United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 244
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904

IN REPLY REFER TO:

December 21, 2018

9043.1
ER 18/0504

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
Mail Code: DLC, HL-11.2
888 First St., NE
Washington, DC 20426

RE: Big Run Pump Storage Hydro Project (FERC #14889)
Preliminary Permit Comments

Dear Ms. Bose:

The U.S. Department of the Interior (Department) has reviewed the October 29, 2018 "NOTICE OF PRELIMINARY PERMIT APPLICATION ACCEPTED FOR FILING AND SOLICITING COMMENTS, MOTIONS TO INTERVENE, AND COMPETING APPLICATIONS" regarding the application for preliminary permit filed by FreedomWorks, LLC (Applicant) proposing to study the feasibility of the Big Run Pump Storage Hydro Project to be located near Parsons in Tucker County, West Virginia.

Public Interest

The Applicant states that the proposed Project will develop, conserve, protect and utilize in the public interest the public water resources of the region without damage to the environment, and will reduce the acid rain and greenhouse effects associated with coal and oil fueled power plants. However, the proposed project will use more electricity than it generates, will eliminate more than 1500 acres of carbon-sequestering forest, and will dam and flood the valleys of at least four Cheat River tributaries. Any forest not removed from these flooded stream valleys may also become a source of methane release. We understand that the Applicant may attempt to utilize power from the nearby wind farm for pumping water from the lower reservoir to the upper reservoir, and will contribute to grid stability by providing on-demand electricity to offset periods when wind-generated electricity is not available. However, the Applicant's statement that the Project will be constructed without damage to the environment is inaccurate.

Fish and Wildlife Resources

The following comments and recommendations are submitted pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq*.).

The proposed Project could have an adverse impact on existing fish and wildlife resources and their habitats. The Department provides the following comments to assist with both construction and operation planning that can minimize potential adverse effects on fish and wildlife resources in the Cheat River, Mill Run, Tub Run, Big Run, Blackwater River, and surrounding areas. We recommend that the permittee coordinate with the U.S. Fish and Wildlife Service (Service) to consider development and operations that would be compatible with existing fish and wildlife resources.

Fisheries Resources:

The section of the Cheat River that is proposed as the source for the initial charge supports an important warm-water fishery, and is a Special Regulation Area with walleye (*Sander vitreus*) being an important recreational species. Large water withdrawals can result in impingement (trapping fish against screens) and entrainment (drawing fish, eggs, or larvae into power plant systems) of aquatic species. Groundwater or surface water withdrawal to fill the proposed reservoirs and the substantial amount of proposed forest clearing associated with the Project could adversely affect hydrology and water quality in the Cheat River and affected tributaries. Rare fish species documented in the Cheat River and its tributaries include redside dace (*Clinostomus elongatus*), pearl dace (*Margariscus margarita*), popeye shiner (*Notropis ariommus*), blue sucker (*Cycleptus elongates*), and brown bullhead (*Ameiurus nebulosus*).

Assessment of Risks to Migratory Birds:

Due to the Applicant's proposal to eliminate over 1500 acres of forest in order to construct project reservoirs, penstocks, and surge loops, the potential exists for avian mortality from habitat destruction and alteration within the project boundaries. Site-specific factors that should be considered in project siting to avoid and minimize the risk to birds include avian abundance; the quality, quantity and type of habitat; geographic location; type and extent of bird use (*e.g.* breeding, foraging, migrating, etc.); and landscape features. We recommend minimization of land and vegetation disturbance during project design and construction. New activities should be constrained to previously disturbed areas wherever possible (*e.g.*, road and utility line rights-of-way, agricultural fields, previously mined areas, etc.).

We offer the following recommendations to avoid and minimize impacts to migratory birds within and around the project area:

1. Due to the difficulty in assessing the entire project site for all bird nests, we recommend that the clearing of natural or semi-natural habitats (*e.g.*, forests, woodlots, reverting fields, fencerows, shrubby areas) be carried out between September 1 and March 31, which is outside the nesting season for most native bird species. Without undertaking specific analysis of breeding species and their respective nesting seasons on the project site, the avoidance of habitat impacts during the aforementioned time frame will avoid take of most breeding birds, their nests, and their young (*i.e.*, eggs, hatchlings).

