Demolition of 22 Buildings at the Henry A. Wallace Beltsville Agricultural Research Center Beltsville, Maryland

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EXECUTIVE SUMMARY

The U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) is proposing to remove 22 surplus buildings at the Beltsville Agricultural Research Center (BARC) in Beltsville, Prince George's County, Maryland. The purpose of the Proposed Action is to reduce long-term operational and maintenance costs and reduce BARC's impact on the Chesapeake Bay Watershed. The 2015 *Reduce the Footprint Policy* (Executive Office of the President, Office of Management and Budget, 2015) mandates the aggressive disposal of surplus properties held by the Federal Government, make more efficient use of its real property assets, and reduce the total square footage of domestic office and warehouse inventory. This policy also requires each agency to develop a Real Property Efficiency Plan describing each agency's strategic and tactical approach to managing its real property. The USDA's *Real Property Efficiency Plan for Fiscal Year 2019-2023* (USDA, 2018b) provides for the annual reduction of office and warehouse/storage square footage by one percent per fiscal year. USDA-ARS would also reduce its operational costs through compliance with BARC's municipal separate storm sewer system (MS4) permit goal of achieving a 20-percent reduction of impervious surface area by 2025. Achieving this goal would support the potential redevelopment of certain BARC areas making the facility more sustainable and supportive of new and ongoing research opportunities.

This Environmental Assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA) as amended (42 United States Code [U.S.C.] § 4321, et seq.); Executive Orders 11514, 12144, and 13807; 34 FR 4247, as amended by Executive Order 119911; 42 FR 26927; 44 FR 11957; 5 U.S.C. 301; and 40 Code of Federal Regulations (CFR) 1500-1508 (51 FR 34191, 1986). The purpose of a NEPA EA is to assess whether the Proposed Action would pose a potential significant impact on the environment and to determine whether an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) is required for the Proposed Action. The specific needs and purpose of the Proposed Action evaluated in this EA are described in Sections 1.2–1.5.

The purpose of this EA is to inform decision makers and the public of the likely environmental consequences of the action proposed at BARC. This EA identifies, documents, and evaluates the potential effects of the demolition of 22 buildings on the BARC facility that would be removed in their entirety, including the building envelopes, building footings and foundations, support systems (e.g., mechanical, electrical), site utilities servicing the buildings, concrete pads, and associated exterior concrete walkways and paved areas (e.g., drives and parking areas). USDA-ARS considers these buildings as not mission critical and has no need for them. After the buildings are removed, the sites would be restored to as close to pre-existing conditions as feasible. However, there is always the possibility of reuse of these sites for future USDA research and by other Federal entities. Because the scope, extent, and timing of potential future redevelopment of these areas is not defined, the effects of any redevelopment of these areas are not assessed in this EA.

The Proposed Action and No Action alternatives are evaluated to determine the direct, indirect, and cumulative effects or changes that may occur on both people and the environment because of the proposed improvements. Other alternatives involving the Repair or Rehabilitation of the Buildings for Continued or Other Use, and Transfer of the Buildings for Use as Facilities to Assist the Homeless were reviewed and eliminated because they do not satisfy the identified needs and purpose.

The direct and indirect effects of the Proposed Action would be temporary and short-term associated with demolition-related activities including restorative actions at each building/building cluster site to provide positive drainage. All 22 buildings proposed for demolition were identified as non-contributing features of the BARC Historic District. The Maryland Historic Trust concurred with these recommendations and determined that their demolition would not adversely affect historic properties under Section 106 of the National Historic Preservation Act.

The Proposed Action would also not result in significant cumulative effects when considered with the effects of past, present, and reasonably foreseeable actions at BARC and in the vicinity of BARC.

Careful design, the use of good engineering and best management practices, and the implementation of certain operational procedures would avoid, minimize, or mitigate these minor and moderate potential adverse effects presented in the EA to a less than significant level. Implementation of the mitigation measures described in the EA would reduce the potential effects of the Proposed Action, resulting in no significant adverse impacts to the environment. Therefore, preparation of an Environmental Impact Statement is not required.

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1.0 PURPOSE AND NEED FOR ACTION

1.1 The Environmental Assessment

This Environmental Assessment (EA) was prepared for the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) by Louviere, Stratton & Yokel, LLC (LSY) and Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell), under Contract No. AG-32SC-D-17-0296. This EA was prepared in accordance with the National Environmental Policy Act (NEPA) as amended (42 United States Code [U.S.C.] § 4321, et seq.); Executive Orders 11514, 12144, and 13807; 34 FR 4247, as amended by Executive Order 119911; 42 FR 26927; 44 FR 11957; 5 U.S.C. 301; and 40 Code of Federal Regulations (CFR) 1500-1508 (51 FR 34191, 1986). The purpose of a NEPA EA is to assess whether the Proposed Action would pose a potential significant impact on the environment and to determine whether an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) is required for the Proposed Action. The specific needs and purpose of the Proposed Action evaluated in this EA are described in Sections 1.2–1.5.

The purpose of this EA is to inform decision makers and the public of the likely environmental consequences of the action proposed at the Beltsville Agricultural Research Center (BARC) in Beltsville, Prince George's County, Maryland. This EA identifies, documents, and evaluates the potential effects of the demolition of 22 buildings on the BARC facility. The buildings would be removed in their entirety, including the building envelopes, building footings and foundations, support systems (e.g., mechanical, electrical), site utilities servicing the buildings, concrete pads, and associated exterior concrete walkways and paved areas (e.g., drives and parking areas). The removal of these 22 buildings depends on the findings of this EA. USDA-ARS considers these buildings as not mission critical and has no need for them. After the buildings are removed, the sites would be restored to as close to pre-existing conditions as feasible. However, there is always the possibility of reuse of these sites for future USDA research and by other Federal entities. Because the scope, extent, and timing of potential future redevelopment of these areas is not defined, the effects of any redevelopment of these areas are not assessed in this EA.

The Proposed Action and No Action alternatives are evaluated to determine the direct, indirect, and cumulative effects or changes that may occur on both people and the environment because of the proposed improvements. Effects can be ecological, aesthetic, historic, cultural, economic, social, or health-related. The following are the areas of interest evaluated in this EA:

- Geology, Topography, and Soils
- Water Resources and Wetlands
- Biological Resources
- Air Quality
- Noise
- Land Use
- Cultural Resources
- Visual Resources
- Utilities and Infrastructure
- Transportation
- Waste Management
- Human Health and Safety
- Socioeconomics
- Environmental Justice and Protection of Children

An interdisciplinary team has identified the features and environment present on the BARC facility and associated with the proposed project sites and has assessed the potential effects of the Proposed Action and No Action alternatives. The proposed project sites include a building, or a cluster of buildings proposed for demolition and a reasonable area around each building or building cluster that would be cleared and regraded. Both beneficial and adverse effects may be associated with the Proposed Action and No Action alternatives as described in Chapters 3.0 and 4.0 of this EA. The effect can be direct (those caused by the action that occur at the same time and place), indirect (those caused by the action that take place later in time or farther removed in distance), or cumulative (the incremental impacts of the project when combined with past, present, and reasonably foreseeable future activities).

Study areas described in this EA are associated with individual buildings and building clusters shown on Figure 1-1. The area of direct effects for each individual building or building cluster includes the area around the building/building cluster previously disturbed by their construction and a buffer area anticipated to allow for recontouring of the building site to achieve positive drainage and, as feasible, return the site to near preconstruction contours.

USDA-ARS contracted the performance of Phase I and II environmental site assessments (ESA) for some of the buildings proposed for demolition. USDA-ARS coordinated with the U.S. Housing and Urban Development (HUD) to conduct a review of the suitability of these buildings for reuse to shelter the homeless (see Section 2.3.2). USDA-ARS also coordinated with the Maryland Historic Trust (MHT) to evaluate the eligibility of the 22 buildings for listing in the National Register of Historic Places (NRHP) (see Section 3.8).

In developing the Proposed Action, USDA-ARS considered the following factors:

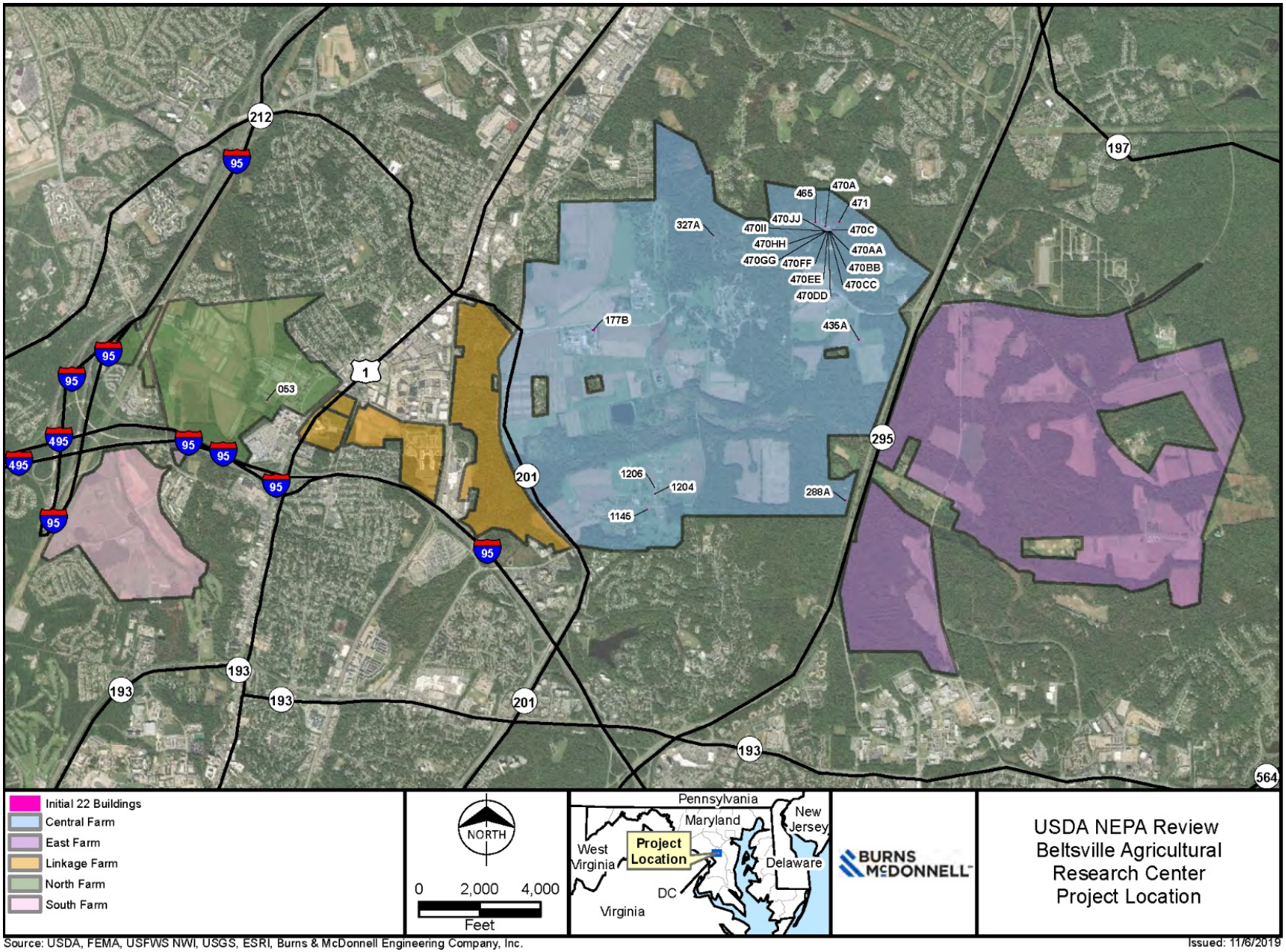
- maximizing use of existing facility resources;
- use and potential re-use of existing buildings and supporting infrastructure;
- removal of physical, human health/safety, and security hazards;
- resource imitations (limited capital and operating funds); and
- sustainability.

The opportunity for public input is an important aspect of NEPA. Input from the public and resource agencies was sought through a public scoping process conducted during September-October 2019. Letters describing the Proposed Action and requesting input were sent to numerous Federal, State, and local agencies and elected officials, and public notices were published in local newspapers. No comments or input were received from the public. Agencies that responded during the scoping process indicated no specific issues, concerns, or mitigation requirements regarding the Proposed Action and encouraged USDA-ARS to continue coordination, as necessary, to obtain any permits or outside approvals required to support removal of the buildings. Final feedback will be based on the results from comments collected from the public when the draft final EA is presented for public review. Such outreach provides an opportunity for the public, agencies, and tribal governments to provide input prior to finalization of the EA and issuance of an environmental decision by USDA-ARS.

1.2 Beltsville Agricultural Resources Center Facility Description and Vicinity

In 1910, the USDA purchased a farm in Beltsville, Prince George's County, Maryland, soon referred to as the Experiment Farm of the Diary and Animal Husbandry Divisions. Major expansion of facilities and services occurred during the 1930s, through the completion of several improvement projects by the Civilian Conservation Corps (CCC). By 1942, all USDA research facilities in Bethesda, Maryland; Arlington, Virginia; and Washington, DC were transferred to Beltsville, forming one consolidated research center known as the Beltsville Agricultural Research Center. During subsequent years, land was transferred to various Federal agencies, slowly reducing BARC's size. The current BARC facility is administered by the USDA-ARS and contains the greatest concentration of agricultural research programs within the ARS nationwide (USDA, 1996).

Figure 1-1: Location of Buildings to be Demolished, Beltsville Agricultural Resource Center



BARC is a campus of agriculture fields and supporting infrastructure, laboratories, and offices. It is accessible from U.S. Route 1, and the Baltimore-Washington Parkway, which provide connectivity to both Interstate 95 (I-95) and the Capital Beltway Inner Loop (I-495). BARC consists of approximately 6,615 acres organized as "farms," which support clusters of permanent laboratories and administrative buildings, numerous temporary agricultural storage structures, and open agricultural fields (depicted in Figure 1-1). BARC is bordered by the suburban community of Beltsville, the cities of Greenbelt and College Park, and by several properties managed by other Federal agencies.

1.3 Purpose

The purpose of the Proposed Action is to reduce long-term operational and maintenance costs and reduce BARC's impact on the Chesapeake Bay Watershed. The 2015 *Reduce the Footprint Policy* (Executive Office of the President, Office of Management and Budget, 2015) mandates the aggressive disposal of surplus properties held by the Federal Government, make more efficient use of its real property assets, and reduce the total square footage of domestic office and warehouse inventory. This policy also required each agency to develop a Real Property Efficiency Plan describing each agency's strategic and tactical approach to managing its real property. The USDA's *Real Property Efficiency Plan for Fiscal Year 2019-2023* (USDA, 2018b) provides for the annual reduction of office and warehouse/storage square footage by one percent per fiscal year. USDA-ARS would also reduce its operational costs through compliance with BARC's municipal separate storm sewer system (MS4) permit goal of achieving a 20-percent reduction of impervious surface area by 2025. Achieving this goal would support the potential redevelopment of certain BARC areas making the facility more sustainable and supportive of new and ongoing research opportunities.

1.4 BARC Needs

Research conducted at BARC focuses on agricultural production, processing, and consumption. The primary need for the BARC facility is to continue to support USDA-ARS' diverse and important mission. Through the Proposed Action, USDA-ARS will further its mission by reducing long-term operational and maintenance costs through the removal of buildings that no longer support the facility's desired research goals.

The primary need is to meet the federally mandated 20-percent reduction of building retired stock no longer necessary to meet mission goals. In addition, these removals assist BARC in supporting the require 20-percent impervious surface reductions require to support the health of the Chesapeake Bay. mission critical buildings. The identified structures, most unused and in various states of disrepair have been determined to no longer meet Mission Critical requirements and therefore should be removed. The area surrounding these buildings requires ongoing maintenance and the buildings pose a safety and health risk to workers due to their structural condition and the presence of potentially hazardous materials.

The second need is compliance with the facility's MS4 goal of achieving a 20-percent reduction in impervious area. To do so, USDA-ARS must demonstrate compliance with U.S. Environmental Protection Agency's (EPA) *Technical Guidance on Implementing Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (EISA) (EPA, 2009). This requires that building sites must be returned to predevelopment conditions, where feasible, including natural topography to promote natural water drainage patterns.

The third need is to address human safety and security risks in support of the facility's mission. As noted previously, the 22 buildings are unoccupied and in various states of disrepair. The dispersed pattern of development on the facility and the condition and unsecured state of these buildings (e.g., entrances are not locked, or the lock has been breached; windows/doors missing or damaged; openings in roofs and walls) makes maintaining security on the facility difficult. The ongoing deterioration of the structures has

exposed building materials presumed to contain asbestos, lead paint, mercury, polychlorinated biphenyls (PCBs), and various petroleum-based products.

1.5 Decisions Required

This EA analyzes the effects of the Proposed Action, the demolition of 22 identified buildings at the BARC facility and returning the sites to as close to preconstruction conditions as feasible. Based on the needs and purpose identified, the scope of the decisions required is limited to which actions, if any, will be approved and if any additional mitigation measures and monitoring requirements may be warranted to protect the resources present.

The deciding official is Dr. Dariusz Swietlik, Northeast Area Director, Agricultural Research Service, USDA.

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2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

USDA-ARS proposes to demolish 22 buildings to reduce operational and maintenance costs and reduce the impervious footprint within BARC in compliance with the facility's MS4 permit goals.

2.1 Proposed Action Alternative

Under the Proposed Action Alternative, each of the 22 BARC buildings listed in Table 2-1 would be demolished in their entirety, including all associated systems and utility infrastructure above and below ground. All materials, equipment, and demolition debris would be removed from the site and properly disposed of according to material type and applicable State and Federal regulations. The buildings proposed for demolition are vacant and in various states of disrepair. In compliance with EPA Section 438 of the EISA, building sites would be returned to predevelopment conditions, where feasible, resembling natural topography in order to promote natural surface drainage patterns. Due to the age of the overall facility and many of the building sites, preconstruction conditions may be difficult to determine. The proposed default would be pollinator friendly meadow, or where possible reforestation using native species to prevent colonization of invasive species. Recontouring of the sites once buildings are removed to achieve positive drainage is dependent upon the proximity of the site to occupied and active buildings and the maintenance of live utility connections and access routes to those occupied buildings. Each site would be seeded and mulched to minimize surface erosion while USDA-ARS determines if the site would be redeveloped or allowed to return to native vegetative cover. Requirements of Section 438 of the EISA are further described in Section 3.2.2.

