7.0 APPLICANTS

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UNITED STATES OF AMERICA
BEFORE
THE FEDERAL ENERGY REGULATORY COMMISSION

Islander East Pipeline Company, L.L.C.	)	Docket No. CP01-384-000 et al.
Algonquin Gas Transmission Company	)	Docket No. CP01-387-000

COMMENTS OF
ISLANDER EAST PIPELINE COMPANY, L.L.C.
AND ALGONQUIN GAS TRANSMISSION COMPANY
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

In accordance with the "Notice of Availability of the Draft Environmental Impact Statement for the Islander East Pipeline Project" issued by the Federal Energy Regulatory Commission ("FERC" or the "Commission") in the above-captioned proceedings on March, 29 2002 (the "Notice"), Islander East Pipeline Company, L.L.C. ("Islander East") and Algonquin Gas Transmission Company ("Algonquin") submit their comments on the Draft Environmental Impact Statement ("DEIS") prepared by the Commission staff.

I.

BACKGROUND

On June 16, 2001, Islander East filed its application in FERC Docket Nos. CP01-384-000 et al. (the "Islander East Application") for authorization to construct, own and operate a new natural gas pipeline and to lease pipeline capacity on the facilities of Algonquin. On the same date, Algonquin filed its parallel application in FERC Docket No. CP01-387-000 for authorization to upgrade its existing C-1 and C-1 L systems, to construct a new compressor station in Cheshire, Connecticut and to lease the resulting

capacity to Islander East. As proposed, the Islander East Pipeline Project will be comprised of the leased capacity on Algonquin and approximately 50 miles of pipeline extending from an interconnection with Algonquin near North Haven, Connecticut and terminating near Brookhaven, New York. It will provide 285,000 dekatherms per day of natural gas transportation capacity to energy markets in Connecticut, Long Island and New York City.[1] The project would provide significant economic and operational benefits to the two local distribution companies and two power producers that executed Precedent Agreements with Islander East for service commencing November 1, 2003 (the "Islander East Customers"[2]), as well as to the growing Connecticut, Long Island and New York City markets.[3]

On December 21, 2001, the Commission issued a Preliminary Determination (the "PD")[4] finding that Islander East's and Algonquin's proposals are required by the public convenience and necessity, subject to the completion of environmental review. On March 29, 2002, the Commission issued the DEIS, concluding that the Islander East Pipeline Project would have only limited adverse environmental impacts,[5] and the Notice inviting comments thereon.

Islander East and Algonquin concur with the DEIS' overall conclusion that any adverse environmental impacts of the Islander East Pipeline Project will be limited. The

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1 *Islander East Application* at 4.

2 The Islander East Customers are KeySpan Gas East Corporation d/b/a KeySpan Energy Delivery Long Island ("KEDLI"), The Brooklyn Union Gas Company d/b/a KeySpan Energy Delivery New York ("KEDNY"), AES Endeavor, a division of AES Corporation and Brookhaven Energy Limited Partnership, an affiliate of American National Power.

3 *Islander East Application* at 5-7.

4 *Islander East Pipeline Co., L.L.C.*, 97 FERC ¶ 61,363 (2001).

5 *DEIS* at ES-4 and 5-1.

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general comments of Islander East and Algonquin on the DEIS, primarily with respect to the alternatives analysis, are set forth herein. More detailed and technical comments on the specifics of the DEIS environmental evaluation of the Islander East Pipeline Project, and the alternatives identified therein, are set forth in the Appendix hereto.[6] Islander East and Algonquin respectfully request that the Commission fully consider these comments in its preparation of the Final Environmental Impact Statement ("FEIS").[7]

II.

COMMENTS

The starting point of the DEIS analysis is the "Project Purpose and Need." The purpose of and need for the Islander East Pipeline Project are set forth in the Islander East Application which describes the specific market need that will be served.[8] The proposed
A1-1 initial 285,000 dekatherms of capacity will meet the immediate gas supply needs of the Islander East Customers commencing in 2003, and the potential for expansion with minimal impact will enable Islander East to help its customers meet the anticipated future demand in both the local distribution company ("LDC") and the electric generation markets in both New York and Connecticut.[9] The Islander East Pipeline Project offers significant additional benefits: greater diversity of supply; fully integrated market access between New York and New England; additional transportation alternatives, resulting in greater competition and supplier access; low cost incremental expandability; high pressure

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6 *See "Technical Comments on the DEIS"* appended hereto (*"Appendix"*).

7 Islander East and Algonquin also direct the Commission's attention to the *Supplemental Data Filings* which they made in these above-captioned dockets on April 17 and April 30, 2002, which provide information additional to that reflected in the DEIS.

8 *Islander East Application* at 11-13.

9 *Id.*

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A1-1 Thank you for your comment.

deliverability; and, enhanced operational flexibility and reliability for both Islander East and Algonquin customers.[10]

The foregoing market needs and additional benefits together comprise the "Project Purpose and Need" and together are of critical importance to the growing Connecticut, Long Island and New York City energy markets. In particular, the benefits afforded by the addition of a new transmission pipeline across Long Island Sound – enhanced supplier access, diversity of supply, competition, security of supply, reliability of service and operational flexibility – are a driving force behind the proposal to build the Islander East Pipeline Project. KEDLI and KEDNY, together with KeySpan Utility Services L.L.C., the fuel purchasing agent for KeySpan's generating affiliates, confirm how crucial this purpose and need is:

> With the addition of Islander East as a supplier to Eastern Long Island, KeySpan believes that the loss of service from either the proposed Islander East System or the existing Iroquois system would not require KeySpan to curtail service to any firm customer. Thus, the construction of Islander East significantly enhances the reliability of the KeySpan Delivery Companies' distribution services.
>
> KeySpan's reliability concerns extend not only to gas distribution but also to the cost and reliability of electric supply. * * * Local electric reliability rules issued by the New York State Reliability Council require planning for the single failure of any gas pipeline. The expansion of Iroquois to the exclusion of Islander East would significantly complicate and potentially compromise the ability to comply with these reliability standards.[11]

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10 *Islander East Application* at 13-15.

11 *Answer of the KeySpan Delivery Companies and KeySpan Utility Services, L.L.C. in Opposition to Motion to Consolidate Proceedings and for Comparative Evidentiary Hearings*, FERC Docket No. CP01-384-000 et al. at 2-3 (April 23, 2002) ("*KeySpan Answer*").

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The Public Service Commission of the State of New York also has acknowledged the reliability and security benefits that will be provided by the Islander East Pipeline Project:

> The contingency protection of both the gas and electric systems afforded by a totally separate Sound crossing, as proposed by Islander East, is protection against total loss of supply if damage were to occur to the Iroquois line . . .[12]

KeySpan's and the NYPSC's concerns about reliability of service and security of supply are shared by many, as is well illustrated by the presentations at FERC's Northeast Energy Infrastructure Conference held on January 31, 2002.[13] Representatives from all sectors of
A1-2 the Northeast energy markets, including state officials and regulators, electric utilities, independent system operators, power project developers, investment bankers, pipelines, trade associations and consumer advocates spoke about the importance of reliability of service and security of supply to the Northeast.[14] In short, the enhanced reliability and security afforded by the creation of a second gas transmission line across Long Island Sound is a central feature of the Islander East Pipeline Project purpose and need.

In defining the "Project Purpose and Need," the DEIS mentions, in addition to meeting the needs of electric generators and LDCs, the integration of market access between New England and New York and increased supply access. It does not, however, acknowledge all the additional benefits that comprise the Islander East Pipeline Project purpose and need, most notably the advantages of a second Sound crossing.[15] The FEIS, in accordance with customary practice and consistent with case law, should adopt Islander

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12 *Notice of Intervention and Comments of the Public Service Commission of the State of New York*, FERC Docket No. CP02-52-000 at 2 (January 23, 2002).

13 *Transcript of Northeast Energy Infrastructure Conference*, FERC Docket No. AD02-6-000 (January 31, 2002).

14 A review of the 217 page transcript of that proceeding shows that the words "reliability" or "security" were used approximately 80 times.

15 *See DEIS* at 1-1 – 1-2 and 4-1.

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A1-2 Thank you for your comment.

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A1-2 East's statement of the market needs and additional benefits of the Islander East Pipeline Project as the "Project Purpose and Need" for purposes of the analysis of alternatives to the Project pursuant to the requirements of the National Environmental Policy Act ("NEPA").[16]

The DEIS identifies three system alternatives to the Islander East Pipeline Project.[17] Each utilizes at least in part the proposal of Iroquois Gas Transmission System, L.P. ("IGTS") to construct an Eastern Long Island Extension (the " Iroquois ELI Proposal"),[18] for which IGTS filed a certificate application on December 14, 2001, one week prior to the issuance of the PD for Islander East and Algonquin.[19] The first two, the "One-Pipe System Alternative" ("OPS") and the "ELI System Alternative" ("ELIS"), would both reconfigure the Iroquois ELI Proposal in order to accommodate, in the first case, both the Islander East Pipeline Project and the Iroquois ELI Proposal gas volumes and, in the latter case, the Islander East Pipeline Project gas volumes only. The third, the "Long Island System Alternative" ("LIS") assumes construction of separate Sound crossings proposed by Islander East and IGTS but would require a single pipeline on Long
A1-3 Island. The DEIS preliminarily evaluates these three system alternatives with respect to

[16] *See Independence Pipeline Company, et al.*, 91 FERC ¶ 61,102 at 61,345-46 (2000), citing *City of Grapevine, Texas v. DOT*, 17 F.3d 1502, 1506 (D.C.Cir. 1993) ("In identifying and defining a project's objective and goal for NEPA purposes, the Commission generally adopts the project sponsor's proposal in the NGA section 7 application that implicates the need to conduct the environmental review. * * * Accordingly, we find it was reasonable to accord substantial weight to the project sponsors' goals in considering the alternatives in the EIS.").

[17] *DEIS* at 4-1 and 4-2 – 4-20. While the DEIS actually identifies four system alternatives, it concludes that the fourth one, the Connecticut-Long Island Lateral Project planned by Tennessee Gas Pipeline Company, is not a reasonable alternative. Islander East supports that conclusion and therefore will not address that alternative in these comments.

[18] *DEIS* at 4-2 – 4-3.

[19] *Application of Iroquois Gas Transmission System, L.P. for Certificate of Public Convenience and Necessity*, FERC Docket No. CP02-52-000 (December 14, 2001). The Commission has yet to issue either a PD or a DEIS for the Iroquois ELI Proposal.

A1-3 Thank you for your comment. The discussion of system alternatives (section 4.2) of the FEIS has been revised.

A1-3 whether they meet the project objectives, as well as whether they are technically and economically feasible and environmentally preferable.[20] Even a cursory review of the alternatives, however, shows that none is able to satisfy these criteria.[21]

Most importantly, the identified system alternatives cannot meet the purpose and need of the Islander East Pipeline Project, in several respects. First, none can meet the Islander East in-service goal of November 2003 for which the Islander East Customers have contracted. Each alternative would require significant additional time to be developed: new project entities would need to be structured and formed; new precedent agreements with the shippers would need to be negotiated and executed; new lease arrangements would need to be negotiated; new certificate applications would need to be filed; new scoping and landowner outreach meetings would need to be held; new regulatory permits would need to be obtained; and significant and time-consuming additional environmental review would be required. Indeed, the DEIS recognizes that, for OPS and ELIS, "[t]his is a preliminary analysis since the environmental analysis of the ELI Extension Project is not complete."[22] Similarly, the DEIS recognizes that the LIS alternative "would require the agreement of both Iroquois and Islander East."[23] Thus, this alternative could not proceed without business structuring negotiations which would
A1-3 inevitably delay the commencement of service. Simply put, the identified system alternatives to the Islander East Pipeline Project cannot meet the time frame for providing

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20 *DEIS* at 4-1.

21 In addition to the Comments herein on the alternatives, Islander East and Algonquin direct the Commission's attention to its technical comments in the *Appendix* hereto, including specifically the technical analyses of the alternatives set forth in Section C. thereof which addresses Section 4.0 of the DEIS.

22 *DEIS* at 4-3 and 4-13.

23 *DEIS* at 4-20.

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A1-3 service to the Islander East Customers, and for that reason alone are not viable alternatives to the Islander East Pipeline Project.[24]

Second, the OPS and ELIS alternatives cannot meet the project goal of a second gas transmission pipeline across Long Island Sound to enhance reliability of service and security of supply, reflecting the desires of the shippers and regulators alike. Either of these alternatives runs contrary to the preference of the NYPSC that, "if only one line were to be built, . . . Islander East be certified because it will [be] another source of delivery to Long Island"[25] and the election by KeySpan "to enter into precedent agreements with Islander East to ensure that it would procure new firm capacity in a timely fashion in a manner that

A1-4 would enhance the reliability of its distribution systems."[26] Thus the OPS and ELIS alternatives fail to accomplish this crucial purpose of the Islander East Pipeline Project.[27] Additionally, two identified system alternatives, OPS and LIS, fail to meet the economic feasibility test. They are premised on serving both the Islander East Customers and the

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[24] *See Independence Pipeline Company, et al.*, 89 FERC ¶ 61,283 at 61,844 (1999) (Commission determined that an alternative (which involved using turn-back capacity) would not be sufficient to meet the proposed capacity of the Independence project or the proposed time frame for providing service to the applicants' shippers.).

[25] *Notice of Intervention and Comments of the Public Service Commission of the State of New York*, FERC Docket No. CP02-52-000 at 2-3 (January 23, 2002).

[26] *Answer of the KeySpan Delivery Companies and KeySpan Utility Services, L.L.C. in Opposition to Motion to Consolidate Proceedings and for Comparative Evidentiary Hearings*, FERC Docket No. CP01-384-000 et al. at 3 (April 23, 2002).

