

within the same geographic area. While the timeframe is unclear when these power plant facilities may be built, they would likely result in some level of disturbance to soils and vegetation, and impact the air, noise, and visual resources in the project area. The extent to which environmental resources would be affected by the developments cannot be quantified without additional development details. Because our analysis of Millennium's facilities indicates that impacts of this proposed project on these resources would be avoided or result in minimal impacts, we believe that cumulative impacts attributable to the compressor station would not be significant.

Residential development within 0.25 miles of the proposed site, along Bender Road and Chestnut Ridge Road, is currently under construction and the expected completion date is unknown since there are still parcels available for purchase. Given the limited scope of the proposed Minisink Compressor Station, staff finds that the cumulative impacts attributable to the compressor station would not be significant.

We did not identify any other projects in the vicinity that would result in cumulative impacts when combined with the Minisink Compressor Project.

## **C. ALTERNATIVES**

The FERC has two possible courses of action in processing a Certificate application. It may grant the application with or without conditions, or deny the application. The FERC will decide among these courses of action, depending on which would best serve the public convenience and necessity.

We considered several alternatives to the proposed action to determine if any were reasonable and preferable to the proposed action. Alternatives discussed in this section include the No-Action Alternative, Systems Alternatives, and Aboveground Facility Alternatives. The evaluation criteria we used for our alternatives analysis are:

- significant environmental advantages over the proposed project;
- technical and/or economic feasibility and practicability; and
- meeting the objective of the project: increase natural gas delivery capacity to Algonquin at Ramapo, New York, to about 675,000 dekatherms per day.

### **1. NO ACTION ALTERNATIVE**

The no-action alternative would result in not implementing the proposed action and would avoid the potential environmental impacts that would be associated with the project; however, the project objectives would not be met. Millennium's customers would likely seek other sources of energy and/or alternative proposals, such as pipelines, to transport the requested volumes of natural gas.

Although a Commission decision to deny the proposed action would avoid the environmental impacts addressed in this EA, other natural gas projects could be constructed to provide a substitute for the natural gas supplies offered by Millennium. Such alternative projects could require the construction of additional and/or new facilities in the same or other locations to transport the gas volumes proposed by the Minisink Compressor Project. These alternatives would

result in their own set of specific environmental impacts that could be greater than those associated with the current proposal.

If the project is postponed or not constructed, the energy needs could possibly be met by alternative energy sources other than natural gas. Alternative energy forms such as coal and oil are available and could be used to meet increased demands for energy. However, natural gas is a much cleaner-burning fuel. Other fossil fuels emit greater amounts of particulate matter, SO<sub>2</sub>, CO, hydrocarbons, and non-criteria pollutants. Energy generated from the burning of coal is considered a major contributor to acid rain. The use of nuclear energy as replacement of other fuel sources also carries undesirable consequences such as negative public perception of the safety of electric generation through nuclear plants and the disposal of waste products created. Renewable energies, such as solar, and wind are not always reliable or available in sufficient quantities to support most baseload market requirements, and would therefore not, necessarily be appropriate substitutes for natural gas in all applications. It would be purely speculative and beyond the scope of this EA to attempt to predict what actions may be taken by policy makers, suppliers, or end users in response to the no action alternative. Therefore, the assessment of impacts associated with these scenarios would also be speculative.

## **2. SYSTEM ALTERNATIVES**

System alternatives make use of existing or modified natural gas transmission systems to meet the stated objective of the proposed project. The point of identifying and evaluating system alternatives is to determine if the potential environmental impact associated with the construction and operation of the proposed facilities could be avoided or minimized by using an existing pipeline system. Environmental considerations with system alternatives include, but are not limited to, new right-of-way requirements, land use effects, and stream and wetland disturbances. A system alternative could make it unnecessary to construct Millennium's Minisink Compressor Project; although modifications or additions to its system or another system may be required. While modifications or additions to existing systems could result in environmental impact, this impact may be less, the same, or more than the impact associated with the proposed project.

Although we did not identify any other pipeline systems capable of providing the additional natural gas volumes at the Algonquin interconnect at Ramapo, New York, we evaluated four system alternatives that make use of Millennium's pipeline system. Because Millennium's system is fully subscribed, these system alternatives would either relocate the proposed compressor station to an existing aboveground site along Millennium's system, expand its system through pipeline replacement or looping<sup>9</sup>, or a combination of both looping and additional compression.