Table 2-1: Buildings Proposed for Demolition at BARC

Farm Location	Building ID	Building Name/Reference	Year Constructed	NRHP Eligibility[(a)]
000 Cluster				
North	053	Biological Greenhouse	Unknown	Non-contributing
100 Cluster				
Central	177B	Electron Microscope Laboratory	1967	Non-contributing
200 Cluster				
Central	288A	Garage, Hydrology Laboratory Annex	1983	Non-contributing
300 Cluster				
Central	327A	Storage Building	Unknown	Non-contributing
400 Cluster				
Central	435A	Pole Barn Associated w/434 Goat Barn	Unknown	Non-contributing
Central	465	Headhouse with Greenhouses	1967	Non-contributing
Central	470A	Laboratory Headhouse and Entomology Greenhouses	1961-62	Non-contributing
Central	470C	Garage	1984	Non-contributing
Central	470AA	Entomology Greenhouse	1967	Non-contributing
Central	470BB	Entomology Greenhouse	1967	Non-contributing
Central	470CC	Entomology Greenhouse	1967	Non-contributing
Central	470DD	Entomology Greenhouse	1967	Non-contributing
Central	470EE	Entomology Greenhouse	1967	Non-contributing
Central	470FF	Entomology Greenhouse	1967	Non-contributing
Central	470GG	Entomology Greenhouse	1967	Non-contributing
Central	470HH	Entomology Greenhouse	1967	Non-contributing
Central	470II	Entomology Greenhouse	1967	Non-contributing
Central	470JJ	Entomology Greenhouse	1967	Non-contributing
Central	471	Garage	1935	Not Eligible (collapsed)
1000 Cluster				
Central	1145	Animal Building	Unknown	Non-contributing
Central	1204	Animal Pen	Unknown	Non-contributing
Central	1206	Animal Building	Unknown	Non-contributing

(a) The BARC Facility was determined eligible for listing in the NRHP as a historic district in 1998. These buildings have been determined to be either not eligible or as non-contributing resources by the MHT Additional information is provided in Section 3-8.

Appendix A provides photographs of the 22 buildings as documented October 22–24, 2019.

The buildings remaining at BARC would continue to serve their existing purposes in support of ongoing research. Additional buildings may be considered for closure and ultimate demolition and removal over time as facility needs dictate.

The Proposed Action does not include redevelopment of the cleared areas. USDA-ARS would evaluate the potential for redevelopment to support its mission at BARC and would conduct the appropriate level of environmental review under NEPA prior to execution of such development.

2.2 No Action Alternative

Under the No Action Alternative, USDA-ARS would not demolish the 22 identified buildings at BARC. The buildings would remain as they are today and continue to pose a substantial safety, security, and maintenance risk to ongoing services at BARC. The buildings would fall into a greater state of disrepair, eventually collapsing and requiring removal. Retainage of the buildings would not satisfy the needs to reduce the facility footprint along with operational and maintenance costs, reduce the impervious footprint of the facility, nor reduce human safety and security risks. Although the No Action Alternative does not satisfy the stated needs, the No Action Alternative is carried forward for comparison to the Proposed Action Alternative in compliance with NEPA.

2.3 Alternatives Eliminated from Further Consideration

2.3.1 Repair or Rehabilitation of the Buildings for Continued or Other Use

This Draft EA does not consider the scenario of USDA-ARS repairing, rehabilitating, or reconstructing the buildings for continued or other use. Due to shifts in research focus and technological advances, and changes in research methodologies these buildings could no longer support ARS research and long term mission goals. As a result, most of these building have been unoccupied for years with many now in a deteriorated condition. If research requirements expanded, new buildings would have to be designed to meet current research requirements. The unnecessary repair, rehabilitation, or reconstruction of these buildings would not satisfy current research requirements and would negatively affect scarce resources to maintain current building stock engaged in research and facility support. Furthermore, repair, rehabilitation, or reconstruction of these buildings would not reduce the impervious footprint of the facility as required by USDA and MDE. For these reasons, this alternative was eliminated from further consideration.

2.3.2 Transfer of Buildings for Use as Facilities to Assist the Homeless

HUD periodically reviews Federal property identified as unutilized, underutilized, excess, or surplus for suitability for use to assist the homeless. During April and August 2014, several BARC buildings (including Buildings 053, 465, 1145, 1204, and 1206 on the list of buildings addressed in this Draft EA) were identified as excess and determined to be suitable and available for use to assist the homeless. A Notice of Availability (NOA) of the buildings for such use was published in the Federal Register (FR) 79:70 (April 11, 2014) p. 20222 and FR 79:158 (August 15, 2014) p. 48176. The buildings were not claimed by a Federal agency or another entity for use and have therefore remained in place and vacant. Many of the buildings would have required costly repair or rehabilitation to be suitable for use to assist the homeless. After attempts were made by USDA-ARS to facilitate transfer of buildings for this purpose, this alternative was eliminated from further consideration.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The affected environment described in this EA focuses on resources currently present at the facility that could be affected by the Proposed Action. Data were obtained from readily available sources including online digital information; documents from USDA and other Federal entities, the state of Maryland, Prince George's County, and the city of Beltsville; communications and interviews with BARC facility staff and personnel; and field reconnaissance of the BARC facility conducted during October 22–24, 2019. For each resource category, the anticipated effects of the Proposed Action and No Action alternatives are described following the description of the affected environment.

Descriptions of the affected environment are provided for BARC and for some topics more specifically by Central and North Farms where the project sites are located. Where appropriate, some descriptions of existing conditions and assessment of potential effects are described by building or building cluster proposed for demolition. The buildings and clusters listed in Table 2-1 are further described as follows:

000 Cluster: Building 053 is the only building in the 000 Cluster proposed for demolition. It is a single-story brick masonry building with an attached greenhouse near other vacant buildings not currently proposed for demolition. Building 053 encroaches into the mapped 100-year floodplain of Little Paint Branch and sits at the edge of an area of bottomland hardwood forest.

100 Cluster: Building 177B is the only building proposed for demolition in the 100 Cluster. It is a single story, vinyl-clad building located south of Powder Mill Road. It sits near other occupied/active buildings in this part of the Dairy Complex.

200 Cluster: Building 288A is the only building proposed for demolition in the 200 Cluster. It is a cinder block, double-bay garage located within a wooded area. Building 288A was not accessible during the October 2019 site visit.

300 Cluster: Building 327A is the only building in the 300 Cluster proposed for demolition. It is a storage building densely overgrown by trees and vines. It sits near another vacant building not proposed for demolition.

400 Cluster:

- Buildings 465, 470A, and 470AA-JJ are grouped together. Building 465 is a multi-story, brick masonry building with an attached set of greenhouses. Building 470A is a single-story, brick masonry building attached to two large greenhouses. It is closely associated with Building 470, which is not currently proposed for demolition. Buildings 470AA-JJ are ten identical greenhouses located south of Entomology Road and of Building 470A in a somewhat open area.
- Building 470C is a vinyl-clad garage located in a wooded area, somewhat isolated from Buildings 465, 470A, and 470AA-JJ.
- Building 471 was a single-story garage located within a wooded area and somewhat isolated from Buildings 465, 470A, and 470AA-JJ. It has collapsed since it was surveyed in 1998.
- Building 435A is isolated and away from the other 400 Cluster buildings described. It is a pole barn/open structure associated with the vacant Goat Barn (Building 434) that is not proposed for demolition. Building 435A sits on a relatively open site adjacent to a pasture.

1000 Cluster: Buildings 1145, 1204, and 1206 are located on relatively open and flat sites. All three are cinder-block construction with metal roof panels. Building 1145 is one of four identical buildings located on a terrace. The adjacent buildings are not proposed for demolition. Buildings

1204 and 1206 are located near each other within an area dominated by managed turf. They are similar to adjacent buildings that are not proposed for demolition.

3.1 Geology, Topography, and Soils

3.1.1 Affected Environment – Geology, Topography, and Soils

3.1.1.1 Geology

BARC is in the Atlantic Coastal Plain physiographic province and underlain by the Chesapeake Rolling Coastal Plain level IV ecoregion. It is characterized by distinctive sedimentary rocks that distinguish it from the Piedmont ecoregion, which consists of metamorphic rock. The Chesapeake Rolling Coastal Plain consists of hilly uplands with well-drained loamy soils and incised streams (Woods et al., 1999). A layer of unconsolidated sediments, including gravel, sand, silt, and clay, underlie the Atlantic Coastal Plain, which overlaps the rocks of the eastern Piedmont. The sediments of this area dip eastward at a low angle, generally less than one degree, and range in age from Triassic to Quaternary. The younger formations crop out successively to the southeast across southern Maryland and the Eastern Shore. A thin layer of Quaternary gravel and sand covers the older formations throughout much of the area (MGS 2019a).

3.1.1.2 Topography

Central Farm – According to the United States Geological Survey (USGS) 7.5-minute topographic maps of the *Beltsville* and *Laurel Quadrangles, Maryland*, elevations across the Central Farm range from approximately 70 to 230 feet above mean sea level (msl). The highest point occurs in the north-central portion of the Central Farm. The western portion of the Central Farm is hilly, with a greater angle of slope, while the eastern portion is more gently sloping. Several small drainages cross the Central Farm in areas of lower elevation, including Beaverdam Creek. All drainages crossing the Central Farm drain to Beaverdam Creek. Shallow groundwater is expected to flow in a similar direction to the surface topographic grade (USGS, 2016a, 2016b).

North Farm – Elevations across the North Farm range from approximately 110 to 260 feet above msl. The highest point on the North Farm is located near the western end of Sellman Road. From this point, elevations decrease in all directions to the boundaries of the Farm. Little Paint Branch bisects the North Farm from north to south. Surface water in the western part of the North Farm flows to the west and southwest towards Paint Branch beyond the BARC property boundary. Surface water flows towards Little Paint Branch within the eastern part of the Farm. Shallow groundwater is expected to flow in a similar direction to the surface topographic grades described (USGS, 2016a).

3.1.1.3 Soils

According to USDA Natural Resources Conservation Service (NRCS) mapping, BARC contains 56 distinct mapped soil units, including 10 soil unit types identified as prime farmland. Forty of these mapped soil units occur within the North and Central Farms. Approximately 2,850 acres, or 44 percent, of BARC's approximate 6,500 total acres is identified as prime farmland. An additional 1,265 acres of BARC is designated as farmland of statewide importance.

The loamy soils of this ecoregion are naturally low in nutrients, compared to the more nutrient-rich Piedmont soils. Though the region does include prime farmland, most require liming and fertilizing to be productive for agricultural crops. The well-drained, rolling open hills, and comparatively less forested character of the region, has made it an attractive location for general farming and livestock production (Woods et al., 1999; NRCS, 2019b).

Central Farm – The Central Farm is the largest of the five BARC farms at nearly 3,000 acres. Soils on this farm are primarily loams, sandy loams, and silt loams. Approximately 44 percent of Central Farm is designated as prime farmland and an additional 21 percent is designated as farmland of Statewide importance. Approximately 10 percent of the soils on the Central Farm have a severe erosion hazard and 59 percent have a moderate erosion hazard.

North Farm – The North Farm encompasses approximately 540 acres. Soils on this farm are primarily loams, sandy loams, and silt loams. Approximately 28 percent of North Farm is designated as prime farmland and an additional 16 percent is designated as farmland of Statewide importance. Approximately 50 percent of the soils on the North Farm have a severe to moderate erosion hazard.

For demolition and clearing activities, runoff factors are an important consideration. Sites with low and very low runoff factors are prone to absorbing rainfall and could potentially become waterlogged or flooded if low water storage occurs in the soil profile. The soil erosion hazard indicator denotes how susceptible a given soil type is to loss from erosion after disturbance activities that expose the soil surface. The soil erosion hazard is based on the soil's erosion factor K and the slope indicating the level of potential soil loss that may be caused by sheet or rill erosion in areas where 50 to 75 percent of the soil surface has been exposed. Soil erosion hazard is categorized as follows:

- Slight (erosion is unlikely under ordinary climatic conditions);
- Moderate (some erosion is likely and erosion control measures may be needed);
- Severe (erosion is very likely and erosion control measures are advised, including revegetation of bare areas); and
- Very severe (significant erosion is expected, loss of soil productivity and offsite damage are likely, and erosion control measures would be costly and generally impractical).

Table 3-1 lists the 12 soil units mapped under the buildings and building clusters identified for demolition. These soils range from 0 percent to 15 percent slopes and include prime farmlands and farmlands of statewide importance.

Table 3-1: Mapped Soil Units, Runoff, Water Storage, Farmland Classification, and Erodibility Underlying the Buildings/Complexes in Within the Central and North Farms

Mapped Soil Type	Runoff Class (a)	Water Storage (a)	Hydric (b)	Farmland Classification (c)	Erodibility (c)	Acres		Building or Cluster (d) (e)
						Central	North	
CcC Christiana-Downer complex, 5-10 percent slopes	High	Low	Not Hydric	Farmland of Statewide Importance	Moderate	610.9	49.3	177B, 400 Cluster
CcD Christiana-Downer complex, 10-15 percent slopes	High	Low	Not Hydric	Not Prime or of Statewide Importance	Severe	204.7	2.8	435A, 1000 Cluster
CdD Christiana-Downer-Urban land complex, 5-15 percent slopes	High	Low	Not Hydric	Not Prime or of Statewide Importance	Not rated	65.3	19.7	177B
CF Codorus and Hatboro soils, frequently flooded	High	High	Hydric	Not Prime or of Statewide Importance	Slight	0	91.9	053,
Ch Codorus-Hatboro-Urban land complex, frequently flooded	Very High	High	Hydric	Not Prime or of Statewide Importance	Slight	0	18.2	053,
DoB Downer-Hammonton complex, 2-5 percent slopes	Very Low	Low	Not Hydric	Prime Farmland	Slight	148.0	24.7	400 Cluster
DoD Downer-Hammonton complex, 10-5 percent slopes	Low	Low	Not Hydric	Not Prime or of Statewide Importance	Moderate	56.3	9.8	327A, 400 Cluster
FaaA Fallsington sandy loams, 0-2 percent slopes	Very Low	High	Hydric	Prime Farmland (if drained)	Slight	7.4	0	400 Cluster
RcA Russett-Christiana complex, 0-2 percent slopes	Low	High	Not Hydric	Prime Farmland	Slight	205.2	15.7	435A,
RcB Russett-Christiana complex, 2-5 percent slopes	Low	High	Not Hydric	Prime Farmland	Moderate	877.9	89.0	053, 177B, 288A, 400 Cluster, 1000 Cluster
RuB Russett-Christiana -Urban land complex, 0-5 percent slopes	Low	High	Not Hydric	Not Prime or of Statewide Importance	Moderate	145.3	37.1	053, 400 Cluster, 1000 Cluster
UrrB Urban land-Russett -Christiana complex, 0-5 percent slopes	Low	Low	Not Hydric	Not Prime or of Statewide Importance	Not rated	25.3	0	177B

Table 3-1: Mapped Soil Units, Runoff, Water Storage, Farmland Classification, and Erodibility Underlying the Buildings/Complexes in Within the Central and North Farms

(a) USDA-ARS (2018) EA
(b) University of Maryland Extension, List of Hydric Soils for Prince George's County; accessed November 16, 2019.
(c) NRCS (2019b)
(d) Where a building or building cluster's association with a soil type indicates that the building is located on that soil type or that the soil type occurs within a 100'-disturbance buffer of the building or building cluster.
(e) Where a building proposed for demolition is isolated from other buildings under consideration, the individual building was indicated. Where multiple buildings proposed for demolition are grouped together, the building cluster was indicated.

Figure 3-1 and Figure 3-2, respectively illustrate the soils on BARC that are considered as prime farmland and of Statewide importance and those that are highly erodible.

3.1.2 Environmental Consequences – Geology, Topography, and Soils

3.1.2.1 Proposed Action Alternative

For all project sites, soil disturbance would be temporary and occur in response to removal of the buildings and supporting infrastructure. A demolition plan, including an assessment of soil condition, would be completed for each project site prior to beginning demolition. Depending on the size of the area of disturbance, development of a soil and erosion control plan may be necessary and approved by Prince George's County. Best management practices (BMPs) would be identified and implemented to minimize soil disturbance and the potential for soil erosion (especially in areas with high erosive potential) or contamination based on existing site conditions. For areas with the potential for high water storage capability, temporary watering may be conducted to make the site suitable for grading. Excavation and material removal activities during demolition are anticipated to be relatively shallow (less than 15 feet below the ground surface) and would be evaluated on a site-by-site basis to not disturb underlying geology. Additional BMPs would be implemented to manage stormwater runoff from entering neighboring drainages, streams, or wetlands, where applicable. When all built components of the site are disposed of properly, excavated areas would be filled with clean, native soil and the area graded to provide positive drainage. The extent of grading and site restoration would consider the proximity of the site to remaining occupied structures, accessible roads/drives, and active utilities. The site would be stabilized with mulch and a USDA-approved seed mix to minimize establishment of invasive species.

3.1.2.1 No Action Alternative

Under the No Action Alternative, no grading or soil disturbance would occur. The existing topography in the areas of the 22 buildings would remain unchanged. No changes would be made in the amount of pervious vegetative cover present. The buildings would continue to deteriorate, leading to the potential release of hazardous substances from building materials or abandoned equipment, which may include heavy metals, fuels, lubricating oils, PCB containing oils, pesticides, herbicides, asbestos fibers, and other laboratory chemicals. The effects of past facility uses on potential soil contamination are addressed in Section 3.11.2.