[27] It is questionable whether the OPS and ELIS alternatives would be viable options for serving long term demand growth in light of the residential growth and encroachment along the IGTS system. *See Appendix* at II-C-4, 7, 11-12, 14, 16 and 20; *see also Independence Pipeline Company, et al.*, 91 FERC ¶ 61,102 at 61,346 (2000) ("[1]t is not unreasonable to select the Independence and MarketLink projects over the other alternatives because they have demonstrated that they not only can supply gas for existing demand but also are able to meet anticipated long term increases in demand."). Additionally, the ELIS alternative, which contributes minimal new infrastructure in Connecticut, misses the immediate opportunity to address the pressing concerns in Southern Connecticut about diversity and security of supply and reliability of service (*see Transcript of Northeast Energy Infrastructure Conference*, FERC Docket No. AD02-6-000 at 17, 56-57, 86 and 99 (January 31, 2002), thereby benefiting existing Connecticut customers and serving as an inducement to developers of future generation projects in Connecticut.

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A1-4 See response to comment 3.

shippers proposed to be served by the Iroquois ELI Proposal. Given IGTS' apparent lack of confidence in the market to be served by the Iroquois ELI Proposal,[28] these alternatives appear to be " too speculative to be . . . viable alternative[s]."[29]

Finally, claims that the identified system alternatives may be environmentally preferable fail to take into account the adverse impacts of the additional facilities that would be required for those alternatives: 16 miles of 36 inch piping in Connecticut for OPS; additional compression at Brookfield, Connecticut for both OPS and ELI; and, the Shoreham compressor station for LIS.[30] Moreover, such claims ignore the fact that the alleged adverse impacts of Islander East's second Sound crossing are temporary and can and will be mitigated.[31]

For these reasons, none of the alternatives offers the "significant environmental advantage" required before an alternative should be favored over the applicant's proposal.[32] Most importantly, the supply diversity, security and reliability benefits of Islander East's creation of a second gas transmission line across Long Island Sound far outweigh whatever advantages, if any, could be provided by the identified system alternatives.[33]

The environmental analysis of the Islander East Pipeline Project should not lose sight of the fact that the Islander East Customers could have committed to the Iroquois

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28 *See also Reply of Islander East Pipeline Company, L.L.C. to Motion for Consolidation of Iroquois Gas Transmission System, L.P.*, FERC Docket Nos. CP01-384-001, et al. at 4 and 7 (April 22, 2002).

29 *Independence Pipeline Company, et al.*, 91 FERC ¶ 61,102 at 61,347 (2000).

30 *See Appendix* at II-C-1-24.

31 *See Appendix* at II-D-1-4. Islander East is committed to employing those mitigation measures which are necessary to mitigate impacts, both those proposed by it and those recommended by the Commission.

32 *DEIS* at 4-1.

33 The Commission "is not constrained by NEPA from deciding that other values outweigh the environmental costs." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989); *see also Southern Natural Gas Company*, 76 FERC ¶ 61,122 at 61,646 (1996) and *Southern Natural Gas Co.*, 79 FERC ¶ 61,280 at 62,205 and 62, 208 (1997).

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ELI Proposal which underlies the three identified system alternatives. These shippers instead determined to contract for service on Islander East because of their desire to ensure the reliability of service and security of supply by supporting the establishment of a second transmission system across Long Island Sound.[34] Islander East and Algonquin urge the Commission to bear in mind this clear and considered choice that was made by the market.

III.

CONCLUSION

Islander East and Algonquin respectfully request that the Commission give full consideration to the foregoing comments on the DEIS and make the necessary revisions in the FEIS to reflect those comments. Islander East and Algonquin further request that the

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[34] *See KeySpan Answer* at 2-3, cited in the text at p. 4 and n. 11, *supra*; *see also KeySpan Answer* at 3 ("KeySpan chose to enter into precedent agreements with Islander East to ensure that it would procure new firm capacity in a timely fashion in a manner that would enhance the reliability of its distribution systems. The Iroquois ELI project does not offer the same reliability benefits.").

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Commission proceed to issue the FEIS at the earliest practicable date to permit the Islander East Pipeline Project to proceed to construction on a schedule consistent with its proposed in-service date of November 2003.

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Respectfully submitted,

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A. COMMENTS ON SECTION 2.0 – PROPOSED ACTION

A1-5 **A.1 Section 2.2.2 – Offshore Land Requirements**

Paragraph 1 of page 2-8 states that typical offshore construction techniques would be used in water deeper than 10 feet and that the primary work area under the Connecticut nearshore waters of Long Island Sound would be between 60 feet (for the onshore to offshore drill) and 80 feet (for the conventional pipe lay). New information was provided in Islander East's *Marine Pipeline Installation Methodology*, which was provided to the Commission in Islander East's March 28, 2002 *Supplemental Data Filing*, states that typical offshore construction techniques would be used in water deeper than 20 feet. Between the drill exit point to a water depth of 20 feet, Islander East plans to install the pipeline using the dredge construction technique, which would require a 120-foot-wide primary work area.

A.2 Section 2.3 – Construction Procedures

A1-6 Table 2.3-1 of page 2-9 states that the Connecticut onshore to offshore Horizontal Directional Drill (HDD) and the Connecticut and New York offshore construction would begin in November and December 2002, respectively. Islander East has reviewed its construction schedule and must commence preparation for the Connecticut onshore to offshore HDD and the Connecticut and New York offshore construction in October 2002 in order to complete the HDD and offshore work within the appropriate environmental construction windows.

A.3 Section 2.3.1 – General Onshore Construction Procedures

A1-7 Paragraph 1 of page 2-10 states that generally stumps would be cut flush with the surface of the ground and left in place. As described in section 3.5.3.2 of Islander East's Erosion and Sedimentation Control Plan, Islander East proposes to remove tree stumps from the trench line in all areas and from at least the permanent right-of-way in uplands. Stumps on the temporary right-of-way in uplands will either be removed or ground to a suitable height that will allow safe passage of equipment. Removal of stumps beyond the trench line in wetlands will be limited to that which is necessary to safely construct the pipeline.

A1-8 Paragraph 2 of page 2-10 states that sediment control devices would be installed as necessary during clearing. Sediment controls will be installed when there is a potential for erosion. Algonquin and Islander East have found that installation of erosion control devices are often unnecessary during clearing since existing ground vegetation and root stock are largely unaffected by clearing activities. As described in section 3.5.2 of Islander East's Erosion and Sedimentation Control Plan, sediment barriers shall generally be installed following vegetative clearing operations.

A1-9 Paragraph 1 of page 2-13 states that within 10 days of backfilling, weather and soil conditions permitting, all remaining trash, debris, and surplus would be removed form the right-of-way. The section further states that all disturbed areas

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A1-5 This information has been updated in the FEIS.

A1-6 This information has been updated in the FEIS.

A1-7 This information has been updated in the FEIS.

A1-8 This information has been updated in the FEIS.

A1-9 This information has been updated in the FEIS.

A1-9 would be finish-graded and restored to preconstruction conditions. As described in section 3.6 of the Erosion and Sedimentation Control Plan, Islander East will require that the contractor make every reasonable effort to complete final clean up of an area within 10 days after backfilling of the trench in that area. If this schedule cannot be met, final clean up will be completed as soon as practical thereafter. In each instance where the restoration schedule cannot be met, Islander East will inform the Commission of any schedule revisions via the periodic status report filed with the Commission.

A.4 Section 2.3.2.7 – Wetlands

A1-10 Paragraph 2 of page 2-15 states that additional temporary workspaces would be a minimum of 50 feet from the edge of wetlands. Islander East will attempt to maintain a 50 foot buffer between extra temporary workspaces and wetlands. However, there may be circumstances where it may not be practicable or reasonable to maintain this buffer. Where this is the case, Islander East will identify and describe to the Commission the reasons why a 50 foot buffer is not practicable and alternative measures that will be implemented to protect the wetland resource. No work will occur in additional temporary workspaces within 50 feet of wetlands without the Commission's approval.

A.5 Section 2.3.2.8 – Waterbodies

A1-11 Paragraph 5 of page 2-17 states that 50-foot long herbaceous strip would be left on the approaches of the waterbodies. Islander East, as stated in its Erosion and Sedimentation Control plan, will maintain a herbaceous strip of 10 feet between construction right-of-way and waterbody areas. Woody vegetation would be cleared to the edge of the waterbodies, but a 10-foot-wide herbaceous strip would be left on the approaches until immediately before construction to provide a natural sediment filter and minimize the potential for erosion immediately adjacent to the waterbodies.

A.6 Section 2.3.2.8 – Waterbodies

A1-12 Paragraph 5 of page 2-22 states that the Peconic River (MP 38.5) would be crossed using the wet trench crossing method. Islander East is now planning to cross the Peconic River using the horizontal directional drilling construction method.

A.7 Section 2.3.3.2 and Section 2.3.6.4 – Bury Barge

A1-13 Paragraph 1 of page 2-27 and paragraph 1 of page 2-40 state that the pipeline would be buried to at least one-half its diameter in water depths greater than 12 feet. Islander East is now planning to bury the pipeline three feet below the sea floor, regardless of the water depth.

A.8 Section 2.3.4.1 – Connecticut Mainland Approach

A1-14 Paragraph 3 of page 2-32 states, "As proposed, the HDD would primarily pass through the local bedrock at a maximum depth of about 80 feet below the sea

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A1-10 Section 2.3.2.7 of the FEIS has been updated to state that Islander East would notify the Commission for approval if additional temporary workspaces are required within 50 feet of a wetland.

A1-11 Section 2.3.2.8 of the FEIS has been updated to state that a 10-foot-wide herbaceous strip would be left on the approaches to waterbodies until immediately before construction.

A1-12 This information has been updated in the FEIS.

A1-13 This information has been updated in the FEIS.

A1-14 This information has been updated in the FEIS.

A1-14 floor", but should state, "As proposed, the HDD would primarily pass through the local bedrock at a depth of up to 120 feet below the sea floor."

A.9 Section 2.3.6.4 – Operations and Maintenance

A1-15 Paragraph 1 of page 2-40 states that air patrols of the pipeline right-of-way would be conducted at least weekly. Islander East currently plans to conduct air patrols at this frequency, but recognizes that the frequency of patrols is subject to the weather and U.S. Department of Transportation regulations.

A.10 Section 2.4.1.1 – Routine Vegetation Maintenance

A1-16 Paragraph 1 of page 2-42 states that in uplands a 10-foot-wide strip would be mowed annually and that vegetation would be mowed over the entire 50-foot-wide permanent right-of-way once every three years. In general, this is consistent with Islander East's plan. However, there may be cases where vegetation maintenance occurs less frequently. Islander East requests that this section say that in uplands a 10-foot-wide strip may be mowed annually and that vegetation over the entire 50-foot-wide permanent right-of-way may be mowed as frequently as once every three years.

A.11 Section 2.6 – Permits and Approvals

A1-17 Table 2.6-1, Permits, Approvals and Consultations, of page 2-46 lists a permit to construct/certificate to operate an air contamination source in New York. Islander East is unaware of any requirement for this permit.

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A1-15 This information has been updated in the FEIS.

A1-16 Section 2.4.1.1 of the FEIS has been updated to state that in uplands a 10-foot-wide strip may be mowed annually and vegetation over the entire 50-foot-wide permanent right-of-way may be mowed as frequently as once every three years.

A1-17 This information has been updated in the FEIS.

B. COMMENTS ON SECTION 3.0 - ENVIRONMENTAL ANALYSIS

B.1 Section 3.1.3.1 – Geology; Existing Environment, Marine Environment

A1-18 Paragraph 2 of page 3-8 states that Islander East has conducted various underwater surveys on the sea floor of Long Island Sound. Islander East is currently conducting remote operating vehicle (ROV) studies to identify potential benthic communities, shellfish and obstructions that may occur along the proposed offshore route.

B.2 Section 3.2.1 – Soils; Existing Environment, Muck Soils

A1-19 Paragraph 6 of page 3-10 states that the proposed pipeline and aboveground facilities would disturb 8.0 acres of muck soils in Connecticut, of which nearly all are in wetlands. Paragraph 1 of page 3-11 states that 1.8 acres of muck soils would be disturbed in New York. Islander East would like to clarify that none of the proposed aboveground facilities in New York or Connecticut will be located on muck soils or in wetlands. In addition, the only muck soils and wetlands within the project area in New York are associated with the Carmans River (MPs 43.1-43.3), which Islander East will cross using horizontal directional drill method. Therefore, as indicated in Islander East's response to the Commissions November 2, 2001 environmental information request (attachment 12), construction of pipeline facilities will not directly affect any wetlands in New York.

B.3 Section 3.2.2 – Soils; Environmental Consequences

A1-20 Paragraph 3 of page 3-12 states that erosion and sediment control permits required by the respective states would be filed with the Commission. Islander East would like to clarify that stormwater discharge permits, as required under the National Pollutant Discharge Elimination System, will be obtained prior to construction.

B.4 Section 3.2.2 – Soils; Environmental Consequences

A1-21 Paragraphs 2 and 3 of page 3-14 describe the measures that Islander East and Algonquin would use to minimize impact on soil erosion and indicate that Islander East and Algonquin would consult with landowners, appropriate land management agencies, and soils conservation authorities regarding revegetation and reseeding requirements. Islander East has been working with various state and local agencies to develop revegetation plans that may be necessary and will provide copies to the Commission when they are complete.

B.5 Section 3.3.1.1 – Water Resources; Existing Environment, Contaminated Groundwater

A1-22 Table 3.3.1-2 of page 3-23 lists contaminated sites within 0.25 mile of the Islander East pipeline route. Three sites, A.J. Waste Systems at MP 0.6, CT Auto Lift at MP 4.0, and Amoco Oil at MP 36.0, as shown on the table are located

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A1-18 This information has been updated in the FEIS.

A1-19 Section 3.2.1 of the FEIS has been clarified that the pipeline and above ground facilities in New York would not affect any muck soils.

A1-20 This information has been updated in the FEIS.

A1-21 Comment noted.

A1-22 Table 3.3.1-3 now refers to locations within 0.3 mile of the project.