2. Avoid permanent habitat alterations in areas where birds are highly concentrated. Examples of high concentration areas for birds are wetlands, State or Federal refuges, Audubon Important Bird Areas, private duck clubs, staging areas, rookeries, leks, roosts, and riparian areas. Avoid establishing sizable structures along known bird migration pathways or known daily movement flyways (*e.g.,* between roosting and feeding areas).

3. To conserve area-sensitive species, avoid fragmenting large, contiguous tracts of wildlife habitat, especially if habitat cannot be fully restored after construction. Maintain contiguous habitat corridors to facilitate wildlife dispersal. Where practicable, concentrate construction activities, infrastructure, and man-made structures (*e.g*., buildings, cell towers, roads, parking lots) on lands already altered or cultivated, and away from areas of intact and healthy native habitats. If not feasible, select fragmented or degraded habitats over relatively intact areas.

4. To reduce habitat fragmentation, co-locate roads, fences, lay down areas, staging areas, and other infrastructure in or immediately adjacent to already-disturbed areas (*e.g*., existing roads, pipelines, agricultural fields). Where this is not possible, minimize roads, fences, and other infrastructure. To minimize habitat loss and fragmentation, cluster development features (*e.g*., houses, commercial buildings, roads) rather than distributing them throughout land parcels.

5. Develop a habitat restoration plan for the proposed site that avoids or minimizes negative impacts on vulnerable wildlife. We recommend the use of plant species that are native to the local area for revegetation of the project area.

Please be aware that since these are general guidelines, some of them may not be applicable to the current project design.

Bald Eagle:

The bald eagle (*Haliaeetus leucocephalus*) was removed from the Federal Endangered Species List on August 8, 2007, and is no longer protected under Section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.; ESA); however, bald eagles are still protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d). Bald eagles are known to be present in the vicinity of the proposed Project. If eagles are present in the project area, the Applicant should follow the Bald Eagle Management Guidelines found on the Service's website[1] prior to commencement of work.

Threatened and Endangered Species

The following comments are provided as technical assistance pursuant to the ESA. As you may be aware, Federal agencies, including the Federal Energy Regulatory Commission (FERC), have responsibilities under Section 7(a)(2) of the ESA to consult with the Service regarding projects that may adversely affect federally-listed species or "critical habitat," and confer with the Service regarding projects that may affect federally-proposed species or proposed "critical habitat." Pursuant to 50 CFR§402.08, Federal agencies have the option to designate a non-Federal representative for the purposes of conducting informal consultation or preparation of a Biological

[1] http://www.fws.gov/northeast/EcologicalServices/eagle.html

Assessment. Should the FERC choose to designate FreedomWorks, LLC as a non-Federal representative, the FERC should send the Service that designation in writing. Directions for completing consultation can be found on the Service's website.[2]

Northern Long-eared Bat, Indiana Bat and Virginia Big-eared Bat:

The proposed project is located within the ranges of the federally listed threatened northern long-eared bat (*Myotis septentrionalis*), and the federally listed endangered Virginia big-eared bat (*Corynorhinus townsendii virginianus*) and Indiana bat (*Myotis sodalis*). The entire project footprint falls within the conservation buffer of a Virginia big-eared bat hibernaculum, and there is a hibernaculum used by this species and the northern long-eared bat along the proposed "Corridor H" transmission route, within 6 miles of the upper reservoir footprint.

Northern long-eared bats hibernate in caves and abandoned mines during the winter months (November through March), and use a variety of upland, wetland and riparian habitats during the spring, summer and fall. These bats usually roost in dead or living trees with exfoliating bark, crevices or cavities. Female northern long-eared bats form nursery colonies under the exfoliating bark of dead or living trees, such as shagbark hickory, black birch, red oak, white oak, and sugar maple, in upland or riparian areas.

Indiana bats hibernate during winter months (November through March) in caves or, occasionally, in abandoned mines. After hibernation, Indiana bats migrate to their summer habitat in wooded areas where they usually roost under loose tree bark on dead or dying trees. During summer, males roost alone or in small groups, while females roost in larger groups of up to 100 bats or more. Indiana bats also forage in or along the edges of forested areas.

Virginia big-eared bats hibernate during the winter months (November through March) singly or in small groups in caves. Females gather from diverse hibernacula during April and May to form maternity colonies in warm caves. This is not a migratory bat, although if disturbed, the entire colony may move to an alternate site. These bats roost year round in caves and feed in the area surrounding the cave during the spring/summer months.

