

EXECUTIVE SUMMARY

INTRODUCTION

The staff of the Federal Energy Regulatory Commission (Commission or FERC) has prepared this draft Environmental Impact Statement (EIS) for the HubLine/East to West Project (E2W Project or Project) to fulfill the requirements of the National Environmental Policy Act (NEPA). The FERC is the lead agency for the preparation of this EIS. The U.S. Army Corps of Engineers (COE) and the U.S. Environmental Protection Agency (EPA) are cooperating agencies. A cooperating agency has jurisdiction by law or special expertise with respect to environmental impacts involved with the proposal and is involved in the NEPA analysis. The purpose of this document is to inform the public and the permitting agencies about the potential adverse and beneficial environmental impacts of the proposed Project and its alternatives, and recommend mitigation measures that would reduce the adverse impacts to the maximum extent practicable.

This draft EIS has been filed with the EPA and a formal Notice of Availability was published in the Federal Register. The public has 45 days after the date of publication in the Federal Register to review and comment on the draft EIS both in the form of written comments and at public meetings to be held in the Project area. All substantive comments received on the draft EIS related to environmental issues will be addressed in the final EIS.

PROJECT BACKGROUND

On August 27, 2007, Algonquin Gas Transmission, LLC (Algonquin) filed a request with the FERC to implement the Commission's pre-filing environmental review process (Pre-Filing Process) for the E2W Project. We¹ approved Algonquin's request on September 10, 2007 and established a pre-filing docket number (PF07-15-000). On June 9, 2008, Algonquin filed an application with the Commission under section 7(c) of the Natural Gas Act and Part 157 of the Commission's regulations. Under Docket No. CP08-420-000, Algonquin is seeking a Certificate of Public Convenience and Necessity (Certificate) to construct, install, own, operate, and maintain an expansion of its existing interstate natural gas pipeline system. We prepared our analysis based on this application, coordination with state and federal agencies, written public comments, comments received at public meetings, information gathered at site visits, environmental information request responses, and subsequent filings made by Algonquin.

PROPOSED ACTION

Algonquin proposes to modify its existing natural gas transmission pipeline system in Massachusetts, Connecticut, Rhode Island, and New Jersey. The E2W Project would provide 746,500 dekatherms per day of east to west natural gas transportation service for delivery to high growth markets in the Northeast. The Project would increase the diversity of supply by accessing natural gas from liquefied natural gas projects recently constructed or under construction offshore of Massachusetts and in New Brunswick, Canada and add natural gas supply reliability and security to Algonquin's existing system by eliminating current delivery bottlenecks. The Project facilities would include:

- I-10 Extension – construction of approximately 12.9 miles of new 36-inch-diameter pipeline in Norfolk County, Massachusetts;

¹ "We," "us," and "our" refer to the environmental staff of the Federal Energy Regulatory Commission's Office of Energy Projects.

- Q-1 System Replacement – installation of approximately 7.5 miles of 36-inch-diameter pipeline that would replace a segment of an existing 24-inch-diameter pipeline in Norfolk County, Massachusetts;
- E-3 System Replacement – installation of approximately 11.0 miles of 12-inch-diameter pipeline that would replace a segment of an existing 6- and 4-inch-diameter pipeline in New London County, Connecticut;
- Rehoboth Compressor Station – a new 10,310-horsepower compressor station in Bristol County, Massachusetts;
- modifications to three existing compressor stations to accommodate bidirectional flow along Algonquin’s system including:
 - Burrillville Compressor Station in Providence County, Rhode Island;
 - Cromwell Compressor Station in Middlesex County, Connecticut; and
 - Hanover Compressor Station in Morris County, New Jersey;
- aboveground over-pressure protection regulation at two existing meter stations (Fore River and Sharon Meter Stations) and at two new regulator stations (beginning and end of the Q-1 System Replacement) along the Algonquin system in Massachusetts; and
- installation of appurtenant ancillary facilities including four mainline valves, two taps, and two remote blow-off valves; five pig² launchers; and three pig receivers in Massachusetts and Connecticut.

The proposed pipeline facilities would be located within or adjacent to Algonquin’s existing pipeline right-of-way and/or NSTAR Electric Company’s (NSTAR) existing powerline right-of-way for the majority of their length. Algonquin proposes to begin construction of the Project in June 2009 and continue until late 2009. The projected in-service date of the E2W Project is November 2009.