Figure 3-1: BARC NRCS Prime Farmland and Farmland of Statewide Importance

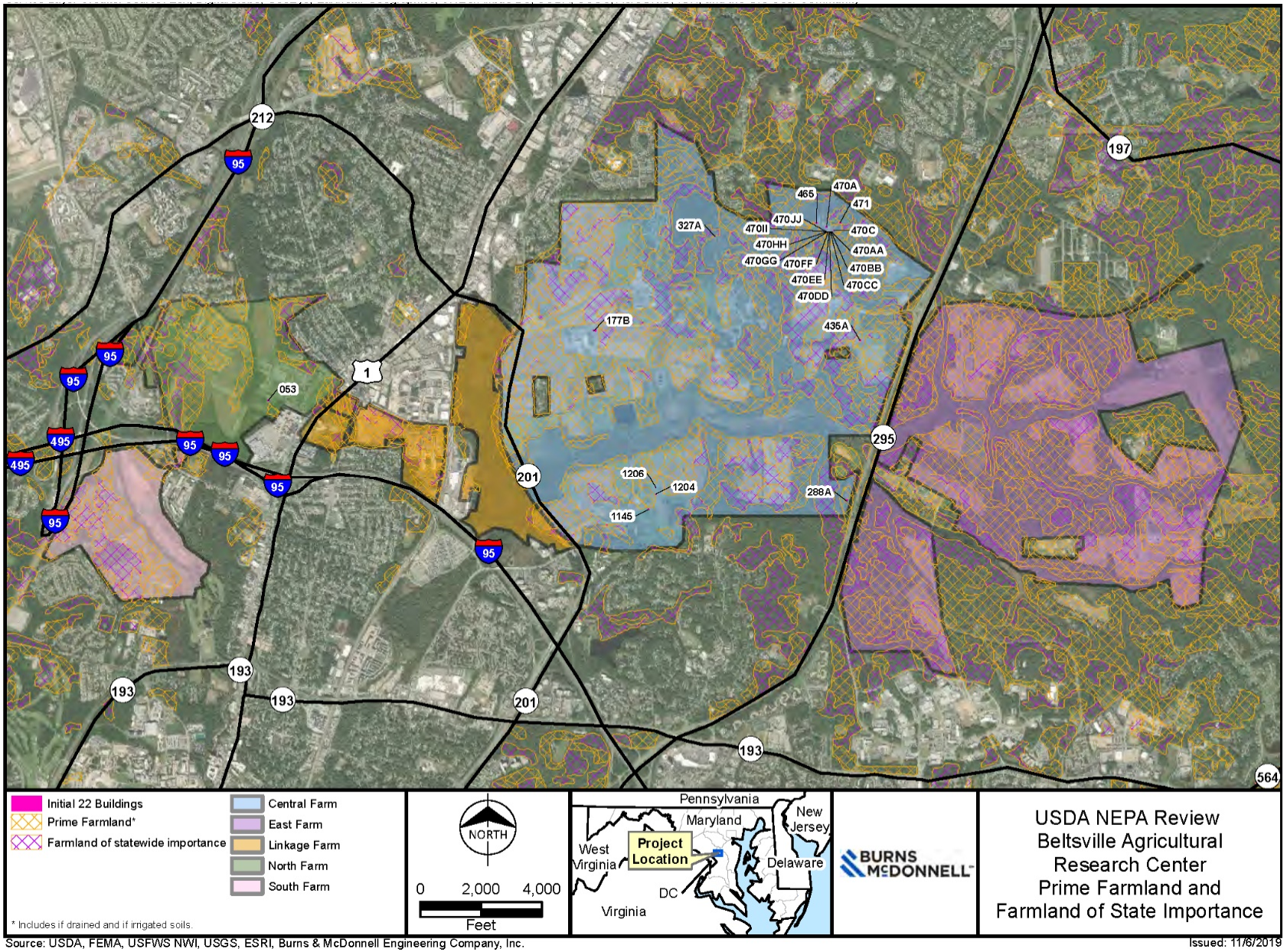
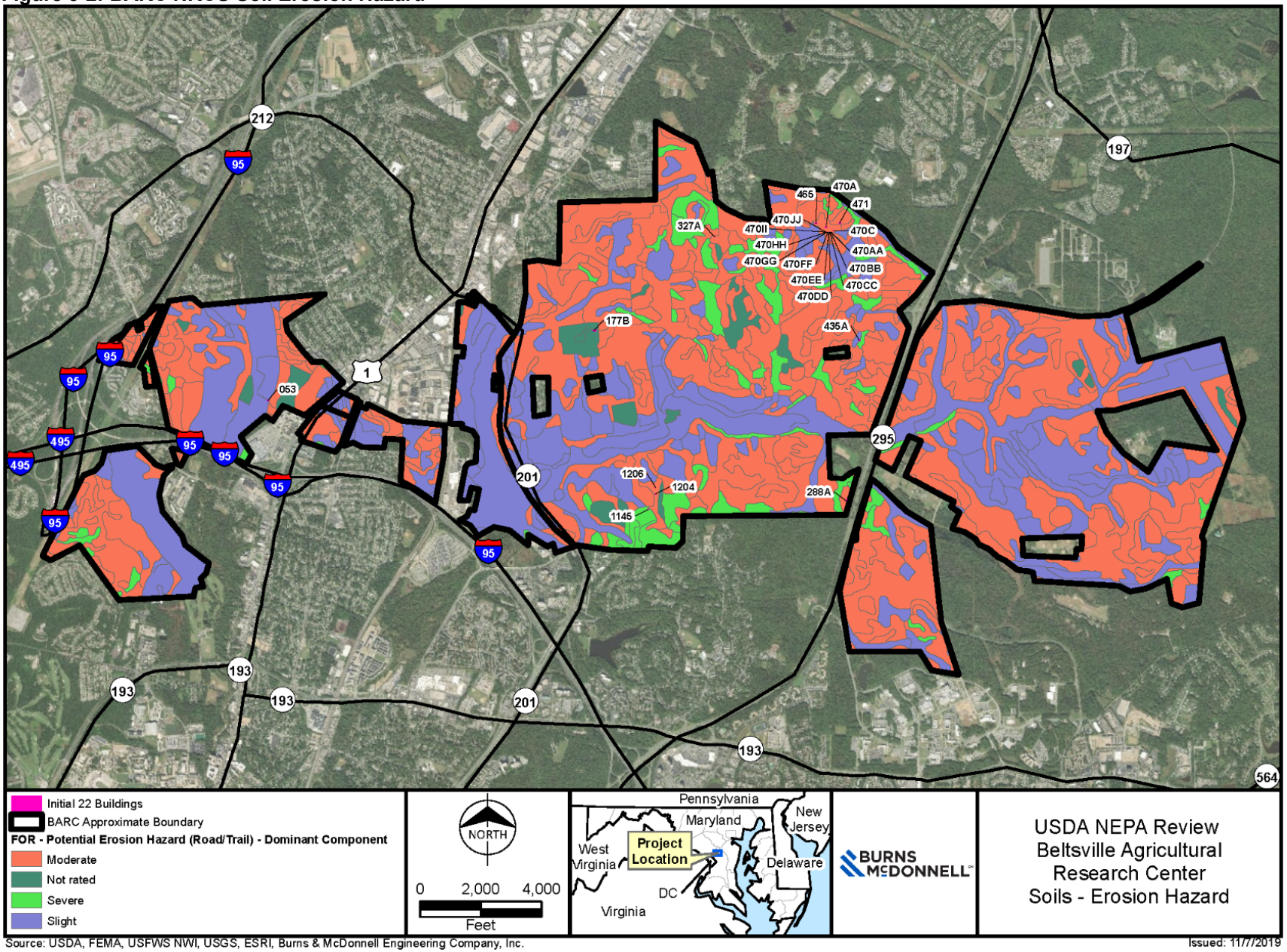


Figure 3-2: BARC NRCS Soil Erosion Hazard



3.2 Water Resources

3.2.1 Affected Environment – Water Resources

3.2.1.1 Surface Waters and Water Quality

BARC lies within the eastern-central portion of the Anacostia River Watershed (HUC10 0207001002), which encompasses approximately 178 square miles, including portions of Prince George's and Montgomery Counties in Maryland and the District of Columbia. The watershed spans both the Piedmont and Atlantic Coastal Plain ecoregions (MDNR, 2005; USGS, 2017). Numerous water features are mapped across the BARC facility ranging from small-unnamed headwater tributaries that originate on the facility to longer stretches of named creeks that receive and transport water offsite. Named streams on BARC include Beaverdam Creek (North Farm), Indian Creek, Little Paint Branch (Central Farm), and Paint Branch. No jurisdictional streams or other jurisdictional open waters were identified at any of the proposed project sites. Figure 3-3 depicts mapped surface waters based on the National Hydrography Dataset (NHD) (USGS, 2019a), 100-year floodplains (FEMA, 2019a), and wetlands based on the National Wetland Inventory (NWI) database (USFWS, 2019a).

3.2.1.2 Groundwater

BARC is within the Patuxent aquifer system, part of the larger Coastal Plain aquifer system that underlies Prince George's County. The deepest water production wells (depth of 2,400 feet) in Maryland produce from the Patuxent aquifer system and are located at the southern tip of Prince George's County at the Chalk Point Power Plant (Andreasen et al., 2013). Karst features within Maryland are limited to the northern region of the State and are not present within Prince George's County (MGS, 2019b).

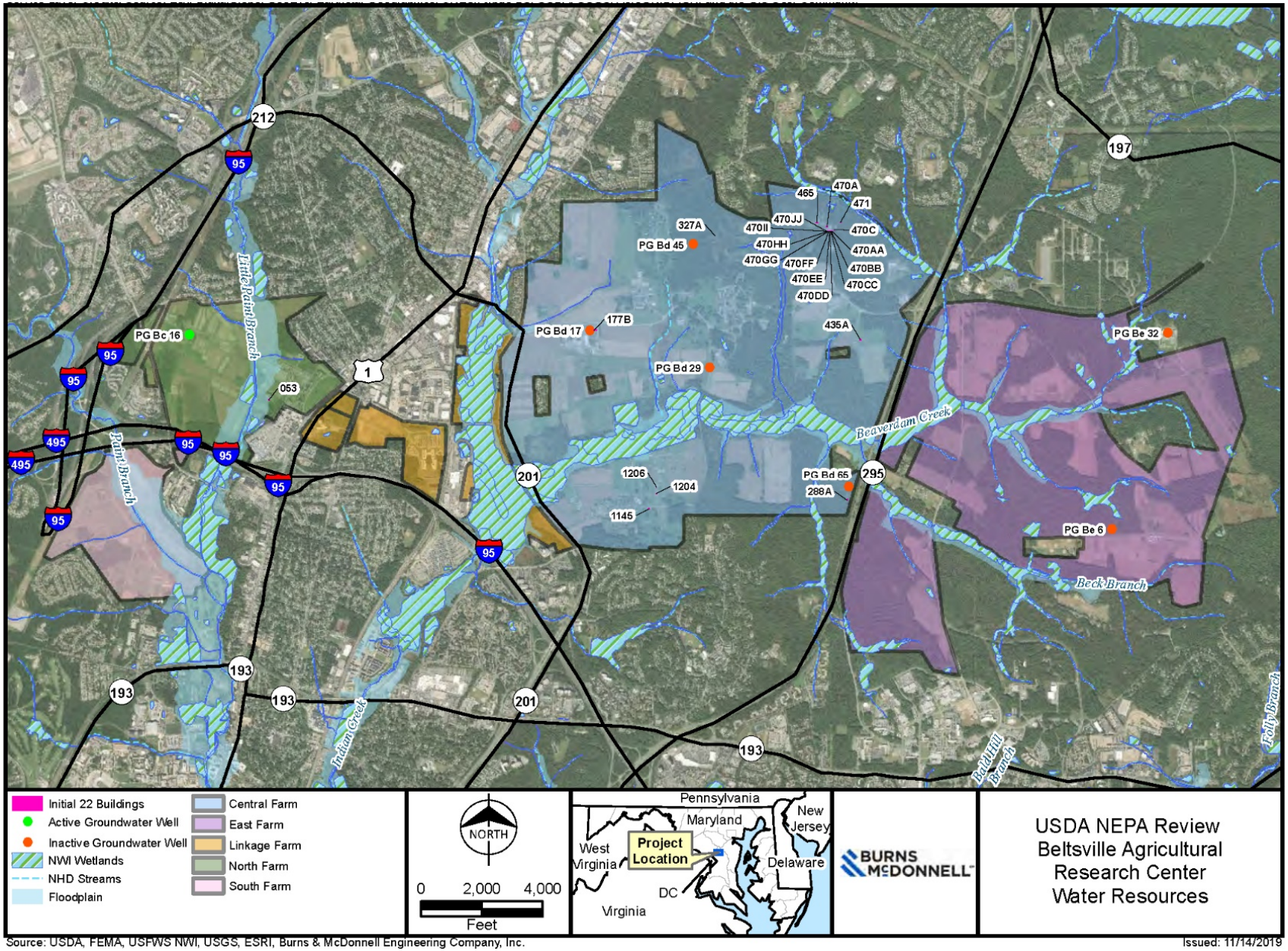
BARC has 11 drilled production wells located within the Central Farm. Three of those wells currently have been taken offline for maintenance. The BARC facility pumps and treats its own well-water used for all operational purposes, including potable, laboratory, sanitary, fire suppression and irrigation.

3.2.1.3 Floodplains

All counties in the State of Maryland participate in the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP) which aims to reduce the impact of flooding on private and public structures and encourages communities to adopt and enforce floodplain management regulations (FEMA, 2019b). The Water and Science Administration of MDE coordinates with counties and communities within the State to develop floodplain management ordinances containing Federal minimum requirements, and individual municipalities are responsible for implementing and enforcing the ordinances and associated permitting programs (MDE, 2019).

Based on the most recent FEMA Flood Insurance Rate Map (FIRM) database, approximately 843 acres of 100-year floodplain are mapped within BARC boundaries (FEMA, 2019a), including approximately 210 acres across the Central Farm and 119 acres across the North Farm. The floodplain areas follow the major streams that cross the facility and are located outside of the proposed project sites. The area where Building 053 sits on the North Farm is partially located within the Little Paint Branch floodplain.

Figure 3-3: BARC Surface Water Resources: Streams, Wetlands, 100-Year Floodplains, and Groundwater Wells



3.2.1.4 Wetlands

BARC contains approximately 640 acres of mapped wetlands according to the NWI (USFWS, 2019a). The wetland types mapped within the North and Central Farms are listed in Table 3-2.

Table 3-2: Summary of NWI Wetlands by Type on the Central and North Farms

Type	Type Description	Acres by Farm		Total Wetlands by Type (Acres)
		Central	North	
PEM	Palustrine emergent	58.4	1.4	**59.8**
PSS	Palustrine scrub-shrub	132.3	0.0	**132.3**
PFO	Palustrine forested	42.2	0.0	**42.2**
PUB	Freshwater pond	16.3	8.3	**24.6**
Riverine	Riverine (contained within channel)	11.1	3.9	**15.0**
Total Wetlands Central and North Farms		**260.3**	**13.6**	**273.8**

All mapped wetlands are freshwater wetlands and are concentrated along and adjacent to major drainage channels (see Figure 3-3). No wetlands are mapped within or immediately adjacent to the proposed project sites. No field delineations have been conducted within the proposed projects sites, although no wetland habitats were observed during the site visit conducted October 22–24, 2019.

3.2.2 Environmental Consequences – Water Resources

3.2.2.1 Proposed Action Alternative

Minor, short-term, and temporary impacts could occur to water resources resulting from excavation and grading at all the proposed project sites. No waters of the United States, including wetlands, are mapped within or adjacent to the proposed project sites. Therefore, no fill materials would be placed within such waters and a Section 404 permit under the Clean Water Act (CWA) would not be required. It is anticipated that the clearing footprint at each site would be limited to that required for removal of the structure and its associated foundation, supporting utilities, and access roads and parking areas used exclusively by that building or cluster and would avoid or minimize encroachment into adjacent vegetation.

The Proposed Action would be subject to the requirements of Section 438 of the EISA because it involves a Federal facility and would result in the disturbance or more than 5,000 square feet of land area. To comply with the requirements of Section 438, the land at and surrounding the buildings proposed for demolition must be returned to predevelopment hydrological conditions, to the extent technically feasible. This may require that all structures and materials associated with the buildings in the immediate area, both above and below ground, are removed from each site. This may include, but not be limited to, removal of all above-ground building materials and utility systems, building foundations, below-ground utility systems, driveways and roadways in the immediate area (while maintaining the continued function of other facilities as intended), and any other debris, supplies, or equipment located onsite.

Per Section 438, following demolition and removal of materials from each site, the sites need to be regraded to manage the 95th percentile rainfall events onsite. Site-specific analyses may be needed for some project sites due to the proximity of remaining and occupied buildings.

000 Cluster: Building 053 encroaches into the mapped 100-year floodplain of Little Paint Branch. Two ponds (2.2 and 0.9 acres in area) occur south-southwest of Building 053 and one larger pond (6.2 acres) lays directly west, adjacent to Little Paint Branch. An existing stormwater detention basin is located near Building 053 at the intersection of South Drive and 2nd Drive that appears to intercept surface flows from the higher elevations to the north and east, including the neighboring vacant buildings not currently proposed for demolition. A site-specific hydrological assessment may be needed to address the drainage issues associated with the site prior to developing the demolition and grading plan. No groundwater wells have been identified near Building 053.

100 Cluster: Building 177B sits among three mapped streams, all located 0.25 to 0.7 mile from the project site. Building 17B is not located in or near a 100-year floodplain. The location and status of an inactive groundwater well located within 100 feet of Building 177B should be confirmed before building demolition begins.

200 Cluster: Building 288A is located between Beck Branch and an unnamed tributary to Beaverdam Creek, approximately 0.42 mile south of their confluence with Beaverdam Creek. Building 288A is not located within or adjacent to a 100-year floodplain. No groundwater wells have been identified near the building.

300 Cluster: Building 327A is located approximately 0.2 mile from the nearest drainage and is not located in or adjacent to a 100-year floodplain. Additional clearing of the site may be needed to determine the actual extent of the building structure and any associated improvements not visible during the site visit. No groundwater wells have been identified near the building.

400 Cluster: Buildings 465, 470A, 470C 470AA-JJ, and 471 are located south of and approximately 0.1 mile from an unnamed tributary to Beaverdam Creek. A small pond, less than 1 acre in size, is located directly north of this building cluster. None of these buildings is located within or adjacent to a 100-year floodplain. Building 435A is isolated and away from the other 400 Cluster buildings described. It is located near the top of a hill and more than 0.6 mile north Beaverdam Creek. It is not located within or near a 100-year floodplain. No groundwater wells have been identified near the building. Vacant Building 434 is located near Building 435A and sits at approximately the same elevation. Grading should avoid drainage impacts to Building 434. No groundwater wells have been identified near either groups of buildings.

1000 Cluster: Buildings 1145, 1204, and 1206 are located close to each other within a relatively flat site. Building 1206 is close to a linear surface drainage feature that should be considered in developing the final grading plan for the site. None of these buildings is located within or adjacent to a 100-year floodplain. No groundwater wells have been identified near the buildings.

Prior to initiating demolition, each site would be reviewed to determine drainage patterns. A Stormwater Pollution Prevention Plan (SWPPP) would be developed and BMPs would be implemented during demolition and grading activities at each site. Minimal and temporary increases in water usage may occur with the use of water in association with removal of asbestos containing materials or to minimize fugitive dust. Following recontouring of each project site, soil stabilization methods would be used to minimize erosion and limit establishment of invasive species.

Following stabilization of each project site, the Proposed Action would result in beneficial effects to local surface water, stormwater, groundwater, and floodplain resources. Removal of impervious cover and underground systems associated with the 22 buildings would reduce stormwater runoff volumes and increase absorption, increase groundwater recharge, and reduce displacement of floodwaters. The Proposed Action would also support USDA's effort to reduce its impact on the Chesapeake Bay

Watershed by reducing impervious surface area across the BARC facility and the requirement for BARC to achieve a 20-percent reduction of all impervious surface by 2025 to comply with its MS4 permit.

3.2.2.2 No Action Alternative

No reduction in the amount of impervious surface area would occur as no buildings and associated improvements would be removed. Long-term impacts on localized surface and groundwater quality would continue as the buildings fall in further disrepair and contaminants are washed by rain and snow onto the ground and eventually into receiving waters. Any soil contamination associated with these project sites would continue to potentially degrade groundwater resources.

3.3 Biological Resources

3.3.1 Affected Environment – Biological Resources

3.3.1.1 Vegetation

BARC maintains a mosaic of native vegetation, agricultural crops, and managed lawns. Developed areas dominated by managed turf/grass, urban trees, and shrubs include the settings of administrative and research buildings, agricultural operation facilities, and water treatment and utility plants. Numerous agricultural fields and pasturelands are bordered by drainages and areas currently unused and in various stages of vegetative succession. Native hardwood and bottomland forest areas are present across the facility. Dominant upland tree species on and near BARC include oaks (*Quercus* spp.), maples (*Acer* spp.), Virginia pine (*Pinus virginiana*), and black cherry (*Prunus serotina*). Lesser stands of American holly (*Ilex opaca*), blackgum (*Nyssa sylvatica*), sweetgum (*Liquidambar styraciflua*), beech (Fagus sp.), and sassafras (*Sassafras* sp.) occur in the uplands. Along the many drainageways that cross the facility, bottomland forests include willow oak (*Quercus phellos*), sweetgum, river birch (*Betula nigra*), and red maple (*Acer rubrum*), with spicebush (*Lindera* sp.), buttonbush (*Cephalanthus* sp.), fetterbush (*Pieris* sp.), pepperbush (Croton sp.), and tussock sedge (*Carex stricta*) commonly found in the shrub layer (BARC, 1996).

