owners and the State. Kingwood also has nearly 5,700 acres of woodland under Farmland Assessment.

With about 1,300 farmland acres preserved to date, Kingwood has targeted farms within a project area predominantly comprised of farm assessed/qualified lands. Of the Farmland Preservation project area's 12,428.19 acres, 77% of the project area are farmland and preserved lands.

The farms targeted for preservation in Kingwood Township's are almost all made up of Statewide Important Soils affecting their cropland and pastureland value for continued agriculture. The PennEast Pipeline would traverse preserved farms and farms targeted for preservation along its route through Kingwood.

6. Impacts on Scenic and Visual, Cultural and Historic Resources

The DEIS states that "no registered natural landmarks, wilderness areas designated under the Wilderness Act, or scenic byways would be crossed or located within 0.25 mile of the Project." (DEIS pg. 4-147)

The DEIS goes on to describe the impacts on visual and scenic resources, which include "the removal of existing vegetation and the exposure of bare soils (...) grading scars (...) removal of large individual trees that have intrinsic aesthetic value (and) landform changes that introduce contrasts in visual scale, spatial characteristics, form, line, color, or texture."

The document characterizes the area that would be crossed by the pipeline as a "highly fragmented landscape," (DEIS pg. 4-148) which may be the impression from Google Maps aerials (which PennEast has indicated they used to evaluate the vast stretches of unsurveyed lands in New Jersey); however, in comparison with other areas of our highly developed state, this section of New Jersey contains some of the largest contiguous visual and scenic resources which is apparent from the "ground level."

The DEIS concludes that "with PennEast's proposed impact avoidance, minimization, and mitigation plans, and our recommendations (...) overall impacts on land use and visual resources would be adequately minimized."

The DEIS acknowledges that the PennEast Pipeline would cross the ecologically significant areas including:

1. The Sourland Mountain region within the Highlands Planning Area for about 9.5 miles. Though the project crosses this region near Goat Hill Overlook, FERC does not anticipate any "significant" impacts on the viewshed since the overlook and the Project would be separated by 0.75 mile of forest.
2. Everittstown Grassland

3. Pole Farm

The SDRP aims to “protect scenic qualities of forested areas that are visible from public roads, trails and waterways from visually intrusive land uses. Preserve these qualities through setback and other scenic corridor maintenance programs.” (SDRP pg. 156)

Cultural and historic resources are also an important contributing factor to the overall visual and scenic environment, especially in this historic and rural area of the State.

The DEIS acknowledges that “a sizable portion of the Project has not been investigated for cultural resources” and FERC recommends that PennEast “not begin construction until additional required surveys are completed, survey reports and treatment plans (if necessary) have been reviewed by the consulting parties and we provide written notification to proceed.” (DEIS pg. 5-14)

The DEIS concludes that the above surveys, and impact minimization measures proposed by PennEast, would “ensure that any adverse effects on cultural resources would be appropriately mitigated.” (DEIS pg. 5-14)

Again, this conclusion seems premature given the “sizable portion” of the pipeline route that has not been investigated. This information should be required prior to issuance of a Certificate so that FERC can utilize the results of the investigations in its decision making.

The pipeline would cross 6 historic districts listed on the National Register of Historic Places:

- Pursley’s Ferry Historic District
- Amsterdam Historic District
- Covered Bridge Historic District
- Rosemont Rural Agricultural District
- Sergeantsville Historic District
- Pleasant Valley Historic District

The State Plan’s Policy 21 under “Infrastructure Investments and Historic, Cultural and Scenic Resources” is to “Provide infrastructure in ways that ensure the preservation and renewal of historic, artistic, archaeological, aesthetic, scenic and other cultural resources, and that protect these resources from the direct, indirect and cumulative impacts of installing infrastructure and induced development.” (SDRP pg. 123) The State Plan also states that “any development in the Environs should be planned and located to maintain or enhance the cultural and scenic qualities”. (SDRP pg. 209)

The Plan also notes that “the recreation and tourism sector, a growing portion of New Jersey’s economy, is heavily dependent on careful management of these lands and the services rural towns and villages can provide for visitors.” (SDRP pg. 206-207)

Delaware Township’s Plans and Policies – Scenic and Visual, Cultural and Historic Resources

Delaware Township’s 2012 Master Plan Reexamination Report noted that “standards should be developed and implemented by ordinance for maintaining the character and scenic beauty of the land along and from the Township’s rural roads. Scenic views should be regarded as a non-renewable resource. Open space acquisition efforts should be expanded to include parcels that contribute to the Township’s rural beauty, since scenic views cannot be recreated easily and are harder to protect through regulation than other State-regulated natural resources.”

The 2012 Reexamination Report also asserted that “The Township should develop and implement aggressive and innovative zoning strategies and incentives designed to maintain the Township’s historic rural character.”

Delaware Township is home to several historic districts listed on the State and National Historic Registers, and to many individual historic properties.

The Township’s Open Space Component and Recreation Element discussed the importance of historic resources, stating that these historic properties are the “foundation of the cultural landscape that Delaware Township enjoys.” The Plan drew attention to the fact that historic properties include more than just the structures, since “unfortunately, historic properties lose their significance when they lose the landscape that gives them their setting in time.”

Hopewell Township’s Plans and Policies – Scenic and Visual, Cultural and Historic Resources

Hopewell Township’s residents enjoy its scenic vistas and historic rural character. The Conservation Plan Element points to “the open fields and meadows, the calming influences of free-flowing streams and rivers, and the beauty of forested slopes” as “a legacy for future generations.”

The Township’s Conservation Plan Element notes that “scenic character is an important element in the general perception of the quality of life in Hopewell Township. The protection of scenic vistas, particularly those seen from public rights-of-way, will serve to maintain the Township’s rural character,” and recommends that “Design standards should be developed to guide the location and configuration of development, in order to protect the various categories of attractive views, including enclosed roadside views, extended roadside views, and distance views.”

Kingwood Township’s Plans and Policies – Scenic and Visual, Cultural and Historic Resources

Kingwood’s Conservation Plan outlines the following goal related to “Scenic Views and Vistas”:

“GOAL: Identify and protect undisturbed hillside, ridgeline, and steep slope views and vistas, particularly the Delaware River Corridor, open fields, forests, and historic landscapes, for the scenic enjoyment of all NJ citizens and to maintain the rural quality of the Township.”

The Conservation Plan notes that scenic views and vistas can provide a look into the past, pointing to the historic mills on streams, farm fields and farmsteads narrow winding rural roads that wind through farms and hug the hillside.

The forests that remain in this largely agricultural landscape are generally found along stream corridors or in areas where the topography discourages farming.

The Township’s goal is to balance the protection of scenic resources against *a private property owner’s right to use their land*. These rights are conferred on the owners through the master plan and zoning ordinance and apply to all lands in the Township. When FERC authorizes a pipeline, it is not authorizing a private property owner to use his or her land for a permitted use, but rather is authorizing a non-owner to interfere with the property rights of the lawful owner.

V. Conclusions

As shown herein, there are plans and policies in place at a local, regional and state level that FERC must examine to identify conflicts with the proposed pipeline plans. Delaware, Hopewell and Kingwood Townships have each demonstrated a long-standing commitment to responsible, environmentally-protective land use policies. The Master Planning documents and municipal ordinances are readily available for review by FERC.

The DEIS repeatedly acknowledges the lack of complete information with regard to impacts on various resources, yet concludes, for most resources, that impacts would be “effectively minimized or mitigated.”

Environmental features and resources are interrelated and impacts to one resource can have far-reaching consequences for seemingly unrelated resources. For this reason, *any* lack of information with regard to existing conditions and land features would have repercussions for the conclusions drawn by FERC not only for that particular feature, but for all other interrelated features.

The fact that multiple categories of natural and manmade features (wetlands, vernal pools, cultural and historic resources, structures, wells, and septic tanks, etc) remain unidentified and/or unverified by PennEast make it almost certain that there are serious oversights in terms of impacts on the local landscape, environment and ecology as identified by FERC in the DEIS.

It is my professional opinion that the DEIS is incomplete, invalid and does not represent a genuine effort to determine the extent of impacts on New Jersey's communities. The proposed PennEast Pipeline would have serious consequences and would irreversibly alter the existing local character that these communities have worked for decades to protect and preserve.