A1-22 greater than 0.25 mile from the project area. As a result, the sites may be removed from table 3.31-2.

B.6 Section 3.3.1.2 – Water Resources: Environmental Consequences

A1-23 Paragraph 1 of page 3-25 states that Islander East and Algonquin would not store hazardous materials, fuels, lubricating oils, or perform concrete coating activities within any municipal watershed area, unless approved by the appropriate governmental authority. As outlined in section 7 of the Erosion and Sedimentation Control Plan, Islander East would not store hazardous materials, chemicals, fuels, or lubricating oils within any designated municipal watershed areas where feasible.

B.7 Section 3.3.2.1 – Water Resources; Surface Water

A1-24 Paragraph 2 of page 3-22 describes the number and classifications of waterbodies that would be crossed by the proposed project. As a result of additional field work and minor route alternatives that Islander East proposes to incorporate into its proposed route, the project will cross a total of 23 waterbodies, of which 14 are perennial and 9 are intermittent waterbodies, in addition to Long Island Sound. Of the total waterbodies that will be crossed, 21 are located in Connecticut and two are located in New York. Islander East will revise table 3.3.2-2 and will submit it to the Commission once it is complete.

B.8 Section 3.3.2.2 – Water Resources; Surface Water, General Construction Procedures

A1-25 In paragraph 5 of page 3-29 the FERC denied Islander East's request for a variance to section V.B.4.a of the FERC Procedures because the project would not cross any waterbodies greater than 20 feet wide. Islander East has conducted additional fieldwork and subsequently determined that the Muddy River is approximately 30 feet wide. Islander East requests that the FERC reconsider the request to sidecast spoil in Muddy River. The Muddy River has steep banks and is located adjacent to a road and several residences, which limit the amount of available spoil storage sites. Given these conditions, there is not sufficient space to safely store spoil at least 10 feet from the water's edge. Instream sidecasting of spoil will address this lack of storage space and will allow Islander East to complete the crossing more quickly, which will minimize the duration of instream impacts.

B.9 Section 3.3.2.2 – Water Resources; Surface Water, Hydrostatic Test Water

A1-26 Paragraph 4 of page 3-32 and paragraph 2 of page 3-45 indicate that no chemical additives would be introduced to the water used to hydrostatically test the new pipeline, and no chemicals would be used to dry the pipeline following the hydrostatic testing. This is correct for the onshore portion of the pipeline. However, Islander East is now considering using a biocide (X-Cide 535) in the hydrostatic test water to minimize bacteria growth while the water remains in the pipe section crossing Long Island Sound. Filtered water will be pumped into the pipeline and will be treated with the biocide immediately preceding its entrance

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A1-23 This information has been updated in the FEIS.

A1-24 We have revised the number of waterbodies crossed by the project as appropriate.

A1-25 This information has been updated in the FEIS.

A1-26 Information on biocides has been added to the appropriate sections.

A1-26 into the pipeline. Before the treated water is pumped back into Long Island Sound, it will be discharged into a containment structure and immediately neutralized with hydrogen peroxide. The biocide can be easily deactivated and is biodegradable. Based on toxicity data, discharge of the biocide-treated test water will not negatively affect the aquatic environments and habitats of and surrounding Long Island Sound. Islander East submitted information regarding the chemical composition of the biocide and supporting data to the FERC in a supplemental filing on April 29, 2002.

B.10 Section 3.3.2. 2 – Water Resources; Surface Water, Hydrostatic Test Water

A1-27 Paragraph 3 of page 3-22 states that water supply wells, their locations, and approximate distance and direction from construction area will be identified in the Final EIS. Islander East will continue to provide the location, direction and approximate distances from the construction areas as survey permission is obtained from tracts crossed by the proposed project. Islander East anticipates it will be able to provide this information to the FERC prior to construction.

B.11 Section 3.3.3.2 – Water Resources; Long Island Sound, Trenching and Pipeline Burial

A1-28 Paragraph 2 of page 3-36 states that Islander East has proposed three types of offshore construction techniques: subsea plowing or jetting waters deeper than 25 feet; and dredging for the Long Island mainland approach, and after the HDD exit point, in water less than 25 feet deep. Islander East intends to use subsea plowing for pipeline installation. Islander East would like to clarify that subsea plowing will be done in waters generally greater than 20 feet deep. Dredging will be conducted in water less than 20 feet deep for the Long Island mainland approach and in water less than 20 feet deep immediately south of the HDD exit hole in Connecticut.

B.12 Section 3.3.3.2 – Water Resources; Long Island Sound, Trenching and Pipeline Burial

A1-29 Paragraph 2 of page 3-37 estimates the quantities of sediment that would be displaced in Long Island Sound by each of the construction methods being proposed to install the pipeline. Islander East would like to clarify that dredging will be conducted in water less than 20 feet deep for the Long Island mainland approach and in water less than 20 feet deep immediately south of the HDD exit hole. Consequently, the amount of sediments displaced by construction from the combination of dredging and plowing will be a total of about 743,800 cubic yards.

B.13 Section 3.3.3.2 – Water Resources; Long Island Sound, Trenching and Pipeline Burial

A1-30 Paragraph 1 of page 3-42 indicates that the FERC conducted a preliminary quantitative analysis of the project's potential turbidity plume and depth of sedimentation, based on available site-specific data, previous modeling in the Sound for Iroquois' Eastchester Project (Docket No. CP00-232-000), and the FERC staff's previous experience with similar projects. Islander East filed a

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A1-27 Hydrostatic testing information has been added to section 3.3.3.2.

A1-28 Comment noted. This information has been updated in the FEIS.

A1-29 The FEIS has been updated to reflect that dredging would occur in 20 feet of water or less.

A1-30 This information has been updated in the FEIS.

A1-30 preliminary report on the affect of the Islander East Pipeline Project on the sediment environment of Long Island Sound in its supplemental filing of April 15, 2002. Islander East wishes to note that the preliminary report on sediment dispersion by Dr. Bohlen suggests that in a worse case scenario drilling mud may spread approximately 444 feet in all directions near the HDD exit hole. Approximately 80 percent of the materials suspended during dredging between MPs 10.9 and 12.0 would settle in an east west pattern within 66 feet of the trench (creating a layer of sediment about 1.9 cm thick). The majority of the remaining 20 percent of suspended material would settle within 300 feet of the trench (creating a layer of sediment about 1.2 mm thick). Given the relatively fine grained nature of the sediments and their cohesiveness, mechanical plowing would result in little sediment dispersion other than in the immediate area surrounding the trench. Additionally, little sediment dispersion would result from the placement and removal of anchors.

B.14 Section 3.3.3.2 – Water Resources; Long Island Sound, Trenching and Pipeline Burial

A1-31 Paragraph 3 of page 3-43 indicates that the subsea plow construction method would require two passes of the plow, an initial pass to excavate the trench and a subsequent pass to bury the pipe. Islander East would like to clarify that a minimum of two passes by the plow will be required. Additional passes of the plow may be necessary to bury the pipeline to the specified depth.

B.15 Section 3.4.1.2 – Fish, Benthic Communities, and Wildlife; Fisheries Resources; Environmental Consequences

A1-32 Paragraph 2 of page 3-49 states that mechanical dredging would create a trench 50 feet wide by a minimum of 5 feet deep for a conventional trench. Islander East now anticipates that mechanical dredging will create a trench 50 feet wide by a minimum of 7 feet deep.

B.16 Section 3.4.1.2 – Fish, Benthic Communities, and Wildlife; Fisheries Resources; Environmental Consequences

A1-33 Paragraph 2 of page 3-52 indicates that no blasting is expected at freshwater stream crossings along the Islander East pipeline route. Islander East anticipates that blasting will be necessary to cross the Muddy River at MP 0.5.

B.17 Section 3.4.1.2 – Fish, Benthic Communities, and Wildlife; Fisheries Resources; Environmental Consequences

A1-34 Paragraph 7 of page 3-53 states that the lay barges would be approximately 400 feet long by 400 feet wide. Islander East now anticipates that the size of the lay barges will be up to 400 feet long by 120 feet wide.

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A1-31 This information has been updated in the FEIS.

A1-32 This information has been updated in the FEIS.

A1-33 Section 3.4.1.2 of the FEIS has been updated to include information regarding potential blasting of Muddy River at MP 0.5.

A1-34 Section 3.4.1.2 of the FEIS has been corrected to reflect the correct width of the bury and lay barges.

B.18 Section 3.4.1.2 – Fish, Benthic Communities, and Wildlife; Environmental Consequences

A1-35 Paragraph 4 of page 3-67 indicates that the spawning period for the winter flounder is January to May. Based on a letter Islander East received from the National Marine Fisheries Service on August 2, 2001, the spawning period for winter flounder is from February 1 to May 15.

B.19 Section 3.6.4.1 – Endangered and Threatened Species; Site-Specific Impact; Federally Listed or Proposed Endangered or Threatened Species

A1-36 Paragraph 3 of page 3-67 indicates that construction across Long Island Sound is scheduled to begin in December and be completed by the end of March. Islander East wishes to clarify that construction across the Sound is scheduled to begin in October and be completed by the end of March.

B.20 Section 3.7.1 – Wetlands; Existing Environment

A1-37 Islander East will revise table 3.7.1-1 (page 3-72) and provide the Commission with a copy once it is complete. Paragraph 2 of page 3-74 addresses the potential for the trench to act as a drainage channel as an impact associated with construction of the pipeline in relation to temporary changes to wetland hydrology and water quality. Islander East wishes to clarify that the use of trench breakers as proposed in the Erosion and Sedimentation Control Plan will prevent wetland drainage along the pipeline.

B.21 Section 3.7.2 – Wetlands; Environmental Consequences

A1-38 Paragraph 1 of page 3-76 discusses impacts on wetlands in New York at MPs 38.3, 38.4, and 43.1. The two wetlands located near MP 38.3 and MP 38.4, are located outside of the construction work area and will not be affected by construction. The wetland located at MP 43.1 will be crossed in conjunction with the HDD of the Carmen's River and therefore will not be affected by construction.

B.22 Section 3.8.1.1 – Land Use, Recreation, and Visual Resources; Land Use, Existing Environment

A1-39 Paragraph 4 of page 3-77 indicates that Islander East would use two areas for pipe storage and contractor staging during construction, the Toelles Road Pipe Yard and the Gateway Terminal. In recent supplemental filings, Islander East has identified 5 additional potential sites for use as pipe storage and contractor yards: the Guilford Pipe Yard; the Anastasio Pipe Yard; the Cheshire Compressor Station Pipe Yard; the Branford Pipe yard; and the Calverton Pipe Yard. Copies of Islander East's letters and responses received from agencies were included in supplemental filings to the FERC dated September 28, 2001, and March 38, April 16, and April 28, 2002.

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A1-35 Section 3.4.1.2 of the FEIS has been updated to reflect the winter flounder spawning period reported by the National Marine Fisheries Service from February 1 through May 15.

A1-36 Section 3.6.4.1 the FEIS has been updated to state that construction across Long Island Sound is scheduled to begin in October, not December.

A1-37 The FEIS has been updated to state that trench breakers will prevent wetland drainage along the pipeline and therefore will prevent temporary changes to wetland hydrology and water quality.

A1-38 The FEIS has been updated to indicate that the two wetlands near MP 38.3 and 38.4 are located outside the construction work area and would not be affected by construction and the wetland at MP 43.1 would be crossed by the HDD method and therefore would not be affected by construction.

A1-39 The FEIS has been updated to include information on newly proposed pipe/contractor yards.

B.23 Section 3.8.1.1 – Land Use, Recreation, and Visual Resources; Land Use, Existing Environment

A1-40 Because Islander East has proposed minor route adjustments after filing its application, the land use numbers listed on page 3-77, in table 3.8.1-1, and in table 3.8.1-3 (page 3-37) have changed. Islander East will file revised tables that provides current information regarding the land uses that will be crossed by the pipeline under separate cover.

B.24 Section 3.8.1.2 – Land Use, Recreation, and Visual Resources; Land Use, Open Water Impacts and Mitigation Measures

A1-41 Paragraph 4 of page 3-81 states that the pipe would be buried for at least half its diameter in off-shore areas. Islander East plans to bury the pipeline three feet below the sea floor, regardless of the water depth.

B.25 Section 3.8.1.2 – Land Use, Recreation, and Visual Resources; Land Use, Open Water Impacts and Mitigation Measures

A1-42 Paragraph 6 of page 3-81 indicates that Islander East proposes to conduct sediment deposition modeling. A preliminary sediment deposition report was filed with the Commission's staff in a supplemental filing on April 15, 2002. The final report summarizing the sediment modeling will be provided to the Commission in June 2002.

B.26 Section 3.9 – Cultural Resources

A1-43 Table 3.9-1 (page 3-111) lists the identified sites that require further work to determine if it is a potentially eligible National Register Historic Places (NRHP) site. Islander East would like to clarify that the historical structures survey listed on the table is not an eligible property but rather a survey report. The survey report will encompass the results of the historical structures survey and will be filed with the FERC.

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A1-40 Comment noted.

A1-41 The FEIS has been updated to incorporate the new proposed burial depth in Long Island Sound.

A1-42 Comment noted. We also note that the final report summarizing sediment modeling was not filed in June 2002 as stated.

A1-43 Comment noted.

C. COMMENTS ON SECTION 4.0

C.1 Section 4.2 System Alternatives

In the DEIS, the Commission's staff identified and conducted preliminary evaluations of four "system alternatives" that would involve the use of other existing, modified, and/or proposed pipeline facilities in Connecticut and New York State to achieve Islander East's objectives. As FERC staff noted in the DEIS, the purpose of a system alternatives analysis is to determine whether another combination(s) of pipeline facilities could potentially be used to further minimize environmental impacts while still meeting the goals of the proposed project.