Millennium's existing system consists of 250 miles of 30-inch-diameter built in 2007, with the exception of a 7.5-mile-long segment of 24-inch-diameter pipeline built in 1987. The 7.5-mile segment, known as the Neversink Segment, is located in Orange County, New York, just upstream of the proposed Minisink Compressor Station site. The Neversink Segment currently limits

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<sup>9</sup> A loop is a segment of pipe that is usually installed adjacent to an existing pipeline and connected to it at both ends. The loop allows more gas to be moved through the system.

expansion of Millennium’s system due to its smaller diameter and lower maximum allowable operating pressure (MAOP)<sup>10</sup> which constrains the 30-inch-diameter system upstream of the Ramapo interconnect with Algonquin. Table 9 describes the system alternatives and whether these alternatives locations and designs could hydraulically meet the project objective of increasing Millennium’s transportation capacity to Ramapo to about 675,000 dekatherms per day. Hydraulically feasible means that the alternative facilities could provide the same level of proposed transportation service while maintaining all existing services and required delivery pressures.

<b>Table 9: Summary of Millennium System Alternatives for the Minisink Compressor Station Project</b>			
<b>System Alternative</b>	<b>Description</b>	<b>Hydraulic Feasibility</b>	<b>Meets Project Objective</b>
1	Install 22.5 miles of 30-inch-diameter pipeline loop in Sullivan County, New York, including a 7.5-mile 36-inch-diameter pipeline loop of the Neversink Segment in Orange County.	Yes	Yes
2	Replace 24 miles of 30-inch-diameter pipeline in Delaware and Sullivan Counties, New York with 36-inch-diameter pipe and replace the approximately 7.5-mile Neversink Segment with 36-inch-diameter pipe in Orange County.	Yes	Yes
3	Install about 50 miles of 30-inch-diameter pipeline parallel to the existing pipeline in Delaware, Sullivan, and Orange Counties including a new parallel pipeline throughout the Town of Minisink, without replacing the Neversink Segment.	Yes	Yes
4	Relocate the Minisink Compressor Station to Millennium’s existing Wagoner Meter Station and increase the MAOP of the Neversink Segment.	No	No

As shown in the table above, System Alternatives 1, 2, and 3 could meet the project objectives of increasing Millennium’s transportation capacity to Ramapo to about 675,000 dekatherms per day. While Millennium provided an initial analysis of these system alternatives, we independently confirmed the hydraulic feasibility of all of the system alternatives. System Alternatives 1-3 would require extensive pipeline replacement or looping to make up for the lower MAOP of the Neversink Segment. Due to the additional disturbance of the pipeline construction, these alternatives do not offer any clear environmental advantages over the proposed project. Therefore, we eliminated System Alternatives 1-3 from further consideration.

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<sup>10</sup> The MAOP of pipeline is based upon the physical characteristics of the pipeline as well as its location. The methodology for determining the MAOP of a pipeline is set forth by the PHMSA of the DOT in 49 CFR Part 192 Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards.

System Alternative 4 is not hydraulically feasible because the downstream pressure at the terminus of Millennium's pipeline system would be too low, due to the Neversink Segment constraint, for Millennium to meet its proposed delivery obligations at the Algonquin interconnect. The Neversink Segment is operating at a MAOP below the rest of the system and, according to DOT standards, cannot be increased further. Therefore, this system alternative would not meet the project objective.

### **3. ABOVEGROUND FACILITY ALTERNATIVES**

We examined alternative sites along Millennium's pipeline system in proximity to the proposed location of the Minisink Compressor Station to determine whether environmental impacts could be reduced or mitigated. We limited sites to locations on or immediately adjacent to Millennium's pipeline to minimize the need for suction/discharge pipeline to connect the compressor station to Millennium's system and the additional environmental impact associated with pipeline construction. In addition, the site must be within a 2-mile range on Millennium's system for optimum efficiency of the compressor station to meet the required volume at the Ramapo interconnection with Algonquin. In order to limit the horsepower needed, the compressor station would need to be at a point as close to the eastern end of the Neversink Segment as reasonably possible. Increasing the distance further downstream would increase the horsepower required to meet the capacity demands (i.e., an increase by about 25 percent horsepower for a move of only ten miles).

Site criteria used to conduct our alternative site analysis included the following:

- Compressor station footprint (size): Based on typical facility design, construction of a compressor station would require about 10.5 acres, and operation would require about 5 acres. The remaining land purchased at the compressor station site would be held as a buffer and would return to its previous use.
- Reasonable availability: For a site to be selected, we believe there should be some indication that the property could be reasonably obtained from the current landowners. Although section 7(h) of the NGA grants the Certificate holder the right to exercise eminent domain, it would be desirable for the site to be available (such as by purchase, lease, or restrictive easement), to minimize the use of eminent domain to secure land for aboveground project facilities.
- Various environmental issues: Environmental issues that were considered in site selection include: loss of prime farmland; wetland disturbance; land use compatibility; forest clearing; waterbodies and floodplains; presence of endangered or threatened species or their critical habitat; cultural and recreational resources; and proximity to NSAs.

Our evaluation involved inspection of aerial photographs and maps, public comments, as well as site visits along Millennium's pipeline system. Our evaluation of alternative sites included five sites within the optimum efficiency range noted above, an alternative station configuration on the proposed site, and an existing meter station site that would require replacement of the Neversink Segment.

