December 23, 2014~~April 7, 2014April 6, 2014April 3, 2014~~

Mr. Kevin Bowman
Environmental Protection Specialist
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

Dear Mr. Bowman:

The U.S. Fish and Wildlife Service (FWS) has reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Constitution Pipeline Project (Constitution or project), Federal Energy Regulatory Commission (FERC) Docket No. CP13-499-000 and the Wright Compressor Station Interconnect Project, Docket No. CP13-502-000 dated February 12, 2014. The applicant, Constitution Pipeline Company, LLC, proposes to construct a new 30-inch natural gas pipeline, approximately 124.4 miles in length, from Susquehanna County, Pennsylvania, to the Wright Compressor Station located along the existing Iroquois Gas Pipeline in Schoharie County, New York. Upgrades will be made to the Wright Station to increase gas compression. The purpose of the projects is to transport natural gas obtained from Marcellus shale reserves in Pennsylvania to markets in New York and beyond.

This is the report submitted by the Department of the Interior pursuant to, and in accordance with, provisions of the National Environmental Policy Act (42 U.S.C. 4321 et seq.), Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq*.), Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended; 16 U.S.C. 668-668d), and the Migratory Bird Treaty Act (MBTA) (40 Stat. 755; 16 U.S.C. 703-712). We may provide additional comments on this project under the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) or other legislation, as applicable.

Project Description

The proposed project involves the construction of approximately 124 miles of new pipeline, two new meter and regulation stations, a new compressor station, two tie-ins and 11 mainline valves. ~~operate the pipeline~~. The project purpose states that the pipeline would deliver up to 650,000 dekatherms of gas per day (Dth/d) on Page 1-2, however, on Page 2-32 of the DEIS, it is indicated that the capacity is actually 850,000 (Dth/d) with increased operating pressure. It is not clear why the project sponsor is not requesting authorization for the maximum capacity at this time. If this request will be made in the future, the cumulative impact of this action should be considered by FERC in the current DEIS.

It is important to note that due to landowner concerns about the project, Constitution's access to 24 percent (approximately 30 miles) of the project area has been denied. Therefore, the impacts reported in the DEIS may be higher ~~(or lower)~~ than reported for most resources.

Temporary construction fencing is described on Page 2-12 and indicates that Constitution may use orange safety fencing to protect wetlands of high value but there is no description of these areas in the document. We encourage Constitution to work with the Corps of Engineers (Corps) to protect all wetlands within and adjacent to the workspace. Temporary fencing should be placed around wetlands near construction areas so that inadvertent encroachment does not occur. The fencing should also have signs indicating the wetlands are "off limits" areas.

Constitution proposes to remove trees, brush and other vegetation (known as slash) from the pipeline right of way and then sell it for pulp or be chipped in place. In forested areas, and where compatible with the landowner's wishes, it is suggested the slash be piled along the edge of the right of way to serve as habitat. The amount of material left behind could be determined by the property owner. Leaving this material in place can serve several functions: in addition to providing habitat for small mammals, reptiles and amphibians as well as birds, it can reduce overland flow and limit erosion, and it can also prevent deer browsing and allow seedlings to become established as they grow up through the slash.

A description of construction techniques proposed for stream crossings is provided on Page 2-20. For most crossings, a dry crossing is proposed to reduce impacts to stream habitat and water quality. However, Constitution proposes to use wet crossings (open-cut trenching) where dry options are ~~rendered~~ determined to be infeasible. This method of construction can impact stream bed and bank stability, deposition of sediment in downstream areas and detrimental changes in water quality (such as increased turbidity). The DEIS does not ~~give specific instances~~describe circumstances where the use of in-stream construction is justified. Further, areas ~~they hav~~ have~~e~~ not been identified where this technique would be used. We recommend FERC require Constitution to justify each use of this technique and provide mitigation where it cannot be avoided ~~not approve this method of construction due to potential impacts on stream bed and bank stability, deposition of sediment in downstream areas and detrimental changes in water quality (such as increased turbidity).~~

We agree with Constitution's proposal to use temporary bridges over waterbodies to facilitate access. The DEIS, however, does not indicate if these structures will be used at all crossings or just those over a certain size. This should be clarified. In addition, the bridges will be designed to accommodate normal to high flows but no specifics are given on what storm events these crossings will be designed to withstand. More information should be provided by Constitution.

For sensitive wetlands, waterbodies and some roads, Constitution would implement horizontal directional drilling (HDD) underneath these areas to avoid surface impacts. However, the required geotechnical investigations are not finished for some locations. In general, we support the use of HDD where conditions allow but the technique can lead to impacts in certain geological conditions. Consequently, FERC should not authorize this technique for any area without sufficient geotechnical information to support the use of HDD. Further, reference is made to the development of a Draft HDD Contingency Plan but it is not included with the DEIS or an appendix. This plan should be provided as an appendix for review and comment. Finally, we do not support the clearing of trees within wetlands in order to ~~use this technique~~place HDD monitoring equipment and agree with FERC that only hand clearing in a 3 foot wide area should be employed.

Comment [DAS1]: How would it be lower? Did they estimate impacts within that area? Yes they were estimates for forests and wetlands, among others

Comment [DAS2]: Were they really not that definitive? If not, should we recommend that this or another BMP be in place at every site where wetlands could be impacted by construction? Text added

Comment [DAS3]: Does this mean directional drilling will be used? If so should that be stated? Dry crossing is using a dam, flume, pump-around so that work is in dry conditions within the channel.