3.3.1.2 Wildlife

Maryland's wild fauna is diverse, with an estimated 90 species of mammals, 93 species and subspecies of reptiles and amphibians, more than 400 species of birds, and several hundred freshwater and marine fish species (MDNR, 2019b). BARC supports a diverse breeding bird population consisting of numerous migratory and wintering species, including the great blue heron (*Ardea herodias*), pileated woodpecker (*Dryocopus pileatus*), ovenbird (*Seiurus aurocapilla*), hooded warbler (*Setophaga citrina*), Kentucky warbler (*Geothlypis formosa*), black-and-white warbler (*Mniotilta varia*), prothonotary warbler (*Protonotaria citrea*), Louisiana waterthrush (*Parkesia motacilla*), Acadian flycatcher (*Empidonax virescens*), and scarlet tanager (*Piranga olivacea*). More than 36 bird species overwinter on the facility, including sparrows, finches, raptors, and waterfowl (USDA, 1996).

Mammal species inhabit the forested and shrubland areas of the BARC facility including whitetail deer, beavers, squirrels, foxes, short tailed weasels, striped skunk, woodchuck, eastern chipmunk, and field mice. The facility is also home to domesticated animals used for agricultural production and research, including livestock (cows and swine), poultry, and honeybees (BARC, 2019).

3.3.1.3 Protected Species

The Endangered Species Act (ESA) provides protection for plants and animals designated by the U.S. Fish and Wildlife Services (USFWS) as threatened or endangered species by prohibiting the take of the designated species (16 U.S.C. § 1531-1543). Protection under the ESA may also include protection of habitat designated as critical habitat for supporting listed species. The ESA defines take of a species as

to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct” (16 U.S.C. § 1532). Section 7 of the ESA states that it is the responsibility of Federal agencies to ensure that any Federal action is not likely to jeopardize the continued existence or result in the destruction or adverse modification of habitat determined to be critical to the conservation of any such species.

Most avian species native to the United States are also protected under the Migratory Bird Treaty Act (MBTA) and bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (BGEPA). The MBTA authorizes Federal regulation of the take of migratory birds and is a primary instrument in migratory bird conservation and protection in the U.S. Protection under the MBTA and BGEPA includes protection of nests.

The USFWS identifies three federally listed threatened species that may occur near the BARC facility, as shown in Table 3-3 (USFWS, 2019b). It should be noted that inclusion in this list does not necessarily mean that a species is known to occur within the BARC facility, but only acknowledges the potential for its occurrence based on historic records, known ranges, and presence of habitat. A brief description of each of the federally listed species is provided below.

Table 3-3: Federally Listed Species for Prince George’s County, Maryland

Common Name	Scientific Name	Federal Listing	State Listing	Potential for Occurrence within BARC
Mammals				
Northern long-eared bat	*Myotis septentrionalis*	Threatened	Not listed	Likely
Mollusks				
Yellow lance	*Elliptio lanceolata*	Threatened	Not listed	Not likely
Flowering Plants				
Sensitive joint-vetch	*Aeschynomene virginica*	Threatened	Endangered	Not likely

SOURCE: USFWS IPaC Resource List; November 13, 2019 (USFWS, 2019b)

***Northern long-eared bat*:** The northern long-eared bat is found across much of the eastern and north central United States and all Canadian provinces from the Atlantic coast west to the southern Northwest Territories and eastern British Columbia. Northern long-eared bats are colonial hibernators, entering their winter hibernacula in late August or September. After spring emergence, bats migrate to summer roosting and foraging grounds. In summer, the species is often associated with forested habitats where the bats make use of tree roosts, especially near water sources. Loose bark, broken tree limbs, cavities, and cracks in a tree can all be used by bats as roosting sites. Most frequently, they are found hanging singly or in small groups. Northern long-eared bats forage for insects over water, in forest clearings, and under tree canopies, using echolocation to catch prey and to navigate. They may also glean insects off leaves and other surfaces, a behavior that may be aided by their unusually large ears (MDNR, 2017). BARC is within the species’ known range and the northern long-eared bat may occur in small numbers within the proposed project sites where suitable habitat occurs.

***Yellow lance*:** The yellow lance, a bright yellow freshwater mussel with a shell more than twice as long as tall, reaching just over 3 inches in length, is native to eight Atlantic Slope drainages in Maryland, Virginia, and North Carolina. The species’ historical range included streams and rivers in the Patuxent, Potomac, Rappahannock, York, James, Chowan, Tar, and Neuse River basins; however, the species is likely extirpated in several of these populations (USFWS, 2019c). The yellow lance is a sand-loving species (Alderman, 2003), often found buried deep in clean, coarse to medium sand and sometimes migrating

with shifting sands (NatureServe, 2015). It has also been found in gravel substrates. The species is dependent on non-polluted, moderate flowing water with high dissolved oxygen content in riverine or larger creek environments. BARC lies just south of the Patuxent Basin, which is outside of the species' known current range. Although highly unlikely, this mussel may occur in small numbers where suitable habitat occurs.

Sensitive joint-vetch: The sensitive joint-vetch, an annual plant in the pea family (Fabaceae), has a historic range in the Eastern United States including New Jersey, Delaware, Pennsylvania, Maryland, and North Carolina. The species' current range includes Maryland, New Jersey, Virginia, and North Carolina, where the species shows considerable annual fluctuation in population numbers. Plants typically attain heights of 3 to 6 feet in a single growing season and contain yellow irregular flowers that bloom from July through September and occasionally into October. The species typically grows in the intertidal zone of coastal marshes where the plants are flooded twice daily and seems to prefer the marsh edge at an elevation near the upper limit of tidal fluctuation where the soils may be mucky, sandy, or gravelly (USFWS, 2019d). The sensitive joint-vetch is not expected to occur due to a lack of suitable habitat within the BARC facility.

In addition to federally protected species, the State of Maryland enacted the Nongame and Endangered Species Conservation Act in 1975, providing protections for additional species designated by the State as rare, endangered, or threatened (MDNR, 2019c). A complete list of protected species in Prince George's County is included in Appendix D.

3.3.1.4 Pollinators

BARC is home to the USDA Bee Research Lab that conducts research to improve the health of honeybee colonies. Several Bee Yards (group of bee houses) have been established across the BARC facility; the closest Bee Yard location to the project sites within the Central and North Farms is in the 400 Cluster near buildings 471 and 470C.

3.3.1.5 Invasive Species

Invasive plants and noxious weeds are species of vegetation that are not native to an area but have a high propensity for rapid and uncontrolled growth in areas where they are introduced. These species outcompete and displace native species and can cause degradation of habitat and depletion of resources for native wildlife and plants while also causing nuisance or harm to agricultural operations. Executive Order (EO) 13112 *Invasive Species*, issued on February 3, 1999, established the Invasive Species Council and required the development of a National Invasive Species Management Plan to prevent/minimize the introduction and spread of invasive species and to minimize the environmental and economic risks associated with invasive species. Subject to the availability of resources, EO 13112 also instructed Federal agencies whose actions may affect the status of invasive species to take actions to prevent, detect, and monitor invasive species and promote public education.

Common invasive plants in Maryland's forested habitats include bamboo, English ivy (*Hedera helix*), Japanese stiltgrass (*Microstegium vimineum*), kudzu vine (*Pueraria montana*), mile-a-minute vine (*Persicaria perfoliate*), multiflora rose (***Rosa multiflora***), and oriental bittersweet (*Celastrus orbiculatus*) (MDNR, 2019a). Maryland has a Weed Control Law, which requires landowners and managers to manage noxious weeds on their land. Common noxious weeds in Maryland include shattercane (*Sorghum bicolor*), johnsongrass (*Sorghum halepense*), Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), plumeless thistle (*Carduus acanthoides*), and musk thistle (*Carduus nutans*) (MDA, 2015).

3.3.2 Environmental Consequences – Biological Resources

3.3.2.1 Proposed Action Alternative

Each project site and the surrounding area would be reviewed for the presence of potential bat habitat and for the presence of nesting migratory birds prior to beginning demolition. Vegetation would be removed from building perimeters and from inside some buildings. Vegetation may also be removed for additional areas on each project site to facilitate infrastructure removal and support recontouring of the site. If active bird nests are discovered, no vegetation removal or building demolition would occur until after the young have fledged. Project site evaluation should also take into consideration the proximity of activity to established bee yards. Demolition activities would be discussed with staff of the Bee Research Lab to determine any mitigation or seasonal limitations that may apply.

The Proposed Action Alternative would not affect the yellow lance because the BARC facility lies outside of its current known range. It would also not affect the sensitive joint-vetch as the BARC facility lacks suitable habitat. The northern-long-eared bat may be present on the BARC facility during summer roosting and foraging periods. The bat may roost under exfoliating bark or within cavities of dead trees.

Based on planned demolition activities, BARC will not exceed the 15-acre threshold established by USFWS for habitat removal. Additional coordination with USFWS is recommended to review the site assessment findings and determine prior to demolition what mitigation, if any, may be needed. If potential bat roost trees are identified, tree removal may be limited to occurring only during the winter hibernation season (November through March).

000 Cluster: Building 053 is close to an area of bottomland forest associated with the 100-year floodplain of Little Paint Branch. Vegetation would be cleared adjacent to the building with limited encroachment into the neighboring forest. The building and surrounding area would need to be evaluated for migratory bird nests and potential roost trees for the northern long-eared bat prior to demolition.

100 Cluster: Building 177B sits within an open area dominated by well-maintained grass. No tree or shrub habitat would be cleared to demolish this building. The building should be evaluated for the presence of migratory bird nests prior to demolition.

200 Cluster: Building 288A sits in a wooded area. Vegetation would be cleared adjacent to the building with limited encroachment into the neighboring forest. The building and surrounding area would need to be evaluated for migratory bird nests and potential roost trees for the northern long-eared bat prior to demolition.

300 Cluster: Building 327A sits in a wooded area. Vegetation would be cleared adjacent to the building with limited encroachment into the neighboring forest. The building and surrounding area would need to be evaluated for migratory bird nests and potential roost trees for the northern long-eared bat prior to demolition.

400 Cluster: Buildings 465, 470A, 470C 470AA-JJ, and 471 are located within a somewhat open area but the buildings are now obscured by trees, shrubs, and vines. The greenhouses harbor tree and shrub growth on the interior. It is anticipated that the area of Buildings 465, 470A, and 470AA-JJ would be cleared in its entirety, limiting encroachment into the forested areas along the perimeter. Clearing of building sites 470C and 471 would be limited to the area needed to remove the building and support positive drainage, thereby minimizing clearing of the adjacent forest. Building 435 would require almost no vegetation clearing but would be evaluated for the presence migratory bird nests before demolition. Buildings 465, 470A, 470AA-JJ, and 471 would be evaluated for the presence of migratory bird nests and potential roost trees for the northern long-eared bat prior to demolition. The 400 Cluster is near a Bee Yard.

1000 Cluster: Buildings 1145, 1204, and 1206 are located within open areas. The area cleared for removal of Building 1145 would avoid encroaching into the fencerow behind the building. Buildings 1204 and 1206 would not involve tree clearing. All three structures would be evaluated for the presence of migratory bird nests prior to demolition.

3.3.2.2 No Action Alternative

Under the No Action Alternative, no vegetation would be removed except what may occur during normal facility maintenance activities. All forested areas would remain as they do today. No changes would occur to the areas currently farmed and used for livestock grazing. No effects would occur to resident or migratory wildlife or protected species. Areas where Bee Yards have been established would remain undisturbed.

3.4 Air Quality

3.4.1 Affected Environment – Air Quality

3.4.1.1 National Ambient Air Quality Standards

The Clean Air Act (CAA), enacted in 1977 and amended in 1990, requires the EPA to establish National Ambient Air Quality Standards (NAAQs) for pollutants considered harmful to public health and the environment. Ambient air is defined as "that proportion of the atmosphere, external to buildings, to which the general public has access" (40 CFR 50.1(e)). The EPA has set NAAQS for six criteria air pollutants—carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2).

States and tribes are required to regularly report ambient air quality data to the EPA, which the EPA utilizes to determine whether the state or tribe meets the NAAQS for each criteria pollutant (attainment) or does not meet NAAQS for each criterial pollutant (nonattainment). Nonattainment areas are required to prepare a State Implementation Plan (SIP) defining how the state or local government will bring the area into attainment status (EPA, 2017a). The EPA categorizes nonattainment as marginal, moderate, serious, severe, or extreme based on the extent to which measurements exceed the NAAQS. During 2019, Prince George's County was identified by the EPA as a marginal nonattainment area for ozone and an attainment area for all other criteria pollutants (EPA, 2019a).

Section 176(c) of the CAA establishes the requirement for general conformity to ensure that Federal actions support a state or area's compliance with SIPs in nonattainment areas. General conformity requirements must be demonstrated for a given project or action to ensure that the action will not cause or contribute to violations of NAAQs or delay attainment of NAAQs in nonattainment areas. General conformity is determined by whether an applicable project complies with the *de minimis* levels for annual criteria pollutant emissions, as established in 40 CFR Part 93.153, and listed in Table 3-4.

Table 3-4: General Conformity *De Minimis* Thresholds[(a)]

Pollutant	*De Minimis* Threshold (tons/year)
Ozone (VOC's or NOx)	
Serious nonattainment area	50
Severe nonattainment area	25
Extreme nonattainment area	10
Other ozone nonattainment areas outside an ozone transport region:	100
Other ozone nonattainment areas inside an ozone transport region:	
VOC	50
NO_x	100
Carbon Monoxide: All maintenance areas	100
SO_2 or NO_2: All nonattainment areas	100
PM_{10}:	
Moderate nonattainment areas	100
Serious nonattainment areas	70
$PM_{2.5}$ (direct emissions, SO_2, NO_x, VOC, and Ammonia	
Moderate nonattainment areas	100
Serious Nonattainment areas	70
Pb: All nonattainment areas	25

(a) 40 CFR Part 93.153

De minimis thresholds are applicable to total emissions from construction and operation phases of a project. A project for which emissions would exceed *de minimis* thresholds would require further conformity analysis prior to receiving support from a Federal agency. A project for which emissions would not exceed *de minimis* thresholds would be exempt from further conformity analysis. Prince George's County is within a nonattainment area and the Proposed Action may therefore be required to demonstrate general conformity or may be subject to further conformity analyses.

3.4.1.2 Climate Change and Greenhouse Gas Emissions

Climate change refers to major changes in temperature, rainfall, snow, or wind patterns lasting for decades or more. These changes may be the result of natural occurrences (e.g., changes in the Earth's orbit, sun's intensity, or volcanic activity) or manmade activity (e.g., combusting fossil fuels, deforestation and land development) (EPA, 2010). Combustion of fossil fuels results in greenhouse gases (GHGs), which trap and convert sunlight into infrared heat. Increased levels of GHGs in the atmosphere have been correlated to a rise in surface temperatures of the Earth, which is thought to contribute to climate change.

The White House Council on Environmental Quality (CEQ) published guidance on August 2, 2016 to Federal agencies requiring the consideration of GHG emissions and their effects on climate change. The CEQ guidance is applicable to all Federal actions subject to review under NEPA, including site-specific

actions, certain funding of site-specific projects, rulemaking actions, permitting decisions, and land and resource management decisions. Federal agencies should consider the extent to which a proposed action and its reasonable alternatives would contribute to climate change, through GHG emissions, and consider the ways in which a changing climate may impact their Proposed Action and any alternative actions, change the action's environmental effects over the lifetime of those effects, and alter the overall environmental implications of such actions.

3.4.2 Environmental Consequences - Air Quality

3.4.2.1 Proposed Action Alternative

The effects of the Proposed Action Alternative on localized air quality would be short-term, minor, and spread out over time. Prince George's County is a nonattainment area for ozone. Because the Proposed Action would be a Federal project within a nonattainment area, it is subject to general conformity determinations under Section 176(c) of the CAA. As no construction timing or equipment information is currently available, emissions calculations for the Proposed Action would be required to determine whether construction and operational emissions of the action would exceed the *de minimis* emissions threshold, as presented in Table 3-4. If emission levels from the Proposed Action Alternative don't exceed *de minimis* thresholds, the Proposed Action Alternative would demonstrate general conformity under the CAA. If *de minimis* emissions thresholds were expected to be exceeded by the Proposed Action Alternative, it would be subject to further general conformity determinations prior to receiving approval (EPA, 2017b, 2017c).

Effects on localized air quality under the Proposed Action Alternative would include:

- emissions from vehicles and large equipment travelling to and from the site and use in onsite demolition, debris removal, and restoration activities;
- fugitive dust resulting from excavation and earth-moving activities, physical wrecking of structures, loading of building debris, travel of vehicles and equipment on unpaved areas, and wind erosion from disturbed and exposed soils;
- fugitive dust containing asbestos fibers may occur when friable asbestos containing materials are disturbed (Section 3.11 identifies those buildings and building clusters proposed for demolition that have the potential for containing asbestos); and
- release of refrigerant gases may occur when air conditioning and refrigeration equipment is disturbed.

These impacts would be temporary and of short duration. To minimize the potential for emissions and adverse impacts to localized air quality, BMPs would be used to reduce and manage emissions. The BMPs may include but not be limited to:

- Development and implementation of Dust and Emissions Control Plan by the contractor, including dust suppression measures such as watering exposed soil areas, washing construction vehicles before they leave the project site, using newer construction equipment that is more fuel efficient, and prohibiting equipment idling. Designation of haul roads for managing debris to roads less traveled by the public.
- Identification and removal of asbestos containing materials (ACM) prior to structural demolition to mitigate emission of fugitive fibers. The removal activities for friable asbestos will be conducted in negative air pressure within containment to further mitigate fugitive fibers. Removed asbestos will be placed in sealed containers for transport and offsite disposal at a licensed facility.

- Evacuate and capture refrigerant gasses from identified air conditioning and refrigeration equipment prior to structural demolition to mitigate release.

The effect of the Proposed Action Alternative on GHGs is anticipated to be minimal and presumed well below *de minimis* standards. The generation of emissions from construction would be short-term, temporary, and dispersed in terms of both location on the facility and schedule.

3.4.2.2 No Action Alternative

No additional emissions, construction, or maintenance-related activities would be generated under the No Action Alternative. Vehicle traffic volumes would not change beyond what may be forecast to reflect planned growth of areas around the BARC facility.

3.5 Noise

3.5.1 Affected Environment – Noise

The United States has a noise law known as the Noise Control Act of 1972; however, state and local authorities generally address noise enforcements regulations. Prince George's County noise standards as prescribed in the County Code at Sub-Title 19, Division 2, Section 19-120 through 19-126 are indicated in Table 3-5.