### **3.1. Alternative Compressor Station Sites**

Five sites were considered as potential alternative sites within Minisink, New York. The following provides a summary of the alternative site locations:

- Site A: abuts the proposed station site to the northeast;
- Site B: located 0.5 mile southeast of the proposed site on Jacobs Road;
- Site C: located 1.1 miles southeast of the proposed site on William Lain Road;
- Site D: located 1.5 miles southeast of the proposed site and is bounded by County Route 1 to the west and Rutgers Creek and Wallkill Creek to the east and south, respectively; and
- Site E: located about 0.75 mile to the northwest of the proposed site and between County Road 284 to the southeast, Fordlea Road to the Northwest, and South Plank Road to the northeast.

The general location of the alternative sites in relation to the proposed compressor station location are shown in Figure 5. Table 10 presents the comparison of the proposed site to the alternate sites specific to land use types, distance to the nearest NSAs and surrounding residences, and other areas of concern.

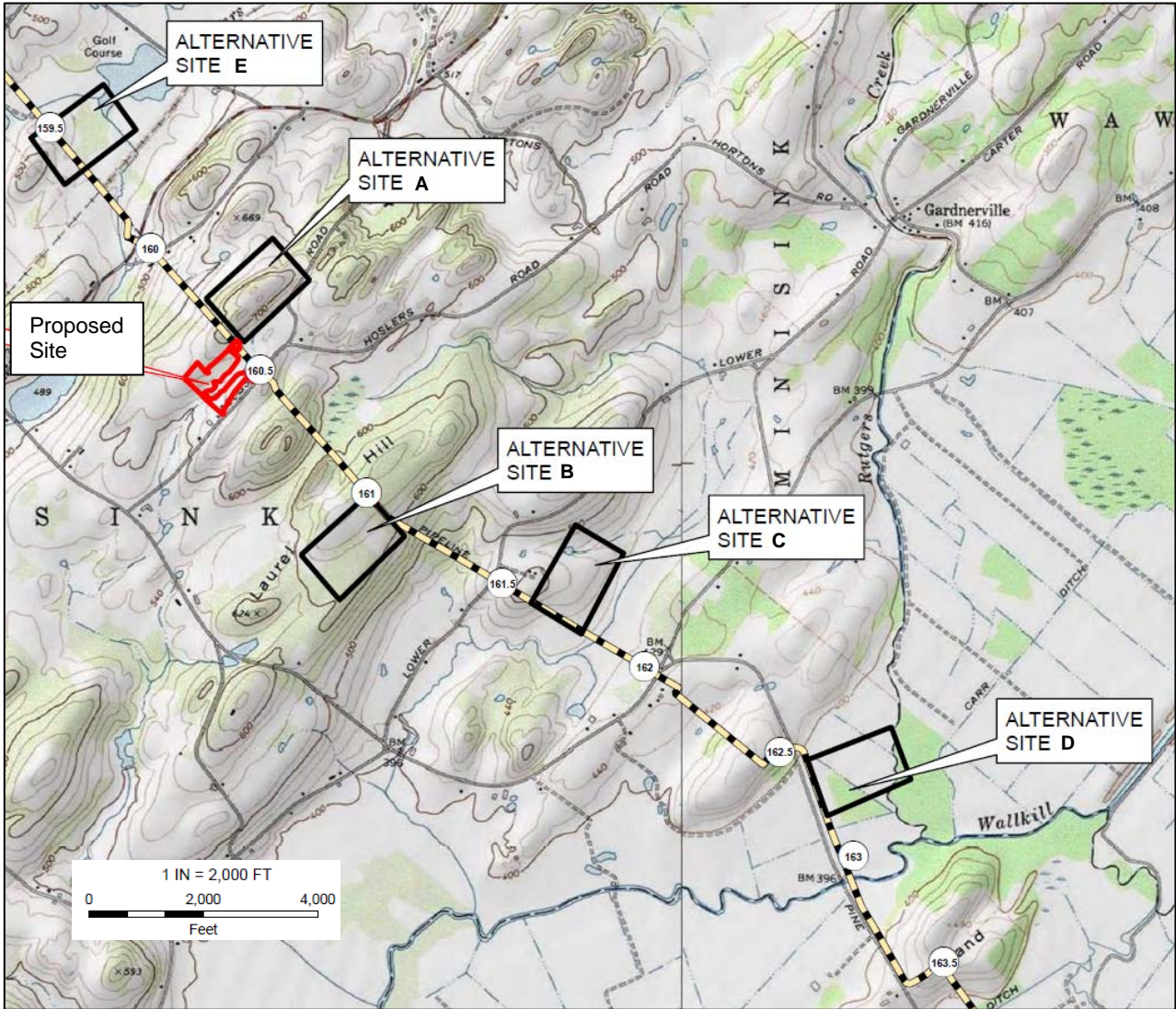


Figure 5: Alternative compressor station sites in relation to the proposed compressor station (shown in red)