COORDINATION OF NEPA/MEPA REVIEW

In addition to the NEPA review process, the Project must undergo an environmental review pursuant to Massachusetts Environmental Policy Act (MEPA) regulations. The MEPA review is administered by the Secretary of the Massachusetts Executive Office of Energy and Environmental Affairs (MEEA). To the extent feasible, this draft EIS provides the relevant information outlined by the Secretary of the MEEA to facilitate a coordinated NEPA/MEPA review.

AGENCY AND PUBLIC REVIEW AND COMMENT OPPORTUNITIES

In June, September, and October of 2007, Algonquin held a total of 29 open houses in various municipalities in Massachusetts and Connecticut to provide the public an opportunity to learn about the Project and express their concerns. An additional open house was held in March 2008 in Stoughton, Massachusetts regarding an alternative pipeline route in the Canton/Stoughton area that was subsequently adopted as part of the proposed route. We attended the open houses to explain the NEPA environmental review process to interested stakeholders and take comments about the Project.

² A pig is an internal tool that can be used to clean and dry a pipeline and/or to inspect it for damage or corrosion.

As part of our pre-filing review, we issued a Notice of Intent to Prepare an Environmental Impact Statement for the Proposed East to West HubLine Expansion Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings (NOI) on October 16, 2007 that briefly described the Project and the EIS process. The NOI was published in the Federal Register and mailed to more than 2,800 individuals and organizations. The NOI invited written comments on the environmental issues to be addressed in the EIS and listed the dates and locations of public scoping meetings to be held in the Project area. We held three public scoping meetings to provide an opportunity for the general public to learn more about the proposed Project and comment on the issues to be addressed in the EIS. These scoping meetings were held in Randolph, Massachusetts; North Andover, Massachusetts; and Norwich, Connecticut on November 5, 7, and 8, 2007, respectively. On April 14, 2008, we issued a Supplemental NOI describing an alternative pipeline route under serious consideration in the Canton/Stoughton area. The Supplemental NOI was published in the Federal Register and mailed to more than 3,000 individuals and organizations and opened a new comment period.

To solicit comments and concerns about the Project from other jurisdictional resource agencies, we conducted an interagency scoping meeting on November 7, 2007 and participated in two interagency field visits on March 7 and 18, 2008.

Through the scoping process and coordination with other agencies, we received comments on a variety of environmental issues. Those issues are addressed in this EIS. The transcripts of the public scoping meetings, a summary of the interagency scoping meetings, and all written scoping comments are part of the public record for the E2W Project and are available for viewing on the FERC Internet website (<http://www.ferc.gov>).³

ENVIRONMENTAL IMPACTS

We evaluated the impacts of the E2W Project on geology; soils; groundwater; surface waters; wetlands; vegetation; wildlife and aquatic resources; special status species; land use, recreation, special interest areas, and visual resources; socioeconomics (including transportation and traffic); cultural resources; air quality and noise; and reliability and safety. The cumulative impacts of the E2W Project with current and foreseeable projects in the area were also considered as well as the growth-inducing impacts of the Project. We also evaluated alternatives to the proposed Project. The issues most frequently raised during the scoping process included the siting of the Boxford Compressor Station (subsequently removed from the Project scope); land use impacts at the proposed Rehoboth Compressor Station site; safety and loss of screening associated with collocation of pipelines with existing NSTAR electric transmission corridors; impacts on NSTAR's future use of its rights-of-way; proximity of the pipelines and construction activities to homes, schools, and a hospital; and impacts on sensitive vegetative communities, wetlands, and forest lands. Consulted resource agencies were also concerned about the crossings of sensitive waterbodies, particularly the Weymouth Fore and Shetucket Rivers. The impacts of the proposed Project are discussed below.

Algonquin proposes to generally use a 75- or 85-foot-wide nominal construction right-of-way, consisting of 30 feet of permanent right-of-way and 45 feet of temporary construction workspace in Connecticut, and 50 feet of permanent right-of-way and 35 feet of temporary construction workspace in Massachusetts. Construction of the Project would temporarily affect about 492.1 acres of land. The land uses that would be affected by construction include open land (35 percent), forest land (32 percent), commercial/industrial land (23 percent), residential land (8 percent), agricultural land (2 percent), and open water (less than 1 percent). Operation of the Project would permanently affect about 172.0 acres of

³ Using the "eLibrary" link, select "General Search" from the eLibrary menu and enter the docket number excluding the last three digits in the "Docket Number" field (i.e., PF07-15 and CP08-420). Select a date range of October 16, 2007 to September 24, 2008.

these land uses, including 71.0 acres of existing right-of-way, 80.8 acres of new permanent right-of-way, 15.1 acres of aboveground facility sites, and 5.1 acres of permanent access roads.