Table 3-5: Prince George's County Noise Standards

Sound Source Property Category	Receiving Property Category				
	All Times	Day	Night	Day	Night
Residential	A person may not create noise or allow noise to be created that disturbs the peace, quiet, and comfort of a residential area and includes residences in all areas.	N/A	N/A	N/A	N/A
Commercial	N/A	67	62	N/A	N/A
Industrial	N/A	N/A	N/A	75	75

Table 3-5 Definitions and Exemptions:

Noise is defined as audible from 50 feet from the source of the sound in a public right-of-way or an adjacent building:

- any sound resulting from the emergency operation of a public service company as defined in Section 1-101(x), Public Utilities Article of the Annotated Code of Maryland;
- any sound resulting from the operations of an instrumentality of the Federal, State, or County government, the Board of Education, a bi-county agency, or of a municipality;
- a sound resulting from the operation of an aircraft.
- on private property for which a valid use and occupancy permit has been issued for purposes of sporting, recreational, entertainment establishment, or for any other event to which the public is invited; or
- an event or activity with a validly issued permit, license or other written authority which takes place on property owned by the United States, the State, the County, the Board of Education, a bi-county agency, or a municipality.
- farm equipment being used on more than five acres or outside of 100 feet of the property line.
- lawn care, snow removal equipment and other household tools or equipment when used and maintained in accordance with the manufacturer's specifications between the hours of 7:00 am to 9:00 pm.

Prince George's County Code of Ordinances Division 2, Sec 19-120 to 19-125

The rural setting of the BARC facility equates to a relatively quiet soundscape. Brief interruptions in the ambient sound level occur during planting and harvesting activities (use of large farm equipment) and when first responders using sirens access the facility to address emergency situations. USDA has introduced rumble strips along Powder Mill Road to alert drivers to roadway intersections. The rumble

strips create a staccato buzz every time they are crossed by vehicle tires. The natural forest cover and rolling topography of the facility attenuate the sounds that occur primarily along the main roadways, within the larger active building clusters, and within the large expanse of agricultural fields near the center of the facility. Many buildings occur on BARC, including service complexes, small farm compounds, large farm compounds, office complexes, and research campuses that are located some distance away from Powder Mill Road. Each of these different land uses has different baseline noise conditions; therefore, they may each be uniquely affected by noise pollution. No ambient noise measurements have been conducted on the facility.

3.5.2 Environmental Consequences – Noise

3.5.2.1 Proposed Action Alternative

Localized, short-term, and intermittent increases in noise would be greatest during demolition and grading activities. Demolition activities would only be permissible during daylight hours and would be limited to short durations at each project site. Noise from heavy trucks accessing and leaving the project sites along major roads on the facility would minimally increase traffic noise for short periods of time. USDA-ARS intends to remove the buildings over time so it is unlikely that demolition and grading activities would be occurring simultaneously at the project sites. The large expanses of open areas, forested areas, and varied topography act as natural noise barriers for developments more distant from each active project site. No blasting or pile driving is anticipated during the demolition process.

Demolition and site-grading activities would be exempt from Prince George's County noise standards because it is occurring on a Federal facility. In any event, USDA-ARS would enforce activities to be limited to daylight work hours to minimize the short-term effects on surrounding uses.

3.5.2.2 No Action Alternative

No demolition or construction-type activities would occur under the No Action Alternative. Regular maintenance and ongoing operational activities that generate noise would continue to occur.

3.6 Utilities and Infrastructure

Utilities and infrastructure serving the BARC facility include electrical utilities, water (potable and fire suppression), wastewater/sanitary sewer, solid waste management, steam generation, and fuel oil. The following sections summarize the utilities associated with the BARC facility. No natural gas pipelines are known to cross the BARC facility.

3.6.1 Affected Environment – Utilities and Infrastructure

3.6.1.1 Electrical Utilities

Currently, electrical service is provided by the Potomac Electrical Power Company (PEPCO) and distributed to the various buildings by a network of overhead distribution lines. Active buildings generally follow the Federal standard workday schedule, with occupancy typically occurring Monday through Friday from 6:30 AM to 6:00 PM. Increasing the agency's proportion of electrical energy sourced from renewable sources or Renewable Energy Credits (REC) is a goal of the USDA, intended to support compliance with the Energy Policy Act of 2005 (EPAct) and the EISA. In 2018, BARC conducted an environmental review to evaluate the potential impacts of construction and operation of a solar photo voltaic systems onsite to supplement current power usage (USDA, 2018b).

Overhead distribution lines and glass insulators were observed at most of the 22 project sites. Some buildings identified as former garages or storage sheds did not appear to be tied into the electrical infrastructure. During the site visit conducted in October 2019, some buildings did appear to still have live

electric power as evidenced by running air conditioning units. Many poles and lines were leaning, sagging, or downed, while others remained upright.

3.6.1.2 Water

Potable water is supplied to the BARC facility utilizing two separate systems. Potable water is supplied to the South Farm by the Washington Suburban Sanitary Commission (WSSC). This system supplies adequate quantities of water under adequate pressure to be suitable for emergency and fire suppression purposes. The rest of BARC's Farms are provided with potable water, withdrawn from eight water production wells, treated and distributed from the BARC's water treatment plant (Building 310). The BARC potable water system is adequate to meet average daily demand, and pressure is sufficient for emergency and fire suppression purposes.

It is presumed that all but the buildings identified as a storage shed or garage were connected to the BARC water system, indicating that underground lines are present within and adjacent to each building footprint and possibly extend to water mains located within the footprint of adjacent service roads.

3.6.1.3 Wastewater

Wastewater management varies across the BARC facility. BARC owns, operates, and maintains two wastewater treatment plants (WWTP). The BARC-East WWTP provides wastewater service to the Central Farm and the BARC-West WWTP provides service to the North Farm. The USDA Office Complex and the National Agricultural Library on the Linkage Farm are provided with wastewater services by WSSC. The entirety of the South and East Farms, as well as some isolated structures across BARC, such as residences, former airport buildings, and University of Maryland facilities, use septic tanks and drain fields for wastewater management (USDA, 1996).

The 22 buildings addressed in this Draft EA are all located on the Central or North Farms, which are serviced by these WWTPs. Sanitary sewer manholes are present near many of the project sites indicating the presence of underground sewer lines of unknown extent.

3.6.1.4 Stormwater Management

As described previously, the BARC facility is crossed by numerous streams with associated wetland complexes. All stormwater generated on the facility drains into the Northeast Branch of the Anacostia River through Paint Branch, Little Paint Branch, Indian Creek, Beaverdam Creek, and Beck Branch. A myriad of agencies and regulations apply to the management and discharge of stormwater from the facility:

- EPA requires facilities to obtain National Pollution Discharge Elimination System (NPDES) permits for control of stormwater quality;
- the U.S. Army Corps of Engineers (USACE) maintains jurisdiction over wetlands and waters of the U.S.; and
- Prince George's County Zoning and Maryland State Regulations restrict disturbance of floodplain areas established by FEMA

State of Maryland stormwater management procedures mandate minimum requirements and procedures to control adverse impacts associated with increased stormwater runoff. BARC has not made major changes in its land use activities since the Maryland Stormwater Management Regulations were enacted during the mid-1980s. The few building projects that fall within the regulations have been reviewed by the State and approved as in compliance (USDA, 1996b).

Although farm operations are exempt from the State regulations, BARC is sensitive to the latest stormwater management, soil conservation, and water pollution control procedures. Farm operations at

BARC are continually working with USDA NRCS to preserve the agricultural potential of BARC's soils and the natural environment (USDA, 1996).

BARC is required under the EO 13508 *Chesapeake Bay Protection and Restoration*, the Clean Water Act, its MS4 permit, and existing NPDES permits to reduce the nutrient load of the Federal facility to support the restoration of the Chesapeake Bay. In addition to BMP management, reforestation, and wetland restoration going on at BARC, the facility is also an active farm that is required to provide the Maryland Department of the Environment (MDE) with an annual nutrient management plan.

BARC also is a participant on the Federal Facility Work Group that coordinates efforts between Federal facilities, state regulators, and the EPA to work towards these goals and is required to report annual progress to the MDE that is provided to EPA (USDA, 2018b).

3.6.1.5 Solid Waste Management

***Non-Hazardous Waste Management*:** Nonhazardous solid waste (e.g., standard office waste and nonhazardous laboratory wastes) generated by operations at BARC are disposed of offsite. Each active building or site that generates waste has a waste management and disposal protocol in place, including recycling of several material types. For long-term projects, such as building renovations, that are not part of ongoing typical operations, project-specific waste management plans are developed. RJ Disposal Service currently provides collection of nonhazardous solid waste and recyclables generated at BARC facilities. The contractor hauls materials to the appropriate materials management facilities offsite (USDA, 2018b). The former airport site on the BARC property is utilized for management of animal wastes and wastewater treatment sludge by land application (USDA, 1996a). All 22 buildings proposed for demolition are vacant and solid waste is not currently generated at these building sites on a regular basis. No solid waste collection containers associated with these buildings were observed during field investigations.

***Hazardous Waste Management*:** Under 40 CFR 261, a large quantity generator (LQG) or hazardous wastes is defined as an entity or operation that generates 1,000 kilograms or more of hazardous waste monthly or more than one kilogram per month of acutely hazardous waste (EPA, 2019b). Based on this definition, BARC is categorized as LQG and as such must operate as an LQG under the Maryland Resource Conservation and Recovery Act regulations. Hazardous wastes currently generated at BARC are primarily categorized as non-halogen solvents, analytical wastes, electrical devices, and compressed gases (USDA, 2018b). All 22 buildings proposed for demolition under the Proposed Action are vacant and unused or are utilized only for storage purposes. Hazardous wastes are not currently generated at these building sites.

BARC is a Superfund Site, listed on the National Priority List (NPL) in 1994 and a Federal Facility Agreement in 1998. Sixty-three Areas of Concern (AOCs) were determined to require investigation after the Preliminary Assessment/Site Inspection (PA/SI) and site-screening process was completed. The AOCs include several former landfills, chemical disposal pits, and open storage areas with contaminated soil, groundwater, and surface water with hazardous chemicals. One AOC is within 900 to 1,200 feet of Building 053.

3.6.1.6 Steam Generation

A large and extensive steam generation and underground distribution system services the North Farm, providing steam heating and energy to many of the BARC buildings in this area. The BARC facility’s steam distribution piping system is aging, and leaking pipes and deteriorated insulation causes significant losses of energy. Current and planned modernization plans are or will be implemented to restore the steam system. Based on field observations, steam continues to be provided to both active and abandoned buildings. Building 053, located on the North Farm, is the only building being currently considered for demolition that is connected to the existing steam system.

3.6.1.7 Storage Tank Management

Pursuant to EO 13148, *Greening the Government Through Leadership in Environmental Management*, and the Emergency Planning and Community Right-to-Know Act (EPCRA), facilities that store above 10,000 pounds of petroleum products and laboratory samples onsite are subject to community right-to-know reporting requirements. Based on a 2018 review, none of BARC's registered underground storage tanks (UST) is known to be leaking (USDA, 2018b).

Only one aboveground storage tank (AST) was observed at the building sites addressed under the Proposed Action. The AST observed was located adjacent to building 465 on the Central Farm and current or historical contents are unknown. Signage indicating storage of fuel oil was observed at several buildings at the BARC facility but not addressed under the Proposed Action. Further evaluation or review of historical documentation would be required to determine the existence of any additional ASTs or USTs in the vicinity of the buildings proposed for demolition.

3.6.1.8 Summary of Utility Infrastructure in the Affected Environment

A summary of the utility and infrastructure components present at each project site is provided below. These descriptions are based on field observations and available documentation. Utility site plans and complete hazardous waste assessments for the buildings proposed for demolition were not available at the time this Draft EA was developed. Further evaluation of the utility infrastructure for each building and connections with larger systems onsite is required to inform development of demolition plans.

000 Cluster: The historic use of Building 053 is unknown. Building utilities include steam, water and electricity. The climate-controlled greenhouse includes steam heat and split air conditioning units. Steam was historically provided by an extensive underground distribution system present on the North Farm. One steam manhole was observed, and one unlabeled manhole was observed adjacent to the building. If the building historically received wastewater services, it would have been serviced by the BARC-West WWTP. Electrical infrastructure observed includes distribution lines connected to the building and an electrical closet adjacent to the building. One large, approximately two-foot diameter plastic-cased opening was observed at ground-level adjacent to the building. The opening is of unidentified use and appears to contain wiring and PVC piping and may be associated with a utility infrastructure system.

100 Cluster: Building 177B was historically used as an electron microscope laboratory. Building utilities include steam, water, and electricity. Distribution lines and transformers observed at the site appear to be largely intact. The BARC-East WWTP would have serviced the building when it was in operation. Not all utilities were observed from the building exterior—further evaluation would be required to confirm the presence of steam heating lines.

200 Cluster: Building 288A was historically used as a garage and later as a laboratory annex. Building utilities have not been observed. Based on historic use, utilities are expected to include electricity and water. Evidence of wastewater utility infrastructure was not observed at this site.

300 Cluster: Building 327A has an unknown historical use but, based on field observations, it appears to have been a small storage shed adjacent to a larger building. The building was not observed to be serviced by any utility systems and historical documentation was not available. Further evaluation would be required to confirm whether utilities exist at this building.

400 Cluster: Building 435A has an unknown historical use and appears to currently be used as an animal shelter associated with a dairy operation. Utilities include electricity only, with no climate control observed.

Building 465 was historically used as an electron microscope laboratory with attached greenhouses. Building utilities include steam, water, and electricity. Electrical infrastructure

includes distribution lines connecting to and transformers adjacent to the building. The BARC-East WWTP would have serviced the building when it was in operation. A large, unlabeled aboveground storage tank was observed at the southeast corner of the building. An unknown capped metal tube was observed near distribution lines, extending approximately four feet above ground, which may have historically served as utility infrastructure.

Buildings 470AA through 470JJ are small greenhouses in the entomology area. Building utilities include steam, water, and electricity. The greenhouses do not have associated wastewater infrastructure.

Building 470A was historically utilized as a headhouse with attached greenhouses. Building utilities include steam, water, and electricity. The building historically housed a boiler to provide heating to the headhouse and greenhouses. The BARC-East WWTP would have serviced the building when it was in operation.

Building 471 was historically used as a garage or storage building and has since collapsed. Electricity is the only utility infrastructure observed or documented for this building. One distribution line pole is located adjacent to the remaining debris but is no longer connected to the grid.

1000 Cluster: Buildings 1145, 1204, and 1206 have unknown historical uses. Building 1145 appears to currently be used for storage. Utilities for these three buildings include water and electricity. Evidence of wastewater utility infrastructure was not observed at the sites.

3.6.2 Environmental Consequences – Utilities and Infrastructure

3.6.2.1 Proposed Action Alternative

Further investigation of each project site would be conducted to identify all utilities serving each structure proposed to be demolished under the Proposed Action Alternative. A demolition plan and utility abandonment plan will be created to achieve the objective of removal while following applicable local regulations. Utility cutting and capping would be conducted prior to building structural demolition. Utility disconnection is commonly a prerequisite requirement for a demolition permit to be issued by the local authority.

Waterline laterals would be cut and capped at the main line where the branch serving the structure begins. The lateral line would be removed from the ground from the cut point back to the building. The water lines are expected to be metal pipes in the one- to two-inch diameter range and buried approximately five feet below ground surface. No insulation or contamination is expected to be encountered with removal. Soil would simply be excavated and replaced. The metallic pipe would be recycled.

Storm and sanitary sewer laterals would be cut and capped at the main line where the branch serving the structure begins. The lateral lines would be removed from the ground from the cut point back to the building. The sewer lines are expected to be clay, concrete, plastic, or metal pipes in the 4- to 12-inch diameter range and buried approximately five feet below ground surface. No insulation or contamination is expected to be encountered with removal. Soil would simply be excavated and replaced. The metallic pipes would be recycled, while other pipe types would be disposed of at a licensed landfill.

Electrical and communication lines would be cut at the main line where the branch serving the structure begins. Electrical and communication lines have been observed predominantly overhead onsite, although some underground lines are expected. The underground lines would be removed from the ground from the cut point back to the building. The lines are expected to be plastic insulated copper or aluminum conductors. Line sizes are expected in the 0.25- to 1-inch diameter range and buried three to four feet below ground surface. Overhead lines will be cut at the main line, dropped to the ground and removed.

Overhead utility poles only serving the subject building would also be removed. Electrical and communication lines will be recycled, wood overhead utility poles would be disposed of at a licensed landfill.

Where present, steam line laterals would be cut and capped at the main line where the branch serving the structure begins. The lateral line would be removed from the ground from the cut point back to the building. The steam lines are expected to be metal pipes in the one- to two-inch diameter range and buried approximately three to four feet below ground surface. Fiberglass or asbestos insulation is expected around buried steam lines. Soil would simply be excavated and replaced. If non-insulated or covered in non-hazardous insulation, the metallic pipe would be recycled. Asbestos-insulated pipes are typically disposed of in whole pieces as asbestos waste.

It does not appear that any of the buildings are or have been serviced by septic tanks; however, wastewater management infrastructure would need to be confirmed for each building during demolition plan development. Buildings are vacant, but it is unclear whether sanitary sewer service has been tied-off in the past for any buildings, or if systems remain active.

3.6.2.2 No Action Alternative

As the BARC facility continues to age, many utilities have fallen into a state of disrepair. Overhead structures supporting electrical utilities may need to be removed to minimize health and safety risks from falling lines and poles. Underground potable water utilities in disrepair risk leaking, as well as introducing bacterial contamination into main lines from the stagnant laterals. Underground storm sewer lines of larger diameter introduce a risk of collapse migrating through soil up to a ground surface sink hole but given the small diameter of sanitary and storm sewer laterals, risk of surface sinkholes is minimal. No plans are currently proposed to make major improvements to the existing utility infrastructure at BARC under the No Action Alternative.