**Table 10: Alternative Aboveground Compressor Sites Analysis**

<b>Environmental Parameter</b>	<b>Proposed Site</b>	<b>Site A</b>	<b>Site B</b>	<b>Site C</b>	<b>Site D</b>	<b>Site E</b>
Site large enough for compressor station	Y	Y	Y	Y	Y	Y
Suitable temporary workspace	Y	N	Y	N	Y	Y
Current land use	Agricultural	Residential (house would be demolished)	Agricultural/ Forest	Certified Organic Farm	Agricultural	Agricultural/ Forest
Cultural resources concerns	N	N	N	Y	N	N
Wetland impacts (acres)	0.09	0.00	0.34	0.00	0.00	1.00
Land subject to flooding	N	N	N	N	Y	Y
Suitable soils	Y	Y	Y	Y	N	N
Access driveway length (approx. footage)	830	825	2,700	1,200	350	3,300
Mainline replacement required	N	N	N	N	N	Y
Distance to nearest NSA (approx. footage)	650	825	1,300	850	1,100	1,300
Number of surrounding residences (within 0.5 mile)	84	66	37	32	14	26
3-phase electric power available	Y	Y	Y	Y	N	Y
Topography	Flat to Rolling	Rolling	Flat to Rolling	Rolling	Flat	Flat to Rolling
Tree clearing required (approx. acreage)	0.4	1.0	2.5	0.0	0.0	1.0
Visual/noise screening	Y	N	Y	N	N	N

We evaluated potential compressor station locations based on gas flow hydraulics, engineering/construction issue, availability of electrical power, proximity to Millennium's existing mainline, and various other factors. We considered the relative potential impacts on the natural and human environment at each of the five alternate sites in relation to the proposed site. We were unable to determine the availability of these sites. For the reasons stated below, we do not find that any of the five alternative sites are environmentally preferable to the proposed site.

- Site A: a residence would be displaced by the construction of the compressor station and there would be insufficient workspace available to support construction of a compressor station;
- Site B: about 2.5 acres of tree clearing would be required to support the access driveway and station site and this parcel has a significant population of shagbark hickory which is a preferred habitat for the endangered Indiana bat;
- Site C: currently an active, U. S. Department of Agriculture-certified, organic farm and the original farm homestead is listed on the NRHP;
- Site D: soils on the site are subject to seasonal saturation requiring extensive excavation and a three-phase electric power is not available at this location; and
- Site E: requires filling a 1.0 acre wetland to minimize the chances of flooding and an access driveway about 3,300 feet long would need to be constructed.

Based on our analysis of alternative site locations in proximity to the proposed site, we found no reason to analyze the sites further or recommend them as an alternative that offers a significant environmental advantage over Millennium's proposed site.

### **3.2. Alternative Station Location on Proposed Site**

We evaluated an alternate location for the project facilities on Millennium's 73.4-acre site on Jacobs Road in an effort to minimize the visual and noise impacts on the surrounding environment. Figure 6 shows the general location of the alternate compressor station location. Table 11 presents the comparison of the proposed site in comparison to the alternate location on the 73.4-acre site specific to land use types, distance to the nearest NSAs and surrounding residences, and other areas of concern.