The aboveground facility acreage includes only the footprint for the proposed Rehoboth Compressor Station facilities. Algonquin proposes to acquire a 97-acre parcel of land for the Rehoboth Compressor Station, most of which is covered by forest. Construction of the Rehoboth Compressor Station and associated facilities would disturb about 18.1 acres of upland forest within the center of the site. The remainder of the forest land would be preserved as screening and buffering for the compressor station or potentially used as conservation or mitigation areas. A proposed subdivision was identified within the boundaries of the proposed Rehoboth Compressor Station property. Although we investigated five alternative sites for the Rehoboth Compressor Station, we determined that none were environmentally preferable for a number of reasons including inadequate size, the presence of wetlands, proximity to residences, and increased length of connecting pipelines. Algonquin would negotiate for acquisition of the proposed Rehoboth Compressor Station site and compensate landowners for impacts on planned developments.

To reduce construction impacts, Algonquin would implement its Project-specific Erosion and Sedimentation Control Plan (E&SCP) that incorporates many of the mitigation measures outlined in the FERC's Upland Erosion Control, Revegetation, and Maintenance Plan (Plan) and Wetland and Waterbody Construction and Mitigation Procedures (Procedures). Algonquin would also implement its Project-specific Spill Prevention, Control, and Countermeasure Plan (SPCC Plan) to reduce the likelihood of a spill and to contain and cleanup a spill should one occur.

A total of 39 waterbodies, including 22 perennial waterbodies and 17 intermittent streams or ditches would be crossed by the pipelines associated with the E2W Project. Of these waterbodies, 14 perennial and 2 intermittent waterbodies are designated coldwater or warmwater fishery resources. Algonquin has identified specific construction methods it would use at each waterbody. To avoid direct impacts on waterbody bed, banks, and riparian habitats, Algonquin would cross five waterbodies using either the horizontal directional drill (HDD) or horizontal bore method. Algonquin would cross all other coldwater and significant coldwater/warmwater streams using a dry crossing method such as the flume or dam and pump crossing method. Waterbody crossings would be constructed in accordance with federal, state, and local permits and in accordance with Algonquin's E&SCP.

The Weymouth Fore and Shetucket Rivers are the only major waterbodies (greater than 100 feet wide) that would be crossed by pipeline construction. The Weymouth Fore River is considered sensitive because it is listed as impaired for pathogens and supports essential fish habitat (EFH) for winter flounder. The Shetucket River is considered sensitive because it is part of a protected National Heritage Corridor and supports EFH for Atlantic salmon. Algonquin is proposing to cross both waterbodies using the HDD method. Although there would be no in-stream construction associated with an HDD crossing, there would be the potential for impacts on these waterbodies if an inadvertent release of drilling mud (also referred to as a frac-out) were to occur. Algonquin has prepared an HDD Contingency Plan that describes how the HDD operations would be conducted and monitored to minimize the potential for frac-outs as well as general procedures for cleanup of drilling mud releases and the procedures that would be followed if it is necessary to abandon the drill hole. Algonquin has also submitted preliminary site-specific HDD crossing plans for the Weymouth Fore and Shetucket Rivers. We reviewed these plans and generally find them adequate. However, we determined that the HDD entry and exit point staging areas and other temporary extra workspaces depicted on the site-specific crossing plans differ from those depicted on the filed alignment sheets. To clarify the HDD workspace requirements, we recommended that Algonquin prepare and file final site-specific HDD crossing plans and alignment sheets that depict consistent construction work areas for the HDDs of the Weymouth Fore and Shetucket Rivers.

Implementation of the final site-specific crossing plans and the HDD Contingency Plan would reduce the potential impact of the Project on these rivers and the resources they support.

Based on the subsurface conditions identified during Algonquin's geotechnical investigations, it appears that the HDDs are feasible; however, should one or both of the HDDs fail and an alternative crossing method proposed, Algonquin would be required to file site-specific crossing plans for our review and approval, in addition to obtaining approvals from the appropriate permitting agencies.