The system alternatives that the FERC included in the DEIS generally involved combinations of the following: Islander East; the Eastern Long Island (ELI) Extension Project recently proposed by Iroquois Gas Transmission System (Iroquois); a Connecticut – Long Island pipeline contemplated by Tennessee Gas Pipeline Company (Tennessee); and pipeline loops of Iroquois' existing mainline in Fairfield County, Connecticut. It is important to note that the Commission's staff, rather than Islander East or others, devised these system alternatives. None represent complete projects for which applications have been submitted to the FERC. Further, in the DEIS, the FERC acknowledged that only preliminary examinations have been conducted of the system alternatives.

Of the four system alternatives included in the DEIS, the FERC determined that one (Tennessee's Connecticut-Long Island Lateral Project) was not a reasonable system alternative because it would involve the construction of 110 miles of pipeline (60 miles longer than Islander East). No further discussion of this alternative was included in the DEIS.

The remaining three system alternatives that FERC identified were:

- The One-Pipe System Alternative and the ELI System Alternative. These two system alternatives (DEIS sections 4.2.1 and 4.2.2, respectively) would involve the construction of different combinations of facilities that are presently proposed separately by Islander East and Iroquois. In addition, FERC identified a requirement for a new 36-inch-diameter mainline pipeline loop along portions of the existing 24-inch-diameter Iroquois mainline in Fairfield County, Connecticut. Both of these system alternatives would eliminate Islander East's proposed facilities in New Haven County, Connecticut. Instead, new pipeline loops and compression would be added along the Iroquois mainline in Fairfield and New Haven counties, respectively.

- The Long Island System Alternative. This system alternative (DEIS section 4.2.3) would be the same as the proposed Islander East facilities in New York, except that on Long Island a 12-mile, 30-inch-diameter (rather than 24-inch) pipeline would be constructed. The larger diameter pipe would be designed to accommodate the volumes proposed by both Islander East and Iroquois's ELI Extension project. In addition, a new 5,000 horsepower (hp) compressor station would be required at Shoreham, New York.

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The following presents Islander East's technical analyses of and comments on the FERC's system alternatives.[1] These analyses focus on the comparative review of potential environmental impacts associated with each system alternative. Islander East's analyses are based on:

- the review of current maps and aerial photography of the eastern Fairfield County, Connecticut communities that would be affected by the proposed system alternatives;
- field reconnaissance (April 2002) of the portions of the existing Iroquois mainline that would have to be looped;
- the examination of detailed environmental data (e.g., lists of streams, wetlands, areas of blasting, unique features) included in Iroquois' June 1991 *Development and Management Plan (D & M) Plan: Connecticut Land Segment (Spread 5)*, which governed the original construction of the Iroquois mainline;
- the FERC Final EIS for the original Iroquois pipeline project (*Iroquois/Tennessee Phase I Pipeline Project FEIS*, June 1990); and
- published data concerning population growth and land use modifications in Fairfield County, Connecticut (and particularly in the communities of Newtown, Monroe, and Shelton) that have occurred since the installation of the Iroquois pipeline in 1991.

Section 4.2.1 One-Pipe System Alternative

The One-Pipe System Alternative would involve the construction of new facilities in both Connecticut and New York State to accommodate the total volume of natural gas (approximately 435,000 Mcf/day) proposed by both Islander East and Iroquois' ELI Project. In particular, the system alternative would combine elements of Islander East and the proposed ELI Project, along with other new pipeline facility construction that the FERC staff has calculated would be needed to transport the total gas volumes. The facilities required to implement the One-Pipe System Alternative are summarized below.

[1] These technical analyses are in addition to the general comments on the DEIS set forth in the *Comments of Islander East Pipeline Company, L.L.C. and Algonquin Gas Transmission Company on Draft Environmental Impact Statement* (hereafter, the "*IE/Algonquin Comments*") to which these *Technical Comments on the DEIS* are appended, including specifically the discussion of the alternatives set forth in Section II, Comments thereof.

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Islander East Pipeline Project One-Pipe System Alternative Facilities	
Component	Location
Mainline: 51.7 (Total Miles)	***24.5 miles in Connecticut; 27.3 miles in New York***
• 17.1 miles* of new 36-inch-diameter mainline pipeline loop	Adjacent to Iroquois' 24-inch-diameter mainline, extending from Brookfield Meter Station to mainline valve 30 in City of Shelton. The loop would traverse towns of Brookfield, Newtown and Monroe, as well as Shelton, Fairfield County, Connecticut.
• 17.1 miles of new 24-inch-diameter mainline marine pipeline in Long Island Sound	7.5 miles in Connecticut waters, 9.6 miles in New York waters, extending from submarine tap off Iroquois' existing 24"-diameter mainline offshore near the City of Milford, Connecticut (New Haven County), across Long Island Sound to Shoreham, New York.
• 12 miles of new 24-inch"-diameter mainline on Long Island	Extends from Shoreham to Brookhaven (Islander East proposed route)
Other Facilities	
• Lateral Pipe: 3.6 Miles	All located in Suffolk County, New York (Islander East's proposed Calverton Lateral)
• New Compressor Station (20,000 hp)	Along Iroquois' mainline in Milford, Connecticut
• 2 New Meter Stations	New York (Calverton and Brookhaven)

*Mileage calculated based on a review of Iroquois maps (@1991).

A1-44 FERC states on page 4-3 that the only portion of the One-Pipe System Alternative that has not already been considered as part of either Islander East or Iroquois' ELI Project is the new 17-mile mainline loop that would be required in Fairfield County, Connecticut. As a result, the following evaluation centers on a review of the environmental characteristics along this 17-mile route and an examination of the potential environmental effects associated with constructing a new 36-inch-diameter pipeline through the area. However, it should be noted that in addition to the new mainline loop, additional compression may be required at the proposed Brookfield compressor station as Iroquois has indicated in a February 19, 2002 response to question 7 of the February 8, 2002 data request in CP02-52, that the proposed Brookfield compressor would be capable of flowing approximately 196,400 Mcf/d from Algonquin into the Iroquois pipeline. Based on this response, it would appear that additional horsepower would be required to flow the proposed 435,000 dth/d One-Pipe System Alternative volume from Algonquin to Iroquois.

One-Pipe System Alternative in Fairfield County, Connecticut

A1-45 Compared to the Connecticut on-shore portion of Islander East, the One-Pipe System Alternative would require the construction of a larger diameter (36-inch), longer (17.1-mile) pipeline through areas of steep, largely forested terrain – substantial portions of which have been developed for residential uses subsequent to the 1991 installation of the Iroquois mainline. Far from "avoiding or minimizing" potential environmental impacts, the One-Pipe System Alternative would increase the potential for adverse environmental effects by exchanging Islander East's proposed 24-inch-diameter, 10.2-mile onshore pipeline in New Haven County, Connecticut for the 36-inch-diameter, 17.1-mile loop in Fairfield County, Connecticut.

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A1-44 See response to comment 3.

A1-45 See response to comment 3.

A1-45 The 17.1-mile loop would traverse four Fairfield County communities: the Town of Brookfield (0.3 mile), Town of Newtown (11.7 miles), Town of Monroe (3.1 miles) and the City of Shelton (3.1 miles).

The One-Pipe System Alternative would originate at a point near Iroquois' existing Brookfield Meter Station (where the Iroquois and Algonquin mainlines converge). Iroquois has proposed – but has not received FERC approval – to develop a new compressor station in this area. From Brookfield, the 36-inch-diameter One-Pipe System Alternative would extend east through the Hawleyville and Sandy Hook sections of the Town of Newtown, paralleling for almost 3 miles a corridor presently occupied by Iroquois' 24-inch mainline and Algonquin's mainline and mainline loop.

Although this area was largely undeveloped forest when the Iroquois mainline was constructed a decade ago, substantial residential growth has since occurred along the pipeline corridor. Several new residential roads also have been developed that cross or abut the pipeline corridor (e.g., Adams Hill Lane, Autumn Ridge Road, Briarwoods Road). In general, most of Newtown's significant population growth and development over the past 10 years has been (and continues to be) centered in the Hawleyville and Sandy Hook sections.

Just west of Hanover Road in Newtown, the Iroquois mainline and the One-Pipe System Alternative diverge south-southeast from the Algonquin corridor. After crossing Hanover Road, the One-Pipe System Alternative would traverse through/near residential areas along Old Farm Hill Road, Horseshoe Ridge Road, Yearling Lane, Woodbine Lane, Edgewood Drive, and Teachers Ridge Road. South of Schoolhouse Hill Road, the One-Pipe System Alternative would follow the Iroquois mainline adjacent to Interstate 84, crossing the Pootatuck River and Route 34 (Washington Avenue).

Between Washington Avenue and Philo Curtis Road, the One-Pipe System Alternative would continue to abut the Interstate 84 corridor, but also would traverse through the rear of approximately 14 residential lots in a new subdivision along the recently constructed Pearl Street. New residential areas also have been developed and are planned between Philo Curtis Road and the existing homes along Jo-Mar Drive, which abut Iroquois' crossing of Interstate 84.[2]

After crossing Interstate 84, the One-Pipe System Alternative would continue along the Iroquois mainline, passing directly through residential areas along Bristle Lane, Brandywine Lane, Jeremiah Road, Rose Lane, Cobblers Mill Road, Mountain Manor, Bennetts Bridge Road, Gelding Hill Road, Charter Ridge Road, and Canterbury Lane/Clapboard Ridge. All of the residential subdivisions in these areas were developed since 1991. Further, extensive new residential growth is continuing along/adjacent to the existing Iroquois pipeline easement in various areas (e.g., along Charter Ridge Road, Clapboard Ridge Road/Canterbury Lane).

Continuing through Newtown, the One-Pipe System Alternative would follow Iroquois' existing mainline through/adjacent to the Paugussett State Forest before crossing State Route 34 and the Halfway River, which forms the boundary between Newtown and the

[2] The ELI System Alternative terminates just south of the Interstate 84 crossing, in the general vicinity of Pole Bridge Road.

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A1-45 Town of Monroe. The Iroquois easement forms the western boundary of the state forest, which extends east to the Housatonic River. Existing or planned residential subdivisions generally abut the pipeline corridor on the west.

In Monroe, the One-Pipe System Alternative would traverse residential development along/near Whispering Pines Road, Old Zoar Road, State Route 111, and Crownview Drive. The loop also would traverse Boys Halfway River, a Class A stream, and the Pomperaug Trail (a "blue dot" hiking trail) before entering the Means Brook watershed and crossing into the City of Shelton.

In Shelton, the One-Pipe System Alternative would follow Iroquois' existing mainline through the extensive wetland complex associated with the Means Brook watershed, as well as through two parcels owned by the Shelton Land Trust. When the Iroquois mainline was planned and installed in 1990-1991, the pipeline alignment through the Means Brook wetland was highly controversial. Owned by the Bridgeport Hydraulic Company, Means Brook is a high quality stream (Class AA) that feeds a public drinking water reservoir. The stream and the surrounding forested watershed were historically protected to maintain drinking water quality. The FERC and the U.S. Army Corps of Engineers approved the Iroquois route through the large, forested wetland in order to avoid impacts to uplands associated with Jones Tree Farm and with a new residential development and associated detention ponds located west of Beardsley Road. As a result, the Iroquois pipeline traverses this wetland for approximately one mile. FERC required Iroquois to implement special mitigation measures (including a revegetation plan) to assure the restoration/preservation of the Means Brook complex. The One-Pipe System Alternative would impact the Means Brook wetland complex again.

The One-Pipe System Alternative also would cross property owned by the Shelton Land Trust, as well as State Route 110 (Leavenworth Road) before terminating at an existing Iroquois mainline valve south of Pearmain Road. Although the area immediately adjacent to the pipeline in this area remains undeveloped, new residences are being constructed along portions of Pearmain Road to the north.

General Environmental Issues

The One-Pipe System Alternative would traverse areas that have undergone substantial development since the Iroquois mainline was installed. Consequently, in addition to crossing relatively rugged terrain characterized by shallow depth to bedrock and numerous wetlands/watercourses, the loop would pass through a variety of new residential areas.

A1-46 The principal environmental issues associated with the loop include:

- Alignment through areas of shallow depth to bedrock will require substantial blasting.
- Increased potential for erosion and sedimentation along steep slopes.
- Proximity to numerous residential areas and potential for direct conflicts with some residences due to congestion.

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A1-46 See response to comment 3.

A1-46

- Numerous wetland, stream, and river crossings, including crossings of Pond Brook, the Pootatuck River, Halfway River, Boys Halfway River, and Means Brook wetland complex.
- Crossing (for about 2 miles) of the Pootatuck Sole Source Aquifer in Newtown.
- Potential for impacts to cultural resources (archaeological sites).
- Potential constraints associated with alignment near Interstate 84 and new subdivision development near Exit 11 (e.g., the Tilson Woods subdivision along Pearl Street).
- Alignment of about 1 mile through Shelton Land Trust properties, including Nicholdale Farm.

The environmental characteristics of the One-Pipe System Alternative are summarized in the following table and discussed briefly below.

Islander East Pipeline Project

Summary of Environmental Characteristics
One Pipe System Alternative

Environmental Factor	Unit	One-Pipe Loop	Comments
Length	(miles)	17.1	
Adjacent to existing right-of-way	(miles)	17.1	
Permanent right-of-way	(acres)	103.6	
Construction right-of-way	(acres)	176.2	
Streams traversed	(total number)	64	Pond Brook; Pootatuck River; Halfway River Boys Halfway River; Means Brook
	(number of Class A or above)	26	
Sole source aquifers traversed	(number)	1	Pootatuck Aquifer; one of only two sole source aquifers designated by EPA in Connecticut.
Wetlands traversed	(number)	61	Significant crossing of Means Brook forested wetland
	(miles)	3.3	
Residences within 50' of edge of est. construction right-of-way	(number)	Unknown	Extensive new residential development near and along pipeline in Newtown, as well as some in Monroe and Shelton. All planned subdivisions identified in FERC FEIS for the Iroquois mainline (June 1990) appear to have now been constructed.
Estimated areas where blasting would be required	(miles)	6.3	Principally in Newtown and Monroe
Estimated crossings (road, utility, railroad)	(number)	38	Interstate 84 State Routes 25, 6, 34, 111, 110 CL&P transmission lines Railroad; Algonquin mainline and loop
Special land uses crossed	(list)	4	Paugussett State Forest (Newtown) Pomperaug Blue Dot Trail (Monroe) Shelton Land Trust (Shelton) – Nicholdale Farm (Property #20) and Property #19

Sources: FERC FEIS for Iroquois Project (June 1990); Iroquois D & M Plan for Connecticut Spread 5 (June 1991); town maps; aerial photography; April 2002 field reconnaissance; Internet research

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A1-46 Multiple Easements and Potential Siting Issues. Along the first 2.8 miles of the loop (in Brookfield and Newtown), the new 36-inch-diameter loop would be aligned adjacent to two Algonquin mainlines and the 24-inch-diameter Iroquois mainline, creating a relatively wide corridor. In this area, various new residential subdivisions (e.g., along Adams Hill Road, Autumn Ridge Road, Briarwoods Road) have encroached on the existing rights-of-way, making the location of a fourth pipeline more difficult. Further, the loop also would cross Pond Brook, a Class A coldwater fishery.