Comment [DAS4]: Explain what our concern is. (I thought we generally were supportive of this technique – under what circumstances would we nto be? If there is bedrock close to the surface, there is the possibility of a frac-out where the driller loses control of the bit and it redirects itself – usually toward the surface – that is why the geotechnical studies are needed

Comment [DAS5]: Since they are supposed to be using this technique to avoid impacts to wetland wouldn't they be staging and starting the drilling outside of the wetland? This paragraph leaves me a bit confusted. You are correct but they need a path to put sensors in the wetland to monitor the HDD. However, they don't need to clear trees and drive equipment through the wetlands.

Details of preconstruction inspections for invasive species were not clearly identified in Section 2 but should be required to identify problem areas (surveys are not completed). The DEIS states that abundant species in New York include reed canary grass, multiflora rose and tartarian honeysuckle but no commitment is made to remove these species or prevent their spread to new areas. Removal and proper disposal of invasive plants prior to construction could limit the spread of seeds, roots and other plant parts. Text in Section 4 of the DEIS indicates that an Invasive Species Management Plan was prepared but it is not included as an Appendix. This information should be included for review.

Constitution proposes to put the pipeline into service in March 2015. Given the lack of data and analysis in the DEIS~~, most notably~~ for approximately 30 miles of the project's length where access has been denied, we have reservations about that timeframe. FERC should require outstanding information and data be included in the DEIS for full review prior to project approval and construction. Having sufficient information is particularly important for other agencies that require the data for analysis and permitting decisions.

Although the document indicates on Page 2-30 that FERC would eventually review unsurveyed parcels, it will not do so until after the project has already been approved and certified. ~~Even if FERC were to conduct an additional review, other agencies with jurisdiction over the various resources in the project area would generally not be part of that process. The commitment to coordinate with other agencies is very weak and should be more explicit in the DEIS.~~ It would be preferable for the entire project area be surveyed and the information included in the DEIS for review by the public and resource agencies prior to project approval.

Construction monitoring would be the responsibility of a third-party contractor. ~~It is difficult to conceive that this contractor will be able to adequately monitor the entire project length which is spread out over five construction sections, all operating simultaneously.~~ There is a long list of action items on Page 2-29 ~~indicate that this will be a very challenging, if not impossible task, to properly complete without extensive resources.~~. y~~ Y~~et, there ~~is a lack of explanation~~are few details in this section on how adequate construction monitoring will take place. More detailed information should be provided on monitoring in the DEIS.

Post construction monitoring would be implemented to evaluate restoration activities. Constitution indicates that monitoring for invasive species would be done annually for 3 years. We recommend this monitoring be done during the growing season between the months of June and August. Problem areas should be dealt with immediately.

On Page 2-33, it is stated that the proposed pipeline could carry as much as 23 percent more gas than what is being authorized by FERC. A reasonable explanation as to why Constitution is not requesting the use of full capacity of its infrastructure should be provided in this section. As mentioned above, FERC should consider the maximum capacity of the project in this DEIS.

Section 3Alternatives

A description of the No-Action Alternative is provided and indicates that if the project were not built it would result in no new natural gas supply for New York and New England markets. This statement is only partially true. It would mean that this project would not supply that natural gas but it doesn't preclude another project from doing so. ~~We note that FERC dedicates five paragraphs to why the No-Action Alternative would be a bad choice but says very little about the~~

Comment [DAS6]: This paragraph should be reframed. The main point is that we would like the entire project are to be surveyed and reviewed by the agencies prior to the project being approved and certified. State that after your first sentence. I don't think you need the additional language. Ok clarified

Comment [DAS7]: I don't think we should take this on as an issue. The point is that we want adequate monitoring so I think what we need to ask in this section is for more information on their monitoring plan. Text changed

~~large impacts to important resources which would be avoided by selection of this alternative.~~Additionally, it should be noted that the No-Action alternative has the least amount of impact to natural resources. A summary of these resources should be provided in this section.

Comment [DAS8]: What resources are being referred to here and why do we want a summary?

~~In describing the project impacts of the preferred alternative, the DEIS (Page 3-9) indicates that the disturbance will be largely short term and temporary. We disagree with that assessment for resources such as wetlands and interior forest habitat and the myriad of species which depend upon them. Lasting impacts are expected to unfragmented forest for many areas.~~
~~(A lead-in sentence should introduce our main point regarding alternatives – that is collocation should be more thoroughly evaluated~~

Comment [DAS9]: This would be more meaningful if you can cite to some literature that substantiates this point. Please develop this comment further. Good point – this is expanded upon below in resource impact section.

Early in the project review, many individuals provided input on the proposed~~(?)~~ project location ~~(Alternative ?)~~ and expressed support for developing an alternative which would roughly follow the Interstate 88 highway corridor (Alternative M). However, the proposed location of the project is for the most part not adjacent to the highway but crosses greenfields as stated on Page 2-1. The FWS, in a letter dated October 5, 2012, recommended FERC consider the benefits of co-locating the project with existing infrastructure, such as highway rights-of-way and utility corridors. This collocation would reduce direct and indirect impacts to wildlife, habitat fragmentation, and human disturbance in natural areas. Constitution has argued that it is not feasible due to steep slopes, however, several sections of the proposed alignment are currently planned on steep slopes.