Based on Algonquin's wetland delineations, 137 wetlands would be crossed by the Project for a total crossing length of 43,277 feet. A total of 9.3 acres of permanent wetland impacts would occur within the maintained portion of the permanent right-of-way, which includes 4.5 acres of forested wetland impacts and 4.8 acres of non-forested wetland impacts. To reduce the impacts of construction on wetland resources, Algonquin would implement its E&SCP that incorporates many of the mitigation measures outlined in the FERC's Plan and Procedures. Algonquin would also implement measures outlined in its Wetland Restoration Procedures for Temporary Wetland Impacts and its Invasive Species Control Plan.

Algonquin has consulted with the New England District of the COE to discuss compensation for the permanent conversion of forested wetland. Algonquin anticipates that the preferred mitigation would include "preservation" at a 1:15 compensation ratio, which would equate to preservation of approximately a 67.5-acre site. Algonquin's preferred site at this time is a 96-acre property (referred to by Algonquin as the Gibson Property or Glen Echo Property) that would be crossed by the I-10 Extension between mileposts (MPs) 11.3 and 11.9. Algonquin's intent and primary interest in the property is for wetland mitigation; therefore, a large portion of the property (46.2 acres) would be restricted by a conservation easement pursuant to Algonquin's COE permit and wetland mitigation requirements. Because the Gibson Property would not provide for the preservation of the required 67.5 acres of wetlands, Algonquin is considering at least two other potential compensation sites and has initiated contacts with the respective landowners. We recommended that Algonquin file additional information regarding its compensatory wetland mitigation plan and the comments of the COE on the plan.

Vernal pools are ephemeral wetlands that fill annually from precipitation, runoff, and rising of the water table. These pools are sensitive wildlife habitats. Algonquin identified four vernal pools that would be crossed and directly impacted by the proposed construction right-of-way in Massachusetts, including one high quality vernal pool. In Connecticut, six vernal pools would be crossed and directly impacted by the proposed construction right-of-way, including three high or very high quality vernal pools. Algonquin would minimize potential impacts on vernal pools by implementing measures outlined in its E&SCP and its Wetland Restoration Procedures for Temporary Wetland Impacts. Algonquin would also continue its consultations with the Massachusetts Natural Heritage and Endangered Species Program (MassNHESP) and the Connecticut Department of Environmental Protection regarding vernal pool impacts and mitigation. We recommended that Algonquin minimize impacts on vernal pools by reducing the width of its construction right-of-way at certain locations and continue to consult with the COE and the applicable state agencies to determine additional recommended mitigation measures.

Other significant sensitive wildlife habitats that would be affected by the E2W Project include the Cranberry Brook Watershed ACEC, the Moose Hill Wildlife Sanctuary, and Moose Hill Farm. Algonquin would implement its E&SCP and Invasive Species Control Plan to minimize impacts on these sensitive wildlife habitats and would continue its consultations with the Massachusetts Department of Conservation and Recreation, ACEC Program; the Massachusetts Audubon Society; and the Trustees of Reservations regarding site-specific measures to minimize impacts on these sensitive wildlife habitats.

To comply with section 7 of the Endangered Species Act (ESA), we informally consulted with the U.S. Fish and Wildlife Service (FWS) and the U.S. Department of Commerce, National Oceanic and

Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) regarding the presence of federally listed or proposed species in the Project area. Based on these consultations, it has been determined that no federally listed species potentially occur in the general vicinity of the proposed E2W Project. Because there would be no impact on federally listed species, required consultation under section 7 of the ESA is complete.

Consultation with the MassNHESP identified two significant wildlife habitat types including Estimated Habitats of rare wetlands wildlife and Priority Habitats of rare species and exemplary communities. Consultation with the MassNHESP and the Massachusetts Audubon Society identified one state-endangered species (dwarf rattlesnake plantain) and six Massachusetts special concern species (blue-spotted salamander, eastern box turtle, mocha emerald dragonfly, eastern pondmussel, oak hairstreak butterfly, and tall-nut sedge) as potentially occurring along the proposed Project in Massachusetts. Consultation with the Connecticut Natural Diversity Data Base did not identify any state-listed species along the proposed Project in Connecticut.