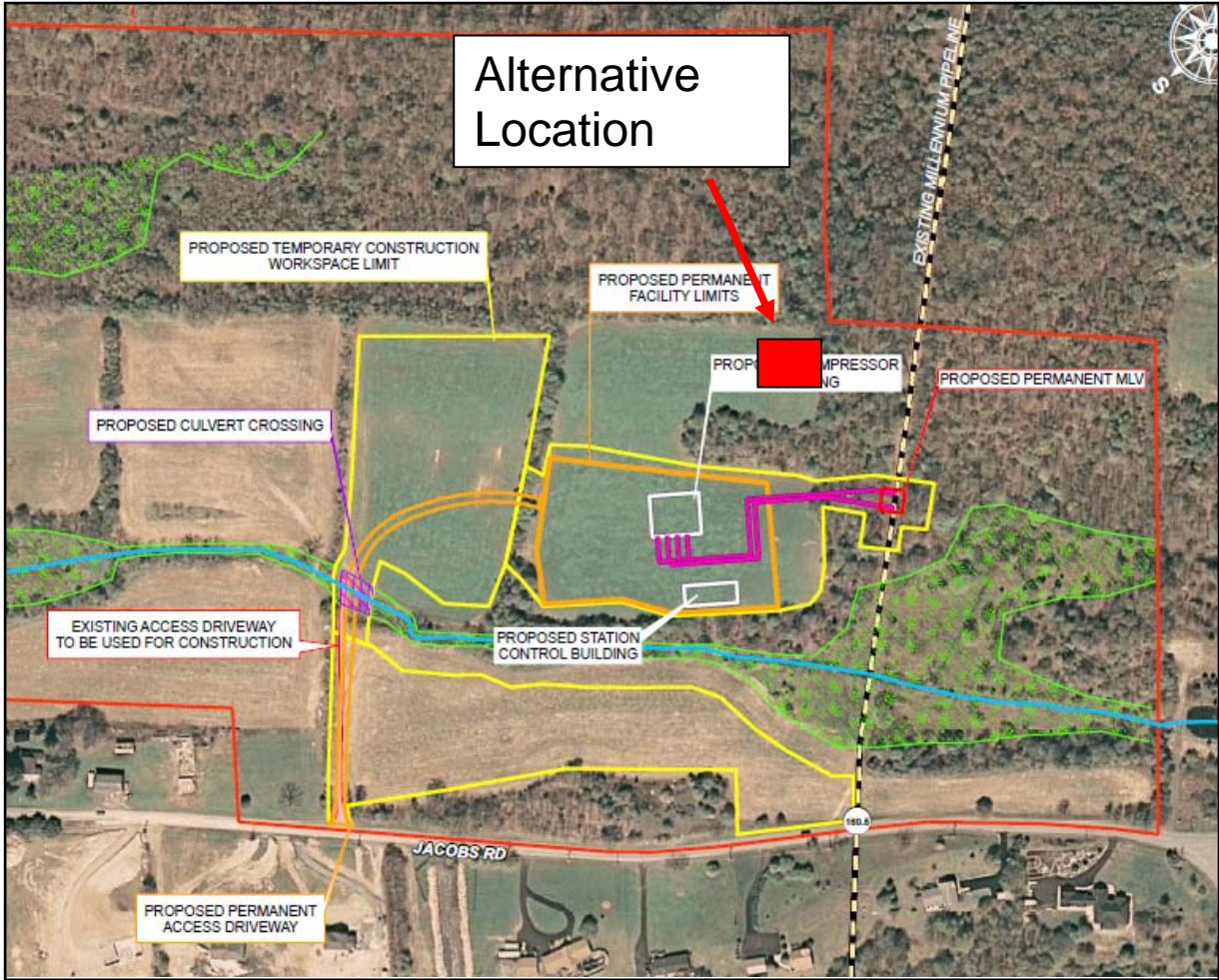


Figure 6: Alternative Station Location on Proposed Site

<b>Table 11: Alternate Location Analysis</b>				
<b>Environmental Parameter</b>	<b>Proposed Location</b>		<b>Alternate Location</b>	
The size of each station footprint	2.4 acres		2.2 acres	
Additional Temporary Workspace	6.2 acres		7.9 acres	
Length of Suction and Discharge Pipelines	Suction Pipeline	536 feet	Suction Pipeline	565 feet
	Discharge Pipeline	513 feet	Discharge Pipeline	663 feet
Distance and Direction to the nearest NSAs	NSA #1	650 feet ESE	NSA #1	1,000 feet SE
	NSA #2	1,125 feet NE	NSA #2	1,000 feet NE
	NSA #3	1,125 feet SW	NSA #3	1,350 feet SW
	NSA #4	1,175 feet NW	NSA #4	850 feet NW
Wetlands	0.1 acre		0.1 acre	
Land Use	Construction	Operation	Construction	Operation
Forest	0.4 acre	0.3 acre	1.3 acres	1.3 acres
Agricultural	9.8 acres	4.1 acres	12.6 acres	4.9 acres
Upland	0.08 acre	0.0 acre	0.1 acre	0.1 acre
Utility Corridor	0.3 acre	0.1 acre	0.3 acre	0.1 acre

When comparing the proposed station location and the alternative location on the 73.4-acre site, the environmental impacts appear to be similar. However, the amount of tree clearing necessary for the alternative location is about 0.9 acre greater than the proposed location. The forest impact is due largely to the two retaining walls that Millennium would need for construction at the alternative location. The trees on the south side of the alternative location would be removed to install the retaining walls, also removing the existing visual screening for the residents on Jacobs Road. For either location, Millennium would install visual screening that would provide a visual buffer from Jacobs Road. The rate of woodland reestablishment in the area between the station and Jacobs Road would depend upon the type of vegetation, length of growing season, and natural fertility of the soils. Any trees or shrubs planted would most likely require years to achieve the same amount of woodland/visual screening that exists today adjacent to the alternative location.

The alternative station configuration would be further away from NSA #1, by about 350 feet, than the proposed station location. However, this favorable increase in distance to NSA #1 is

canceled by the decrease in distance by about 325 feet from the alternative location to NSA #4. In addition, the noise impacts associated with the alternative station location when compared to the proposed location merely shifts the noise increases at the affected NSAs. Table 12 illustrates the comparative noise impacts on the nearest NSAs to the proposed station location compared to the alternative location.