Blasting. Based on data included in Iroquois' 1991 D & M Plan, blasting would be required along about 6 miles of the loop, including through areas near existing residential development. The following table identifies potential areas in which blasting would likely be required along the loop.

Islander East Pipeline Project

Areas Where Blasting Could Be Anticipated on the One-Pipe System Alternative

Community Beginning MP*	Ending MP*	Total Distance (Miles)	Community Beginning MP	Ending MP*	Total Distance (Miles)
Newtown			29.42	29.46	0.04
21.19	21.39	0.2	29.52	29.91	0.39
21.43	21.62	0.19	30.09	30.17	0.08
21.65	21.78	0.13	30.23	30.64	0.41
21.93	22.28	0.35	31.17	31.32	0.15
22.29	22.45	0.16	31.38	31.65	0.27
22.48	22.85	0.37	31.72	31.96	0.24
22.87	22.99	0.12	Monroe		
23.01	23.03	0.02	32.74	32.92	0.18
23.19	23.23	0.04	33.14	33.58	0.44
24.05	24.37	0.32	33.65	33.83	0.18
24.53	24.8	0.27	33.86	34.08	0.2
25.66	25.74	0.08	34.12	34.38	0.26
27.22	27.57	0.35	34.41	34.45	0.04
27.87	27.91	0.04	Shelton		
27.97	28.04	0.07	36.83	37.38	0.55
28.10	28.15	0.05			
28.54	28.66	0.12	Total Miles		6.31

Source: Iroquois D & M Plan, June 1991.
* Mileposts from June 1991 Iroquois D & M Plan.

Wetlands Crossings. A review of Iroquois' mainline route adjacent to which the loop would be located indicates that approximately 81 wetlands would be crossed, for a total of about 3.3 miles. The following table provides the Iroquois milepost, wetland number, wetland classification, wetland crossing length and comments for the wetlands. Prior to the installation of the Iroquois mainline, most of these wetlands were forested; additional portions of the same forested wetlands would be affected by the installation of the One-Pipe System Alternative. Extensive forested wetlands associated with the Means Brook watershed would be among those crossed.

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Wetlands Along the One-Pipe System Alternative

	Milepost*	Wetland No.	Wetland Classification*	Wetland Crossing Length (feet)	Comments
1.	20.72	64-1	PEM5E; PFO/SS1E/PSS1E	800	Large wetland along Algonquin and Iroquois rights-of-way.
2.	21.00	64-2	PEM1E	112	
3.	21.01	64-3	PSS/PFO1E	240	Pond Brook
4.	21.12	64-4	PFO1E	150	
5.	21.67	64-6	PFO1E, PEM5E	110	
6.	21.78	64-7	PEM5E, R4SB1, PFO1/SS1	750	
7.	22.13	64-10	PFO1E	100	
8.	22.28	64-11		50	
9.	22.45	64-12	PFO1E, PEM2E	50	
10.	22.70	64-13	PFO1E, PEM5E	160	
11.	22.88	64-13.1		30	
12.	23.12	64-14	PFO1E	150	
13.	23.29	64-15	PFO1E	300	
14.	23.43	64-15.1		80	
15.	23.51	64-15.2		70	
16.	23.72	64-15.3		420	
17.	24.25	64-15.4		30	
18.	24.38	CTWC 64-15.6		30	
19.	24.40	64-15.7		120	
20.	24.40	64-15.8		80	
21.	24.87	64-16	PSS/PFO1E	315	
22.	25.19	64-17	PFO1E	160	
23.	25.31	64-18	PFO1E	85	
24.	25.81	64-20	PFO1E; R2UWH	150	Associated with Pootatuck River
25.	26.18	64-21	PEM5E/SS1H; PFO1E	260	
26.	26.96	64-22	PFO/SS1E	150	
27.	27.20	64-23	PFO1E	80	Adjacent to I-84 southwest side.
28.	27.57	64-26	PFO1E; R4SB1	100	
29.	27.73	64-28	PFO1E	155	
30.	27.78	64-29	PFO1E	75	
31.	27.83	64-30	PFO/SS1H	210	
32	28.15	64-32	PFO1E	150	
33.	28.74	64-35	PFO1E	20	
34.	28.75	64-36	PFO1E, R3SB1, PEM/SS1E	700	Associated with Barnetts Bridge Brook
35.	29.55	64-37.1	PFO1E	30	
36.	29.61	64-38.1	PFO1E	50	
37.	30.48	64-41	PFO4E	230	
38.	30.72	64-42	PFO1E	110	
39	31.08	64-43.1		200	
40.	31.66	64-43.3		20	

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Wetlands Along the One-Pipe System Alternative

Milepost*		Wetland No.	Wetland Classification*	Wetland Crossing Length (feet)	Comments
41.	31.89	64-43.4		90	
42.	31.97	64-43.6		80	Adjacent to Halfway River.
		CTWC 64-44			Halfway River
43.	32.06	65-0.2		100	
44.	32.39	65-2.1		50	
45.		CTWC 65-5	PFO1E	60	
46.	32.60	CTWC 65-6	PFO1E	25	
47.		CTWC 65-7		55	
48.	32.79	65-8	PFO1E	30	
49.	33.41	65-9.2	PFO/SS1E	25	
50.	33.50	65-8.3	PFO/SS1E	50	
51.		CTWC 65-10	PFO1E	30	Boys Halfway River.
52.	33.85	65-11	PFO1E	400	
53.	34.10	65-12	PFO1E	60	
54.	34.50	65-16	PFO1E	80	
55.		65-15.1		2700	
56.	35.09	66-1	PFO1E	9325	Large wetland associated with Means Brook.
57.	36.36	66-2	PFO1E	700	
58.	36.61	66-4	PFO1E	200	
59.	36.73	66-5	PFO1E	250	
60.	36.93	66-5.1	PFO1E	150	
61.	37.03	66-5.2	PFO/SS1E	30	
TOTAL		(linear feet)		17,362	
		(linear miles)		3.3	

* Wetland crossings and classifications estimated based on review of Iroquois mainline O & M Plan (June 1991), FERC FEIS for the Iroquois mainline (June 1990), and aerial photography.

Waterbody Crossings. The 17.1-mile loop would traverse 64 perennial and intermittent streams, including Pond Brook, the Poolatuck River, Halfway River, and Boys Halfway River. Some of these streams (e.g., Pond Brook, Poolatuck River) support coldwater fisheries and many have a water quality classification of A or AA. The following table provides the approximate milepost, waterbody name, and the water quality and fishery type of each waterbodies that would be traversed.

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Waterbodies Traversed Along the One Pipe System Alternative

	Approximate Milepost*	Waterbody Name	Water Quality Classification	Fishery Classification
1.	20.76	Intermittent Tributary		
2.	21.04	Pond Brook	A	Coldwater
3	22.19	Intermittent Tributary		
4.	22.30	Intermittent Tributary		
5.	22.26	Intermittent Tributary		
6.	22.76	Intermittent Tributary		
7.	22.86	Intermittent Tributary		
8	23.13	Perennial Tributary		
9.	23.29	Intermittent Tributary		
10.	23.43	Intermittent Tributary		
11.	23.50	Intermittent Tributary		
12.	24.26	Intermittent Tributary		
13.	24.38	Intermittent Tributary		
14.	24.40	Intermittent Tributary		
15.	24.42	Perennial Tributary		
16.	24.91	Intermittent Tributary		
17.	25.10	Intermittent Tributary		
18.	25.34	Intermittent Tributary		
19.	25.53	Pootatuck River	B/C	Coldwater
20	27.01	In. Tributary (drain)		
21.	27.20	Intermittent Tributary		Coldwater
22	27.48	Intermittent Tributary (2x)		
23	27.55	Intermittent Tributary	A	
24.	27.73	Intermittent Tributary	A	
25.	27.80	Perennial Tributary to Housatonic River	A	
26.	28.16	Intermittent Tributary	A	Coldwater
27.	28.28	Intermittent Tributary	A	
28.	28.35	Intermittent Tributary	A	
29.	28.77	Perennial Tributary to Housatonic River (Bennets Bridge Brook)	A	Coldwater
30.	28.89	Intermittent Tributary	A	
31.	29.55	Perennial Tributary to Housatonic River	A	
32.	29.61	Perennial Tributary to Housatonic River	A	
33.	29.87	Intermittent Tributary		
34.	30.46	Perennial Tributary	A	
35	30.73	Perennial Tributary	A	
36.	30.84	Intermittent Tributary		Coldwater
37.	31.34	Intermittent Tributary		
38.	31.67	Intermittent Tributary		
39.	31.71	Intermittent Tributary		
40.	31.90	Intermittent Tributary		
41.	32.01	Halfway River	B/C	Coldwater
42.	32.20	Intermittent Tributary		
43.	32.30	Intermittent Tributary		
44.	32.39	Intermittent Tributary		
45	32.52	Intermittent Tributary		
46.	32.54	Intermittent Tributary		
47.	32.69	Intermittent Tributary		
48	32.80	Intermittent Tributary		
49	33.35	Intermittent Tributary to Boys Halfway River		
50.	33.39	Intermittent Tributary to Boys Halfway River		
51.	33.51	Perennial Tributary to Boys Halfway River	A	
52.	33.59	Boys Halfway River	A	Cold
53.	33.87	Intermittent Tributary to Boys Halfway River		
54.	34.10	Perennial Tributary to Hurds Brook	A	
55.	34.42	Intermittent Tributary		
56.	34.67	Pine Swamp Brook	A	Coldwater
57.	35.22	Intermittent Tributary to Means Brook	AA	
58.	36.03	Perennial Tributary to Means Brook	AA	
59.	36.36	Intermittent Tributary to Means Brook	AA	
60.	36.52	Perennial Tributary to Means Brook	AA	Coldwater
61.	36.63	Intermittent Tributary to Means Brook	AA	
62.	36.73	Intermittent Tributary to Means Brook	AA	

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Waterbodies Traversed Along the One-Pipe System Alternative

	Approximate Milepost*	Waterbody Name	Water Quality Classification	Fishery Classification
63.	36.93	Perennial Tributary to Means Brook	AA	
64.	37.02	Perennial Tributary to Means Brook	AA	

Aquifers. For approximately 2 miles in Newtown, the One-Pipe System Alternative would traverse the federally-designated Pootatuck Sole Source Aquifer. This aquifer is one of only two sole source aquifers in Connecticut that have been designated by the U.S. Environmental Protection Agency (EPA) pursuant to the Safe Drinking Water Act.

Proximity to Residential Development. A field reconnaissance of the pipeline loop, conducted in early April 2002, revealed numerous new subdivisions adjacent to the existing Iroquois easement. Since the Iroquois pipeline was installed in 1991, substantial residential development has occurred along the route, particularly in Newtown. In fact, 2000 Census data indicates that Newtown experienced a 20.5 percent increase in population over the past decade – the greatest growth in terms of net population gain and population change of any community in Connecticut (HMA, Town of Newtown Plan of Conservation and Development – 2002 Update). A majority of this growth has been concentrated in the northern and eastern portions of the town – the areas through which Iroquois' mainline traverses. The following table compares the planned residential developments identified in the 1990 FERC Final EIS to the existing subdivisions along the proposed route of the One-Pipe System Alternative.

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Status of Residential Subdivision Developments Along
One-Pipe System Alternative and Original Iroquois Mainline

Location (Town)	Name of Development if Identified in FERC 1990 FEIS for Iroquois Project and Current Status
Newtown	New homes along Ferrell Road
	New subdivision along Adams Hill Road
	New subdivisions along Autumn Ridge Road and Briarwoods Road
	Old Farm Hill subdivision is constructed; extensive residential development in the Old Farm Hill Road and Horseshoe Ridge Road area. Teachers Ridge subdivision is constructed
	River View Ridge subdivision, Contemporary Estates subdivision, and Bridge Road subdivision are constructed with new subdivisions off Washington Street (Pearl Street), Philo Curtis Road Feather Meadow subdivision and Deer Ridge subdivision are constructed along Bristle Lane, Brandywine Road, Rose Lane, Fawnwood Road
	Mountain Manor Estates, Cobblers Mill Phase II, and Green Ridge Estates are extensive residential subdivisions along Cobblers Mill Road and Mountain Manor. Trout Run subdivision has new homes along Bennetts Bridge Road and Gelding Hill Road Bernard Green Trustee, Sutherland Woods, and Osborne Hill Estate have extensive new residential subdivisions in Charter Ridge Road area.
	Forest View subdivision is constructed; abuts pipeline and near Paugussett State Forest
Monroe	Whispering Pines Estates and Buckhill Estates are constructed.
	Woodland Commons is constructed along Crownview Drive.
Shelton	Monty Blakeman is constructed; adjacent to Means Brook wetland

Source: FERC FEIS for Iroquois project (June 1990), town maps, and aerial photography.