Algonquin conducted botanical and wildlife surveys of the proposed Project facilities in Massachusetts to identify the presence of listed species in the Project area during the 2007 and 2008 field seasons. On September 12, 2008, Algonquin met with the MassNHESP to review the spring and summer special status species survey results, address any outstanding survey needs, and discuss potential conservation measures and permit timeframes. As a result of this meeting, conservation measures were developed to avoid or minimize potential impacts on special status species. These conservation measures are considered draft conservation measures until Algonquin completes its preapplication consultation with the MassNHESP and submits its formal Massachusetts Endangered Species Act (MESA) application to the MassNHESP.

Based on the survey results to date and Algonquin's proposed draft conservation measures, we concluded that the Project would have no adverse impact on any of the state-listed species in Massachusetts with the potential exception of the tall-nut sedge. Algonquin is continuing its consultations with the MassNHESP regarding the tall-nut sedge and would include the impact analysis and final proposed conservation measures in its final MESA application.

Algonquin expects to finalize and submit its MESA application to the MassNHESP in late October 2008. This application would incorporate all field survey results to date, and include an analysis of the potential impacts on state-listed species and a discussion of Algonquin's proposed conservation measures. To ensure that potential impacts on state-listed species would be avoided or mitigated, we recommended that Algonquin file its final MESA application, the comments of the MassNHESP on the final MESA application, and any additional consultation and clearance letters.

Algonquin's proposed construction work area would be located within 50 feet of 176 structures, of which 127 are residences. Of the 127 residences, 78 would be located within 25 feet of the construction work area. Algonquin would utilize special construction methods designed for working in confined areas to minimize construction-related impacts on all residences and structures located within 50 feet of the construction right-of-way and has developed site-specific residential construction plans to inform affected landowners of proposed measures to minimize disruption and to maintain access to the residences located within 25 feet of the construction work area. We have reviewed these plans and find them acceptable.

In locations where trees that serve as a visual buffer would be removed, Algonquin would discuss screening issues with individual landowners during easement negotiations. In areas where all visual screening is removed, Algonquin would consider strategic planting of fast-growing evergreens. We requested that Algonquin provide site-specific justification for all areas where a wider than nominal

construction right-of-way and temporary extra workspaces would be needed and specify the land use (vegetative cover type) that would be affected. Our recommendation to approve or deny each request took vegetative cover type into consideration to avoid unnecessary tree clearing and removal of visual screening.

Algonquin has completed cultural resources investigations for the majority of the proposed pipeline routes and ancillary facilities. A total of 253 aboveground cultural resources and 48 belowground cultural resources were recorded during surveys of the proposed Project. Based on Algonquin's surveys and evaluations, 232 of the aboveground cultural resources have been recommended as not eligible for listing on the National Register of Historic Places (NRHP) and no further work is recommended. The remaining 21 aboveground cultural resources have been recommended as eligible for listing on the NRHP, but would not be affected by Project activities because they are located outside the Project Area of Potential Effect. Forty of the belowground cultural resources identified during surveys of the proposed Project are recommended as not eligible for listing on the NRHP and no further work is recommended. One site was previously determined as eligible for listing on the NRHP; however, this site has subsequently been destroyed and, therefore, would not be affected by the Project. Of the remaining seven sites, four are recommended as potentially eligible for listing on the NRHP and three are recommended as eligible for listing on the NRHP. If avoidance is not feasible, testing and/or archival research would be conducted to determine the potential Project impacts.

To ensure that the FERC's responsibilities under the National Historic Preservation Act and its implementing regulations are met, we recommended that Algonquin not begin implementation of any treatment plans/mitigation measures (including archaeological data recovery); construction of facilities; or use of all staging, storage, or temporary work areas and new or to-be-improved access roads until it files the remaining survey and evaluation reports, any required treatment plans, and the comments of the Massachusetts Historical Commission (MHC) and the Connecticut State Historic Preservation Officer (SHPO) on all cultural resources reports and plans submitted for review, and the Director of the Office of Energy Projects notifies Algonquin that treatment plans/mitigation measures may be implemented or construction may proceed.

The pipeline and aboveground facilities associated with the E2W Project would be designed, constructed, operated, and maintained to meet or exceed the U.S Department of Transportation Minimum Federal Safety Standards in Title 49 Code of Federal Regulations Part 192 and other applicable federal and state regulations. By designing and operating the proposed Project in accordance with the applicable standards, the Project would not result in a significant increased public safety risk.