<b>Table 12: Noise Impacts Comparison Associated with the Proposed Station Location and Alternative Station Location</b>							
		<b>Proposed Station Location</b>			<b>Alternative Station Location</b>		
<b>NSA</b>	<b>Calculated Ambient L<sub>dn</sub> (dBA)</b>	<b>Distance and Direction to Compressors</b>	<b>Calculated L<sub>dn</sub> of Station (dBA)</b>	<b>Potential Increase (dB)</b>	<b>Distance and Direction to Compressors</b>	<b>Calculated L<sub>dn</sub> of Station (dBA)</b>	<b>Potential Increase (dB)</b>
1	42.2	650 ft. (E to SE)	39.0	1.7	1,000 ft. (E to SE)	35.1	0.8
2	41.2	1,125 ft. (N-NE)	34.0	0.8	1,000 ft. (N-NE)	35.1	1.0
3	39.9	1,125 ft. (S to SW)	34.0	1.0	1,350 ft. (S to SW)	32.4	0.7
4	39.1	1,175 ft. (W to NW)	33.7	1.1	850 ft. (SW to W-NW)	36.6	1.9

As shown in Table 12, the noise attributable to either location would be very low. However, the noise impact associated with the alternative station location would be slightly greater at NSAs #2 and #4 when compared to the noise from the proposed location at these same NSAs.

For the reasons discussed above, we concluded that the alternative station location did not offer any significant environmental advantages over the proposed station location. Therefore, we did not analyze the alternative location on Millennium’s 72.4-acre site further.

### **3.3. Wagoner Alternative**

Some residents in the Town of Minisink requested in comments that we evaluate an alternative that would involve moving the new compressor station from the Town of Minisink to Millennium’s existing Wagoner Meter Station and the replacement of its Neversink Segment. Because this alternative, hereinafter referred to as the Wagoner Alternative, would site the compressor station outside the 2-mile range described in our site criteria above, it must include replacing the existing constrained segment of pipeline in order to meet the hydraulic feasibility requirements. Millennium would have to replace the existing 7.2-mile 24-inch-diameter pipeline with a 30-inch-diameter pipeline. This would require constructing a new parallel pipeline before

removing or abandoning in place the existing pipeline because taking the Neversink Segment out of service would result in Millennium not being able to meet existing delivery obligations. Millennium states that the Wagoner Alternative would cost at least 50 percent more than its proposed project.

The Wagoner Meter Station is located in the Town of Deerpark, Orange County, New York, near Millennium's MP 150, and is the interconnect point between Millennium and Columbia Gas Transmission Corporation (Columbia)<sup>11</sup>. The west end of the Neversink Segment begins at the Huguenot Meter Station and the east end terminates at the Westtown Meter Station, all in Orange County, New York. A general map of the Wagoner Meter Station and aerial alignment sheets showing the the Neversink Segment are provided in appendix B.

Because the Wagoner Alternative would affect a large number of additional landowners who previously did not have the opportunity to participate in our review process, we issued a second public scoping notice seeking comment. We received several comments from local business organizations opposed to the Wagoner Alternative based on local workforce and economic interests. The Deerpark Town Board filed a resolution that it adopted in January 2012 opposing the alternative citing "far greater environmental impact on the residents of Orange County", the replacement pipeline would cross "very steep and rugged portion of the Town", and the lack of revenue received as a result of this alternative. Mr. and Mrs. Landrio, who own property adjacent to the Wagoner Meter Station, filed a comment letter concerning construction-related issues during construction of the Wagoner Meter Station, subsequent property discrepancies with Millennium and Columbia during operation of the meter station, and perceived wildlife impacts. The substantive comments received are addressed in the discussion below.

We also received comments in support of the alternative from landowners along the Neversink Segment, residents in Minisink, the State of New York Department of Agriculture and Markets, and the Town of Minisink. The residents provided comments in favor of the alternative because it would eliminate the need for an aboveground facility in their rural residential/agricultural community. The State of New York Department of Agriculture and Markets filed in favor of the alternative because the proposed project would result in the permanent loss of agricultural land. The Town of Minisink reiterated issues brought up by the residents of Minisink and pointed to the proposed location's noncompliance with the Town Zoning Laws. The issue of zoning in Minisink is discussed in section A.5. Millennium contends, however, that the compression facility at the Wagoner Meter Station would not comply with the Town of Deerpark's zoning laws.

Table 13 compares the impacts associated with the Minisink Compressor Station versus the Wagoner Alternative.

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<sup>11</sup> Columbia operated a temporary compressor station adjacent to the Wagoner Meter Station between November 2008 and June 2011 under Columbia's blanket certificate authority (Docket No. CP83-76-000); therefore, this system would make use of a site that was previously used for compression.