Comment [DAS10]: Has their argument been that it is not feasible or not economically preferred? The argument has been that they cannot work within the DOT ROW and there are more steep slopes but they don't say its not feasible or economically preferred.

In describing the project impacts of the preferred alternative, the DEIS (Page 3-9) indicates that the disturbance will be largely short term and temporary. We disagree with that assessment for resources such as wetlands and interior forest habitat and the myriad of species which depend upon them. Lasting impacts are expected to unfragmented forest adjacent to the pipeline for many areas (see additional discussion below)

Comment [DAS11]: This would be more meaningful if you can cite to some literature that substantiates this point. Please develop this comment further. Good point – this is expanded upon below in resource impact section.

In considering existing infrastructure, we are aware of several proposed and existing gas pipeline projects which deliver natural gas from Pennsylvania to New York (Tennessee Gas 300, Stage Coach to Millennium, Texas Eastern). The DEIS indicates that the Tennessee Gas 300 pipeline proceeds in an east-west direction (which is in the direction of New York City and one of Constitution's markets) but not toward the Wright Compressor Station. ~~Likewise,~~T~~t~~he Millennium pipeline also follows an east-west route before turning toward New York City.

Comment [DAS12]: What is your take home point? Is your point that there is sufficient capacity or that they could co-locate in these rights of way? Collocation added

A collocation of the Constitution pipeline with one of these other projects would reduce resource impacts. It is not explained why a new pipeline couldn't be collocated with the Tennessee Gas 300 pipeline or the Millennium Pipeline. But, the text does indicate that these pipelines are not in the direction of the Wright Compressor Station. We believe the alternative selection criteria should not mandate a link to this compressor station, especially if other feasible routes are available to get the gas to markets. For example, an option not considered in the DEIS would be to collocate a new pipeline with either the 300 pipeline or the Millennium pipeline and make a connection to the Algonquin pipeline where they intersect. In combination, these pipelines would serve both the New York City and New England markets. On Page 3-19, it is stated that a new pipeline would not be feasible due to the highly developed nature of the area. However, we note that portions of the Tennessee Gas 300 and Spectra New Jersey-New York pipelines were recently constructed in the New York City area.

Comment [DAS13]: This paragraph and the one above are somewhat duplicative. Please consolidate. done

Both the EmKey and Bluestone pipelines are or would be located near the natural gas source in Susquehanna County, PA but the DEIS indicates that due to meandering routes these pipelines

could not be used to transport gas or as a location for a new pipeline (although the Constitution project would collocate with Bluestone for 1,900 linear feet). ~~The explanation given as to why the Constitution project could not be collocated with more of the Bluestone project does not provide a clear answer.~~ The DEIS should provide a more thorough explanation as to why this collocation is not feasible.

Major alternative routes
Alternative K was reviewed as a southern, more direct route between the project endpoints. It would be 6 miles shorter than the proposed project and mostly travel along existing rights of way. Significantly, the Alternative K route would collocate with almost 90 miles of existing roads and electric and pipeline corridors while the proposed project would collocate with approximately 11 miles.

The primary reasons for rejecting Alternative K include traversing the New York City water supply watershed, longer permitting processes and impacts to forest wildlife. The DEIS does ~~a poor job~~ not adequately support~~ing~~ the preferred alternative over Alternative K in that the amount of forest land crossed and total forest impacts is similar for both. ~~Despite this, t~~The DEIS indicates that more forest-dwelling wildlife would be affected by Alternative K, based primarily upon the amount of forest edge lost ~~as a result of Alternative K~~. While there would be more forest edge impacted due to collocation, ~~the~~ new impacts to forest interior would be significantly less with collocation as interior forest habitat loss has already occurred as a result of the previous projects. ~~More importantly, t~~The amount of interior habitat affected by Alternative K would be~~is~~ significantly less at 127 acres as opposed to 436 acres for the proposed route. The fact is that roads, pipelines and power lines have all been built within the area of Alternative K and building another pipeline adjacent to this existing infrastructure would not cause significantly greater impacts to forest dwelling species than would the proposed route, which crosses 36 miles of interior forest habitat. Further, while special construction precautions must be used to protect water quality, linear projects have and probably will continue to be built in this watershed. Therefore, it is recommended that FERC and Constitution reevaluate the importance of selecting an alternative which minimizes impacts to quality interior forest habitat. As FWS has mentioned in previous correspondence (October 5, 2012), in order to avoid important resource impacts, the project should be collocated with existing infrastructure to the greatest degree possible.

Comment [DAS14]: This section can be written to be more concise. clarified

Alternative M was generally developed to follow the Interstate 88 highway corridor. Placement of the pipeline within the controlled access area of the highway is generally not preferred by state and federal highway agencies. However, construction adjacent to the highway is possible and not prohibited. As the DEIS points out, some areas occur on slopes and would pose construction challenges. This route was broken down into six segments to provide for a comparison with the preferred alternative. Alternative M Segments 3 and 5/6 would result in substantially less impacts to forest interior habitat. We recommend that Alternative M be given greater consideration than the preferred route because of fewer impacts to quality habitat and the fact that it generally follows disturbed areas.