NSTAR has raised safety and land use concerns regarding the proposed I-10 Extension, where approximately 3.9 miles (30 percent) would be located within NSTAR's existing powerline right-of-way, and an additional 3.8 miles (29 percent) would be located outside of, but generally adjacent to the existing NSTAR right-of-way. The proposed alignment would place the I-10 Extension 50 feet or less from 56 electric transmission towers and 30 feet or less from 17 towers. The nearest tower to the proposed pipeline would be approximately 17 feet away.

In response to NSTAR's concerns, Algonquin modified the alignment of the I-10 Extension to minimize proximity to existing towers and overhead lines and would implement special construction techniques to minimize the potential for construction activities to damage NSTAR's facilities.

We recognize that collocation of natural gas transmission pipelines and electric transmission facilities presents unique construction and safety challenges but is not without precedent, including Algonquin's original Q-1 system pipeline, which is located within approximately 50 feet of 24 NSTAR towers, with the nearest tower being offset by approximately 30 feet. We concluded that the proposed

I-10 Extension could also be safely installed and operated without compromising the integrity or reliability of NSTAR's existing facilities or public safety by implementing the construction measures described by Algonquin, together with continued communication between Algonquin and NSTAR. It has been our experience that overhead powerlines and buried pipelines can coexist in the same corridor and that potential future conflicts between the two can generally be reconciled through close coordination and cooperation between the electric and natural gas transmission companies. To ensure this, we recommended that Algonquin file site-specific blasting and construction plans where the pipelines would be 50 feet or less from an existing tower foundation as well as an update regarding its ongoing communications with NSTAR regarding safety and reliability issues. Although we analyzed possible alternatives to the pipeline route near the NSTAR facilities, we did not identify an environmentally preferable alternative to the proposed I-10 Extension alignment.

Detailed descriptions of the impacts of the Project, Algonquin's proposed mitigation measures, and our additional measures to further avoid, minimize, and mitigate these impacts are presented in section 4.0 of this draft EIS.

ALTERNATIVES CONSIDERED

The No Action Alternative and the Postponed Action Alternative were considered. If the FERC and/or another federal agency with approval authority were to deny or postpone action on Algonquin's applications, the environmental impacts associated with the Project would be avoided or postponed. However, the stated objectives of the Project would not be met.

The use of alternative fuels, renewable fuels, and energy conservation programs was considered but would not offer environmentally preferable, technically feasible, or viable alternatives to the proposed Project.

Alternatives involving the use of existing pipeline systems operated by companies other than Algonquin were evaluated. No existing pipeline system was identified in the Project area with the available capacity to deliver the volume of natural gas that would be delivered by Algonquin without the construction of new facilities. Any such expansion would result in environmental impacts that could be similar to or greater than the impacts associated with the E2W Project. Furthermore, we are not aware of any plans to expand an existing pipeline system that would meet the Project objectives within the same general timeframe as the E2W Project. For these reasons, the use of an existing pipeline system is not considered an environmentally preferable or viable alternative to the proposed Project.

Three modifications to Algonquin's existing system were considered as major route alternatives to various elements of the proposed Project, including upgrades and/or looping of the Q-1, E-3, I-13, I-8, and I-9 systems. Some of these modifications would offer some environmental advantages over their corresponding portions of the proposed Project. However, overall they would have significant drawbacks primarily associated with constructability concerns and/or increase the amount of new permanent right-of-way required. Based on these drawbacks, we concluded they are not preferable to the proposed I-10 Extension.

Six other route alternatives to the proposed alignment of the I-10 Extension were considered. All of these route alternatives were eliminated from consideration because they would not be environmentally preferable, would pose significant constructability constraints, or would create additional safety and reliability concerns when compared to their corresponding segments of the I-10 Extension.