Land-clearing, especially of forested areas, may adversely affect these bat species by killing, injuring or disturbing roosting bats, and by removing or reducing the quality of foraging and roosting habitat. In addition, if any natural caves or abandoned mines occur within the project area, it is possible that bats may be using them during hibernation or potentially as summer roost sites. Entrances to these potential hibernacula could be intentionally or inadvertently closed or destroyed during activities such as land clearing, grading, fill disposal, mining, road construction or building construction. If bats are present within a cave or abandoned mine when this occurs, they may become trapped inside and perish. Even if bats are not present during the closure, they may be adversely affected when they return to their hibernaculum in the fall and find it closed. This will force them to expend energy looking for another suitable hibernaculum during a time when it is crucial that they store up sufficient fat reserves for hibernation. Bats are at an increased risk of mortality when they enter hibernation with insufficient fat reserves, or are unable to locate a cave/mine with the suite of conditions (*e.g.*, temperature, humidity, air flow) necessary for successful hibernation.

[2] http://www.fws.gov/northeast/pafo/pdf/HOW%20AND%20WHY%20DO%20I%20CONSULT.pdf

Due to the potential presence of the northern long-eared bat, Indiana bat, and Virginia big-eared bat in the project area, and because more than 17 acres of forest clearing is proposed within the ranges of all of the above bat species, further consultation with the Service is recommended [50 CFR § 402.03]. To facilitate our review, we recommend submitting detailed project plans, and an analysis of alternatives to avoid and minimize adverse effects. Hydrological and geological surveys would be needed to assess the impacts of the construction and/or operation on nearby caves. This information along with bat surveys would help evaluate potential impacts to bats from this project.

Cheat Mountain Salamander

The Cheat Mountain salamander (*Plethodon netting*), a federally listed threatened species, occurs in cool, moist red spruce or northern hardwood forests with an abundance of cover such as rocks, downed wood, or leaf litter. While the northern limit of its known range is to the south of the proposed Project, the Service's online Information for Planning and Consultation (IPaC) tool indicates potential for this species to occur within portions of the Project area, and the nearest documented occurrence is less than 1 mile from the proposed upper reservoir footprint, in Blackwater Canyon. Due to this species' potential presence within the Project area, further consultation with the Service is recommended [50 CFR § 402.03].

Running Buffalo Clover and Small Whorled Pogonia

During surveys associated with the Corridor H highway project, running buffalo clover (*Trifolium stoloniferum*)[3], a federally listed endangered species, and small whorled pogonia (*Isotria medeoloides*)[4], a federally listed threatened species, were found in the vicinity of the proposed Project. Running buffalo clover is found in woodland habitats with partial to filtered sunlight where there is moderate periodic disturbance (e.g., trampling, grazing). Small whorled pogonia is found in deciduous woods. Surveys by approved surveyors will be needed within all proposed areas of disturbance associated with the Project. The Service and the West Virginia Division of Natural Resources have established acceptable survey periods and developed procedures to follow if either of these species is found during surveys.[5]

Although not required, we recommend that the following be stipulated in any preliminary permit issued by the Commission regarding FERC No. 14889:

> "The permittee shall design and conduct, at the permittee's expense, as soon as practicable after issuance of the project's preliminary permit, preparatory studies in cooperation with the West Virginia Division of Natural Resources, West Virginia Department of Environmental Protection, U.S. Fish and Wildlife Service, National Park Service, and the Bureau of Indian Affairs or affected Tribes if applicable. These studies shall address, but not be limited to, the effects of project construction and operations on the reproduction and survival of aquatic or semi-aquatic fish and wildlife resources, recreational fishing, wetland and riparian wildlife, forest-dependent wildlife, rare plant species, and historical and archaeological resources. The studies shall also identify and evaluate general

[3] https://www.fws.gov/midwest/endangered/plants/runningb.html
[4] https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=Q1XL
[5] https://www.fws.gov/westvirginiafieldoffice/PDF/Protocol_Listed_Plant_Surveys.pdf

measures to avoid, offset, and/or reduce adverse project-caused impacts on fish and wildlife resources."

Cultural Resources

In the applicant's PAD, as proposed, a portion of the project works (the penstocks) associated with the proposed Big Run Pump Storage Hydro Project overlap the Big Run Bog National Natural Landmark, https://www.nps.gov/subjects/nnlandmarks/site.htm?Site=BIRU-WV. The September 2009 Natural Landmark Brief (NLB) and associated maps is attached as Appendix A.