The New York State Department of Environmental Conservation (NYSDEC) along with the Environmental Protection Agency and the FWS ~~have~~has requested a more rigorous analysis of alternate routes including Alternatives K and M and surrounding areas. These agencies believe that constructing the Constitution pipeline ~~in areas~~ adjacent to ~~Interstate 88~~disturbed areas would reduce impacts to important resources such as streams, wetlands and large blocks of interior forest. While habitat would still be lost as a result of Alternatives K and M, it appears that it

Comment [DAS15]: Why do you recommend Alternative M instead of K. It seems K has fewer impacts. clarified

would be less than the proposed alignment and to lower quality habitat, due to the presence of disturbed ~~nature of the a~~areas.

Section 4 Environmental Analysis

Geology of the project area is varied and includes approximately 45 miles of alignment with shallow bedrock, which may require blasting. However, Constitution indicates that the blasting locations cannot be determined until geotechnical investigations are complete. Blasting can be disturbing to wildlife. We recommend that Best Management Practices (BMPs) for blasting be used to limit wildlife impacts~~as little as possible~~ (see below for more information related to blasting and bald eagles).

Surface water resources potentially affected by the project include 277 waterbodies. The project would cross 124 perennial, 96 intermittent and 57 ephemeral streams. Another 58 waterbodies are located in the construction right-of-way but not directly crossed. It is not clear from the DEIS if there will be indirect impacts to these areas such as erosion, sedimentation or changes in hydrology or water quality due to adjacent construction. A statement on Page 4-52 indicates that Constitution would avoid impacts "to the extent practicable". Instead of requiring specific impact information to be contained within the DEIS for public review, FERC indicates that the information can be submitted separately at another time. Like many sections of the DEIS, this lack of information does not allow the reader to understand the full scope of impacts that would result from the project. A thorough analysis of impacts should be presented in the DEIS.

Constitution proposes to withdrawal approximately 22.5 million gallons of water from five local waterbodies ~~-~~to hydrostatically test the pipeline for leaks. The DEIS indicates that Constitution would ensure that base flows in source streams were maintained but does not provide any details on monitoring the waterbodies before or after the withdrawal. Nor are there details about when the water would be withdrawn. Some of these waterbodies are classified as fisheries of special concern. We are concerned with potential impacts to aquatic communities if water withdrawals are excessive or occur during periods of low flow. Additional water will be needed for dust suppression and to create drilling mud for horizontal directional drilling. It is not explained in the DEIS why local reservoirs or the Susquehanna River cannot be used as a water source. These would be preferable sources and should be investigated. We recommend water withdrawals from streams not occur during periods of low flow (typically June through August) or when this activity would impact fish spawning.~~.~~ Coordination should be undertaken by Constitution with the Delaware and Susquehanna River Basin Commissions to determine appropriate locations and methods of water withdrawal.

When testing is completed the used water would be discharged onto the ground. Measures should be implemented to avoid discharge into sensitive areas. ~~such as wetlands and to prevent erosion of upland areas~~. Any damaged areas should be restored which would include adding plantings and seeding. Constitution should coordinate with local communities and the NYSDEC for potential beneficial uses of this water (fire protection, irrigation, etc.), if appropriate.

According to the DEIS, the project would affect 91.8 acres of wetlands, including 32 acres of forest~~ed~~, 25 acres of scrub-shrub and 34 acres of emergent wetland habitat. Most of the impacts would result from the pipeline. However, we note that approximately 30 miles (24 percent) of the project area has not yet been surveyed due to restricted access by landowners. Therefore, the impacts could be higher. National Wetland Inventory maps were used to determine if wetlands were located on inaccessible areas. It is important for FERC to understand that these maps are

Comment [DAS16]: Do you have any specific BMPs to recommend or you can cite to?

Comment [DAS17]: Or do we recommend that they select routes that require less blasting or do we just ask for BMPs related to time of year or time of day or whatever are the best scenarios? Text added

Comment [DAS18]: What about hydrology? Good point

Comment [DAS19]: I recommend that after this sentence that you identify specific BMPs or guidelines for water withdrawal – the SRBC has some that you might want to look at and we can speak to what the time of year, flow volumes etc we are concerned about. Text added

Comment [DAS20]: What about spawning periods which may occur during spring high water events? With snow melt and spring runoff, water levels are less of a concern then.

Comment [DAS21]: 22.5 million gallons??? Yes, through filter socks

produced from high altitude imagery and do not identify all wetland areas, particularly small wetlands. The maps cannot substitute for field surveys and should not be relied upon to make wetland impact determinations. Therefore, we recommend the entire project area be field surveyed and the information be included in the DEIS. This information is necessary to obtain a permit for wetland encroachment as required by the Clean Water Act (CWA). In the Public Notice issued by the Corps of Engineers for a CWA permit, no determination is made on whether this project must apply for a Nationwide Permit or an Individual Permit. Given large scope of the project and the level of the impact, we will recommend that an Individual Permit be required for this project.

Comment [DAS22]: I don't think FERC can act on this. This is a comment for the Corps. You're correct but this is the Federal EIS and we are not providing a separate letter to the Corps on the Public Notice. So, I think this is our chance to make this important point.