**Table 13: Comparison of Wagoner Alternative to the Minisink Compressor Station**

<b>Environmental Parameter</b>	<b>Proposed Compressor Station</b>		<b>Wagoner Alternative<sup>1</sup></b>	
Horsepower required	12,260 hp		5,100 hp	
Total Land Requirement (acres): Construction / Operation	10.6 / 4.5		Compressor Station: 8.9 / 2.8 Pipeline: 103.5 / 42.5	
Distance and Direction of the new compression to the nearest NSA	650 feet SE		5,450 feet SE	
Residences within 0.5 mile of the compressor station	86		0	
Residences directly impacted by pipeline construction and operation	0		58	
Potential Threatened and Endangered Species Impacts	1		5	
Number of Wetlands	1		Compressor Station: 0 Neversink Segment: 11	
Number of Waterbodies	1		Compressor Station: 0 Neversink Segment: 12	
Land Use (acres)	Construction	Operation	Construction	Operation
Forest	0.36	0.27	47.61	16.50
Agricultural	9.83	4.05	22.0	7.17
Wetlands	0.09	0.09	2.68	1.68
Open Water	0	0	0.43	0.41
Upland Scrub/Shrub	0.08	0	0	0
Utility Corridor/Open Space	0.28	0.08	27.50	16.00
Open Land	0	0	12.16	4.89
Industrial	0.00	0.00	2.02	0.17
Residential	0.00	0.00	0.74	0.22

**Table 13: Comparison of Wagoner Alternative to the Minisink Compressor Station**

<sup>1</sup> Data for the project alternatives obtained from the following sources:

- a. Engineering calculations;
- b. Conceptual Site Plans;
- c. Publicly available Geographic Information System (GIS) data and/or photo interpretation of aerial imagery;
- d. FWS Threatened and Endangered Species List for Orange County, NY and NYSDEC Environmental Resource Mapper;
- e. National Park Service (NPS) on-line database of NRHP and NRHP GIS data;
- f. National Wetland Inventory GIS data and NYSDEC Environmental Resource Mapper state wetland data; and
- g. NPS National Rivers Inventory online listing.

Compared to the Millennium’s proposal, the horsepower required at the Wagoner Compressor Station would be 7,160 hp lower than that required at the Minisink Compressor Station. The decreased compression would be possible due to replacing the existing Neversink Segment. Air emissions from both the proposed and alternative compressor stations would impact the local air quality for as long as the station was operational. The smaller alternative compressor station would result in lower emissions, thereby reducing the effects on the local air quality. However, either station would be a minor source with regards to the Title V Operating Permit Program and PSD regulations.

Although building the alternative compressor station would eliminate the noise concerns associated with the proposed site, as described in section B.7.2, the noise emitted from either the Minisink Compressor Station or the Wagoner site would be barely noticeable.

The acreage of land used to construct each compression facility would be similar at either site. The impacts on visual resources, on the other hand, are far from similar when comparing the Wagoner Compressor Station to the Minisink Compressor Station. The Minisink Compressor Station could result in a substantial visual impact on viewers in the Minisink area by introducing a new industrial feature into the rural residential/agricultural landscape and alter the landscape of the existing view on Jacobs Road. To address visual impacts, Millennium developed a visual screening plan to help screen the station and improve the appearance of the facility from nearby roads and residences. To further minimize visual impacts associated with the Minisink Compressor Station, we included recommendations in section B.5 that require Millennium to finalize the station design and its visual screening plan so that the exterior of the facility would be more harmonious with the surroundings and other buildings in the area. We conclude that with implementation of our recommendations, the visual impacts of the Minisink Compressor Station would be minimized to the extent practical and would not be significant. The visual impacts associated with the compressor facility at the Wagoner Compressor Station would be negligible considering the dense forested area surrounding the meter station and the lack of residences within 0.5 mile of the existing meter station.

For the reasons stated above, the environmental impacts associated with siting a compressor station at Millennium’s existing Wagoner Meter Station would be slightly less in comparison to the proposed site. However, as mentioned previously, building a compressor at that site would not meet the project objective of delivering the additional natural gas capacity without replacement of the smaller diameter Neversink Segment.

Due to replacing the pipeline, the Wagoner Alternative would impact more than ten times more land (112.4 acres) than construction of the Minisink Compressor Station (10.6 acres). The bulk of the land use impacts associated with the Wagoner Alternative would be forest, agricultural, and utility corridor. Although the replacement pipeline would generally follow the existing Neversink Segment, utilizing about 27 acres of existing pipeline right-of-way, and minimizing the forested impacts of the replacement to the extent practical. Millennium would still need to clear about 47.61 acres of trees and use about 22 acres of cleared agricultural land, compared to 0.4 and 9.8 acres of forested and agricultural land, respectively, for the Minisink Compressor Station. The primary impact on agricultural land would be the temporary loss of crops within the work area and adjacent areas, since this land would be taken out of production for one growing season. Following construction, most agricultural land uses would revert to previous uses within the permanent right-of-way.