Crossings. The 17.1-mile loop would involve an estimated 38 road, utility, or railroad crossings, including Interstate 84, as well as State Routes 25, 6, 34, 111, and 110, as set forth in the following table.

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Road, Railroad, Powerline, and Pipeline Crossings
Along the One-Pipe System Alternative

	Approximate Milepost*	Crossing	Road Type	Road Material	Additional Temporary Workroom Required for Iroquois 1991**
1.	20.21	High Meadow Road	T	B	50 x 25 DS
2.	20.60	Ferrell Road	T	B	50 x 50 US; 250 x 50 DS
3.	20.95	State Route 25	S	B	225 x 60 US; 150 x 55 DS
4.	20.98	Obsua Road	T	B	150 x 55 DS
5.	*21.50*	*Adams Hill Road*	T	*B*	*New Road*
6.	*21.60*	*Autumn Ridge Road*	T	*B*	*New Road; Parallels Pipeline*
7.	21.84	Butterfield Road	T	B	100 x 25 DS
8.	21.85	Algonquin Gas Transmission System	-	-	-
9.	22.17	Georges Hill Road	T	D	None
10.	22.57	Pamelee Hill Road	T	B	200 x 60 US; 50 x 15 DS
11.	23.37	Hanover Road	T	B	100 x 15 US and DS
12.	*24.00*	*Horseshoe Ridge Road*	T	*B*	*New Road*
13.	24.48	Woodbine Lane	T	D/G	None
14.	24.83	Schoolhouse Hill Road	T	B	75 x 25 DS
15.	25.56	Church Hill Road (U.S. Route 6)	S	B	140 x 25 US; 100 x 25 DS
16.	26.05	Washington Street (Rt. 34)	S	B	100 x 45 US
17.	26.78	Philo Curtis Road	T	B	100 x 15 US and DS
18.	27.13	Interstate 84	S	B	160 x 125 US; 200 x 125 DS
19.	27.24	Pole Bridge Road	T	B	200 x 125 US; 100 x 25 DS
20.	27.77	Brandywine Lane	T	B	None
21.	27.93	Jeremiah Road	T	B	100 x 15 US
22.	28.30	*Cobblers Mill Road*	T	B	None
23.	*28.45*	*Mountain Manor Road*	T	*B*	*New Road*
24.	28.75	Bennetts Bridge Road	T	B	75 x 15 US; 100 x 25 DS
25.	28.95	Gelding Hill Road	T	B	100 x 30 US; 100 x 15 DS
26.	29.36	*Charter Ridge Road*	T	*B*	*New Road*
27.	31.35	Telephone Cable	-	-	100 x 15 US
28.	31.68	State Route 34	S	B	100 x 15 US and DS
29.	32.04	ConRail	-	-	100 x 25 Us and DS
30.	32.18	Whispering Pines Road	T	B	None
31.	32.32	Old Zoar Road	T	B	50 x 15 US; 100 x 15 DS
32.	32.42	State Route 111	S	B	75 x 20 US and DS
33.	32.65	Crown View Drive	T	B	100 x 15 US; 50 x 20 DS
34.	34.09	Webb Circle	T	B	50 x 15 US; 100 x 15 DS
35.	34.45	East Village Road	T	B	50 x 15 US; 100 x 15 DS
36.	36.31	State Route 110	S	B	100 x 15 US and DS
37.	36.53	Bridgeport Hydraulic Co. Waterline	-	-	100 x 25 US
38.	37.20	Peatmain Road	T	D	None

Key: Type of Crossing: T = Town/City Road; S = State Road.
Road Material: B = Blacktop; D = Dirt; G = Gravel
US / DS = Upstream / Downstream (direction of gas flow; north-to-south)
* Mileposts are from Iroquois 1991 D & M Plan and maps.
** Additional Temporary Workroom requirements from Iroquois 1991 D & M Plan.
Italics indicates new road since 1991 installation of Iroquois mainline.

Land Uses. Initial analyses indicate that a majority of the loop would cross forested and/or residential areas adjacent to the existing Iroquois easement. Prominent land use features adjacent to or crossed by the loop include the Paugussett State Forest in Newtown; Pomperaug Trail along the Boys Halfway River in Monroe; and Jones Tree Farm and the Shelton Land Trust in Shelton. The One-Pipe System Alternative would traverse about a mile through Shelton Land Trust properties located both north and south of Leavenworth Road (i.e., State Route 110). These land trust parcels include:

- Property # 29 (Nicholdale Farm), a 44.87-acre parcel acquired in 1991. This parcel, which abuts Bridgeport Hydraulic Company property (Means Brook watershed) south of Leavenworth Road, includes developed hiking trails and a camping area.

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A1-46 • Property #15, which was acquired by the Shelton Land Trust in 1988, is adjacent to Means Brook and abuts Leavenworth Road to the north and encompasses about 32.7 acres.

Cultural Resources. The original Iroquois mainline traverses areas that were found to be highly sensitive for the location of archaeological sites. Prior to the 1991 Iroquois construction, impacts to various significant sites were avoided or minimized through minor route changes or by data recovery (excavation) along the right-of-way prior to construction. However, significant archaeological sites may remain adjacent to the existing Iroquois right-of-way, in areas that would be disturbed by the construction of the One-Pipe System Alternative. Detailed field investigations by qualified archaeologists would be required to determine the specific significance of potential cultural resource impacts.

Summary

A1-47 The FERC's preliminary examination of the One-Pipe System Alternative, as presented in the Islander East DEIS, understates the environmental resources that would be affected by the construction and operation of a 36-inch-diameter mainline loop along the existing Iroquois easement. The DEIS analysis does not incorporate the detailed environmental data that Iroquois submitted as part of its 1991 D & M Plan, nor does it identify the substantial residential development that has occurred since Iroquois' 1991 construction – and continues to occur – in the immediate vicinity of the Iroquois pipeline route. When these factors are considered, Islander East concludes that the One-Pipe System Alternative would result in substantially greater environmental impacts in Connecticut than would the proposed Islander East pipeline.

A1-48 In proposing the One-Pipe System Alternative, the FERC also did not appear to have considered the facilities that Algonquin might have to construct in order to deliver the required natural gas volumes (i.e., the 435,000 Mcf/day that FERC envisions for the One-Pipe System Alternative) to the Iroquois system/One-Pipe System Alternative at Brookfield. The environmental consequences of developing such facilities would need to be properly identified and factored into any comparisons of the One-Pipe System Alternative.

A1-49 Further, the FERC's One-Pipe System Alternative analysis appears to assume that Iroquois has an existing compressor station at Brookfield. This is not the case. In late 2001, Iroquois applied to FERC and to the State of Connecticut – but has as yet received no approvals -- for the development of a compressor station at Brookfield. According to Iroquois' submission to the Connecticut Siting Council, the Brookfield Compressor Station would include a 10,000 hp natural-gas fired turbine-driven compressor unit and associated facilities (utility/control and storage buildings; motor control building; domestic gas building) on a 88.3-acre site adjacent to the existing Brookfield Meter Station. This proposed compressor station would be near Brookfield's Whisconier Middle School, as well as residential areas along High Meadow Road and Whisconier Road. Iroquois' application indicates that the compressor station is proposed for construction in 2003, with an in-service date planned for November 2003.

In March 2002, Iroquois submitted an application to the Connecticut Siting Council for its proposed "Iroquois Extension" project. Although the focus of the application is on a proposed marine pipeline, the need for "certain additions to Iroquois' proposed natural

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A1-47 See response to comment 3.

A1-48 See response to comment 3.

A1-49 See response to comment 3.

gas compressor station in Brookfield" is referenced. These additions appear to include a new gas filtration system, new meter station, and piping modifications. Such additions are planned for construction in 2004, with an in-service target of November 2004.

It is unclear what modifications to the proposed Brookfield Compressor Station would be required to support the One-Pipe System Alternative, or how the planning and permitting of such facilities could be completed in time to meet Islander East's proposed in-service date. Iroquois' February 19, 2002 response to question 7 of the February 8, 2002 data request in CP02-52, stated that the Brookfield compressor would be capable of flowing approximately 196,400 Mcf/d from Algonquin into the Iroquois pipeline. Based on this response, it would appear that additional horsepower would be required to flow the proposed 435,000 dth/d One-Pipe System Alternative volume from Algonquin to Iroquois. The environmental effects of the proposed compressor station and any
A1-50 additional horsepower requirements (including effects on air quality, noise, visual resources, residential areas, etc.) should be included in the One-Pipe System Alternative evaluation. Similarly, any other Iroquois additions that would be required to implement the One-Pipe System Alternative also should be factored into the comparative analysis of the system alternatives.

A1-51 In summary, the One-Pipe System Alternative would not serve to avoid or mitigate environmental impacts. This system alternative would simply shift the potential environmental effects of pipeline development from New Haven County, Connecticut to Fairfield County, Connecticut, where a mainline loop would result in comparatively greater effects on environmental resources.[3]

SECTION 4.2.3 ELI SYSTEM ALTERNATIVE

This system alternative would involve the use of new facilities – i.e., principally Iroquois' proposed ELI project, along with certain other modifications, to transport the Islander East natural gas volumes (280,000 Mcf/day). Except for the length of the mainline loop on the Iroquois system and the diameter of the pipe (20-inch instead of 24-inch) across Long Island Sound and on Long Island, the facilities required to implement the ELI System Alternative (summarized below) are almost identical to those described for the One-Pipe System Alternative.

[3] This Summary sets forth only the technical analysis of the One Pipe System Alternative. As stated in the *TE/Algonquin Comments*, the One Pipe System Alternative would not meet the project goals of the Islander East Pipeline Project of an in-service date of November 2003 or of a second gas transmission pipeline across Long Island Sound to enhance reliability of service and security of supply. In addition, this alternative may not be economically feasible.

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A1-50 See response to comment 3.

A1-51 See response to comment 3.

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ELI System Alternative Facilities

Component	Location
Mainline Pipe: 35.1 (Total Miles)	**8.8 miles in Connecticut; 27.3 New York**
• 7 miles* of new 36-inch-diameter mainline pipeline loop**	Adjacent to Iroquois 24-inch-diameter mainline, traversing from the Brookfield Meter Station to a point immediately southeast of Interstate 84. Crosses portions of towns of Brookfield and Newtown, Fairfield County, Connecticut.
• 17.1 miles of new 30-inch-diameter mainline marine pipeline in Long Island Sound	7.5 miles in Connecticut waters, 9.6 miles in New York waters, extending from submarine tap off Iroquois' existing 24-inch-diameter mainline off the City of Milford, Connecticut (New Haven County), across Long Island Sound to Shoreham, New York.
• 12 miles of new 20-inch-diameter mainline on Long Island	Extends from Shoreham to Brookhaven (Islander East proposed route)
Other Facilities	
• Lateral Pipe: 5.6 miles; 24inch-diameter	All located in Suffolk County, New York (Islander East's proposed Calverton Lateral)
• New Compressor Station, 20,000 hp	Along Iroquois mainline in Milford, Connecticut
• 2 New Meter Stations	New York (Calverton and Brookhaven)

*Mileage calculated based on a review of Iroquois maps (@1991).
**Items shown in bold represent change from the One-Pipe System Alternative.

A1-52 The ELI System Alternative would involve the same types of environmental issues as described for the One-Pipe System Alternative. However, because this alternative would involve approximately 7.1 miles, rather than 17.1 miles, of new mainline loop, the environmental impacts would be comparatively less than described for the One-Pipe System Alternative. Nonetheless, the new pipeline loop would cross through numerous new residential subdivisions, as well as 21 watercourses (including Pond Brook and the Pootatuck River), about 27 wetlands, and 18 roads/utilities (including Interstate 84 and State Routes 25, 6, and 34). In addition, the 7.1-mile loop would cross areas of steep slopes and shallow depth to bedrock as described for the One-Pipe System Alternative; blasting would be required along an estimated 2.3 miles of this looping route.

ELI System Alternative Mainline Loop: General Description

A1-53 In Connecticut, the ELI system alternative would involve the construction of 7.1 miles of 36-inch-diameter pipeline loop adjacent to the 24-inch-diameter Iroquois mainline. Although this discussion focuses on this pipeline loop, the ELI System Alternative also would require the construction and operation of a new 20,000 hp compressor station in the City of Milford (New Haven County). In addition, as discussed in the analysis of the One-Pipe System Alternative, the ELI System Alternative appears to assume that Iroquois' proposed Brookfield Compressor Station will be approved, but does not consider the environmental impacts of this proposed station, the modifications, or any horsepower additions to it that would be required to implement the ELI System Alternative.

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A1-52 See response to comment 3. Revisions to the ELI System Alternative, section 4.2.2, have been made in the FEIS.

A1-53 See response to comment 52..

A1-54 The 7.1-mile loop would traverse two Fairfield County communities: Town of Brookfield for 0.3 mile and the Town of Newton for 6.2 miles. Like the One-Pipe System Alternative, the ELI System Alternative's mainline loop would originate at Iroquois' existing Brookfield Meter Station and proposed Brookfield Compressor Station. The ELI System Alternative would follow the same route as the One-Pipe System Alternative through Brookfield and northeastern Newtown before terminating south of the Interstate 84 crossing.

Islander East Pipeline Project

Summary of Environmental Characteristics
ELI System Alternative

Environmental Factor	Unit	ELI Pipe Loop	Comments
Length	(miles)	7.1	
Adjacent to existing right-of-way	(miles)	7.1	
Permanent right-of-way	(acres)		
Construction right-of-way	(acres)		
Streams traversed	(total number of)	21	Pond Brook Pootatuck River
	(number Class A or above)	0	
Sole source aquifers traversed	(number)	1	Pootatuck Aquifer; one of only two sole source aquifers designated by EPA in Connecticut.
Wetlands traversed	(number of)	27	
	(est. linear miles)	0.62	
Residences within 50' of edge of est. construction right-of-way	(number)		Extensive new residential development near and along pipeline in Newtown. All platted subdivisions identified in FERC FEIS for the original Iroquois mainline (June 1990) appear to have been constructed.
Estimated areas where blasting would be required	(miles)	3.0	Areas of steep slopes and bedrock outcrops.
Estimated crossings (road, utility, railroad)	(number)	18	Interstate 84 State Routes 25, 6, 34 CL&P transmission lines Railroad Algonquin mainline and loop
Special land uses crossed	(#/t)	0	

Primary sources: FERC FEIS for Iroquois Project (June 1990); Iroquois D & M Plan for Connecticut Spread 5 (June 1991); town maps; aerial photography, April 2002 field reconnaissance.