Attachment A

Municipal Land Use Law Purposes (N.J.S.A. 40:55D-2)

(italics added)

- a. To encourage municipal action to guide the appropriate use or development of all lands in this State, in a manner which will *promote the public health, safety, morals, and general welfare*;
- b. To *secure safety from fire, flood, panic and other natural and man-made disasters*;
- c. To *provide adequate light, air and open space*;
- d. To ensure that the development of individual municipalities does not conflict with the development and general welfare of neighboring municipalities, the county and the State as a whole;
- e. To *promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods, communities and regions and preservation of the environment*;
- f. To encourage the appropriate and efficient expenditure of public funds by the coordination of public development with land use policies;
- g. To *provide sufficient space in appropriate locations for a variety of agricultural, residential, recreational, commercial and industrial uses and open space, both public and private, according to their respective environmental requirements in order to meet the needs of all New Jersey citizens*;
- h. To encourage the location and design of transportation routes which will promote the free flow of traffic while discouraging location of such facilities and routes which result in congestion or blight;
- i. To promote *a desirable visual environment* through creative development techniques and good civic design and arrangement;
- j. To promote the *conservation of historic sites and districts, open space, energy resources and valuable natural resources* in the State and to *prevent urban sprawl and degradation of the environment through improper use of land*;
- k. To encourage planned unit developments which incorporate the best features of design and relate the type, design and layout of residential, commercial, industrial and recreational development to the particular site;
- l. To encourage senior citizen community housing construction;
- m. To encourage coordination of the various public and private procedures and activities shaping land development with a view of lessening the cost of such development and to the more efficient use of land;
- n. To *promote utilization of renewable energy resources*; and
- o. To *promote the maximum practicable recovery and recycling* of recyclable materials from municipal solid waste through the use of planning practices designed to incorporate the State Recycling Plan goals and to complement municipal recycling programs.
- p. To enable municipalities the flexibility to offer alternatives to traditional development, through the use of equitable and effective planning tools including clustering, transferring development rights, and lot-size averaging in order to concentrate development in areas where growth can best be accommodated and maximized while preserving agricultural lands, open space, and historic sites.

Attachment B

Contents of a Master Plan per N.J.S.A. 40:55D–28b and c

- b. The master plan shall generally comprise a report or statement and land use and development proposals, with maps, diagrams and text, presenting, at least the following elements (1) and (2) and, where appropriate, the following elements (3) through (16):
- (1) A statement of objectives, principles, assumptions, policies and standards upon which the constituent proposals for the physical, economic and social development of the municipality are based;
 - (2) A land use plan element
 - (a) taking into account and stating its relationship to the statement provided for in paragraph (1) hereof, and other master plan elements provided for in paragraphs (3) through (14) hereof and natural conditions, including, but not necessarily limited to, topography, soil conditions, water supply, drainage, flood plain areas, marshes, and woodlands;
 - (b) showing the existing and proposed location, extent and intensity of development of land to be used in the future for varying types of residential, commercial, industrial, agricultural, recreational, open space, educational and other public and private purposes or combination of purposes including any provisions for cluster development; and stating the relationship thereof to the existing and any proposed zone plan and zoning ordinance; and
 - (c) showing the existing and proposed location of any airports and the boundaries of any airport safety zones delineated pursuant to the “Air Safety and Zoning Act of 1983,” P.L.1983, c.260 (C.6:1-80 et al.); and
 - (d) including a statement of the standards of population density and development intensity recommended for the municipality;
 - (3) A housing plan element pursuant to section 10 of P.L.1985, c.222 (C.52:27D-310), including, but not limited to, residential standards and proposals for the construction and improvement of housing;
 - (4) A circulation plan element showing the location and types of facilities for all modes of transportation required for the efficient movement of people and goods into, about, and through the municipality, taking into account the functional highway classification system of the Federal Highway Administration and the types, locations, conditions and availability of existing and proposed transportation facilities, including air, water, road and rail;
 - (5) A utility service plan element analyzing the need for and showing the future general location of water supply and distribution facilities, drainage and flood control facilities, sewerage and waste treatment, solid waste disposal and provision for other related utilities, and including any storm water management plan required pursuant to the provisions of P.L.1981, c.32 (C.40:55D-93 et al.). If a municipality prepares a utility service plan element as a condition for adopting a development transfer ordinance pursuant to subsection c. of section 4 of P.L.2004, c.2 (C.40:55D-140), the plan element shall address the provision of utilities in the receiving zone as provided thereunder;
 - (6) A community facilities plan element showing the existing and proposed location and type of educational or cultural facilities, historic sites, libraries, hospitals, firehouses,

police stations and other related facilities, including their relation to the surrounding areas;

(7) A recreation plan element showing a comprehensive system of areas and public sites for recreation;

(8) A conservation plan element providing for the preservation, conservation, and utilization of natural resources, including, to the extent appropriate, energy, open space, water supply, forests, soil, marshes, wetlands, harbors, rivers and other waters, fisheries, endangered or threatened species wildlife and other resources, and which systemically analyzes the impact of each other component and element of the master plan on the present and future preservation, conservation and utilization of those resources;

(9) An economic plan element considering all aspects of economic development and sustained economic vitality, including

(a) a comparison of the types of employment expected to be provided by the economic development to be promoted with the characteristics of the labor pool resident in the municipality and nearby areas and

(b) an analysis of the stability and diversity of the economic development to be promoted;

(10) An historic preservation plan element:

(a) indicating the location and significance of historic sites and historic districts;

(b) identifying the standards used to assess worthiness for historic site or district identification; and

(c) analyzing the impact of each component and element of the master plan on the preservation of historic sites and districts;

(11) Appendices or separate reports containing the technical foundation for the master plan and its constituent elements;

(12) A recycling plan element which incorporates the State Recycling Plan goals, including provisions for the collection, disposition and recycling of recyclable materials designated in the municipal recycling ordinance, and for the collection, disposition and recycling of recyclable materials within any development proposal for the construction of 50 or more units of single-family residential housing or 25 or more units of multi-family residential housing and any commercial or industrial development proposal for the utilization of 1,000 square feet or more of land;

(13) A farmland preservation plan element, which shall include: an inventory of farm properties and a map illustrating significant areas of agricultural land; a statement showing that municipal ordinances support and promote agriculture as a business; and a plan for preserving as much farmland as possible in the short term by leveraging moneys made available by P.L.1999, c.152 (C.13:8C-1 et al.) through a variety of mechanisms including, but not limited to, utilizing option agreements, installment purchases, and encouraging donations of permanent development easements;

(14) A development transfer plan element which sets forth the public purposes, the locations of sending and receiving zones and the technical details of a development transfer program based on the provisions of section 5 of P.L.2004, c.2 (C.40:55D-141);

(15) An educational facilities plan element which incorporates the purposes and goals of the "long-range facilities plan" required to be submitted to the Commissioner of Education by a school district pursuant to section 4 of P.L.2000, c.72 (C.18A:7G-4); and

(16) A green buildings and environmental sustainability plan element, which shall provide for, encourage, and promote the efficient use of natural resources and the installation and usage of renewable energy systems; consider the impact of buildings on the local, regional and global environment; allow ecosystems to function naturally; conserve and reuse water; treat storm water on-site; and optimize climatic conditions through site orientation and design.

c. The master plan and its plan elements may be divided into subplans and subplan elements projected according to periods of time or staging sequences. d. The master plan shall include a specific policy statement indicating the relationship of the proposed development of the municipality, as developed in the master plan to

(1) the master plans of contiguous municipalities,

(2) the master plan of the county in which the municipality is located,

(3) the State Development and Redevelopment Plan adopted pursuant to the “State Planning Act,” sections 1 through 12 of P.L.1985, c.398 (C.52:18A-196 et seq.) and

(4) the district solid waste management plan required pursuant to the provisions of the “Solid Waste Management Act,” P.L.1970, c.39 (C.13:1E-1 et seq.) of the county in which the municipality is located. In the case of a municipality situated within the Highlands Region, as defined in section 3 of P.L.2004, c.120 (C.13:20-3), the master plan shall include a specific policy statement indicating the relationship of the proposed development of the municipality, as developed in the master plan, to the Highlands regional master plan adopted pursuant to section 8 of P.L.2004, c.120 (C.13:20-8).

BANISCH

ASSOCIATES, INC.

Planning and Design

FRANCIS J. BANISCH, III

EDUCATION

Bachelor of Arts, Princeton University, 1972

Major: Architecture and Urban Planning

PROFESSIONAL EXPERIENCE

1976 - Present **President, Banisch Associates, Inc.**
Community Planning and Design Consultants
Flemington, New Jersey

Senior associate and principal of planning and design firm specializing in visioning, resource management plans, redevelopment plans, historic preservation, growth management programs, master plan and zoning ordinance preparation, municipal planning, subdivision and site plan review and preparation, environmental analysis and conceptual design plans.

Professional responsibilities, in addition to the services listed above, have included administering several low- and moderate-income housing programs, including rehabilitation programs and Regional Contribution Agreements (RCA's), representing municipalities and clients in Superior Court and administrative agency actions, serving as Court-appointed master in Mt. Laurel litigation, preparing contracts and work programs, and supervising planning, drafting, technical and clerical personnel.

1972-1976 **Associate, Alvin E. Gershen Associates**
Trenton, New Jersey

Assisted municipal clients with Master Plan studies, continuing planning programs, ordinance preparation, housing programs and numerous special studies, development reviews including planned developments and major commercial projects.

Assisted private clients in preparation of conceptual subdivision and site plan designs and testimony before review agencies.