From their PAD, Exhibit 4 Maps, SK-2 and SK-5 Topographic Detail shows the proposed penstocks going through the bog, connecting the upper and lower reservoirs.

From the September 2009 NLB:
"The site contains a high altitude northern sphagnum-red spruce bog far south of its normal range, persisting as a Pleistocene relict community. It possesses a high degree of integrity and is thus a fine representative example of this fairly uncommon ecosystem in West Virginia. There are large numbers of rare plants and animals here, many at the extremes of their range. The diversity of habitats from mixed oak and beech-maple forests to northern sphagnum-red spruce bog makes this area valuable as a refuge for a large variety of biota."

Potential impacts associated with construction and operations should be identified and evaluated.

The NPS appreciates the opportunity to provide these comments and looks forward to continued assistance to the applicant in developing the CMP associated with this project.
Any questions should be directed to Kevin_Mendik@nps.gov NPS Northeast Region Hydro Program Coordinator.

Thank you for the opportunity to comment on this preliminary permit application.

Sincerely,

Lindy Nelson
Regional Environmental Officer

Attachment: Appendix A

cc: FERC Service List

Appendix A NPS Comments on ER 18/0504

U.S. Department of the Interior
National Park Service
National Natural Landmarks Program

Name: **Big Run Bog**

Location: **Tucker County, West Virginia**

Description:

Big Run Bog is located approximately 7 miles east of Parsons. This 731-acre tract contains a 50-acre northern sphagnum bog located in an amphitheater-shaped valley head with an elevation of 3,200 feet. The surrounding slopes are forested with second-growth stands of beech-maple and mixed oaks creating a buffer zone, which protects the watershed of this important wetland. Red spruce and hemlock occur in patches in the bog and on its periphery. Among the interesting shrubby and herbaceous plants within the open sphagnum areas are highbush blueberry, golden club, sundew, pitcher plant, grass-pink orchid, rose-pink orchid, bog buckbean and others. The peat deposits here are more than nine feet deep. In the more wooded northwest section of the swamp, and occasionally scattered elsewhere, are great laurel, black chokeberry, American mountain ash, and pitch pine. Active beaver dams occur throughout, crating small areas of open water. The swamp sparrow and other birds are more northern affinity inhabit the bog. Varying hares, part of a large disjunct population located in West Virginia, Virginia, and Maryland have been sighted.