General Environmental Issues

The principal environmental issues associated with the ELI loop are generally the same as those described for the One-Pipe System Alternative, including:

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A1-54 See response to comment 52.

A1-54

- Substantial blasting would be required to install the pipeline through areas of bedrock outcrops and where there is a shallow depth to bedrock.
- Increased potential for erosion and sedimentation along steep slopes.
- Potential constraints associated with alignment near Interstate 84 and new subdivision development near Exit 11.
- Numerous wetland and watercourse crossings, including Pond Brook (Class A) and the Pootatuck River – both of which support fisheries.
- Crossing of the Pootatuck Sole Source Aquifer in Newtown.
- Alignment through various new residential areas and potential for conflicts with some residences.

Blasting. Based on data included in Iroquois' 1991 D & M Plan, blasting would be required along about 2.96 miles of the mainline loop. The following table identifies potential areas in which blasting would likely be required along the loop.

Islander East Pipeline Project

Areas Where Blasting Anticipated: ELI System Alternative

Community Beginning MP	Ending MP *	Total Distance (Miles)	Community Beginning MP	Ending MP *	Total Distance (Miles)
Newtown			22.87	22.99	0.12
21.19	21.39	0.20	23.01	23.03	0.02
21.43	21.62	0.19	23.19	23.23	0.04
21.65	21.78	0.13	24.05	24.37	0.32
21.93	22.28	0.35	24.53	24.8	0.27
22.29	22.45	0.16	25.68	25.74	0.06
22.48	22.85	0.37	Total Miles		2.96

*Milepests are from Iroquois 1991 maps.
Source: Iroquois D & M Plan, June 1991.

Wetlands Crossings. A review of ELI System Alternative route indicates that approximately 27 wetlands would be crossed, for a total of about 0.9 mile. The following table provides the milepost, wetland number, wetland classification, and wetland crossing length for each wetland that would be crossed.

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Wetlands Along ELI System Alternative

Milepost		Wetland No.	Wetland Classification*	Wetland Crossing Length (feet)	Comments
1.	20.72	64-1	PEM5E; PFO/SS1E/PSS1E	600	Large wetland along both Algonquin and Iroquois rights-of-way.
2.	21.00	64-2	PEM5E	112	
3.	21.01	64-3	PSS/FO1E	240	Pond Brook
4.	21.12	64-4	PFO1E	150	
5.	21.67	64-6	PFO1E, PEM5E	110	
6.	21.78	64-7	PEM5E, R4SB1, PFO1/SS1	750	
7.	22.13	64-10	PFO1E	100	
8.	22.25	64-11		50	
9.	22.45	64-12	PFO1E, PEM5E	50	
10.	22.70	64-13	PFO1E, PEM5E	180	
11.	22.86	64-13.1		30	
12.	23.12	64-14	PFO1E	160	
13.	23.29	64-15	PFO1E	300	
14.	23.43	64-15.1		90	
15.	23.51	64-15.2		70	
16.	23.72	64-15.3		420	
17.	24.25	64-15.4		30	
18.	24.36	CTWC 64-15.6		30	
19.	24.40	64-15.7		120	
20.	24.40	64-15.8		60	
21.	24.87	64-16	PSS/FO1E	315	
22.	25.19	64-17	PFO1E	160	
23.	25.31	64-18	PFO1E	95	
24.	25.61	64-20	PFO1E; R2UWH	150	Associated with Pootatuck River
25.	26.18	64-21	PEM5E/SS1H; PFO1E	260	
26.	26.56	64-22	PFO/SS1E	150	
27.	27.20	64-23	PFO1E	60	Adjacent to I-84southeast side.
TOTAL		(linear feet)		4,842	
		(linear miles)		0.92	

* Wetland crossings and classifications estimated based on review of Iroquois mainline D & M Plan (June 1991), FERC FEIS for the Iroquois mainline (June 1990), and aerial photography.
* Note: Mileposts from June 1991 Iroquois D & M Plan.

Waterbody Crossings. The 7.1-mile loop would traverse 21 perennial and intermittent streams, including Pond Brook and the Pootatuck River. Both of these streams support coldwater fisheries. The following table provides the approximate milepost, waterbody name, and the water quality and fishery type of the waterbodies that would be traversed.

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Streams Traversed Along the ELI System Alternative Mainline Loop

Approximate Milepost*	Waterbody Name	Water Quality Classification	Fishery Classification
1. 20.78	Intermittent Tributary		
2. 21.04	Pond Brook	A	Coldwater
3. 22.19	Intermittent Tributary		
4. 22.30	Intermittent Tributary		
5. 22.28	Intermittent Tributary		
6. 22.75	Intermittent Tributary		
7. 22.85	Intermittent Tributary		
8. 23.13	Perennial Tributary		
9. 23.29	Intermittent Tributary		
10. 23.43	Intermittent Tributary		
11. 23.50	Intermittent Tributary		
12. 24.28	Intermittent Tributary		
13. 24.38	Intermittent Tributary		
14. 24.40	Intermittent Tributary		
15. 24.42	Perennial Tributary		
16. 24.91	Intermittent Tributary		
17. 25.10	Intermittent Tributary		
18. 25.34	Intermittent Tributary		
19. 25.83	Pootatuck River	B/C	Coldwater
20. 27.01	Intermittent Tributary (drain)		
21. 27.26	Intermittent Tributary		Coldwater

Source: Iroquois O & M Plan June 1991; FERC FEIS June 1990.
*Note: Mileposts from June 1991 Iroquois O & M Plan.

Proximity to Residential Development. A field reconnaissance of the pipeline loop, conducted in early April 2002, revealed numerous new subdivisions adjacent to the existing Iroquois easement. In fact, 2000 Census data indicates that Newtown experienced a 20.5 percent increase in population over the past decade – the greatest growth in terms of net population gain and population change of any community in Connecticut (HMA, Town of Newtown Plan of Conservation and Development – 2002 Update). The following table compares the planned residential developments identified in the 1990 FERC Final EIS to the existing subdivisions along the proposed route of the ELI mainline loop.

Islander East Pipeline Project

Status of Residential Subdivision Developments Along
ELI Loop and Original Iroquois Mainline

Location (Town)	Name of Development if Identified in FERC 1990 FEIS for Iroquois Project and Current Status
Newtown	New homes along Farrell Road
	New subdivision along Adams Hill Road
	New subdivisions along Autumn Ridge Road and Briarwoods Road
	Old Farm Hill subdivision is constructed and there is extensive residential development in the Old Farm Hill Road and Horseshoe Ridge Road area. Teachers Ridge subdivision is constructed
	River View Ridge subdivision, Contemporary Estates subdivision, and Bridge Road subdivision are constructed with new subdivisions off of Washington Street (Pearl Street), and Philo Curtis Road

Source: FERC FEIS for Iroquois project (June 1990), town maps, and aerial photography.

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A1-54 Crossings. The 7.1-mile loop would involve an estimated 18 road, utility, or railroad crossings, including Interstate 84, as well as State Routes 25, 6, and 34. The following table identifies the road, railroad, powerline and pipeline crossings along the system alternative.

Islander East Pipeline Project

Road, Railroad, Powerline, and Pipeline Crossings
Along the ELI System Alternative

	Approximate Milepost*	Crossing	Road Type	Road Material	Additional Temporary Workroom Required for Iroquois 1991**
1.	20.21	High Meadow Road	T	B	50 x 25 DS
2.	20.60	Farrell Road	T	B	50 x 50 US; 250 x 50 DS
3.	20.95	State Route 25	S	B	220 x 90 US; 150 x 55 DS
4.	20.98	Obrien Road	T	B	150 x 55 DS
5.	*21.50*	*Adams Hill Road*	*T*	*B*	*New Road*
6.	*21.60*	*Autumn Ridge Road*	*T*	*B*	*New Road; Parallels Pipeline*
7.	21.64	Butterfield Road	T	B	100 x 25 DS
8.	21.65	Algonquin Gas Transmission System	-	-	-
9.	22.17	Georges Hill Road	T	D	None
10.	22.57	Parmelee Hill Road	T	B	200 x 50 US; 50 x 15 DS
11.	23.37	Hanover Road	T	B	100 x 15 US and DS
12.	*24.00*	*Horseshoe Ridge Road*	*T*	*B*	*New Road*
13.	24.46	Woodbine Lane	T	D/G	None
14.	24.83	Schoolhouse Hill Road	T	B	75 x 25 DS
15.	25.58	Church Hill Road (U.S. Route 6)	S	B	140 x 25 US; 100 x 25 DS
16.	25.09	Washington Street (Rt. 34)	S	B	100 x 45 US
17.	26.75	Pinto Curtis Road	T	B	100 x 15 US and DS
18.	27.13	Interstate 84	S	B	150 x 125 US; 200 x 125 DS

Key: Type of Crossing: T = Town/City Road; S = State Road
Road Material: B = Blacktop; D = Dirt; G = Gravel
US / DS = Upstream / Downstream (direction of gas flow; north-to-south)
* Mileposts are from Iroquois 1991 D & M Plan and maps.
** Additional Temporary Workroom requirements from Iroquois 1991 D & M Plan.
Italics indicates new road since 1991 installation of Iroquois mainline.

Summary

A1-55 The ELI mainline loop would have to cross rugged, forested terrain, various wetlands and watercourses (including Pond Brook and the Pootatuck River) and new residential areas. The FERC's preliminary analysis of the ELI System Alternative (DEIS section 4.2.2), like the evaluation of the One-Pipe System Alternative, underestimates the environmental impacts of constructing the 7.1-mile pipeline loop along the Iroquois mainline through the towns of Brookfield and Newtown. Further evaluations (which incorporate detailed environmental data from Iroquois' 1991 D & M Plan, as well as the results of site reconnaissance, aerial photography review, and research on current development trends in Newtown) revealed that the construction and operation of the 36"-diameter mainline loop would affect more environmental resource ; and be located within 50 feet of significantly more residences than listed in the DEIS.

A1-56 Furthermore, in proposing the ELI System Alternative, FERC does not appear to have considered the facilities that Algonquin might have to construct in order to deliver the required natural gas volumes to the Iroquois system/ELI system alternative loop at Brookfield. The environmental consequences of developing such facilities should be properly identified and factored into any comparisons between the ELI System Alternative and Islander East. Further, like the One-Pipe System Alternative, this system

A1-57 alternative appears to assume that Iroquois has an existing compressor station at

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A1-55 See response to comment 52.

A1-56 See response to comment 52.

A1-57 See response to comment 52.

A1-57 Brookfield and does not consider any horsepower additions that may be required at this location.

A1-58 Overall, while the ELI System Alternative would require less on-shore mainline construction in Connecticut than Islander East, the use of this system alternative would not avoid or mitigate environmental impacts. This system alternative would simply shift the potential environmental effects of pipeline development from New Haven County to Fairfield County. Further, the ELI System Alternative would result in comparatively greater air quality and noise impacts since a larger compressor station would be required along the Iroquois system at Milford (20,000 hp) than is planned for Islander East (10,310 hp) and additional compression also would likely be required on the Iroquois system at Brookfield (where Iroquois plans a new 10,000 hp facility).[4]

Comparative Summary Of One-Pipe And ELI System Alternatives To Islander East

The following summary table compares the environmental features associated with the onshore Connecticut portions of Islander East, the One-Pipe System Alternative, and the ELI System Alternative.

[4] This Summary sets forth only the technical analysis of the ELI System Alternative. As stated in the *IE/Algonquin Comments*, the ELI System Alternative would not meet the project goals of the Islander East Pipeline Project of an in-service date of November 2003 or of a second gas transmission pipeline across Long Island Sound to enhance reliability of service and security of supply.

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A1-58 See response to comment 52.

A1-59

Islander East Pipeline Project

Environmental Comparison: Connecticut Onshore Portions of Islander East, One-Pipe System Alternative, and ELI System Alternative

Environmental Factor	Unit	Islander East	One-Pipe Loop	ELI Loop
PIPELINE				
Length	(miles)	10.2	17.1	7.1
Adjacent to existing right-of-way	(miles)	9.25	17.1	7.1
Permanent right-of-way	(acres)	61.9	103.6	43.0
Construction right-of-way	(acres)	92.7	176.2	73.1
Streams traversed	(total number of)	20	64	21
	(number Class A or above)	10	25	1
Sole source aquifers traversed	(number)	0	1	1
Wetlands traversed	(number of)	41	61	27
	(est. linear miles)	2.3	3.3	0.9
Residences within 50' of edge of est. construction right-of-way	(number)	33	Unknown	Unknown
Estimated areas where blasting would be required	(miles)	0	6.3	3.0
Estimated crossings (road, utility, railroad)	(number)	31	38	18
Special land uses crossed	(list)	6 Branford Land Trust North Branford Land Trust North Haven Land Trust All Saints Cemetery Highway 146 Tilcon Barge Terminal	4 Pisgusset State Forest Pomperaug Trail Shelton Land Trust (2 parcels)	0
COMPRESSOR STATIONS				
	(number of, list)	• 10,310 hp Cheshire	• 20,000 hp Milford • 10,000 hp Brookfield + Additions	• 20,000 hp Milford • 10,000 hp Brookfield + Additions
METER STATIONS				
	(number)	0	1- Brookfield*	1- Brookfield*

* = Based on Iroquois' submissions to the Connecticut Siting Council for ELI Extension Project and Brookfield Additions.

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A1-59 Thank you for your comment. See response to comment 52.