111 Main Street, Flemington, NJ 08822

908-782-0835/908-782-7636(fax) banisch@banisch.com

PROFESSIONAL AFFILIATIONS AND LICENSURE

- Member, American Institute of Certified Planners
- Licensed Professional Planner in New Jersey since 1975 (#1686)
- Member, American Planning Association
- Member, New Jersey Association of Consulting Planners

PROFESSIONAL ACTIVITIES AND ACHIEVEMENTS

- Member, Board of Counselors, New Jersey Planning Officials
- Member, Municipal Land Use Law Technical Review Committee (NJ League of Municipalities)
- Member, State Planning Commission Rural Policy Technical Advisory Committee
- Regular lecturer for the New Jersey Planning Officials, New Jersey League of Municipalities and the New Jersey Chapter of the American Planning Association
- Adjunct professor for Rutgers University, Office of Continuing Education
- Mayor's designee on Municipal Council in development of Pinelands Comprehensive Management Plan
- Member, Cultural Resource Management Plan Advisory Committee to Pinelands Commission

PUBLICATIONS

- Fair Share Methodologies: Improved Approaches to Need Calculation and Distribution by Frank Banisch and Mary Winder, New Jersey Federation of Planning Officials Special Report.
- The New Jersey Municipal Master Plan Manual, Chapter 20, "The Conservation Plan Element", New Jersey Planning Officials, 1998.
- "Coastal Storm Hazard Mitigation Strategies for Strathmere and Whale Beach, Upper Township, Cape May County, NJ", by Francis J. Banisch III, PP/AICP and Peter J. Pizor, Ph.D., June 1986.

BROADCAST

- "Innovations" (PBS television) highlighting early use of Geographic Information Systems (GIS) to assist in developing local planning and policy recommendations.

SUPERIOR COURT CASES

- On behalf of the Township of Pemberton, Burlington County, in the matter of State of New Jersey v. Pemberton Township
- On behalf of the Township of Holmdel, Monmouth County, in the matter of Support Development Corporation v. Holmdel Township, et al.
- On behalf of the Township of Bedminster, Somerset County, in the matter of F. M. Kirby v. Bedminster Township
- On behalf of the Randolph Investors, in the matter of Randolph Investors v. Readington Township
- On behalf of Pemberton Borough, Burlington County, in the matter of G & F Assoc. v. Pemberton Borough
- On behalf of the Township of Mt. Olive, Morris County, in the matter of Interverse Enterprises, Inc. v. Mt. Olive Township
- On behalf of the Township of Readington, Hunterdon County, in the matters of Lackland and Lackland, et al v. Readington Township, et als, Illva Saronno Corp. v. Readington Township, and Toll Brothers, Inc. v. Readington Township, et als.
- On behalf of the Township of Washington, Morris County, in the matter of Fellows et al v. Washington Township, et al.
- On behalf of the Township of Washington, Morris County, in the matter of Rand, et al v. Washington Township, et al.
- On behalf of East Amwell Township, Hunterdon County, in the matter of NJ Farm Bureau, et al v. East Amwell Township, et al.
- On behalf of East Brunswick Township, Middlesex County, in the matter of Bailes, et al v. East Brunswick Township, et al.
- On behalf of Bernards Township, Somerset County, in the matter of Millington Quarry, Inc., v. Bernards Township

COURT APPOINTED MASTER

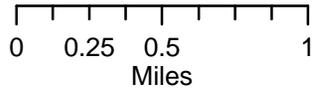
- EAI Investments, LLC v. Pohatcong Planning Board, et al. (appointment by Honorable Roger Mahon, JSC)
- Alpha 519, LLC v. Borough of Alpha, et al. (appointment by Honorable Roger Mahon, JSC)
- Woolwich Adult, LLC v. Woolwich Township, et al. (appointment by Honorable James Rafferty, JSC)
- “In the Matter of the Application of the Township of Delanco” (appointment by Honorable John Sweeney, JSC)
- “In the Matter of Borough of Gibbsboro” (appointment by Honorable Allen Vogelson, PJCh)
- “In the Matter of Borough of Shrewsbury” (appointment by Honorable Robert Coogan, JSC)
- “In the Matter of Township of Wall” (appointment by Honorable Robert Coogan, JSC)

- “In the Matter of D’Anastasio Corporation v. Borough of Woodstown” (appointment by Honorable James Rafferty, JSC)
- “In the Matter of the Application of the Borough of North Caldwell, County of Essex” (appointment by Honorable Francine Schott, JSC)
- “In the Matter of the Application of the Borough of Monmouth Beach” (appointment by Honorable Robert Coogan, JSC)
- “In the Matter of the Application of the Township of Hopewell” (appointment by Honorable James Rafferty, PJGE)
- “In the matter of Application of the Township of Chesterfield” (appointment by Honorable Ronald Bookbinder, AJSC)
- “In the matter of the Application of the Township of Oldmans” (appointment by Honorable James Rafferty, PJGE)
- “In the matter of the Application of the Township of Pittsgrove” (appointment by Honorable James Rafferty, PJGE)
- BVB II Associates v. Township of Ocean, et al; Avalon Bay Communities, Inc. v. Township of Ocean, et al, Roosevelt Properties, LLC v. Township of Ocean, et al (appointment by Honorable Paul Kapalko, JSC)
- “In the matter of Application of the Township of Mantua” (appointment by Honorable Anne McDowell, PJGE)

Figure 1: Surface Waters

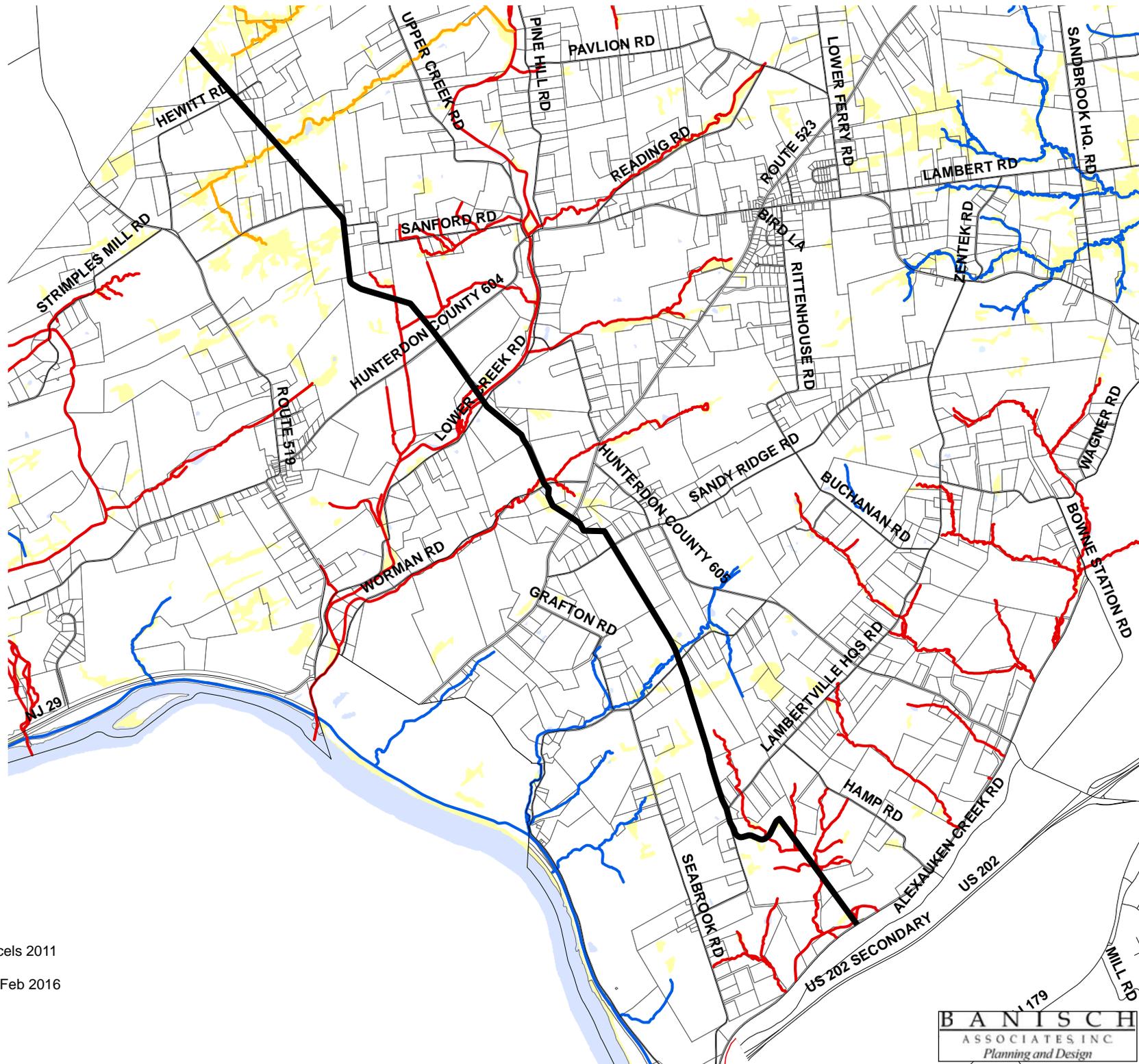
Proposed Penneast Pipeline
Delaware Township
Hunterdon County, NJ

September 2016



Legend

- Proposed Pipeline
- FW1
- FW2-NT
- FW2-TM
- FW2-NTC1
- FW2-TMC1
- FW2-IPC1
- Water
- Wetlands



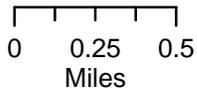
Data Sources:
NJDEP 2012 Land Use Land Cover
NJDEP SWQS Water Quality v2012
Hunterdon County Planning Board Parcels 2011
NJDOT Roadway Network 2011
Penneast Pipeline prepared by AECOM Feb 2016