3.7 Transportation

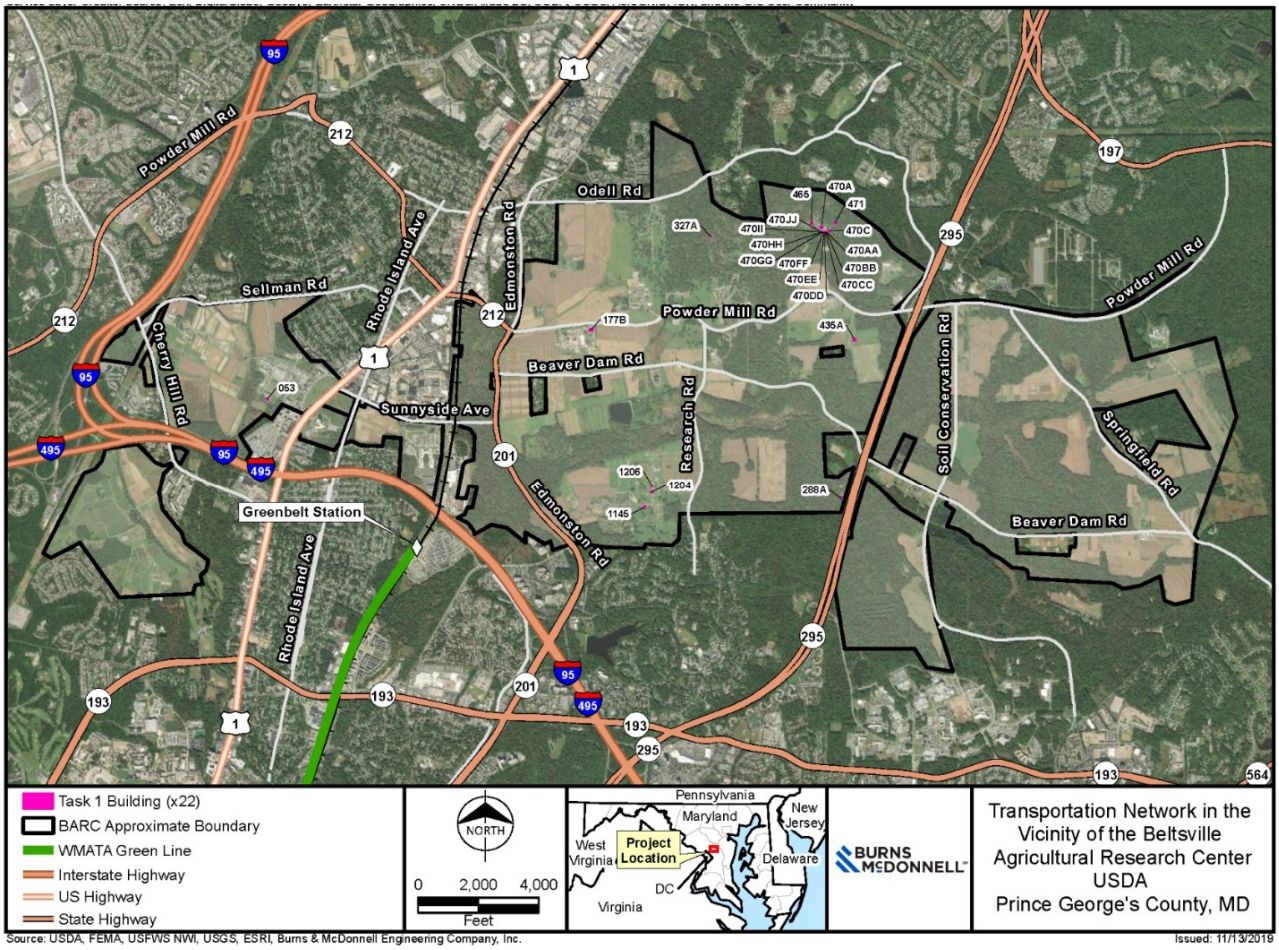
The BARC facility is approximately 15 miles (by road) northwest of Washington, DC. It is accessible from several major highways running adjacent to or through the facility, including I-94/I-495 (the Beltway), U.S. 1 (Baltimore Avenue), and MD 295 (Baltimore-Washington Parkway). Several locally major roadways provide access adjacent to and within the facility, described in Section 3.7.1. Numerous minor paved roads provide direct access to buildings and building clusters for the public and personnel. Multiple transit systems provide access directly to the BARC facility and destinations within the surrounding area. Parking is provided within most building complexes accessible to employees and visitors at no cost (USDA, 2018b).

3.7.1 Affected Environment – Transportation

The primary roads providing access to and within the BARC facility are shown in Figure 3-4 and described below generally from west to east:

- Baltimore Avenue (U.S. 1) runs generally north-south between the North Farm and the Linkage Farm, providing access to the North Farm from the west. It provides access to various BARC administrative buildings located on the North Farm and serves as the main entry point to the BARC facility.

Figure 3-4: Transportation Infrastructure Servicing BARC



- Cherry Hill Road provides access to the North and South Farms from I-495 along the western edge of the facility. Cherry Hill Road runs along the western boundary of the North Farm and intersects Sellman Road at the northwest corner of the North Farm. Sellman Road runs adjacent to the north boundary of the North Farm. To the south, Cherry Hill Road intersects Buck Lodge Road (accessible only to authorized personnel), which provides access through the South Farm.
- Edmonston Road runs north-south separating the Linkage Farm to the west from the Central Farm to the east. Numerous interior roads connect to Edmonston Road, including Sunnyside Avenue, Beaver Dam Road, Powder Mill Road, and Odell Road. Edmonston Road is one of two accesses to the 1000 Cluster, via the intersection with facility Road C (accessible only to authorized personnel).
- Sunnyside Avenue runs east-west along part of the northern boundary of the Linkage Farm between Baltimore Avenue and Edmonston Road. It connects the North, Linkage, and Central Farms. It intersects Edmonston Road just north of the Washington Metropolitan Area Transit Authority (WMATA) Greenbelt Railyard, the northern terminus of WMATA's green and yellow metrorail lines, which lies outside of the BARC facility.
- Powder Mill Road is the major east-west public roadway across the facility and provides multiple access points to the Central Farm. It bisects the Central Farm and serves as the northern boundary of the East Farm.

- Beaver Dam Road is also an east-west connector running through the Central Farm and East Farm south of Powder Mill Road. Beaver Dam Road generally serves facility personnel and is not a conduit for public thru traffic.
- Soil Conservation Road is a major north-south access road for the East Farm. It begins at its junction with Powder Mill Road to the north and runs south through the western portion of the East Farm.
- Springfield Road is the easternmost access road to the BARC Facility. It runs southeast from Powder Mill Road at the northern boundary of the East Farm through the eastern portion of the farm.

From the locally major road network described above, numerous minor roads provide direct access to BARC building clusters, individual buildings, and other facilities.

000 Cluster: Building 053 is located at the southern portion of the main facility road network on the North Farm at the terminus of a paved driveway off the southern end of 3rd Drive. It is accessible from Baltimore Avenue via South Drive to 3rd Drive. All transportation infrastructure providing access to Building 053 also provides access to other BARC buildings not proposed for demolition.

100 Cluster: Building 177B of the 100 Cluster is accessible via driveway access south of Powder Mill Road, approximately 0.5 miles east of the intersection with Edmonston Road. It runs along the eastern edge of the Dairy Complex, adjacent to a 0.4-acre paved parking area. Multiple smaller roads cross the Dairy Complex and provide secondary access to Building 177B from the west and south. All transportation infrastructure providing access to Building 177B also provides access to other BARC buildings not proposed for demolition.

200 Cluster: Building 288A is in a small, isolated group of buildings in the Hydrology Laboratory Annex of BARC's Soil Conservation Area located just west of MD 295 and south of Beaver Dam Road. Direct access is provided by a small paved facility road (accessible only to authorized personnel) that begins at Beaver Dam Road and runs south. Based on aerial imagery, no parking facilities are associated with Building 288A. All transportation infrastructure providing access to Building 288A also provides access to other BARC buildings not proposed for demolition.

300 Cluster: Building 327A is accessible via a small subnetwork of paved facility roads and driveways, with two accesses north from Powder Mill Road. Heading north from Powder Mill Road, Center Road and Entomology Road connect to several small unnamed roads, each terminating within approximately 0.7 mile of Powder Mill Road. Building 327A is located at the terminus of an unnamed road in the northwestern portion of the area serviced by this subnetwork. All transportation infrastructure providing access to Building 327A also provides access to other BARC buildings not proposed for demolition.

400 Cluster: Buildings 465, 470A, 470C 470AA-JJ, and 471 are accessible via Entomology Road, which begins at Powder Mill Road approximately 1 mile west of the intersection with MD 295 and runs north and northeast from Powder Mill Road. Entomology Road connects to a small subnetwork of paved roads and driveways providing access to the 400 Cluster. The roadway network that accesses these buildings with the 400 Cluster also provides access to other occupied buildings.

Building 435A is accessible via an unnamed paved road and connecting driveway that runs south from Powder Mill Road, approximately 0.4 mile west of the intersection with MD 295. The unnamed road and driveway also provide access to Building 434, not proposed for demolition.

1000 Cluster: Buildings 1145, 1204, and 1206 are most directly accessed from Research Road, a connector road running south from Powder Mill Road and exiting the BARC facility at the southern boundary of the Central Farm. Research Road connects to a subnetwork of small paved facility roads, via Road D, providing access to the entirety of the 1000 Cluster. All transportation infrastructure providing access to these three buildings also provides access to other occupied BARC buildings and other vacant building not proposed for demolition.

The northern terminus of the WMATA green and yellow metrorail lines (collocated) is located at the WMATA Greenbelt Railyard, south of I-495, between the intersections with Rhode Island Avenue and Cherrywood Lane, near the southern boundary of the Linkage Farm. The green and yellow metrorail lines provide access south into the Washington, DC. The Maryland Area Regional Commuter (MARC) train provides regional service to the area, with two stops outside the BARC facility, at the Greenbelt Station just south of the Linkage Farm and the Muirkirk Station north of the Central Farm (MDOT, 2019).

WMATA and the Regional Transportation Agency (RTA) of Central Maryland provide bus service near BARC and have multiple routes that cross and run adjacent to the BARC facility. These routes provide access to the Central, Linkage, and North Farms (WMATA, 2018b). The USDA also provides a limited shuttle service for BARC employees that connects to the WMATA Greenbelt Metro Station and makes stops at several BARC building locations (USDA, 2016).

3.7.2 Environmental Consequences – Transportation

3.7.2.1 Proposed Action Alternative

The Proposed Action Alternative would have no effect on the main roadway system providing access across the BARC facility. No effect would occur on the WMATA bus service or the BARC employee shuttle service that operates on BARC roadways. Similarly, no effect would occur on the off-BARC metrorail or commuter train service or infrastructure. Each project site would be evaluated to determine the extent of the existing access road, drives, and parking areas that should be removed to accommodate grading and drainage of the site without affecting access to other active/occupied buildings in the vicinity. Removal of roads and driveways supports a reduction in impervious surfaces at BARC, as required to comply with BARC's MS4 permit.

In the short term, minor effects on traffic traveling on these roads would occur due to the temporary increase in vehicles and large equipment accessing the BARC facility and travelling within the facility during demolition, debris removal, and site-restoration activities. Increased vehicle and heavy equipment traffic could cause minor disruptions to traffic flow during peak travel times. No long-term effects on localized travel or on local or regional transportation facilities would occur because of the Proposed Action. Traffic near the buildings and building clusters would continue to be primarily for minimal routine grounds maintenance. The physical condition of the existing roads (e.g., pavement) would be assessed prior to initiating project activities. Roadway maintenance would continue, and damage caused by heavy equipment would be repaired as quickly as possible.

3.7.2.2 No Action Alternative

Under the No Action Alternative, no improvements or changes to the existing on-facility or off-facility roadway networks would occur. All infrastructure would remain in place to provide access to, from, and within the facility by BARC personnel and the public.

3.8 Cultural Resources

The entire BARC facility, recorded in the Maryland Inventory of Historic Places (MIHP) as PG: 62-14, is a historic district determined eligible for inclusion in the NRHP in 1998 (see Appendix B: Figures B-1 and B-2). The period of significance for the facility and its contributing resources ranges from its inception in

1910 to its reclassification as a regional center in 1984. The Determination of Eligibility for the district states:

> *The entire 2,664-hectare (6,582-acre) Beltsville Agricultural Research Center was determined eligible for the National Register of Historic Places under Criteria A and C by the Maryland Historical Trust in a letter dated October 16, 1998. The BARC is eligible under Criterion A as an important site which reflects the development of a national center for agricultural experimentation and testing. It is the main research facility of the U.S. Department of Agriculture and is the leading and most diversified agricultural research complex in the world. Government acquisition began in 1910 and grew rapidly with the Depression-era programs of the 1930s and 1940s. Included within the complex are areas for the Beltsville Human Nutrition Research Center, the Livestock and Poultry Science Institute, the Natural Resources Institute, and Plant Sciences Institute. The diversity of the scientific research conducted at BARC has influenced many aspects of 20th century living for the farmer as well as the consumer. The history and development of the agricultural research facility reflects New Deal policies and programs. The Beltsville Agricultural Research Center is also eligible under Criterion C. Because the mission of the facility has remained constant over the years, the landscape reflects a strong level of integrity. The physical appearance of BARC was strongly influenced in the 1930s by the planning team of A.D. Taylor, landscape architect, and Delos Smith, architect. The Civilian Conservation Corps and the individual bureaus at BARC played important roles in shaping the landscape as well. Contributing elements of the landscape include major paved roads, including Powder Mill Road, minor service roads, field and research crops, pasture lands, seasonal ponds, forests, sustainable meadows, other landscape features, and buildings* (Farris, 2017a).

3.8.1 Affected Environment – Cultural Resources

The district includes 47 buildings identified on the MIHP. All of the 22 buildings proposed for demolition under the Proposed Action, listed in Table 3-6 do not contribute to the NRHP-eligible BARC Historic District (Appendix C). The buildings are discussed individually in Section 3.8.1.1.

Table 3-6: BARC Historic District Associated Resources Proposed for Demolition

Farm Location	MIHP No.	BARC Building ID	Building Name/ Reference	Year Built	Notes/NRHP Eligibility Status	NRHP Effect
North	N/A	053	Biological Greenhouse	1993	Identified as non-contributing feature of district on 1/2/2015	Concurrence with no adverse effect determination issued on 1/12/2015
Central	PG:67-42	177B	Electron Microscope Laboratory	1967	Identified as non-contributing feature of district on 1/2/2015	Concurrence with no adverse effect determination issued on 1/12/2015
Central	PG:67-43	288A	Garage, Hydrology Laboratory Annex	1979	Identified as non-contributing feature of district on 1/2/2015	Concurrence with no adverse effect determination issued on 1/12/2015
Central	N/A	327A	Storage Building	1988	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	N/A	435A	Unknown	1970	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-39	465	Headhouse with Greenhouses	1967	Identified as non-contributing feature of district on 1/2/2015	Concurrence with no adverse effect determination issued on 1/12/2015
Central	PG:62-40	470A	Laboratory Headhouse and Entomology Greenhouses	1968	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-65	470C	Garage	1984	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-41	470AA	Entomology Greenhouse	1967	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-41	470BB	Entomology Greenhouse	1966	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-41	470CC	Entomology Greenhouse	1967	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-41	470DD	Entomology Greenhouse	1967	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-41	470EE	Entomology Greenhouse	1967	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15

Table 3-7: BARC Historic District Associated Resources Proposed for Demolition, continued

Farm Location	MIHP No.	BARC Building ID	Building Name/ Reference	Year Built	Notes/NRHP Eligibility Status	NRHP Effect
Central	**PG:62-41**	**470FF**	**Entomology Greenhouse**	**1967**	**Identified as non-contributing feature of district on 9/28/2015**	**Concurrence with no adverse effect determination issued on 10/1/15**
Central	PG:62-41	470GG	Entomology Greenhouse	1967	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-41	470HH	Entomology Greenhouse	1967	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-41	470II	Entomology Greenhouse	1967	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-41	470JJ	Entomology Greenhouse	1966	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	PG:62-50	471	Garage	1935	Identified as non-contributing feature of district on 9/28/2015	Concurrence with no adverse effect determination issued on 10/1/15
Central	N/A	1145	Animal Building	1969	Identified as non-contributing feature of district on 1/2/2015	Concurrence with no adverse effect determination issued on 1/12/2015
Central	N/A	1204	Animal Pen	1972	Identified as non-contributing feature of district on 1/2/2015	Concurrence with no adverse effect determination issued on 1/12/2015
Central	N/A	1206	Animal Building	1972	Identified as non-contributing feature of district on 1/2/2015	Concurrence with no adverse effect determination issued on 1/12/2015

The review of Maryland's Cultural Resources Information System *MEDUSA* Identified 36 previously recorded archeological sites and 27 previously conducted cultural resources surveys within the BARC boundary (Table 3-8 and Table 3-10; Appendix B: Figure B-2). Only one previously recorded site is within 1,000 feet of a building or building cluster proposed for demolition. Archeological resources are discussed individually in Section 3.8.1.2.

Table 3-8: Previously Recorded Archeological Sites within BARC

Trinomial	Site Type	Determination of Eligibility	Within 1,000 feet of building to be demolished
18PR83	Archaic short-term resource procurement	Undetermined	No
18PR84	Archaic short-term resource procurement	Undetermined	No
18PR85	Archaic lithic scatter	Undetermined	No
18PR86	Late Woodland short-term resource procurement,19th century unknown	Undetermined	No
18PR88	Archaic lithic scatter	Undetermined	No
18PR89	Early Archaic, Late Archaic, Middle Woodland short-term resource procurement	Undetermined	No
18PR90	Late Woodland short-term camp; Late 19th century possible structure	Undetermined	No
18PR91	Prehistoric lithic scatter	Undetermined	No
18PR92	Early Archaic, Late Archaic, Middle Woodland, Late Woodland short-term resource procurement camp	Undetermined	No
18PR94	Early and Late Archaic base camp	Eligible	No
18PR95	Early Archaic short-term resource procurement	Undetermined	No
18PR111	Short-term resource procurement and quartzite workshop, possibly Archaic	Undetermined	No
18PR113	Prehistoric short-term resource procurement	Undetermined	No
18PR114	Short-term resource procurement, possibly Archaic	Undetermined	No
18PR115	Prehistoric lithic scatter	Not eligible	No
18PR208	Possibly Middle Woodland short-term resource procurement camp	Undetermined	No
18PR361	Late Archaic, Early Woodland base camp	Undetermined	No
18PR394	Early 19th century farmstead and cemetery	Undetermined	No
18PR411	Early Archaic, Late Archaic, Early Woodland base camp	Not eligible	No
18PR423	Prehistoric lithic scatter	Not eligible	No
18PR424	19th to early 20th century farmstead	Not eligible	No
18PR425	Late 19th to early 20th century farmstead	Not eligible	No
18PR426	Late 19th century family cemetery	Not eligible	No
18PR455	18th century artifact concentration	Undetermined	No
18PR456	Early 19th century possible structure, artifact concentration	Not eligible	Yes
18PR545	Early, Middle & Late Archaic and Early, Middle, and Late Woodland base & short-term camps	Not eligible	No
18PR546	Middle & Late Archaic and Early, Middle, and Late Woodland base camp	Not eligible	No
18PR547	19th-Early 20th century artifact concentration	Not eligible	No
18PR997	Portion of Beltsville C.C.C. Camp A-4, c. 1935-1942	Undetermined	No
18PR1021	Late Archaic short-term camp	Not eligible	No
18PR1022	Prehistoric lithic scatter	Not eligible	No
18PR1024	Middle Early Woodland to Middle Woodland short-term tool manufacture and maintenance area	Eligible	No

Table 3-9: Previously Recorded Archeological Sites within BARC, continued

Trinomial	Site Type	Determination of Eligibility	Within 1,000 feet of building to be demolished
18PR1041	Early-Mid 20th century Civilian Conservation Corp (CCC) Camp	Not eligible	No
18PR1042	Prehistoric lithic scatter	Not eligible	No
18PR1127	Prehistoric isolated find; 18th-19th century artifact scatter	Undetermined	No