C.2 Section 4.2.3 Long Island System Alternative

A1-60 Islander East has reviewed the Long Island System Alternative proposed by Commission staff in section 4.2.3 and concurs with the staff's environmental analysis that the principal environmental effect from this route would be the construction of the compressor station at the landfall in Shoreham, New York. However, Islander East is not able, consistent with its contractual commitments to the Islander East Customers to commence service in 2003, to support the Long Island Alternative which would require, *inter alia*, that Islander East and Iroquois conclude negotiations of new business agreements regarding cost allocation.[5]

C.3 Section 4.4.1 - Pine Orchard Variation

A1-61 Paragraph 2 of page 4-35 indicates that the Pine Orchard Alternative would be 2 miles longer than the corresponding segment of the proposed route (also see table 4.4.1-1). Islander East has reviewed the variation and has confirmed that the Pine Orchard Variation would be 0.2 mile longer than the proposed route.

C.4 Section 4.4.2 - Pond Variation

A1-62 In paragraph 3 of page 4-40, the FERC recommends constructing the Pond Variation to reduce tree clearing and recreation use impacts to Branford Land Trust Property. It notes that although direct impacts on wetlands associated with constructing through the pond are higher, the impacts would be short term in comparison to the proposed route which would require tree removal and longer term restoration. Islander East accepts the Commission's recommendation and will file revised alignment sheet showing Islander East's adoption of the variation.

C.5 Section 4.4.4 - William Floyd Parkway Variation

In paragraph 2 of page 4-43, the FERC recommends incorporating the William Floyd Parkway Variation into the proposed route between MPs 41.4 and 41.8. The William Floyd Parkway Variation would avoid about 0.2-mile of tree clearing within the Central Pine Barrens Core Preservation Area (CPA).

A1-63 Islander East agrees that the William Floyd Parkway Variation would reduce impacts on the CPA. However, in an effort to address stakeholder concerns, Islander East has modified the proposed route between MPs 34.3 and 42.4 to reduce impacts on the CPA and undeveloped public lands associated with Brookhaven State Park and the Town of Brookhaven. The modifications include a reduced construction right-of-way configuration between MPs 34.3 and 36.6 and a combination of four horizontal directional drills and an alignment change between MPs 36.6 and 42.4. These modifications would reduce CPA impacts by approximately 60 percent over the proposed route. Islander East requests that the Commission consider Islander East's proposed modifications between MPs

[5] As stated in the *IE/Algonquin Comments*, the Long Island System Alternative would not meet the project goal of the Islander East Pipeline Project of an in-service date of November 2003. In addition, this alternative may not be economically feasible.

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A1-60 Thank you for your comment.

A1-61 Thank you for your comment. This has been corrected in the FEIS.

A1-62 Thank you for your comment.

A1-63 Thank you for your comment. The construction modifications through the Central Pine Barrens are discussed in section 3.8.3.2. The additional route variations have been included in section 4 of the FEIS.

A1-63 34.3 and 42.4. Islander East will file updated alignment sheets under separate cover.

C.6 Section 4.4.6 Other Site Specific Variations: Marshalling Yard Variation

A1-64 In the FERC's November 2, 2001 Data Request, Question 55 stated "The Town of Branford has suggested that between MP 9.2 to about MP 9.4 the pipeline continue on the west side of the Branford Steam Railroad..." The 0.2-mile long route variation would cross the tracks from the east side to the west side at approximately MP 9.2, near the northern limits of the Marshalling Yard. Although Islander East originally responded that this alternative was not preferred, Islander East has reevaluated and is now supporting this variation.

The Marshalling Yard Variation will decrease impacts on 1,000 feet of the forested wetland (CT A37) to the east of the Marshalling Yard. Even though the route requires the crossing of two "Y" tracks connecting the Branford Steam Railroad to the Amtrak mainline, impacts to railroad operations would decrease due to a greater distance (75 feet as opposed to 25 feet) between the western-most track and the pipeline.

A1-65 The variation identified by Islander East would cross to the west side of the train tracks immediately north of the Marshalling Yard; therefore impacts to Wightwood School and residential properties would remain unchanged. Tilcon Minerals, Inc. has expressed concern that this variation would increase impacts on its operations. Islander East feels that the greater offset between the railroad and the pipeline will reduce potential impacts to Tilcon Minerals, Inc. operations. In addition, Islander East will cross the "Y" tracks using the bore construction method, which would further reduce potential impacts on operation of the railroad. Islander East will file a revised alignment sheet illustrating the proposed variation to assist FERC in its review of the proposed variation.

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A1-64 The Marshalling Yard Variation is discussed in section 4.4.3 of the FEIS.

A1-65 See response to comment 64.

D. COMMENTS ON SECTION 5.0

D.1 Section 5.1 – Summary of the Staff's Environmental Analysis of the Proposed Action and Alternatives

A1-66 The summary discussion of offshore sediment disturbance by pipeline construction on page 5-2 (paragraph 2) states that Islander East's preferred method of trenching in water 12-feet deep or greater is via the seaplow with midline buoys. Islander East would like to clarify that the seaplow with midline buoys method is preferred in waters 20-feet deep or greater.

D.2 Section 5.1 – Summary of the Staff's Environmental Analysis of the Proposed Action and Alternatives

A1-67 Paragraph 3 of page 5-4 discusses the potential impacts that a significant increase in sedimentation and turbidity could have on marine invertebrates and use of the subsea plow construction method as a way to minimize sedimentation for pipeline construction. The Commission recommends that Islander East utilize this construction method near the shellfish lease beds and through areas designated as sensitive by state and Federal agencies. Islander East will use the HDD method to cross under lease beds owned by the Town of Branford and will use the subsea plow construction method across lease bed L-555.

D.3 Section 5.2 – FERC Staff Recommended Mitigation

A1-68 FERC staff recommended in the DEIS on page 5-15, that Islander East use the subsea plow construction method for pipeline installation near the shellfish lease beds and through any sensitive areas of the Long Island Sound designated by state and/or Federal agencies. As discussed above, Islander East will use the subsea plow construction method at water depths greater than 20-feet deep to mitigate potential impacts on shellfish lease beds and sensitive species.

D.4 Certificate Conditions

A1-69 Section 5.2 of the DEIS identifies mitigation measures identified by the environmental staff of the Office of Energy Projects. Conditions with which Islander East and Algonquin concur are not discussed here. The following are Islander East's responses to the remainder, which are numbered as they appear in the DEIS.

13. In the event that the HDD of the Carmans River fails, Islander East shall file with the Secretary an updated plan including site-specific drawings identifying all areas that would be disturbed by construction using the dry flume crossing method at the Carmans River on Long Island. Islander East shall file this plan concurrent with its application to the COE for a permit to construct using this plan. The Director of OEP must review and approve this plan in writing before construction of the crossing. Page 3-30.

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A1-66 This information has been updated in the FEIS.

A1-67 Comment noted.

A1-68 This information has been updated in the FEIS.

A1-69 Some certificate conditions have been updated in the FEIS as a result of comments from other agencies. The following changes would apply to those conditions contested in these comments from Islander East.

13. The NYSDEC has indicated that use of the dry flume method would be unacceptable for the Carmans River crossing under any circumstances. Therefore, FERC is no longer requiring that method to be included as a component of the contingency plan. The Director of the OEP must review and approve the plan in writing before construction of the crossing.

A1-69 **Islander East's Response:**
Islander East is developing a HDD Achievement Plan for the Carmans River based on comments received from the NY DEC and Islander East will file the plan with the Commission under separate cover.

A1-70 *15. Islander East shall submit a site-specific Directional Drill Contingency Plan for each of the proposed directional drill crossings. Each Directional Drill Contingency Plan shall address how Islander East will:*

a. handle any inadvertent release of drilling mud into the waterbody or areas adjacent to the waterbody, including procedures to contain inadvertent releases;
b. seal the abandoned drill hole; and
c. clean up any inadvertent releases.

*Islander East shall file each plan with the Secretary for review and written approval by the Director of OEP, **before construction**. Page 3-31.*

Islander East's Response:
Islander East will solicit input from its construction contractor regarding site-specific directional drill contingency plans and agrees to prepare and submit to the Secretary for review and written approval, a post certificate directional drill contingency plan for each site-specific HDD location.

A1-71 *17. Islander East shall file the data from the site-specific Sound sedimentation investigations and computer modeling results with the Secretary, **before the issuance of the Final EIS**. Page 3-44.*

Islander East's Response:
Islander East filed preliminary results of its sediment modeling with the Secretary in April 2002. Final analyses will be filed in June 2002.

A1-72 *18. Islander East shall use the subsea plow construction method for pipeline installation near the shellfish lease beds and through any sensitive areas of the Long Island Sound designated by state and/or Federal agencies. Page 3-54.*

Islander East's Response:
Islander East will use the HDD method to cross under lease beds owned by the Town of Branford and will use the subsea plow construction method across state lease bed L-555.

A1-73 *19. **Before construction**, Islander East shall file with the Secretary the final plan for crossing shellfish lease area L-555 at MP 12.6, and documentation of consultation with the lease holder on the final plan. Page 3-54.*

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A1-70 Some certificate conditions have been updated in the EIS as a result of comments from other agencies. The following changes would apply to those conditions contested in these comments from Islander East.

15. The condition stands as in the DEIS.

A1-71 Some certificate conditions have been updated in the EIS as a result of comments from other agencies. The following changes would apply to those conditions contested in these comments from Islander East.

17. This condition has been deleted and the text has been updated with the new information filed.

A1-72 Some certificate conditions have been updated in the EIS as a result of comments from other agencies. The following changes would apply to those conditions contested in these comments from Islander East.

18. The condition has been updated to "Islander East should use the subsea plow construction method, where technically feasible, between MPs 12.0 and 32.15 for pipeline trenching and backfill operations."

A1-73 Comment noted.

A1-73 **Islander East's Response:**
In its April 29, 2002 filing, Islander East provided the Commission with a copy of a letter (dated April 13, 2002) stating that an agreement had been reached between Islander East and the lease holder of shellfish (clams) lease area L-555. This agreement provides for harvesting of shellfish within the trenchline area prior to construction placing seed clams over the trenchline following construction.

A1-74 *22. Islander East shall continue consultation with the NYSDEC regarding the tiger salamander and any other requirements for surveying, monitoring, or avoiding tiger salamanders and their habitats. The results of these consultations, including copies of all correspondence shall be filed with the Secretary. Page 3-71.*

Islander East's Response:
Islander East filed a copy of its *Phase I Tiger Salamander Study* with the Commission in its March 28, 2002 filing. In its April 17, 2002 filing, Islander East provided a copy of its April 3, 2002 consultation letter to the NY DEC that submitted the Phase I tiger salamander survey report. Islander East will file future correspondence with the NY DEC concerning this survey work as it becomes available.

A1-75 *29. **Before construction**, Islander East shall inspect Mr. Nargi's property at MP 8.9 to determine the feasibility of reconstructing this septic system to code on the land available outside of the proposed pipeline right-of-way and file this information with the Secretary. Page 3-89.*

Islander East's Response:
Once Islander East has obtained access to Mr. Nargi's property, it will inspect the property and will assess the feasibility of reconstructing the septic system to code on the land available outside of the proposed right-of-way. Islander East will file this information with the Commission once it is available.

A1-76 *31. Islander East shall file with the Secretary a description of how it would control or limit potential all-terrain vehicle use and damage on its right-of-way. Page 3-90.*

Islander East's Response:
Islander East is aware that all-terrain vehicle (ATV) use along in the area of the proposed route in New York is a landowner concern. Islander East will work with the landowners to identify ways in which potential use of ATVs along the pipeline right-of-way may be controlled.

A1-77 *34 **Prior to construction**, Islander East shall prepare and file with the Secretary for review and written approval by the Director of OEP, a site-specific Central Pine Barrens Crossing Plan to minimize construction clearing through the Central Pine Barrens. This plan shall include:*

a. measures to minimize tree clearing;
b. any revised construction procedures or reductions in workspace;
c. a restoration plan, including planned revegetation techniques and species; and

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A1-74 Section 3.6.4.2 has been revised accordingly.

A1-75 Comment noted.

A1-76 Comment noted.

A1-77 These modifications have been included in the FEIS.

A1-77 *c. a restoration plan, including planned revegetation techniques and species; and*
d. updated alignment sheets that reflect the above measures.

For the forested areas where tree clearing is required in the Central Pine Barrens, provide a detailed vegetation map that shows the location and types of arboreal species that would be removed, including any Federal or state protected species or local species of concern. Page 3-105.

Islander East's Response:
Islander East has modified the proposed route between MPs 34.3 and 42.4 to reduce impacts on the Central Pine Barrens Area and undeveloped public lands associated with Brookhaven State Park and the Town of Brookhaven. The modifications include a reduced construction right-of-way configuration between MPs 34.3 and 36.6 and a combination of four horizontal directional drills and an alignment change between MPs 36.6 and 42.4. These modifications would reduce Central Pine Barrens Area impacts by approximately 80 percent over the proposed route. Islander East requests that the Commission consider Islander East's proposed modifications between MPs 34.3 and 42.2. Islander East will file updated alignment sheets under separate cover.

A1-78 *39. Islander East shall incorporate the William Floyd Parkway Variation into the proposed route between MPs 41.4 and 41.8. Page 4-43.*

Islander East's Response:
Islander East has modified the proposed route between MPs 34.3 and 42.4 to reduce impacts on the Central Pine Barrens Area and undeveloped public lands associated with Brookhaven State Park and the Town of Brookhaven. The modifications include a reduced construction right-of-way configuration between MPs 34.3 and 36.6 and a combination of four horizontal directional drills and an alignment change between MPs 36.6 and 42.4. These modifications would reduce Central Pine Barrens Area impacts by approximately 80 percent over the proposed route. Islander East requests that the Commission consider Islander East's proposed modifications between MPs 34.3 and 42.2. Islander East will file updated alignment sheets under separate cover.

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A1-78 Section 4.4.7 has been revised accordingly.