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 2: 2012 Land Use Land Cover

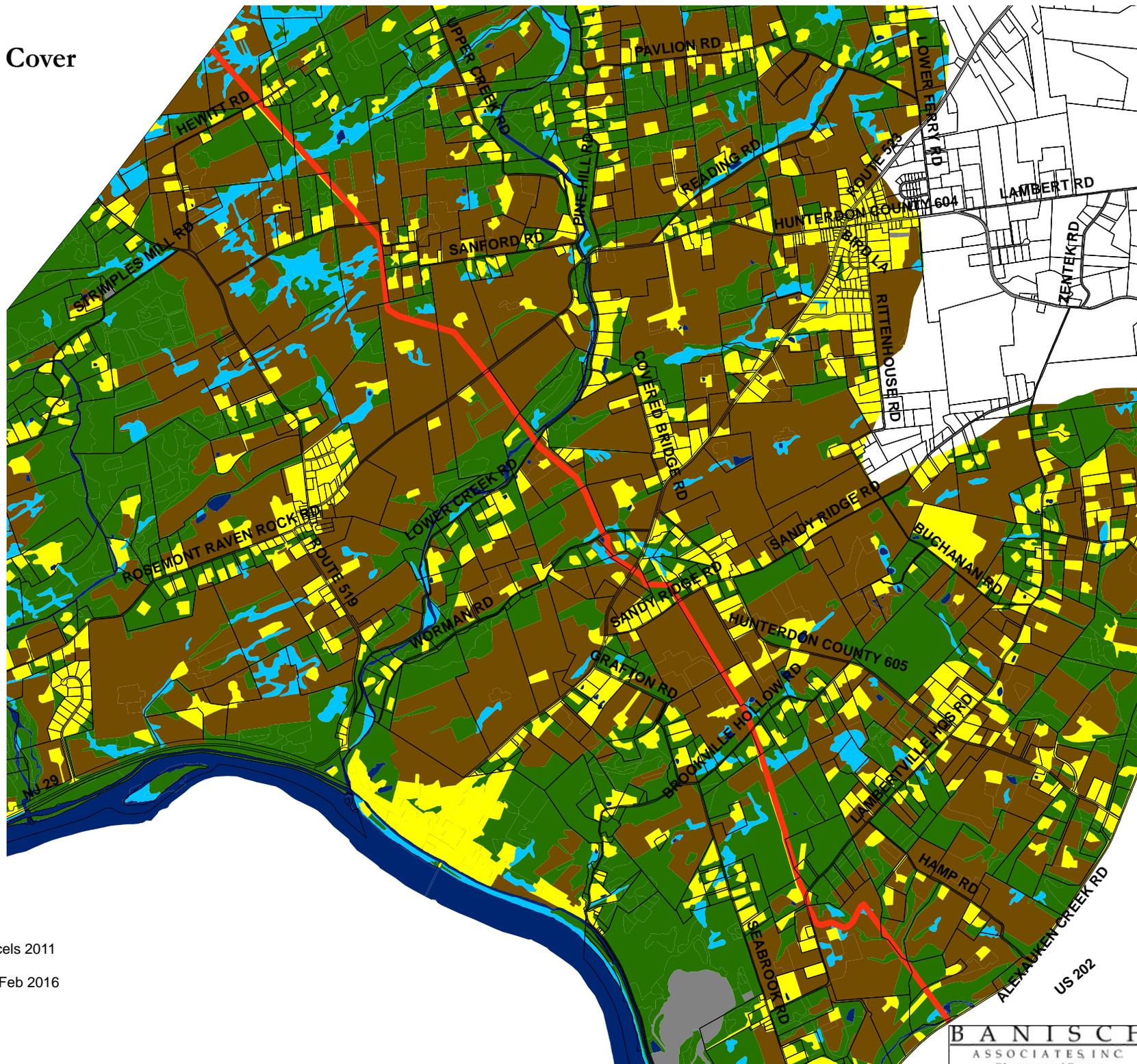
Proposed Penneast Pipeline
Delaware Township
Hunterdon County, NJ

September 2016



Legend

-  Proposed Pipeline
-  Agriculture
-  Barren Land
-  Forest
-  Urban
-  Water
-  Wetlands

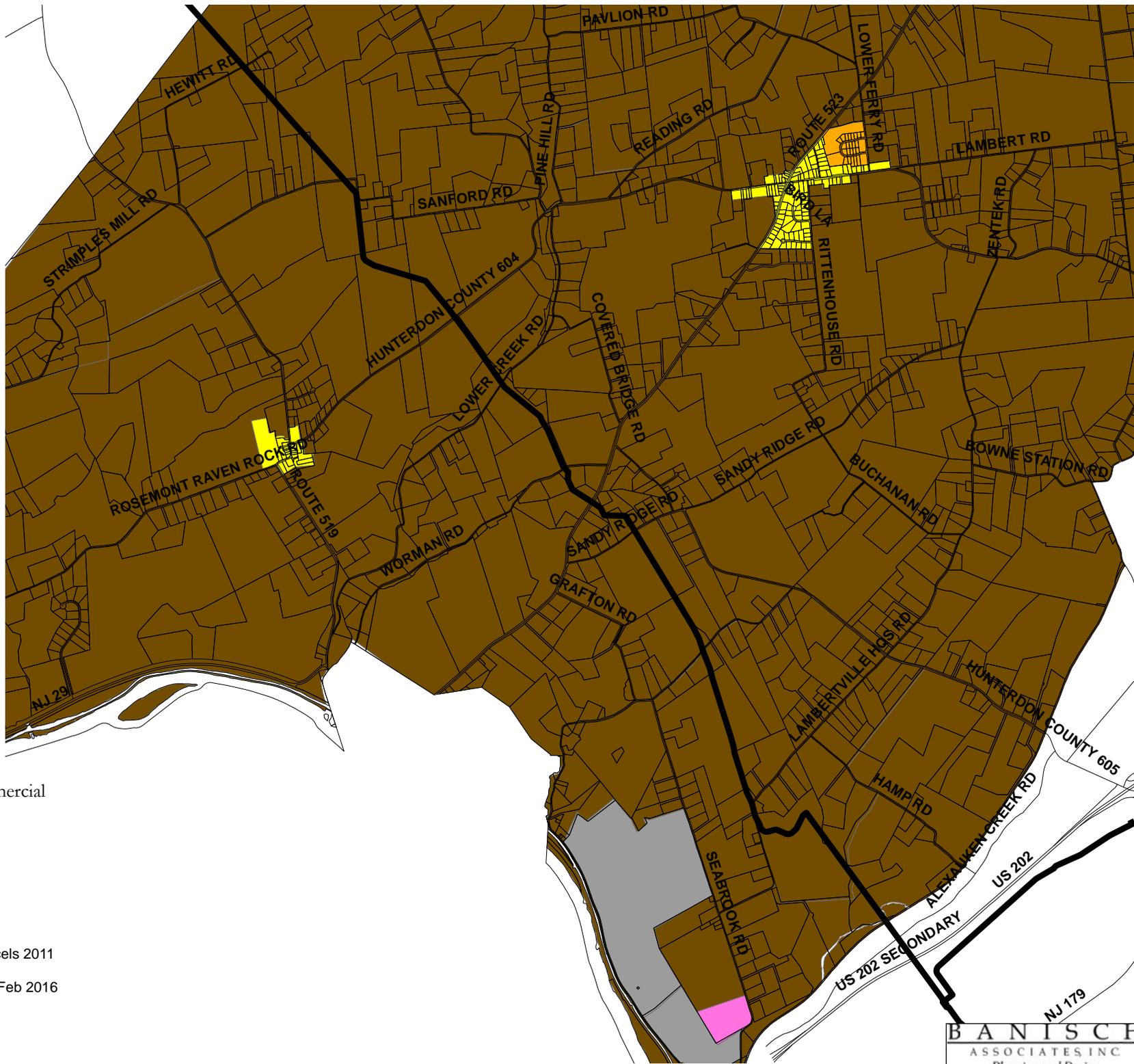


Data Sources:
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Hunterdon County Planning Board Parcels 2011
NJDOT Roadway Network 2011
Penneast Pipeline prepared by AECOM Feb 2016

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 3:
Land Use Plan
 Proposed Penneast Pipeline
 Delaware Township
 Hunterdon County, NJ