Residents of Minisink filed comments expressing concern that Millennium's calculations of forested impacts were incorrect and misleading. As stated by Millennium, the acreage of impacts along the Neversink Segment replacement includes both replacement and excavation of the existing Neversink Segment, requiring additional space for the excavation. In addition, Millennium would need additional temporary workspace (21.4 acres) required for road, railroad, wetland and utility crossings, horizontal directional drills, rock removal, timber stockpiling, and topsoil segregation that are over and above the typical construction corridor. We find that the width of construction right-of-way and the temporary workspaces that Millennium would use for replacement of the Neversink Segment are similar in size and purpose for typical pipeline installation and replacements. In standard industry practice, the construction area used for the alignment would not be centered on the existing pipeline but would extend about 85 feet on the working side to avoid safety hazards associated with operating heavy equipment over the active pipeline.

As part of the Wagoner Alternative, the pipeline replacement would also result in visual impacts. Due to the clearing of trees and shrubs, however, the replacement would be collocated adjacent to the existing Neversink Segment where feasible, which is preferable to clearing and creating an entirely new right-of-way as the visual impacts are confined to a known, existing corridor. The forested impacts associated with the Neversink Segment account for about 38 percent of the total construction impact of the Wagoner Alternative.

Although the Minisink Compressor Station would permanently alter the visual landscape of the surrounding area, the site itself would not have a direct impact on the nearby residents. Indirect impacts such as property values, air quality, and noise are discussed in section B. The Wagoner Alternative would impact about 0.7 acre of residential land use and directly impact 58 landowners by way of an additional easement for the replacement right-of-way on their property. Millennium would need to acquire the additional right-of-way from these landowners including 10 landowners whose land is not currently crossed by the current Neversink Segment. Millennium's negotiations for such easement could require use of eminent domain. Temporary construction impacts on residential areas could include inconveniences caused by some increased construction-related traffic on local roads; noise and dust generated by construction equipment; the presence of on-site construction personnel; trenching through roads or driveways; ground disturbance of lawns; removal of trees, landscaped shrubs, or other vegetative screening between residences and

adjacent rights-of-way; and removal of aboveground structures such as sheds from within the existing right-of-way. Millennium identified 10 residences within 50 feet of the construction area along the Neversink Segment replacement.

The Minisink Compressor Station would impact a minimal amount of wetlands on the site, whereas, the Wagoner Alternative would require 11 wetland crossings and would impact about 2.7 acres of wetlands with about 0.3 acres of permanent impact on forested wetlands. The Neversink Segment replacement would require 12 waterbody crossings, including the Neversink River, compared to the one intermittent stream crossed by the proposed Minisink Compressor Station access road.

The Minisink Compressor Project would only potentially impact one special status species, the Indiana bat for which we came to a determination of *not likely to adversely affect* regarding this species in section B.3.3. The Wagoner Alternative has the potential to impact five special status species: the Indiana bat, bog turtle, dwarf wedge mussel, small whorled pogonia, and the spreading globeflower. Although no known hibernacula occur within the Neversink Segment area, some potential Indiana bat roosting habitat would be removed during construction. The proposed project and alternative are both within the range of the bog turtle. The wetlands along the Neversink Segment are in an area of Orange County where no known bog turtle populations occur and are lacking suitable surrounding habitat. Therefore, we believe that it is unlikely that this alternative would impact bog turtles. The dwarf wedge mussel is a federally-listed and New York state-listed endangered freshwater mussel that inhabits large streams and rivers that drain into the Atlantic Ocean. The dwarf wedge mussel occurs in the Neversink River that would be crossed by this alternative and could be impacted by the replacement. The small whorled pogonia is a federally threatened plant species in the region. However, the lack of documented occurrences of this species within the project area indicate that this species is not likely present. The spreading globeflower is a rare New York state species and could occur within the wetlands along the Neversink Segment replacement.

The Wagoner Alternative is not simply an alternative that would eliminate the siting of the Minisink Compressor Station in the Town of Minisink. By the elimination of the bottleneck created by the existing lower MAOP Neversink Segment, it could enhance the reliability of Millennium's system and could allow Millennium wider options for expansion of its system. Although the Wagoner Alternative would meet the project objective, our analysis shows that the proposed Minisink Compressor Project would impact considerably less wetlands, waterbodies, special status species, and forested and residential land. The alternative's impact on these resources would be greater during construction than operation. Conversely, there would be more impacts on air quality and visual resources associated with the Minisink Compressor Project than the Wagoner Alternative because the location of the Wagoner Compressor Station is more remote than the Minisink Compressor Station. While it is apparent that the Wagoner Compressor Station site has some advantages over the proposed location, the greater environmental issues and landowner impacts of replacing the Neversink Segment cause us to conclude that the Wagoner Alternative does not provide a significant environmental advantage over the proposed project.