In addition, the CWA requires that any project which applies for a Section 404 permit to fill jurisdictional wetlands conduct an alternative analysis to determine if all feasible measures to avoid and minimize impacts have been implemented. The US Army Corps of Engineers cannot issue a permit for wetland encroachment until this information has been provided. We remind FERC that wetlands provide important habitat for wildlife as well as functions that benefit society such as flood flow retention, sediment and nutrient trapping, water filtration, and biologically productive areas. Therefore, measures to limit wetland loss are important.

The DEIS indicates, on Page 4-61, that wetland crossing methods would be determined during construction based upon soil stability and saturation. If the crossing method has not been determined at this point, the impacts from construction are unknown and the DEIS is incomplete. We recommend sufficient information be gathered about wetland and stream conditions so that appropriate avoidance and minimization measures can be planned and implemented. The measures ultimately employed for the crossings should be included in the DEIS for review and comment.

On Page 4-64, the DEIS lists construction measures to implement near streams and wetlands. We note that control of invasive plant species is not on this list. This should be added as a requirement. Invasive plants can preclude beneficial plant species and affect the biological functions of wetlands. Construction activities can spread seeds and plant parts and ground disturbance can favor invasive species. Therefore, all invasive plants close to proposed disturbed areas should be removed by appropriate methods prior to project construction. We recommend Constitution indentify and incorporate BMPs into the project documents which will limit the spread of invasive species.

Comment [DAS23]: Instead of this language can you provide a reference to a standard BMP for handling invasives for this type of construction?\ I don't know of a BMP for removing IS close to construction areas but will search for one. I looked for a specific one but could not find any so I am making a general BMP reference here.

Mitigation for lost wetland functions and values is required by the CWA, however, no details are provided in the DEIS. The Corps of Engineers should not issue a permit for this project until all potential impacts are analyzed and measures have been identified to avoid, minimize and mitigate wetland loss to the greatest extent practicable. The statement on Page 4-67 which indicates that mitigation banking is not available in New York is inaccurate. There are several of these banks operating in the state however, none are near the project.

Comment [DAS24]: Why put this in FERC comments if it is directed to the Corps? Same reason as above – Corps indicated it will be using the DEIS and requested comments on it.

Comment [DAS25]: I thought Curotola's was being considered? Yes, but his is an In-Lieu Fee program and not a bank.

According to the DEIS, construction of the pipeline could disturb more than 1,650 acres of land with approximately 700 acres or more being permanently retained for the operation of the project. Clearing of upland forest would result in the impact to more than 1,024 acres of habitat (Table 4.5.5-1). We note that the text on Page 4-68 provides a different estimate (983 acres).

However, since the DEIS was written, several changes have been made to the project alignment and several access roads and other infrastructure were being contemplated. Therefore, the estimate of forest habitat loss will change. As we have stated in our previous comments, we

have serious concerns about the loss of this amount of habitat and the effects of forest fragmentation on the remaining forest blocks. Appendix M indicates that more than 190,000 linear feet (almost 36 miles) of interior forest would be ~~crossed~~ impacted by the project. This would result in the direct loss of more than 439 acres of interior forest on 539 different tracts. While Constitution has attempted to reduce this loss by narrowing the right-of-way by 10 feet in some areas and has proposed a mitigation plan, it will not diminish the impact of fragmentation to remaining forest areas. ~~We believe this is a significant and possibly unmitigated impact.~~ The proposed Upland Forest Mitigation Plan has not yet been provided for review. However, it is not clear how this plan or the measures proposed by Constitution would mitigate the fragmentation of all of the interior forest.

During the coordination with the FWS, it was agreed that Constitution would calculate the indirect impact of forest fragmentation. This calculation would involve identifying areas where the project's effect extends 300 feet into the forest interior on each side of the right-of-way. This distance is based upon studies by Jones~~,~~ et al., 2001and Robbins~~,~~ et al. 1989 (however, the distance can vary based upon a number of factors such as other disturbances and forest species being considered). This analysis appears to be missing from the DEIS.

Fragmentation of forest not only results in habitat loss, but also can lead to reduction in habitat quality, isolation of individuals, reduced occupancy, reproduction, or survival in a particular species (Andren 1995). Smaller forest blocks provide less habitat and are more effected by changes in temperature, sunlight, humidity and plant communities (Murcia 1995). Higher levels of predation and nest parasitism have also been documented (Brittingham and Temple 1983, Robinson et al. 1995).

Constitution proposes to limit tree clearing and vegetation removal in upland areas outside of the breeding bird season (generally April to August) in most areas. This will reduce mortality and limit some impact on breeding activity. Even though tree clearing would be done outside of the nesting season for the most part, there will be construction activity in cleared areas during the breeding season and this will have an impact on adjacent forest-dwelling species. Construction noise, lights, dust and emissions could all disrupt wildlife activity. Cumulatively, these impacts could have an impact on wildlife. In several locations in the DEIS, it is mentioned that trees within the right-of-way will be removed for the life of the project but the document does not indicate how many years that will be. For these reasons, Constitution should provide mitigation for impacts to migratory bird habitat.