September 2016



Legend

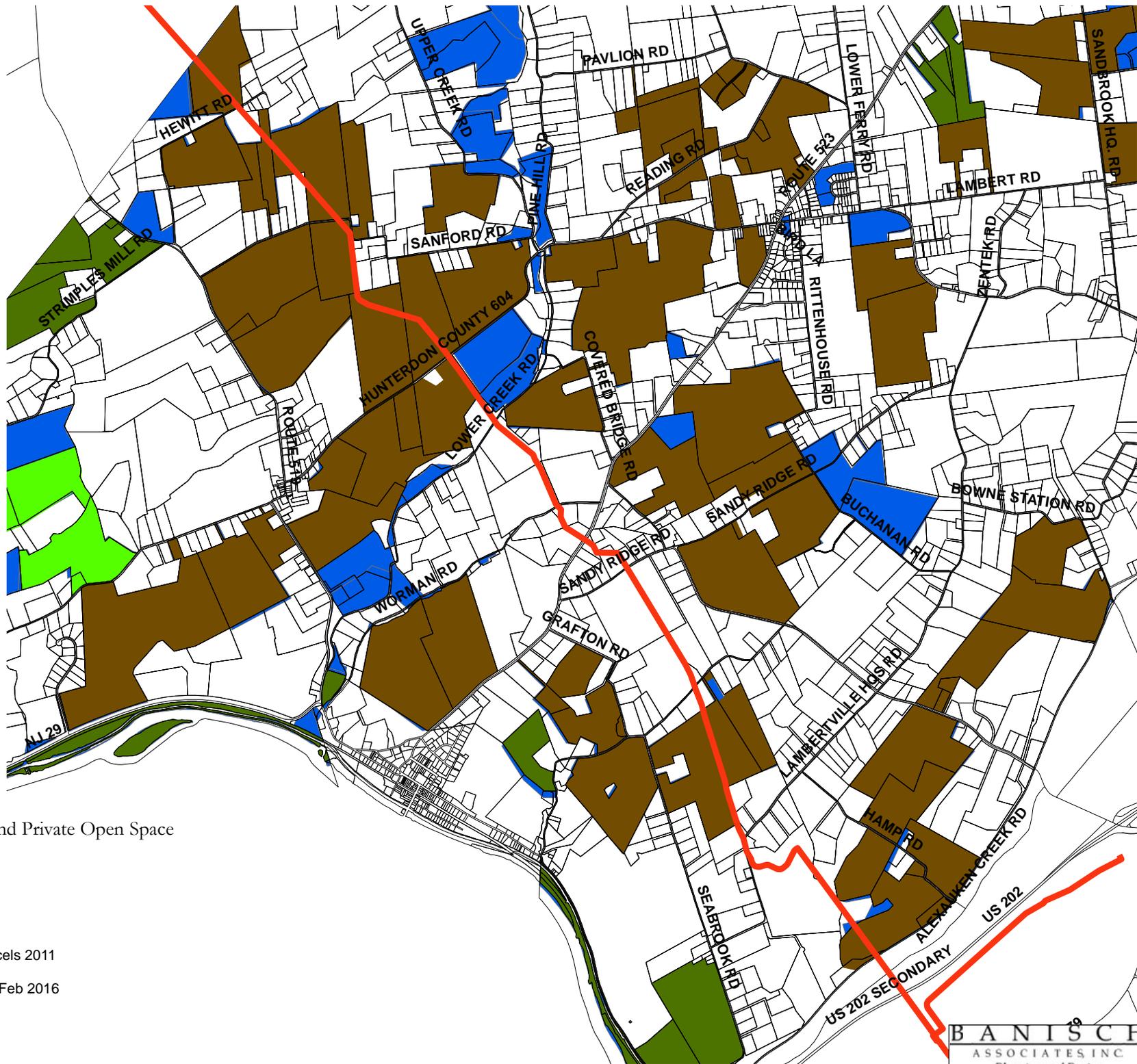
-  Proposed Pipeline
-  Agricultural/Residential
-  Garden Apartments
-  Quarry Industrial
-  Village Residential/Commercial
-  Village Zone

Data Sources:
 NJDEP State Open Space v2016
 NJDEP County Open Space v2016
 NJDEP NJFPP v2016
 Hunterdon County Planning Board Parcels 2011
 NJDOT Roadway Network 2011
 Penneast Pipeline prepared by AECOM Feb 2016

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 4:
Open Space and
Preserved Farmland
 Proposed Penneast Pipeline
 Delaware Township
 Hunterdon County, NJ

September 2016



Legend

- Proposed Pipeline
- Preserved Farmland
- County Open Space
- State Open Space
- Township, Non-Profit and Private Open Space

Data Sources:
 NJDEP State Open Space v2016
 NJDEP County Open Space v2016
 NJDEP NJFPP v2016
 Hunterdon County Planning Board Parcels 2011
 NJDOT Roadway Network 2011
 Penneast Pipeline prepared by AECOM Feb 2016

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Figure 5: Surface Waters

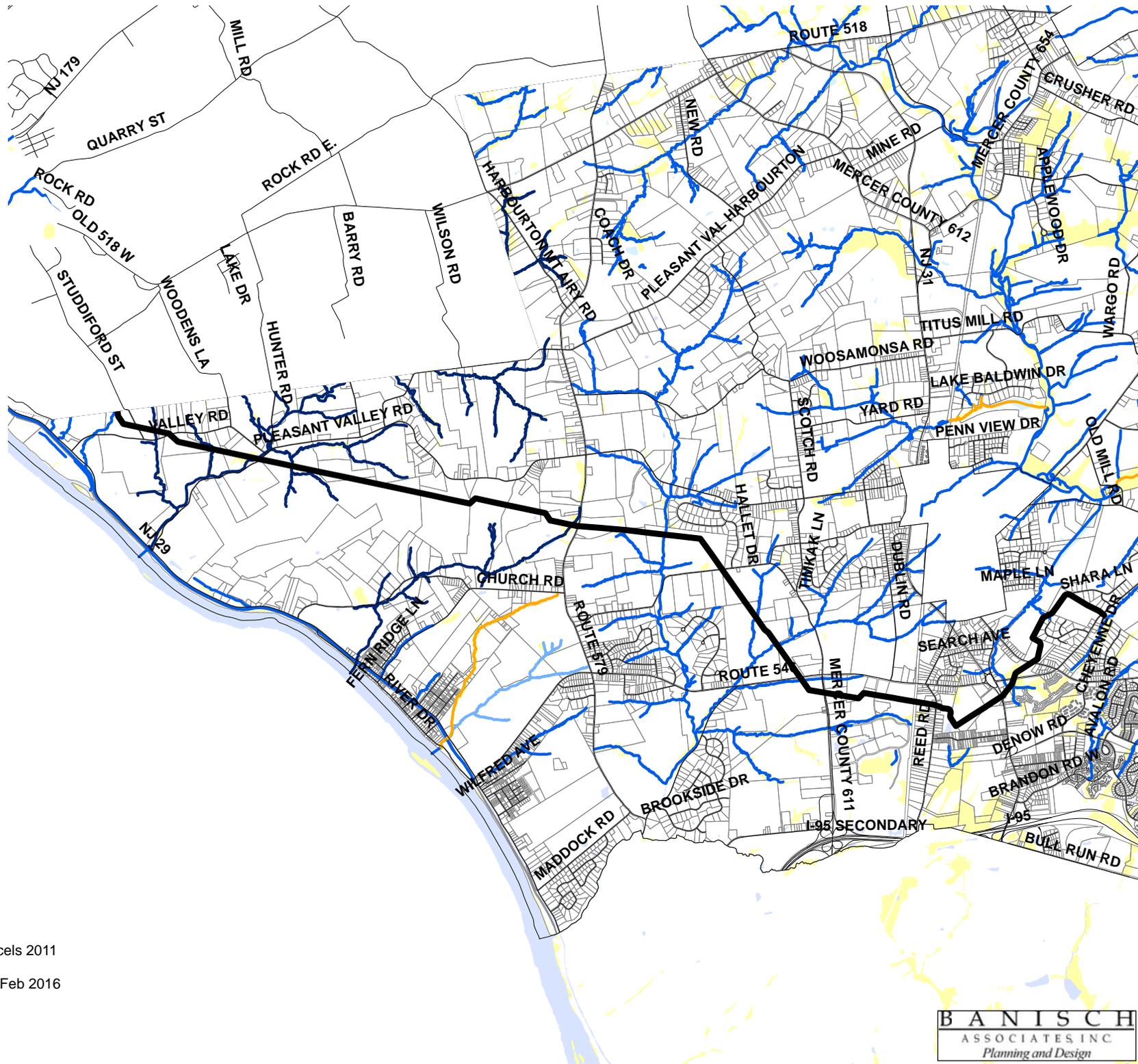
Proposed Penneast Pipeline
Hopewell Township
Mercer County, NJ

September 2016



Legend

-  Proposed Pipeline
-  FW1
-  FW2-NT
-  FW2-TM
-  FW2-NTC1
-  FW2-TMC1
-  FW2-TPC1
-  Water
-  Wetlands



Data Sources:
NJDEP 2012 Land Use Land Cover
NJDEP SWQS Water Quality v2012
Hunterdon County Planning Board Parcels 2011
NJDOT Roadway Network 2011
Penneast Pipeline prepared by AECOM Feb 2016

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 6: 2012 Land Use Land Cover