Table 3-10: Previously Conducted Cultural Resources Investigations within BARC

Call Number	Project Name	Date	Consultant	Agency
AN46	Baltimore-Washington Parkway from the Washington, D.C. Line to the Baltimore City Line	1978	Maryland Geological Survey, Division of Archeology	MDOT, SHA, Federal Highway
MD1V2	Volume 2: Western Shore	1981	Maryland Historical Trust, Annapolis, MD	MDOT, SHA, Federal Highway
MO37	Inter-County Connector Alignments	1980	MD Geological Survey, Division of Archeology	MDOT, SHA, Federal Highway Administration
MO37B	Inter-County Connector	1983	MD Geological Survey, Division of Archeology	MD State Highway Administration
MO236	I-495 Capital Beltway Mainline project and Stormwater Management Ponds	2005	Archeological & Historical Consultants, Inc	Maryland State Highway Administration
PR12	12 Miles of Proposed Water Main in Prince George's County	1978	Department of Anthropology, Catholic University	Washington Suburban Sanitary Commission
PR77	Agricultural Research Center	1984	Mid-Atlantic Archaeological Research, Inc., Newark, DE	USDA Agricultural Research Station - Beltsville, MD
PR83	Greenbelt Storage Yard	1988	The Cultural Resource Group, Louis Berger & Associates, Inc.	Wallace, Roberts and Todd, Philadelphia, PA
PR106	Historic Properties Review of the National Plant Materials Center	1990	John Milner Associates, Inc.	USDA, Soil Conservation Service
PR118	Proposed Site of the Southern Maryland Courthouse	1991	Engineering-Science, Inc.	U.S. General Services Administration & Leo Daly
PR132	Beltsville Plant Material Center	1991	Soil Conservation Service	USDA - Robert J. Klumpe, State Conservationist
PR141	USDA Office/Research Facility	1992	Mid-Atlantic Archaeological Research, Inc., Newark, DE	GNM & Associates, Inc., Silver Spring, MD
PR171	Anacostia Tributaries Trail from Lakeland To Cherry Hill Road	1994	M-NCPPC, History Division	MDOT, SHA, Federal Highway Administration
PR172	USDA BARC-East, Water Systems Improvement	1994	Mid-Atlantic Archaeological Research, Inc., Newark, DE	Macguire Group, Inc., Providence, RI

Table 3-11: Previously Conducted Cultural Resources Investigations within BARC, continued

Call Number	Project Name	Date	Consultant	Agency
PR217	Edmonston Road Improvements for the Beltsville Office Facility	1997	R. Christopher Goodwin & Associates, Inc.	GNM & Associates, Inc.
PR244	Sewer Improvement project	1999	John Milner Associates, Inc.	ATC Associates, Inc.
PR245	NASA Goddard Space Flight Center	1999	KCI Technologies, Inc.	NASA Goddard Space
PR271	Woodrow Wilson Bridge project	2001	Potomac Crossing Consultants	Federal Highway Administration, VA DoT, DC DoPW, MD SHA
PR276	NASA Goddard Space Flight Center	2002	EAC/Archaeology	National Aeronautical and Space Administration
PR285	U.S. Route 1/Maryland Route 201 Planning Study	2006	The Louis Berger Group, Inc.	Maryland State Highway
PR290	I-95 Greenbelt Metro Interchange	2004	TRC Garrow Associates, Inc and Legacy Research Associates	MDOT:SHA
PR494	U.S. 1/MD 201 Planning Study Cherrywood Lane to N. of Contee Road	2008	McCormick Taylor, Inc.	SHA
PR573	Henry A. Wallace Beltsville Agricultural Research Center CERCLA Remediation project	2011	Greenhorne & O'Mara, Inc.	BMT Designers and Planners, Inc.
PR580	PB-85, and Phase II Archeological Investigation of the BARC Floodplain A Site (18PR1024)	2012	Rummel, Klepper & Kahl	State Highway Administration
PR587	Reforestation Area 22 (Sites 4, 8, 13 and 15), Intercounty Connector project	2012	Rummel, Klepper & Kahl	Maryland State Highway
PR623	Stream and Wetland Restoration project	2015	Stantec Consulting Services, Inc.	BMT Designers and Planners, Inc.

3.8.1.1 Non-Contributing Features of the BARC Historic District NRHP Eligible Buildings

All 22 buildings proposed for demolition were identified as non-contributing features of the BARC Historic District between 2015 and 2019. MHT concurred with these recommendations and determined that their demolition would not adversely affect historic properties under Section 106 of the National Historic Preservation Act (NHP) (Appendix C).

Building 053 was constructed circa 1996 and the only structure proposed for demolition on the North Farm, stands alone and is of unknown historic use (Appendix A: Photos 01 through 04; Appendix B: Figure B-1.3). The building is in a state of disrepair. The building was identified as a non-contributing feature of the district in January 2015. MHT concurred with this determination in January 2019 (Appendix C).

Building 177B (Electron Microscope Laboratory) was constructed in 1967 and was historically part of a large cluster of 76 buildings used to "conduct research on dairy cow breeding, diseases, and nutrition to increase milk production" known as the "Dairy Complex" (Farris, 2017b) (Appendix A: Photos 05 through 08; Appendix B: Figure B-1.4). The building was identified as a non-contributing feature of the district in January of 2015. MHT concurred with this determination the same month (Appendix C).

Building 288A (Hydrology Laboratory Annex) was constructed as a two-car concrete block garage built in 1979 (Appendix B: Figure B-1.8). The building was not accessible during the current site visit. The building was identified as a non-contributing feature of the district in January of 2015. MHT concurred with this determination the same month (Appendix C).

Building 327A was constructed in 1988. It has an unknown historical use but was likely used for storage (Appendix A: Photos 09 through 12; Appendix B: Figure B-1.1). It is currently abandoned and heavily obscured by vegetation. The building was identified as a non-contributing feature of the district in September of 2015. MHT concurred with this determination in October of 2015 (Appendix C).

Building 435A was constructed in 1970. It is a small one-story wood-framed building currently used as an animal shelter (Appendix A: Photos 13 and 14; Appendix B: Figure B-1.5). The building was identified as a non-contributing feature of the district in September of 2015. MHT concurred with this determination in October of 2015 (Appendix C).

Building 465 (Headhouse with Greenhouses) is located at the Entomology Research Division in the Central Farm of BARC (Appendix A: Photos 15 through 18; Appendix B: Figure B-1.2). It was constructed in 1967. The building was identified as a non-contributing feature of the district in January of 2015. MHT concurred with this determination in January 2019 (Appendix C).

Building 470A (Laboratory Headhouse with Greenhouses) was constructed between 1961 and 1962 with a second greenhouse added in 1968 (Appendix A: Photos 19 through 22; Appendix B: Figure B-1.2). The building was identified as a non-contributing feature of the district in September of 2015. MHT concurred with this determination in October of 2015 (Appendix C).

Buildings 470AA through JJ (Greenhouses) are also associated with the Entomology Research Division (Appendix A: Photos 26 through 29; Appendix B: Figure B-1.2). The ten adjacent and identical greenhouses were built in 1967. The buildings were identified as a non-contributing feature of the district in September of 2015. MHT concurred with this determination in October of 2015 (Appendix C).

Building 470C (Garage) was constructed in 1984 and used a garage (Appendix A: Photos 23 through 25; Appendix B: Figure B-1.2). The building was identified as a non-contributing feature of the district in September of 2015. MHT determined it not NRHP-eligible in July 2018 (Appendix C).

Building 471 was constructed in 1935 and used as a garage (Appendix A: Photos 30 through 33; Appendix B: Figure B-1.2). The building has collapsed since its original recordation in 1998. The building was identified as a non-contributing feature of the district in September of 2015. MHT concurred with this determination in October of 2015 (Appendix C).

Building 1145 was constructed in 1969 and has an unknown historic use (Appendix A: Photos 34 through 37; Appendix B: Figure B-1.7). The building was identified as a non-contributing feature of the district in January of 2015. MHT concurred with this determination in 2019 (Appendix C).

Building 1204 was constructed in 1972 and has an unknown historic use (Appendix A: Photos 38 through 41; Appendix B: Figure B-1.6). The building was identified as a non-contributing feature of the district in January of 2015. MHT concurred with this determination in 2019 (Appendix C).

Building 1206 was constructed in 1972 and has an unknown historic use but is currently used for animal quarantine (Appendix A: Photos 42 through 45; Appendix B: Figure B-1.6). The building was identified as a non-contributing feature of the district in January of 2015. MHT concurred with this determination 2019 (Appendix C).

3.8.1.2 Archeological Resources

Of the previously recorded archeological sites only one, 18PR456, is located approximately 800 feet east-northeast of Building 177B and is the remains of an early nineteenth century building or structure and associated historic-period artifact scatter. MHT determined Site 18PR456 is ineligible for NRHP inclusion.

Of the remaining 34 archeological sites, 25 are prehistoric, eight are historic-age, and one has both prehistoric and historic-age components (see Appendix B, Figures B-2.1 through B-2.10). Two sites have been determined eligible for NRHP inclusion, 13 have been determined ineligible, and 19 have unknown/undetermined eligibility. Because of the distance of the remaining archeological sites from the buildings proposed for demolition, the Proposed Action does not appear to have potential to adversely affect any known, NRHP-eligible archeological sites. However, the review of *MEDUSA* indicated portions of the BARC have not been previously surveyed for archeological resources, and a potential exists for unidentified prehistoric and historic-age archeological sites. Archeological survey of previously unevaluated portions of the facility may be required to fulfill USDA's obligations under Section 106 if the areas are determined to be within the area of potential effects (APEs) for demolition and regrading activities.

3.8.2 Environmental Consequences – Cultural Resources

3.8.2.1 Proposed Action Alternative

Under the Proposed Action Alternative, each of the 22 BARC buildings would be demolished in their entirety, including all associated systems and utility infrastructure above and below ground.

Buildings Determined Ineligible for NRHP Inclusion – As the subject buildings were previously determined ineligible for NRHP inclusion and do not contribute to the NRHP-eligible BARC Historic District, no further consultation is anticipated under Section 106. Their removal would not adversely affect the district; however, once demolition plans are finalized, USDA will determine if proposed construction activities associated with their removal has the potential to affect other historic properties. If potential effects are identified, any potential adverse effect would be addressed through ongoing consultation with MHT.

Archeological Resources – As the APE is currently limited to the footprint and immediate vicinity of the individual building or building cluster to be demolished, direct impacts to archeological resources are not anticipated. However, as demolition plans are formalized and areas within the district subject to direct

impacts from demolition and construction activities are identified, USDA will coordinate with the State Historic Preservation Office (SHPO) to determine appropriate APEs and identification methods as required to comply with Section 106.

3.8.2.2 No Action Alternative

Under the No Action Alternative, the buildings would remain as they are today and continue to pose a substantial safety, security, and maintenance risk to ongoing services at BARC. The buildings would fall into a greater state of disrepair, eventually collapsing and requiring removal.

3.9 Land Use

The BARC facility has been in use by the USDA as an agricultural and research center since it was purchased by the agency in 1910. In the 1930s, the CCC completed extensive land improvement and construction projects on the property. Over time, all of USDA's research facilities previously located in Bethesda, Maryland; Arlington, Virginia; and Washington, DC were transferred to this site. By 1942, the facility was known as BARC and was, and continues to be, USDA-ARS's primary research facility (USDA, 2018b). ARS's greatest concentration of agricultural research programs nationally are housed at the BARC facility. The general land use at BARC has remained consistent throughout its history (USDA, 1996b).

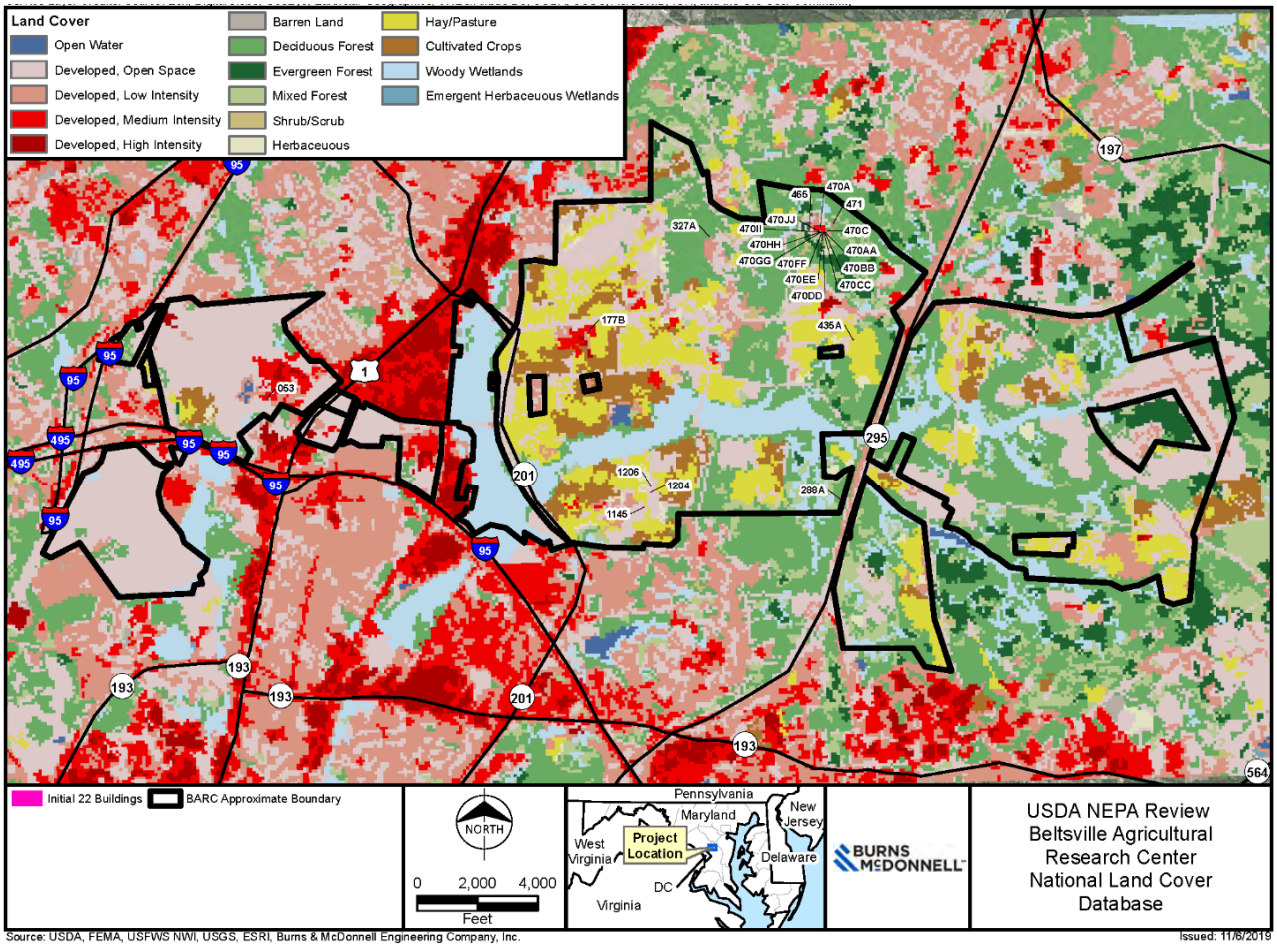
The dominant land cover of the BARC facility consists of crop and pasture lands, forests, and wetlands. Developed areas including buildings and manmade structures account for approximately 6.5 percent of the total land cover. Figure 3-5 shows the land cover classifications of the BARC facility listed in Table 3-12 (MRLC, 2016).

Table 3-12: BARC Facility Land Cover[(a)]

Land Cover Classification	Acres	Percent
Developed, Open Space	2,017.6	31.2
Forested	1,894.8	29.3
Hay/Pasture	888.6	13.7
Wetland	789.1	12.2
Cultivated Crops	384.8	5.9
Developed, Low Intensity	280.8	4.3
Developed, Medium to High Intensity	140.9	2.2
Undeveloped Herbaceous or Barren Land	62.1	1.0
Open Water	11.8	0.2

(a) MRLC (2016)

Figure 3-5: BARC Land Cover



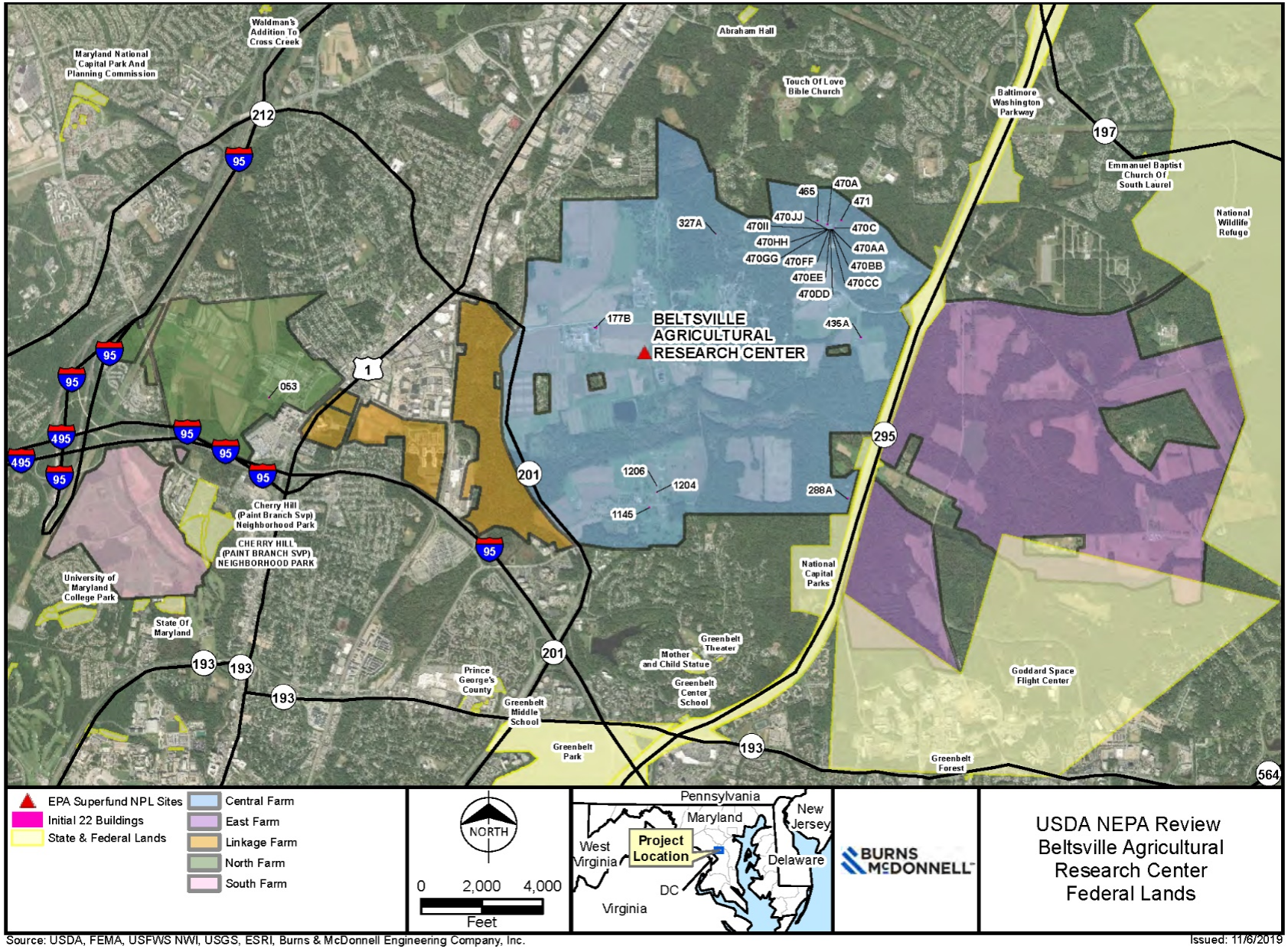
Current zoning of the BARC facility is largely designated as reserved open Space (R-O-S) for over 99 percent of the facility area. Small areas, less than one percent each, are zoned as open space (O-S) and rural residential (R-R) (USDA, 2018b). The Prince George's County Code of Ordinances defines the purpose of the R-O-S zoning designation to be encouragement of protection of large areas of open space, trees, and agriculture and to protect scenic and environmentally sensitive areas. It allows for non-intensive or passive recreational uses, and a limited range of public and agricultural uses. The purpose of the O-S zoning designation is to allow for low-density development and appropriate use of natural resources, while preserving the ecological integrity of the area. The R-R zoning designation is intended to allow for appropriate planning and expansion of one-unit residential lots while maintaining the preservation of open spaces and trees to the extent possible (Prince George's County Code of Ordinances, 2019). The current land uses and activities of the BARC facility are in alignment with current zoning designations.