Algonquin planned the proposed facilities to minimize impacts by following existing rights-of-way where possible. As a result, approximately 80 percent of the proposed pipeline facilities would be

constructed within or adjacent to existing rights-of-way. However, prior to and after submittal of its application, Algonquin identified several areas along the proposed E2W Project pipeline routes where site-specific conditions such as rock outcroppings, unstable soils, residences, and existing infrastructure require minor variations from the originally proposed route, including minor deviations from the existing pipeline or powerline rights-of-way. In addition, route alternatives to the proposed I-10 Extension in the Canton/Stoughton area were evaluated to specifically address concerns raised by local residents and the Town of Stoughton during the Pre-Filing Process. In total, 1 route alternative and 26 minor route variations were adopted during the Pre-Filing Process and 35 minor route variations were adopted after Algonquin filed its application. Some of the minor route variations were adopted to reduce impacts on sensitive resources (e.g., vernal pools and other wetlands), whereas others were adopted due to constructability issues (e.g., steep slopes, road crossings). In the case of the I-10 Extension, the majority of these minor route variations were identified during ongoing consultations between Algonquin and NSTAR in an attempt to address NSTAR's concerns and minimize potential construction or operational conflicts with NSTAR's electric transmission line system. In the case of the Q-1 and E-3 systems, these minor variations would preclude using the lift and replace method (i.e., removing the existing pipeline and then installing the replacement pipeline in the same ditch). We consider the route alternative and minor route variations to be both warranted and preferable and agree that they should be part of the proposed route.

Five alternative locations for the proposed Rehoboth Compressor Station were evaluated. Due primarily to a combination of inadequate size, proximity to residences, site constructability concerns associated with the presence of wetlands, and increased length of connecting pipelines, we determined that none of the five alternative locations are environmentally preferable to the proposed location.

The majority of the other proposed aboveground facilities are either modifications of existing facilities that would be located within the fencelines of existing compressor stations, collocated with other similar existing facilities along Algonquin's existing right-of-way, or would have relatively minor impacts in upland areas. Because no significant environmental resources would be impacted by these facilities, we concluded that no environmentally preferable alternatives exist. We have some concerns, however, about the proposed location of a remote blow-off valve near MP 1.3 of the I-10 Extension and recommended that Algonquin prepare an alternatives analysis for the proposed location.

With the potential exception of the blow-off valve at MP 1.3 of the I-10 Extension, we have determined that Algonquin's proposed Project, as modified by our recommended mitigation measures, is the preferred alternative that can meet the Project objectives.

CONCLUSIONS

We have determined that construction and operation of the E2W Project would result in limited adverse environmental impacts. These limited impacts would mostly occur during the period of construction. This determination is based on a review of the information provided by Algonquin and further developed from data requests; field investigations; scoping; literature research; alternatives analysis; and contacts with federal, state, and local agencies, Native American tribes, and individual members of the public. We have concluded that the Project would be an environmentally acceptable action. Although many factors were considered in this determination, the principal reasons are:

- 80 percent of the proposed pipelines would be within or adjacent to existing rights-of-way;
- Algonquin would protect natural and cultural resources and residential areas during construction and operation of the Project by implementing its E&SCP, SPCC Plan, HDD

Contingency Plan, Site-specific Residential Construction Plans, Blasting Plan, Invasive Plant Species Control Plan, Wetland Restoration Procedures for Temporary Wetland Impacts, and Procedures Guiding the Discovery of Unanticipated Cultural Resources and Human Remains;

- use of the HDD method for the crossings of the Weymouth Fore and Shetucket Rivers would minimize impacts on the bed, banks, and EFH associated with these waterbodies;
- Algonquin would implement a compensatory wetland mitigation plan to compensate for forested wetland impacts and preserve upland forest;
- Algonquin's proposed Rehoboth Compressor Station would disturb a relatively small area within the center of a large forested site, the remainder of which would be preserved as screening and buffering for the compressor station or potentially used as conservation or mitigation areas;
- Algonquin would submit documentation of concurrence from the Massachusetts Office of Coastal Zone Management that the Project is consistent with the Coastal Zone Management Act before construction;
- ESA consultations with the FWS and NOAA Fisheries have been completed;
- the appropriate consultations with the MassNHESP, the MHC, the Connecticut SHPO, and Native American tribes would be completed before Algonquin would be allowed to begin construction in any given area; and
- an environmental inspection and mitigation monitoring program would ensure compliance with all mitigation measures that become conditions of the FERC Certificate and other approvals.

In addition, we developed specific mitigation measures and have recommended that Algonquin develop and implement other plans to further reduce the environmental impact that would otherwise result from construction of the Project. We are recommending that these mitigation measures and plans be attached as conditions to any authorization issued by the Commission. The draft EIS includes 36 recommended mitigation measures that are presented in section 5.2.