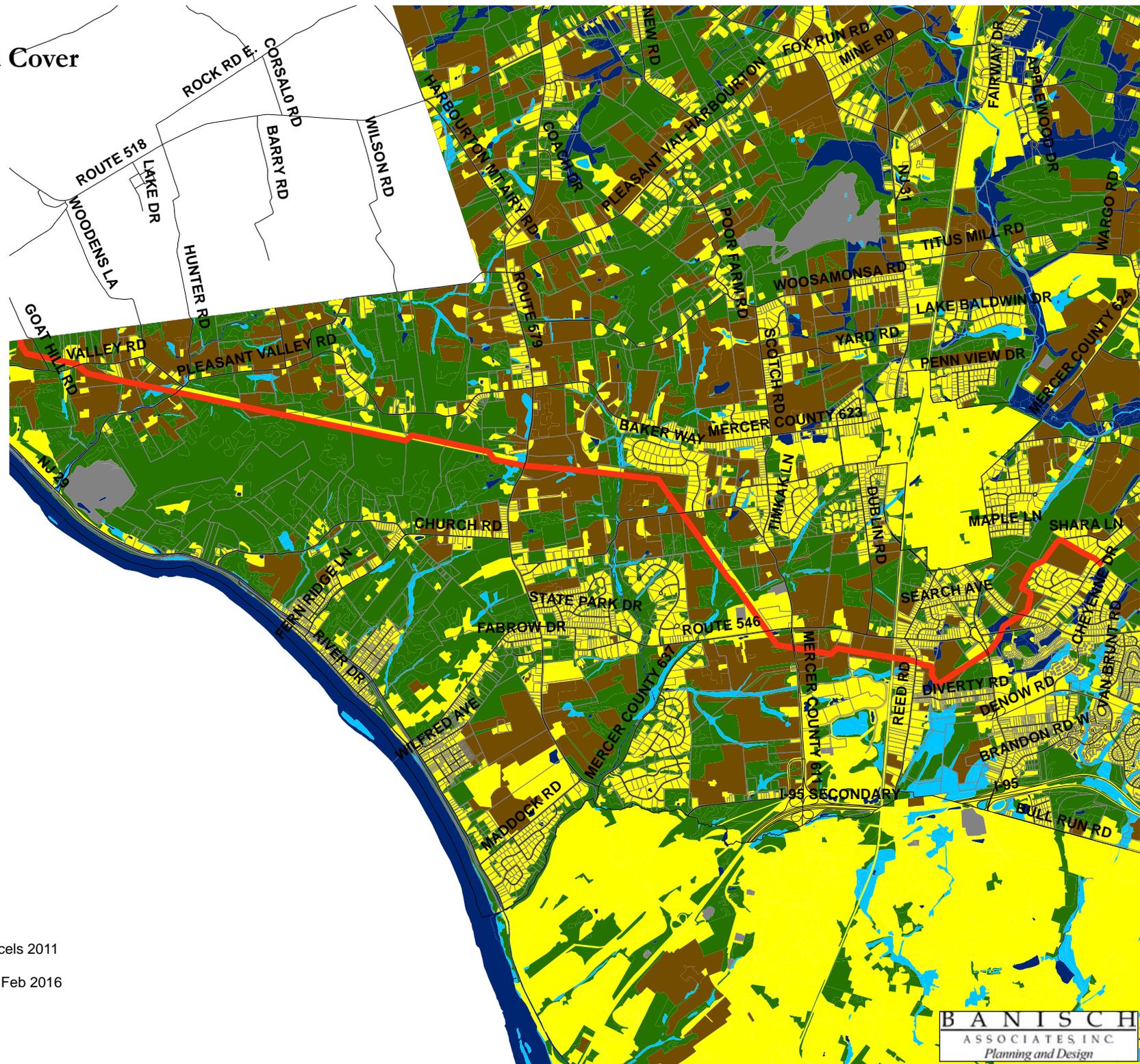
Proposed Penneast Pipeline
Hopewell Township
Mercer County, NJ

September 2016



Legend

-  Proposed Pipeline
-  Agriculture
-  Barren Land
-  Forest
-  Urban
-  Water
-  Wetlands



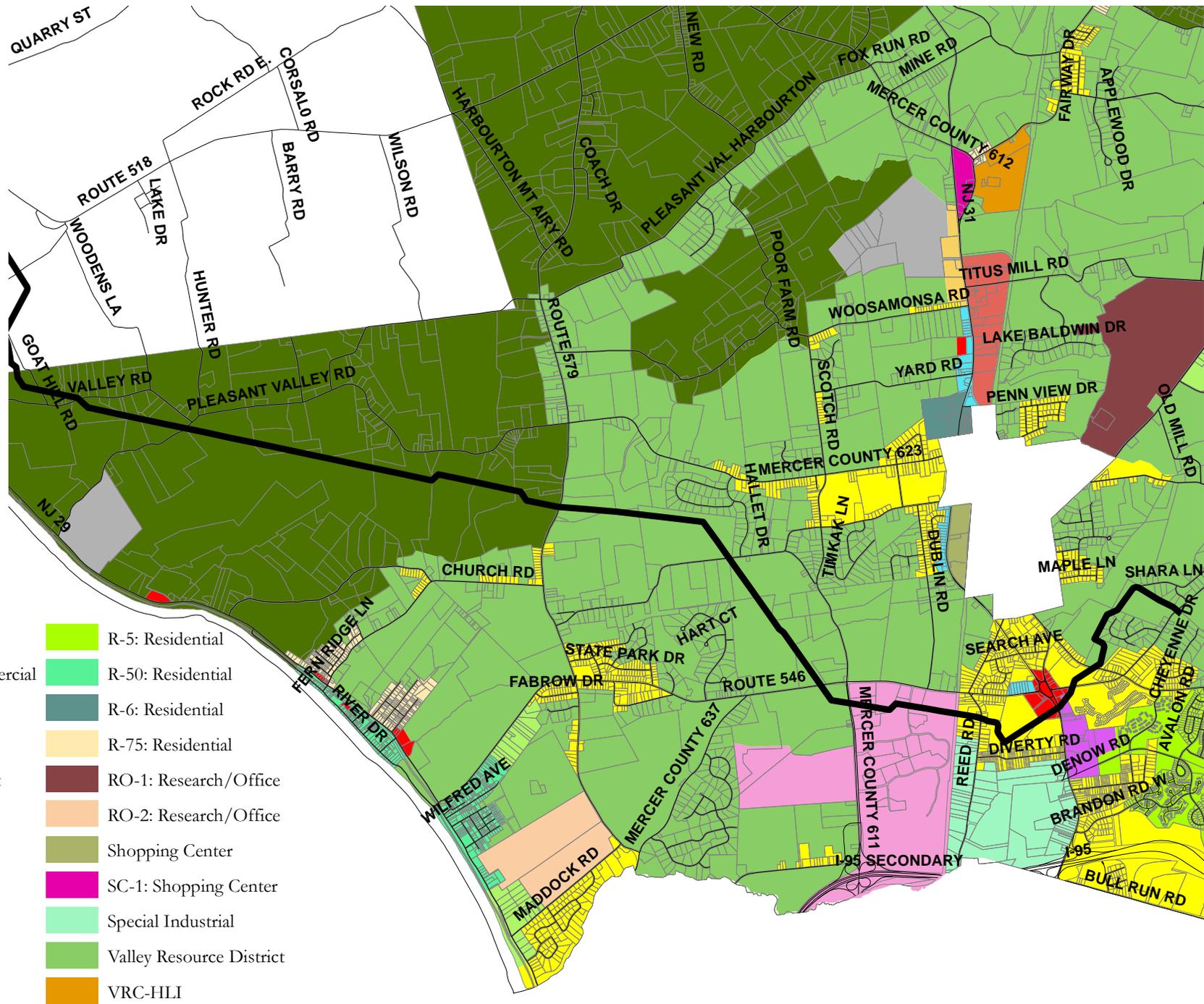
Data Sources:
NJDEP 2012 Land Use Land Cover
Hunterdon County Planning Board Parcels 2011
NJDOT Roadway Network 2011
Penneast Pipeline prepared by AECOM Feb 2016

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 7: Land Use Plan

Proposed Penneast Pipeline
Hopewell Township
Mercer County, NJ

September 2016



Legend

- | | | | |
|--|------------------------------|--|--------------------------|
| | Proposed Pipeline | | R-5: Residential |
| | C-1: Neighborhood Commercial | | R-50: Residential |
| | Highway Business Office | | R-6: Residential |
| | Industrial/Commercial | | R-75: Residential |
| | Mountain Resource District | | RO-1: Research/Office |
| | Office/Commercial | | RO-2: Research/Office |
| | Office Light Industrial | | Shopping Center |
| | Office Professional | | SC-1: Shopping Center |
| | Quarry | | Special Industrial |
| | R-100: Residential | | Valley Resource District |
| | R-150: Residential | | VRC-HLI |

Data Sources:
 NJDEP State Open Space v2016
 NJDEP County Open Space v2016
 NJDEP NJFPP v2016
 Mercer County Planning Board Parcels 2011
 NJDOT Roadway Network 2011
 Penneast Pipeline prepared by AECOM Feb 2016

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 8:
Open Space and
Preserved Farmland
 Proposed Penneast Pipeline
 Hopewell Township
 Mercer County, NJ

September 2016

Legend

- Proposed Pipeline
- Preserved Farmland
- County Open Space
- State Open Space
- Non-Profit and Private Open Space



Data Sources:
 NJDEP State Open Space v2016
 NJDEP County Open Space v2016
 NJDEP NJFPP v2016
 Mercer County Planning Board Open Space 2010
 Mercer County Planning Board Parcels 2010
 NJDOT Roadway Network 2011
 Penneast Pipeline prepared by AECOM Feb 2016