Comment [DAS26]: OK, but what is it we want them to do? Since they are cutting out of season I think the only thing we might request is mitigation for habitat lost. Text added

The Upper Susquehanna Coalition (USC) is a network of 16 Soil and Water Conservation Districts in New York and 3 Conservation Districts in Pennsylvania. They work with a long list of government agencies, non-government organizations and academic institutions to protect and improve water quality and natural resources in the Upper Susquehanna River Basin of Pennsylvania and New York. One of their many projects is to identify important areas for conservation, including large forest blocks and wildlife travel corridors within the watershed. Mapping from this group indicates that the Constitution project will bisect~~s~~ some of these areas identified in Broome, Chenango, Delaware Counties, New York and Susquehanna County, Pennsylvania. The project would cross wildlife travel ~~(?)~~ corridors from approximately milepost 14 to 45 and forest blocks from milepost 36 to 47 in Broome and Chenango Counties and most of the route in Delaware County. Similarly, the project would cross forest blocks in Susquehanna County from milepost 15 to 23. The DEIS does not contain this information nor does it discuss this system of forest blocks and travel corridors in detail. It is recommended that Constitution contact the USC for more information and data related to these resources.

Comment [DAS27]: Does crossing necessarily result in impact? Shouldn't the focus be on impact as related to crossing? yes

The DEIS points out that the loss of fragmentation of forests is bad for other animals besides birds. However, we found little information in the document that describes what these impacts may be to mammals, reptile and amphibians. For example, there is only one reference to a single salamander species and, no references to snakes other than the timber rattlesnake (*Crotalus horridus*), primarily because it is a species of concern. Likewise, the only reference to turtles was the bog turtle (*Clemmys [= Glyptemys] muhlenbergii*), also because it is a federally-listed species. Reptiles and amphibians can be negatively impacted by pipelines through loss and fragmentation of habitat, reduced habitat quality, particularly in wetlands, and mortality from construction. ~~However none of this was discussed in the DEIS.~~ The document should be revised to provide more information. Data on reptile and amphibian species' range expected to be found in the project area can be found on the NYSDEC website (see NY Herp Atlas Project- http://www.dec.ny.gov/animals/7140.html).

A total of 108 waterbodies, which are classified as having fisheries of special concern, would be crossed by the project. Many of these are cold water fisheries capable of supporting trout and some are stocked with fish to provide recreation. We support the recommendation of the NYSDEC that these fisheries should only have in-stream work between June 15 and September 30 in order to avoid disruptions to trout spawning activity.

Construction work in streams will mostly be accomplished by use of dry crossing methods (flume, dam and pump or cofferdam). These methods will be used on 85 percent of the streams while the other 15 percent would use trenchless methods such as horizontal drilling, conventional bore or direct pipe. Because trenchless methods involve no direct impacts to the stream, we recommend this method be used for all waterbodies classified as fisheries of special concern. This would avoid impacts to sensitive and important fishery resources. For those streams where dry crossings are used, we recommend Constitution take precautions to protect biota such as removing~~e~~ fish, amphibians and reptiles ~~aquatic life~~ from work areas prior to start of construction, maintaining flow rates from upstream to downstream areas at all times and slowly releasing water behind dams back into the stream upon completion of work.

Comment [DAS28]: This should be more specific, I am not sure what you are asking them to do. Text added

Special attention should be given to erosion and sedimentation control measures used near streams to prevent stream bank erosion and water quality impacts. We recommend an environmental monitor be on site when in-stream work is being completed.

In previous correspondence the FWS recommended that Constitution coordinate with the NYSDEC for information on sensitive aquatic species such as the hellbender (*Cryptobranchus alleganiensis*) and freshwater mussels which are known to occur in the Susquehanna River basin. These species may be adversely affected by changes in water quality or habitat disturbance. However, there is no mention of the hellbender in the DEIS. Surveys may be needed in locations of pipeline crossings of the river or its tributaries. Additional information should be added to the DEIS concerning this species.

Comment [DAS29]: Has Noelle looked at this project to determine if it is crossing in areas that have already been surveyed or need to surveyed? Yes, there are a couple of tribs to the Susquehanna river which could be habitat – check this

Endangered Species Act

The FERC requested that the FWS consider the DEIS as the biological assessment (BA) for the purposes of conducting ESA Section 7(a)(2) consultation procedures. The DEIS addresses the potential for impacts to the following federally-listed endangered species: Indiana bat (*Myotis sodalis*) and dwarf wedgemussel (*Alasmidonta heterodon*); and the following federally-listed threatened species: bog turtle and northern monkshood (*Aconitum noveboracense*).

Indiana bat
Mist-net and acoustic surveys (Page 4-97) were conducted in the Pennsylvania portion of the project in 2012 and 2013 and Indiana bats were not captured or detected. The project is located outside the current range of the species in New York. FERC has determined the project may affect, but is not likely to adversely affect the Indiana bat given the survey results and project location. We concur with this determination.

Dwarf wedgemussel
Habitat surveys were conducted at 35 waterbodies in 2013 and the DEIS states that no habitat or individual dwarf wedgemussels were found in the project area (Page 4-97). The DEIS also states that "Prior to construction, Constitution should develop impact avoidance or effective impact minimization or mitigation measures (e.g., utilization of trenchless crossing methods or mussel relocation) in consultation with the FWS, the PFBC, the PGC, the PADCNR, and the NYSDEC for any dwarf wedgemussels encountered during construction." FERC has determined the project may affect, but is not likely to adversely affect the dwarf wedgemussel because no individuals or suitable habitat were found during surveys in 2013 and because of recommendations to develop avoidance, minimization, or mitigation measures. The FWS cannot concur with this determination because to date we have not received copies of the dwarf wedgemussel survey report. If FERC believes habitat is not found in the project area based upon field surveys, then they should reevaluate the "not likely to adversely affect" determination.