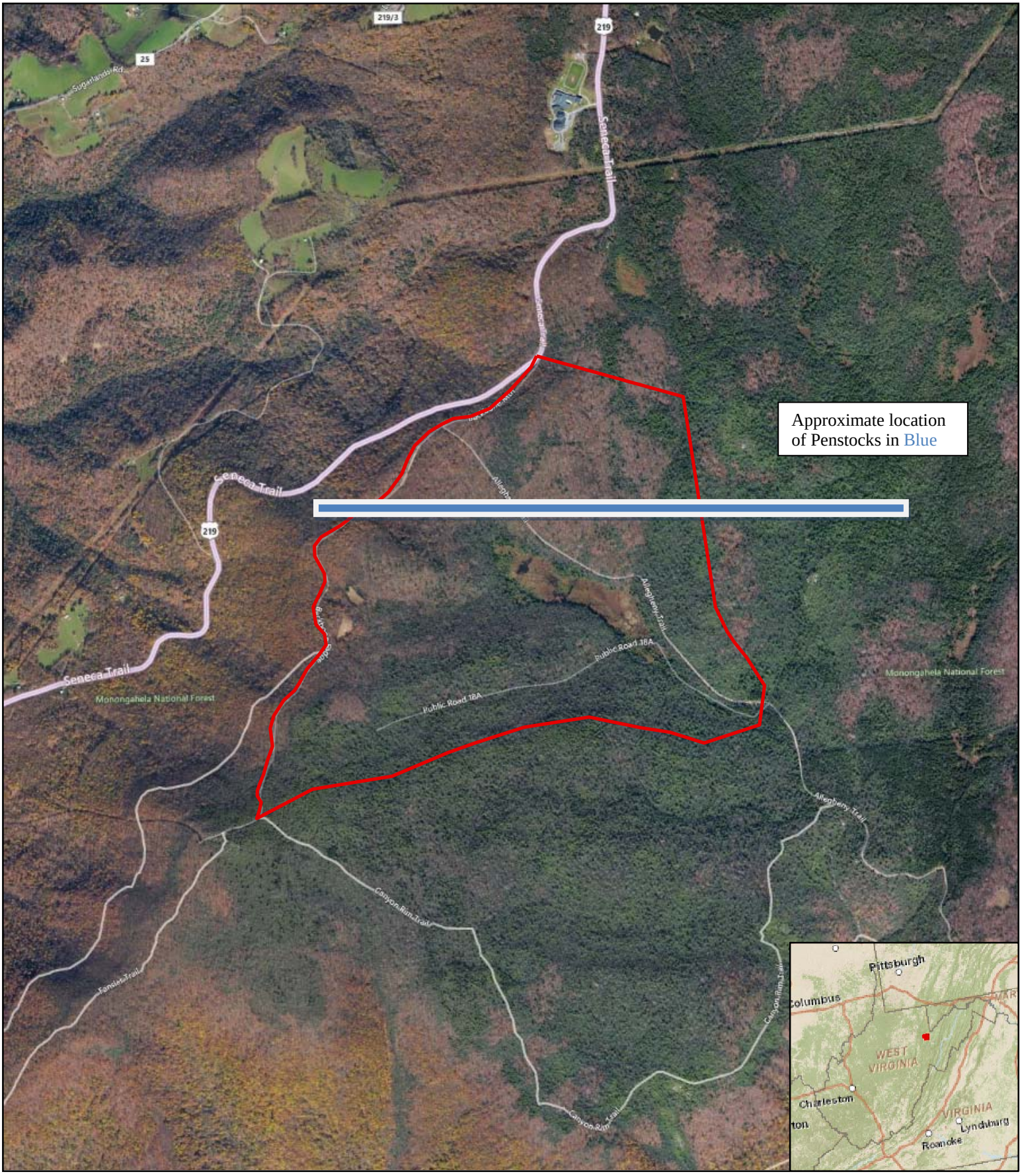
Significance:

The site contains a high altitude northern sphagnum-red spruce bog far south of its normal range, persisting as a Pleistocene relict community. It possesses a high degree of integrity and is thus a fine representative example of this fairly uncommon ecosystem in West Virginia. There are large numbers of rare plants and animals here, many at the extremes of their range. The diversity of habitats from mixed oak and beech-maple forests to northern sphagnum-red spruce bog makes this area valuable as a refuge for a large variety of biota.

Ownership: Federal

Designation: December 1974

Evaluation: Dr. Jesse F. Clovis, West Virginia University, January 1974



BIG RUN BOG
NATIONAL NATURAL LANDMARK

Tucker County, West Virginia

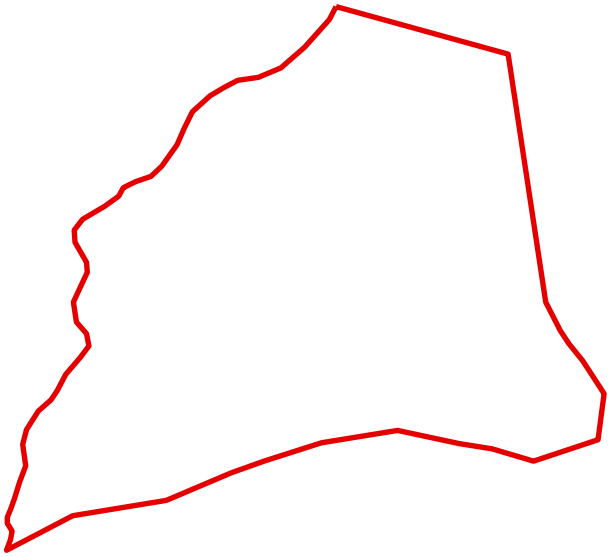
NNL Boundary

Calculated Acreage: 730.7

0 0.35 0.7 Miles

Data Source:
NPS NNL Data, ESRI Roads

Map Produced June 2012
by National Park Service
Intermountain Region Geographic
Resources Program



BIG RUN BOG
NATIONAL NATURAL LANDMARK
Tucker County, West Virginia

NNL Boundary

Calculated Acreage: 730.7

0 0.45 0.9 Miles

Data Source:
NPS NNL Data, ESRI Roads

Map Produced June 2012
by National Park Service
Intermountain Region
Geographic Resources Program