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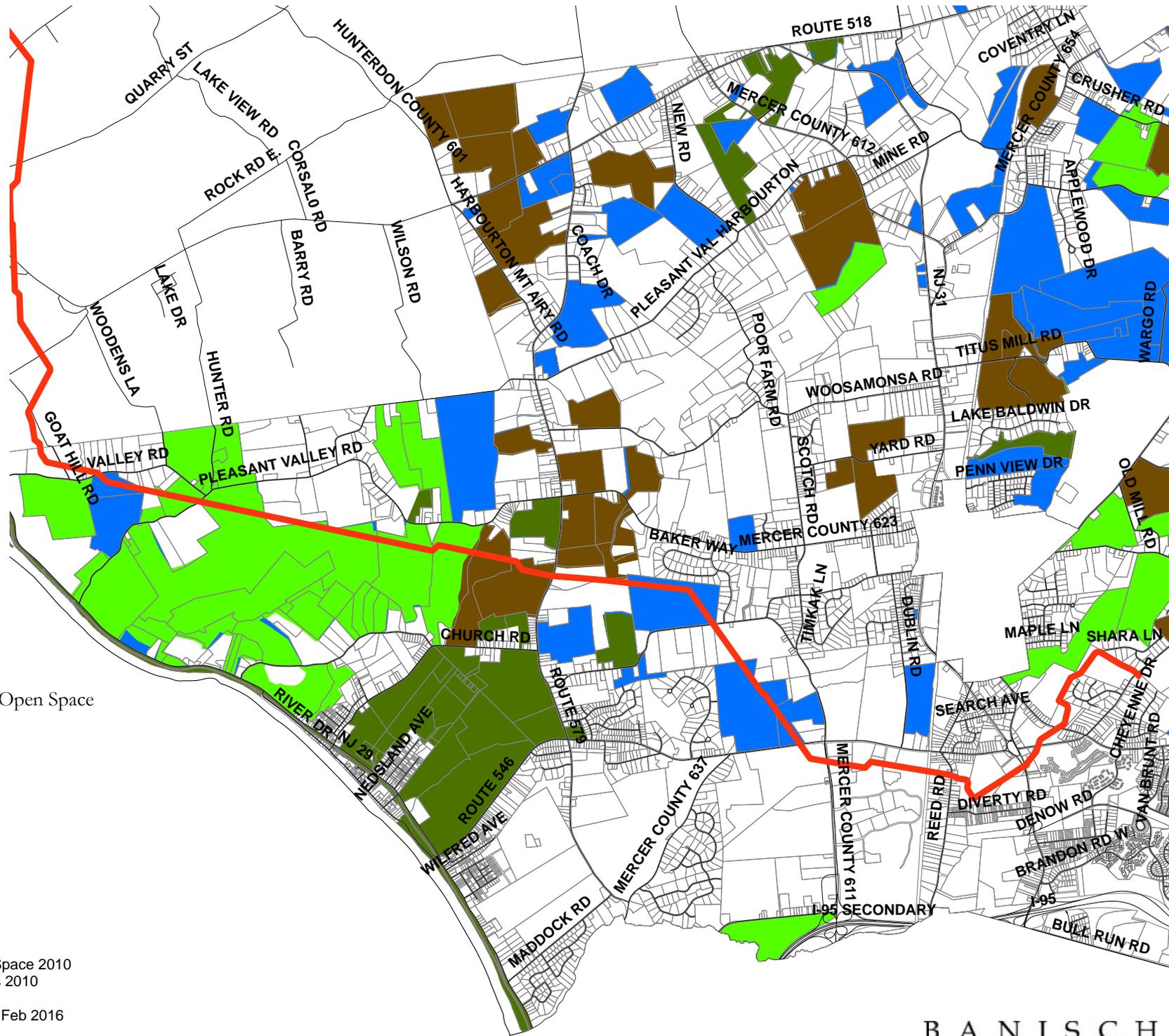
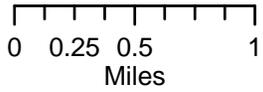


Figure 9: Surface Waters

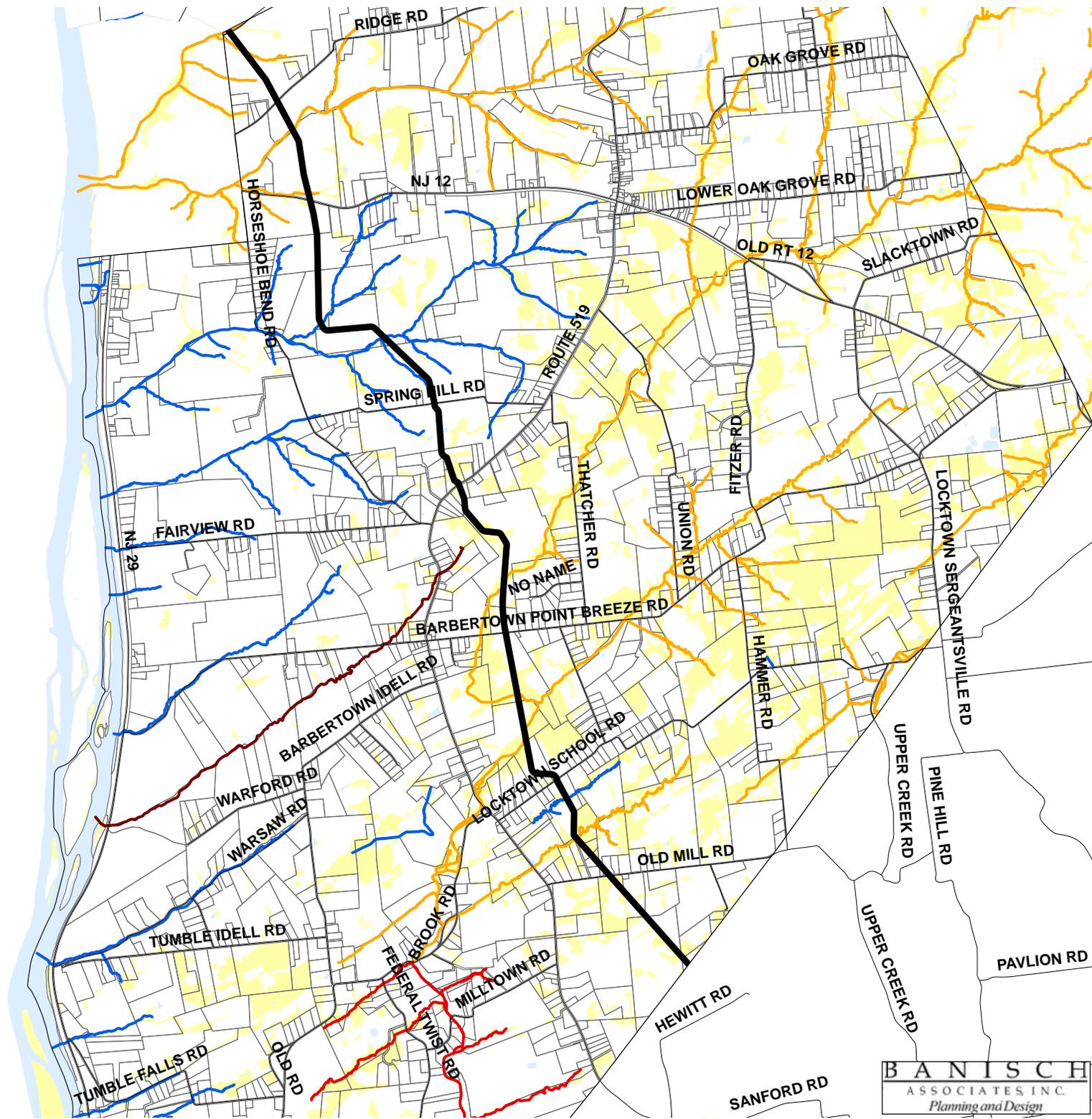
Proposed Penneast Pipeline
Kingwood Township
Hunterdon County, NJ

September 2016



Legend

- Proposed Pipeline
- FW1
- FW2-NT
- FW2-TM
- FW2-NTC1
- FW2-TMC1
- FW2-TPC1
- Water
- Wetlands



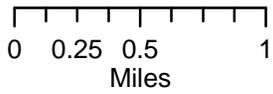
Data Sources:
 NJDEP 2012 Land Use Land Cover
 NJDEP SWQS Water Quality v2012
 Hunterdon County Planning Board Parcels 2011
 NJDOT Roadway Network 2011
 Penneast Pipeline prepared by AECOM Feb 2016

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

Figure 10: 2012 Land Use Land Cover

Proposed Penneast Pipeline
Kingwood Township
Hunterdon County, NJ

September 2016



Legend

-  Proposed Pipeline
-  Agriculture
-  Barren Land
-  Forest
-  Urban
-  Water
-  Wetlands

Data Sources:
NJDEP 2012 Land Use Land Cover
Hunterdon County Planning Board Parcels 2011
NJDOT Roadway Network 2011
Penneast Pipeline prepared by AECOM Feb 2016