Bog turtle
Historically bog turtles were found in Otsego County but are now believed to be extirpated (Page 4-97). The FERC has determined the project will result in no effects to the bog turtle as no suitable habitat for the species will be impacted. We have no further comments on this species.

Northern monkshood
Surveys for northern monkshood were conducted in 2012 and 2013 as described on Page 4-97. All but four parcels with potential suitable habitat were surveyed and no plants were found. The DEIS includes several measures in the event populations are found in the future. The FERC has determined the project may affect, but is not likely to adversely affect the northern monkshood because no plants were found during the surveys and because of recommendations to develop avoidance, minimization, and mitigation measures. The FWS cannot concur with this determination because some areas have not yet been surveyed. If any individuals of the species are anticipated to adversely impacted (i.e., avoidance is not fully possible), formal consultation is required.

Comment [RN30]: True that we don't have results? We do have a report which only partially covers the project area

At this time, the FWS cannot concur with FERC's determination that the project may affect, but is not likely to adversely affect the dwarf wedgemussel and the northern monkshood. We look forward to receiving final survey results, plans for avoidance of impacts, and a more robust assessment of the potential for impacts to these species.

The FWS concurs with the FERC's determination that the project may affect, but is not likely to adversely affect the Indiana bat and we have no further comments regarding the bog turtle. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, these determinations may be reconsidered. The most recent compilation of federally-listed and proposed endangered and threatened species in New York is available for your information. Until the proposed project is complete, it is recommended that you check the FWS website every 90 days from the date of this letter to ensure that listed species presence/absence information for the proposed project is current.*

Bats
The DEIS also discusses three special-status bat species: the eastern small-footed bat (*Myotis leibii*), listed as a threatened species in Pennsylvania and a species of concern in New York; the

northern myotis [northern long-eared bat] (*Myotis septentrionalis*) (NLEB), a species the FWS has proposed listing as endangered; and the silver-haired bat (*Lasionycteris noctivagans*), listed as a Pennsylvania species of concern.

It is recommended that text on Page 4-101 be edited to modify the bullet "northern myotis, which is listed as proposed endangered by the FWS..." to indicate that, "the northern myotis, a species the FWS has proposed listing as endangered." This is recommended because the species is not "listed" as anything at this time.

On Page 4-101 the DEIS states, "In December 2013, FWS stated that the eastern small-footed bat did not warrant listing, but the northern myotis bat was proposed as an endangered species." Please revise the document as the final determination for the eastern small-footed bat and the NLEB proposed rule was published on October 2, 2013.

The NLEB was captured/detected during surveys of the Pennsylvania portion of the project (Page 4-102). Constitution has proposed conducting the majority of tree clearing between September 1 and April 1. The EIS states that "Prior to construction, Constitution should develop avoidance, minimization, or mitigation measures… for construction between April 1 and October 31 to minimize impacts on the small-footed bat, Northern myotis, silver haired bat, and little brown bat." Constitution met with the FWS's New York Field Office on April 2, 2014, to discuss additional NLEB survey options and conservation measures. However, additional coordination is necessary.

As mentioned above, the NLEB is currently proposed for listing under the ESA. While the ESA prohibits unauthorized "take"[1] of fish and wildlife species *listed* as endangered or threatened, *proposed* species are not afforded this protection. However, 30 days after publication of a final listing rule, take prohibitions become effective. The FWS anticipates a final listing decision for the NLEB by October 2014. The FWS is encouraging all federal and non-federal landowners and project developers to implement conservation measures for NLEBs. If the species becomes listed, project proponents will need to avoid adverse effects unless and until they have incidental take authorization (i.e., biological opinion is issued). Therefore, for projects that are currently in the planning stage, such as this project, the FWS is recommending coordination with ~~foiekd~~field offices now so as to avoid potential project delays in the event the species becomes listed. Therefore, the FWS recommends updating the DEIS to fully address the potential for adverse effects to NLEB. The FWS does not agree with FERC's assessment that "construction and operation of the project would not result in adverse impacts on sensitive bat species" since avoidance, minimization, and mitigation measures have not yet been determined. Also, the DEIS fails to address the potential for killing or injuring NLEB that may be roosting in trees during tree clearing activities.

Comment [RN31]: Edit this to match with however we are referring to the project in this letter

Comment [DAS32]: Field? changed

Bald eagles (*Haliaeetus leucocephalus*) were federally delisted in 2007, but remain protected under the MBTA, the BGEPA, and by the state of New York as a threatened species. The BGEPA defines "take" as to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest or disturb" (16 U.S.C. 668c; 50 CFR 22.3). The FWS's National Bald Eagle Management Guidelines (Guidelines), which can be found at http://www.fws.gov/northeast/ecologicalservices/eagle.html, were developed to assist

[1] Section 3 of the ESA defines "Take" as, "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The term "Harm" is further defined by the FWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. "Harass" is further defined by the FWS as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.