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

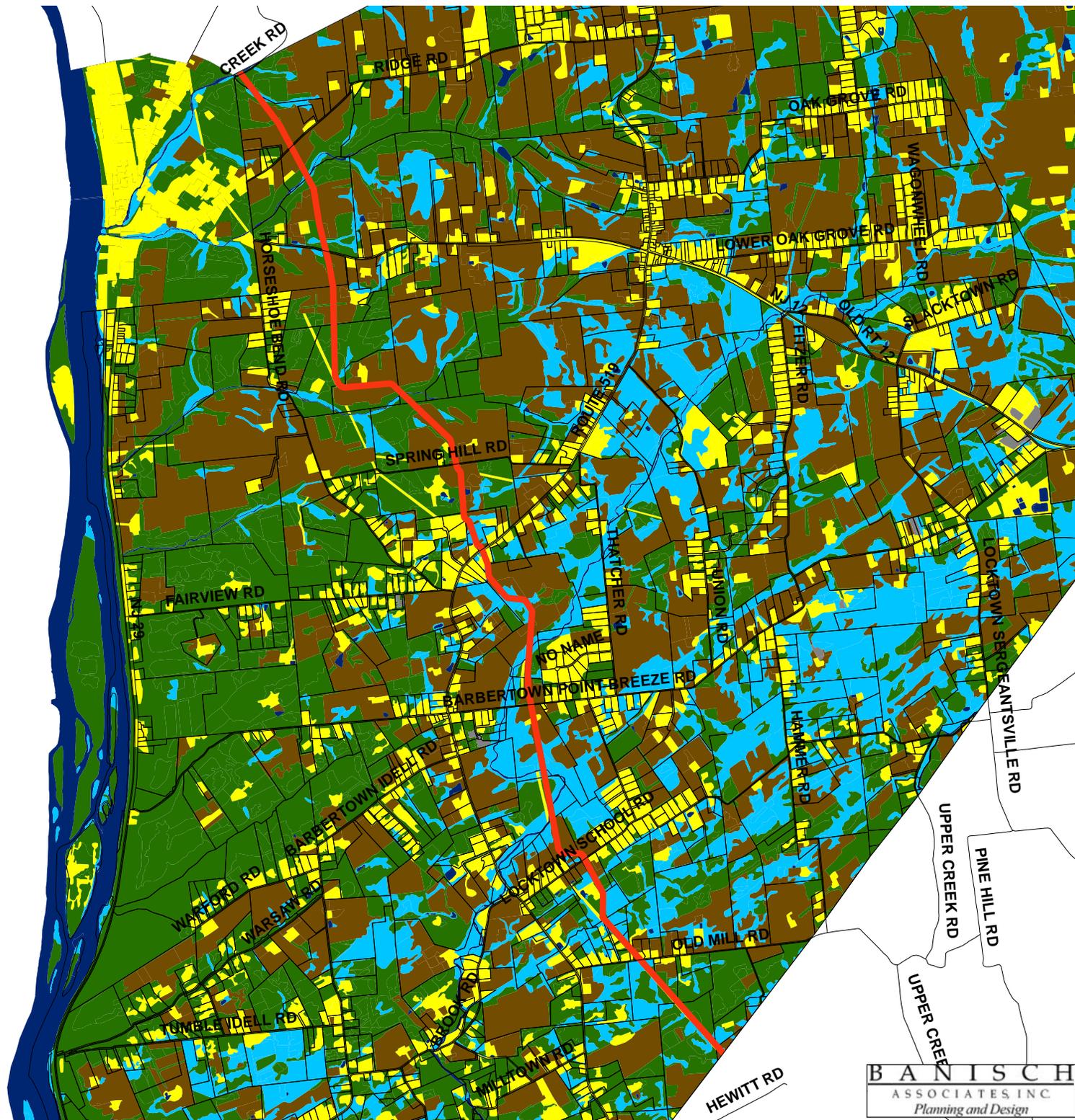


Figure 11: Land Use Plan

Proposed Penneast Pipeline
Kingwood Township
Hunterdon County, NJ

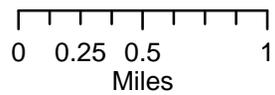
September 2016

Legend

 Proposed Pipeline

zone_name

-  Agricultural/Residential
-  Business Park
-  Highway Commercial
-  Professional Office/Residential
-  Village Commercial-1
-  Village Commercial-2
-  Village Residential-1
-  Village Residential-2



Data Sources:
 NJDEP State Open Space v2016
 NJDEP County Open Space v2016
 NJDEP NJFPP v2016
 Hunterdon County Planning Board Parcels 2011
 NJDOT Roadway Network 2011
 Penneast Pipeline preped by AECOM Feb 2016

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been NJDEP verified and is not State-authorized.

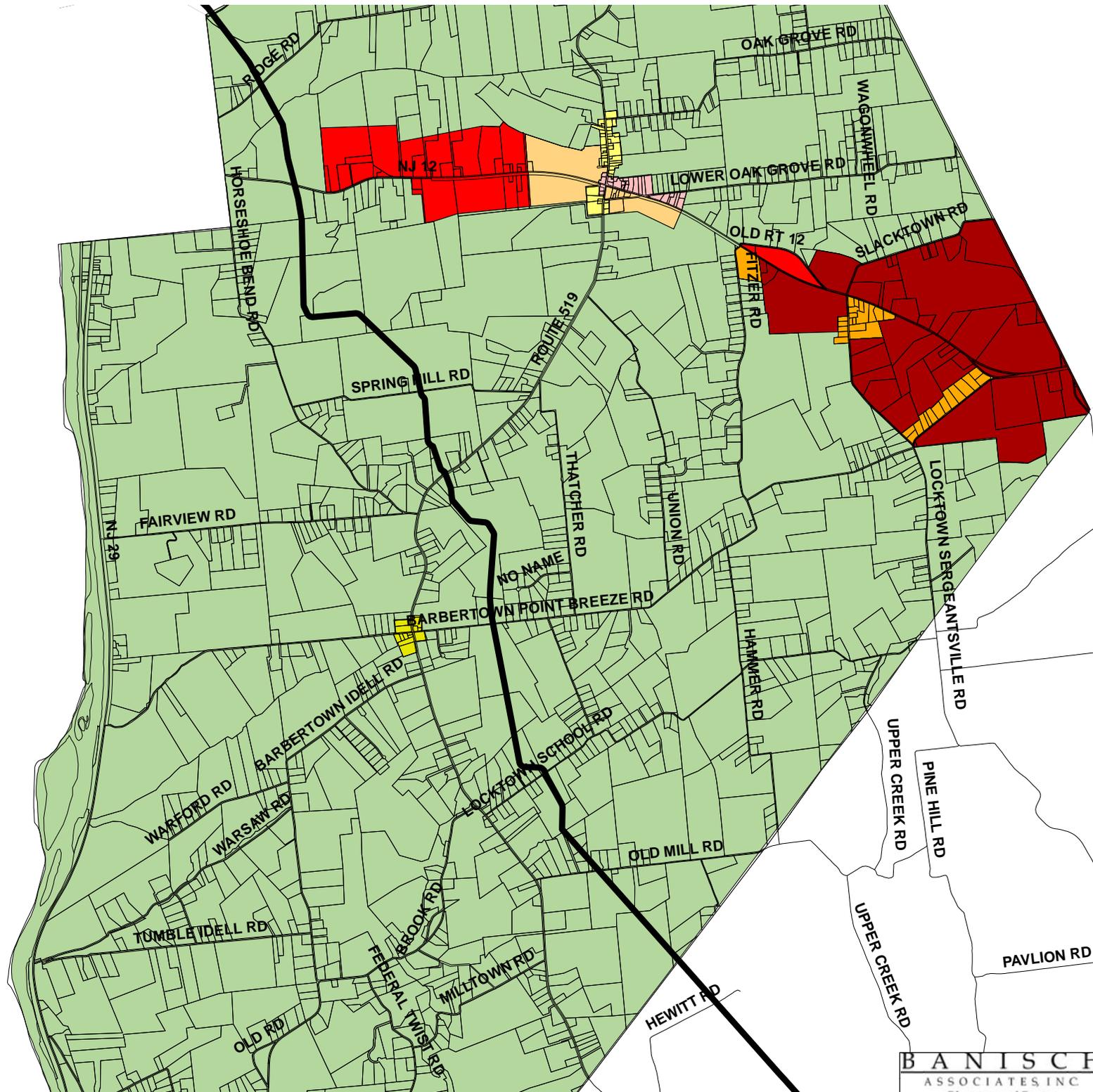


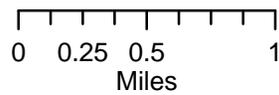
Figure 12: Open Space and Preserved Farmland

Proposed Penneast Pipeline
Kingwood Township
Hunterdon County, NJ

September 2016

Legend

-  Proposed Pipeline
-  Preserved Farmland
-  County Open Space
-  State Open Space
-  Township, Non-Profit and Private Open Space



Data Sources:
 NJDEP State Open Space v2016
 NJDEP County Open Space v2016
 NJDEP NJFPP v2016
 Hunterdon County Planning Board Parcels 2011
 NJDOT Roadway Network 2011
 Penneast Pipeline prepared by AECOM Feb 2016

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