landowners in project planning and to minimize impacts to bald eagles, particularly where construction activities may constitute "disturbance." The BGEPA regulations (50 CFR 22.3) define "disturb" as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Existing information indicates that at least two bald eagle nests are known to occur within 0.5 mile of the proposed pipeline. The FWS's guidelines recommend that activity between the nest and the nearest foraging area be minimized and that activities be kept as far away from nest trees as possible. If loud and disruptive activities (i.e., blasting) are proposed, it is recommended that they be conducted outside the breeding season (see guidelines (Category H). A 660 foot buffer should be maintained between all construction activity and the nests. In addition, landscape buffers, such as forested areas, should be maintained to provide a visual screen between blasting activities and the nests. If these recommendations cannot be implemented during construction or if new nests are identified in the vicinity of the project, the FWS should be contacted to see if a BGEPA permit is required. Constitution has indicated on Page 4-100 that bald eagle nest surveys would be conducted in winter/spring of 2014 but it is unknown if these surveys were completed. Further, no blasting mitigation plan has yet been submitted to the FWS as indicated.

Cumulative impacts

The cumulative impact analysis reviewed existing pipelines, transmission corridors, roads, and other development and was provided in Table 4.13-1 with previous, current and proposed projects being listed. However, noticeably absent from the list is the Millennium natural gas line which runs across the southern tier of New York State and is within the Constitution project area. The Millennium project should be added to the table and analysis. That project had substantial impacts to resources such as wetlands and forest habitat.~~, not unlike the Constitution project. Collectively, the two projects could have significant cumulative impacts.~~

Comment [DAS33]: Constitution has not had any impacts yet. Good point

Similarly, two other completed pipelines under FERC jurisdiction, the Tennessee Gas ~~P~~ 300 Line and Northeast Upgrade projects, were not included in the analysis based upon their distance, scope and schedule. Few details were provided on these projects but FERC considers projects 10 miles away to be too far to be included in the analysis. However, when considering regional impacts from multiple natural gas pipelines on resources such wildlife or habitat, this distance does not seem excessive. When considering impacts on a regional scale, a distance of 25 or 50 miles seems more appropriate.

Although the DEIS lists projects and some resources which may be cumulatively affected by development, it does not quantify the impacts or provide a scale of the changes over time. This appears to be a serious flaw in that the cumulative analysis does not give the reader a sense the magnitude of development in the affected region nor how the Constitution project contributes to resource change. It is suggested that this entire section be revised with more detailed information.

Regardless of the missing information, Table 4.13-1 has an extensive list of natural gas related development, particularly in Pennsylvania where Marcellus shale gas drilling is taking place. The DEIS indicates that a projection of similar development is speculative for New York State and was not included. However, even though high-volume, horizontal fracturing is not yet permitted in the state, the NYSDEC completed such an estimate (based on allowable drilling densities) and this information could be incorporated into the analysis. Consideration should be

given to the Marcellus shale gas drilling and additional natural gas pipelines and infrastructure which may be required.

On Page 1-2 of the DEIS, it is stated that Constitution will enter into an agreement with the Leatherstocking Gas Company, LLC to provide gas from the proposed pipeline to local communities along its route. At least four taps are planned but no details of the supporting infrastructure (distribution lines, metering stations, compressor stations, etc.) are provided. Unfortunately, FERC does not attempt to evaluate the scope of this secondary impact, only stating on Page 4-217 "As of this time no concrete plans for this local distributor have been made." However, at least 9 communities have been identified to receive the gas. FERC could at least provide the rough distances of these communities from the pipeline route and give a cursory overview of potential impacts to natural resources.

Again, the DEIS cumulative impact section should be revised to include all pertinent information as required by the National Environmental Policy Act (NEPA) for this type of analysis. Included in the analysis should be the approximately 30 miles of the Constitution pipeline which has not been studied or included in this DEIS.

Summary

In summary, we recommend FERC and the applicant provide a more rigorous environmental review of the Constitution Pipeline Project prior to project approval. Due to the quantity of missing information, it appears that the document does not meet NEPA standards. Most importantly, the DEIS does not have complete information for resources along approximately 30 miles of the project route. Further, the proposed alignment has been modified since the DEIS was released and plans are not complete for some access roads and other project infrastructure leaving the document with additional unknown resource impacts. Missing information about wetlands, protected species and mitigation plans is also problematic. Finally, some construction plans have not been finalized and therefore it is difficult for other regulatory agencies to analyze the project and make informed permitting decisions.

Impacts to wetlands, streams and forest habitat will be long-term and permanent in many cases. Of particular concern is the loss of over 1000 acres of forest habitat, including more than 400 acres of interior forest. It appears that alternatives other than the proposed route could result in less impact to these resources yet they were dismissed. Alternatives K and M could result in fewer impacts to these resources. Federal and state resource agencies remain concerned about the proposed location of the project and its impact on important resources.

Further coordination and consultation will be needed with the FWS regarding listed and proposed species prior to project construction. A plan to avoid blasting impacts on bald eagles may also be required. Based on project information, FWS anticipates that wetland and forest mitigation plans will be provided for review and comment.

Finally, the cumulative impact analysis section of the DEIS is missing important information on existing and proposed projects which may influence the report conclusions. FERC should revise this section to include the projects mentioned and attempt to quantify the past, present and foreseeable future impacts of other development projects in the region. This will assist in the public's understanding of the impacts of the Constitution pipeline project.

*Additional information referred to above may be found on our website at: http://www.fws.gov/northeast/nyfo/es/section7.htm

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