3.9.1 Public and Federal Lands

Multiple Federal lands and public recreational facilities occur directly adjacent to the BARC facility, and additional lands and facilities in the region surrounding BARC. Figure 3-6 shows the locations of the public and Federal lands and recreational facilities within the vicinity of BARC listed below:

- **Patuxent Research Refuge:** The Patuxent Research Refuge, managed by the USFWS and the only national wildlife refuge established to support wildlife research, is located adjacent to the eastern boundary of the East Farm. It was established in 1936 and has grown from the original

Figure 3-6: Federal Lands and Recreational Facilities



Source: USDA, FEMA, USFWS NWI, USGS, ESRI, Burns & McDonnell Engineering Company, Inc.

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- 2,670 acres to the present size of 12,840 acres, encompassing land formerly managed by the Department of Agriculture and Department of Defense (USFWS, 2019e).
- **Goddard Space Flight Center:** Goddard Space Flight Center is located adjacent to the southern boundary of the East Farm. Established in 1959, it is managed by the National Aeronautics and Space Administration (NASA) and is the agency's first and largest space research center (NASA, 2019).
- **Baltimore-Washington Parkway:** The Baltimore-Washington Parkway is a 29-mile highway connecting Baltimore, Maryland and Washington, DC. It is managed by the National Park Service (NPS) and has been in operation since 1954. A segment of the parkway runs between the Central and East Farms (NPS, 2017).
- **Cherry Hill Neighborhood Park:** Cherry Hill Neighborhood Park is located adjacent to the eastern boundary of the South Farm, just south of I-495. It is a small local community park that includes a baseball field, basketball court, and playground.
- **City of Greenbelt Observatory:** The City of Greenbelt Observatory is a small local community observatory utilized primarily by residents and astronomy hobbyists. It is located across MD 295 from the southwestern portion of the East Farm.
- **University of Maryland Astronomy Observatory:** The observatory is a teaching and research facility and allows public access at designated times. The observatory and lecture hall were built in 1963 (UMD, 2019).

3.9.1 Affected Environment – Land Use

Currently, each of the buildings proposed for demolition is vacant, abandoned, or collapsed. Each building previously supported agricultural and research activities at BARC, either directly by housing laboratory and office facilities, or indirectly through use as garages or other storage facilities. The following descriptions provide a summary of the identified land uses and land cover at each building site or building cluster and the immediately surrounding areas (MRLC, 2016).

000 Cluster: Building 053 sits at the southern edge of the largest medium to high density developed area within the five BARC farms. Wooded areas lie to the west and south, developed areas to the north and east.

100 Cluster: Building 177B is at the eastern edge of the Dairy Complex. It sits within a small area identified as medium intensity development, surrounded by larger areas of pasture and cultivated crops.

200 Cluster: Building 288A is part of a small cluster of buildings located in a wooded area. Based on aerial mapping, several buildings are located directly adjacent to Building 288A, with a water tower approximately 320 feet to the north. The area is surrounded by native forest. A narrow paved road provides access to these structures; although the site was not accessible in October 2019.

300 Cluster: Building 327A sits in an area of mixed low intensity development and developed open space. A subnetwork of paved roads provides access to several buildings within the 300 Cluster. Building 327A sits at the edge of the developed area and a larger undeveloped forested area. The building itself is largely overgrown and surrounded by woody vegetation.

400 Cluster: Buildings 465, 470A, 470C 470AA-JJ, and 471 are part of a small, medium intensity developed area, the Entomology Research Division, surrounded by a large wooded area. Buildings 465, 470A, and 470AA-JJ are in more sparsely vegetated areas accessed by paved

roads. Buildings 470C and 471 are removed from the other buildings and set back into an area of more mature forest cover.

Building 435A sits within an area identified as pasture or hayfield. It is located within a large, open area maintained for livestock and other agricultural uses.

1000 Cluster: Buildings 1145, 1204, and 1206 sit within an area of developed open space, part of a larger mosaic of open areas identified as open developed, cropland, and pasture or hayfield. The 1000 Cluster was previously used for research activities by the USDAs Bureau of Animal Industry (BAI) for various research activities. Building 1145 appears currently to be used for equipment storage purposes; the previous use is unknown. Building 1204 is currently unused but the previous use is unknown. Building 1206 was previously used as an animal quarantine facility and is currently unused.

3.9.2 Environmental Consequences – Land Use

3.9.2.1 Proposed Action Alternative

Implementation of the Proposed Action Alternative would result in the removal of vacant and deteriorating buildings once used to support various research programs at BARC. Removing these buildings, their supporting infrastructure, and access roads and parking areas would convert small pockets of previous development to open undeveloped lawn. USDA-ARS would determine which areas would be candidates for redevelopment and which could be allowed to revert to native forest or meadow depending on location and surrounding dominant cover type. The Proposed Action Alternative would result in no direct effects on the public and Federal lands located adjacent to or near the BARC facility.

3.9.2.2 No Action Alternative

Under the No Action Alternative, no changes in land use or land cover would occur. The buildings would not be removed and many eventually would collapse and their sites would be colonized by invasive and native species.

3.10 Socioeconomic Resources

3.10.1 Affected Environment – Socioeconomic Resources

During 2018, BARC employed approximately 540 people, including scientists, professional staff, administrative and facilities support, and visiting scientists and students (USDA, 2018b). This workforce represents a relatively small portion of the 2018 Prince George's County Maryland estimated population of 909,308 (U.S. Census Bureau [USCB], 2018) and 2018 average estimated labor force of 504,423. (U.S. Department of Labor, Bureau of Statistics, 2019).

The population of Maryland increased by 4.7 percent from 2010 to 2018. The population growth rates of Prince George's County and Beltsville were higher than the Statewide average over the same period, at 5.3 percent and 6.7 percent, respectively. However, the population of Prince George's County is projected to grow at an average annual rate of 0.4 percent from 2018 to 2030, slower than the projected State population growth rate of 0.7 percent annually over that same period.

3.10.1.1 Environmental Justice

EO 12898, *Federal Action to Address Environmental Justice in Minority and Low-Income Populations*, was passed to focus the attention of Federal agencies on human health and environmental conditions in minority and low-income communities. Environmental justice analyses identify disproportionate placement of high and adverse environmental or health effects from proposed Federal actions on minority or low-income populations and identify alternatives that could mitigate such effects.

The Proposed Action would occur completely within the interior of the BARC facility, in areas void of residential development and of the presence of low-income or minority populations; therefore, further analysis under this category is not warranted.

3.10.1.2 Protection of Children

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires Federal agencies to evaluate any Federal action to determine whether the action would disproportionately affect children. Children differ biologically and behaviorally from adults in ways that often make them more vulnerable to environmental health and safety risks during their development and may increase their exposure and susceptibility to pollutants (EPA 2019c).

The Proposed Action would occur completely within the interior of the BARC facility, in areas void of residential developments with facilities that support children's activities such as schools, daycare facilities, hospitals, parks, and playgrounds; therefore, further analysis under this category is not warranted.

3.10.2 Environmental Consequences – Socioeconomic Resources

3.10.2.1 Proposed Action Alternative

Under the Proposed Action Alternative, short-term negligible beneficial economic impacts would occur as a result of a temporary increase in construction workers hired and the local purchasing of construction supplies. The Proposed Action would not substantially affect local and regional sales volumes, income, employment, or the local tax base. Additionally, because the Proposed Action Alternative would occur entirely within the interior of the BARC facility, the Proposed Action Alternative would not result in any increase in population, would have no effect on public services (e.g., fire protection, police enforcement, medical services, education, etc.), and would not directly, indirectly, or disproportionately affect low income, minority, or child populations. Overall impacts to socioeconomics and environmental justice would be negligible and further analysis has been dismissed.

3.10.2.2 No Action Alternative

Under the No Action Alternative, employment levels at the BARC facility would remain largely unchanged and all supporting services would operate as normal.

3.11 Human Health and Safety

Many buildings are in such advanced states of disrepair that they need to be demolished and removed to minimize health and safety risks. Building materials currently exposed that present a human exposure risk include but are not limited to flaking lead-based paint, friable asbestos insulation, and mold. Other hazardous materials are present in and around abandoned buildings that may be released to the environment as their containers deteriorate and leak. Hazardous materials present that may be leaking or may leak in the future are mercury containing thermostats and lights, PCB containing electrical transformers and lighting ballasts, fuel, heating oil, pesticides, refrigerants in air-conditioning equipment, and other undocumented chemicals.

3.11.1 Affected Environment – Human Health and Safety

000 Cluster: Building 053, is a single-story masonry head house with two bays of greenhouses. The building sits on a concrete slab on grade. Climate control includes steam heat and split air conditioning units. Building utilities include steam, water, and electricity. Based on a Regulated Waste Inventory study completed by Tidewater in 2015 regulated materials found include electrical waste in the form of electrical cabinets, computers, monitors, and a printer; refrigerants in 13 air conditioning units; batteries in exit signs; and mercury and PCBs present in fluorescent lights and ballasts. The regulated materials survey did not test the building steam line thermal insulation, which is suspected of containing asbestos material.

100 Cluster: Building 177B was historically used as an electron microscope laboratory. The building is single story with wood siding and asphalt shingled roof, concrete masonry unit (CMU) knee wall, and slab on-grade. This building is situated within the paved Dairy Complex on the Central Farm. It has three-phase power, with three wet power transformers serving just this building, sitting adjacent to the building. The climate control includes steam heat and a single large split air conditioning unit. Building utilities include steam, water, and electricity. A Regulated Waste Inventory has not been completed for this building. Regulated materials expected to be present include electrical waste in the form of electrical cabinets, computers, and monitors; refrigerants in the air conditioning units; batteries in exit signs; and mercury and PCBs present in fluorescent lights and ballasts.

200 Cluster: Building 288A was historically used as a garage and later converted to a hydrology lab annex. The building is a single-story, two-car garage, when converted to a lab annex, the interior walls were finished in drywall and garage door openings were blocked off. The building construction is CMU block walls with an asphalt shingle roof. A regulated waste inventory has not been completed for this building. Regulated materials expected to be present include lead-based paint; mercury and PCBs present in fluorescent lights and ballasts; electrical waste in the form of electrical cabinets, microscopes, computers, and monitors; refrigerants in air conditioning units; and miscellaneous laboratory chemicals.

300 Cluster: Building 327A has an unknown historical use. The building is a single-story, single-room storage shed. A nameplate on the door suggests restricted access. The building construction appears to be CMU block walls with stucco exterior, and asphalt shingle roof. A regulated waste inventory has not been completed for this building. Regulated materials expected to be present include lead-based paint.

400 Cluster: Building 435A is a small single-story wood-framed building currently used as an animal shelter. The structure is covered in corrugated metal siding with a corrugated metal roof. The structure rests on a concrete slab. Only electricity is present, and the structure is not heated. A regulated waste inventory has not been completed for this building. Lead-based paint is the primary regulated material presumed to be present.

Building 465 was historically used as an electron microscope laboratory with attached greenhouses. The building is single story with brick siding over CMU walls. The building is concrete slab on grade with a flat built-up roof. This building is situated within the entomology complex on the Central Farm. Building utilities include steam, water, and electricity. Based on October 2019 field observations and a Regulated Waste Inventory study completed by Tidewater in 2015, regulated materials found include electrical waste in the form of electrical cabinets, microscopes, computers, and monitors; refrigerants in air conditioning units; batteries in exit signs; mercury and PCBs present in fluorescent lights and ballasts, and asbestos containing thermal insulation on piping, lab counter tops, floor tiles, and mastic holding the floor tiles to the subfloor. The building appears to have a wet pad-mount style transformer adjacent to the structure, which is expected to be oil containing, and the oil may contain PCBs.

Buildings 470AA through 470JJ are greenhouses in the entomology area. Greenhouses are galvanized steel-frame and glass with CMU knee walls. Building utilities include steam, water, and electricity.

Building 470A includes a boiler, presumably used to heat the headhouse and greenhouses. A regulated waste inventory has not been completed for this building. Regulated materials expected to be present include, asbestos steam pipe insulation; lead-based paint; electrical waste in the form of electrical cabinets, computers, and monitors; refrigerants in air conditioning units; batteries in exit signs; and mercury and PCBs present in fluorescent lights and ballasts.

Building 470C was historically used as a garage. The building is single-story wood framing with corrugated metal siding and roofing. The building sits on a concrete slab on grade. The climate

control includes steam heat and split air conditioning units. Building utilities include steam, water, and electricity. A regulated waste inventory has not been completed for this building. Regulated materials expected to be present include asbestos steam pipe insulation; lead-based paint; electrical waste in the form of electrical cabinets; and mercury and PCBs present in fluorescent lights and ballasts.

Building 471 was historically used as a garage or for storage. The building is single-story wood framing with wood siding and asphalt shingle roofing. The building has an earthen floor and has collapsed. It has electrical wiring but is no longer connected to the grid. Lead-based paint is the primary regulated materials presumed to be present.

1000 Cluster: Building 1145 has an unknown historic use. The building, which is a single-story structure with CMU walls and corrugated metal roofing, It sits on a concrete slab on grade. Building utilities include water and electricity. A regulated waste inventory has not been completed for this building. Regulated materials expected to be present include lead-based paint; electrical waste in the form of electrical cabinets; and mercury and PCBs present in fluorescent lights, ballasts, and thermostats.

Building 1204 has an unknown historic use. The building is a single-story structure with CMU walls and corrugated metal roofing, sitting on a concrete slab on grade. Building utilities include water and electricity. Based on the October 2019 field observations and a Regulated Waste Inventory study completed by Tidewater in 2015, regulated materials found include asbestos containing caulk in window and door casings. Regulated materials expected to be present include lead-based paint; electrical waste in the form of electrical cabinets; mercury and PCBs present in fluorescent lights, ballasts, and thermostats; and refrigerants from the AC unit.

Building1206 has an unknown historic use. The building is single-story wood framed structure with metal siding and roofing comprised of corrugated metal over asphalt shingles. The building sits on a concrete slab on grade. Building utilities include water and electricity. A regulated waste inventory has not been completed for this building. Regulated materials expected to be present include lead-based paint; electrical waste in the form of electrical cabinets; and mercury and PCBs present in fluorescent lights, ballasts, and thermostats.

3.11.2 Environmental Consequences – Human Health and Safety

3.11.2.1 Proposed Action Alternative

Under the Proposed Action Alternative, each structure proposed for demolition would be assessed by appropriately licensed professionals, and demolition plans developed accordingly after completion of the assessment. Hazardous materials identified at each building site during the assessments would be handled and disposed of according to applicable Federal and State regulations. The following descriptions identify hazardous materials that may be present, based on previously completed assessments and a preliminary site review, and provides a summary of applicable regulations and proper handling and disposal for each material type. Depending on the type of material present, exposure by unprotected workers will be minimized and all appropriate precautions will be taken to protect workers prior to investigating each site and during demolition.

***Used Oils*:** Used oils will be drained and collected from oil-containing equipment and tanks. Oils will be characterized for disposal or recycling based on their constituents. If used oil is characterized as non-hazardous, containers will be labeled as “Non-Hazardous Waste- Used Oil” and recycled at a licensed facility. Used oil recycling is governed under 40 CFR 279 and Code of Maryland Regulations 26.13.10.

***Polychlorinated Biphenyls (PCBs)*:** PCB oil found in liquid form such as fluorescent light ballasts will be collected prior to demolition, processed at a licensed recycling facility to remove the oils, and then the oils will be destroyed by incineration at a licensed disposal facility. PCBs found in bulk product form such as a

minor constituent of paints or caulks at less than 50 mg/kg concentration will be disposed of as non-hazardous solid waste; these products are considered an excluded product under 40 CFR 761.3. Oils and bulk materials having concentrations of PCBs greater than or equal to 50 mg/kg must be disposed in accordance with the Toxic Substances Control Act (TSCA). PCB oil and bulk product disposal is governed under 40 CFR 761.6. Disposal options include: an EPA-approved incinerator, an EPA-approved chemical waste landfill, or an EPA or State-permitted Resource Conservation Recovery Act (RCRA) landfill. Maryland follows Federal regulations for handling, marking, treating, storing, and disposing of PCBs under 40 CFR 761. In the State of Maryland, PCB containing lighting ballasts are regulated as universal waste, discussed below.

***Asbestos*:** Asbestos-containing materials will be removed by a Maryland-licensed asbestos abatement contractor prior to the start of demolition activity that may disturb them. A Maryland-accredited consultant will be contracted to provide oversight and air monitoring during asbestos abatement. Daily and final air clearance monitoring will be conducted. Asbestos-containing materials will be placed in lined, sealed, impermeable, and labeled containers for disposal. Asbestos-containing materials will be disposed of at a licensed disposal facility.

***Lead-based Paint*:** All demolition activities will incorporate lead Toxicity Characteristic Leaching Procedure (TCLP) testing of the construction debris prior to disposal in accordance with the RCRA. Waste exceeding 5 mg/L TCLP for lead will be handled as hazardous, waste with less than 5 mg/L will be handled as non-hazardous.

***Refrigerants*:** Chlorofluorocarbons (CFCs) and other refrigerant gases will be removed and documented per US Code title 42 subsection 7671 (Clean Air Act), and 40 CFR Part 82, Protection of Stratospheric Ozone. Removed CFCs will be collected in a labeled gas cylinder for transport and recycling at a licensed recycling facility. Refrigerant management will be conducted by an EPA-certified refrigerant reclaimer.

***Universal Wastes*:** Universal wastes are a subset of hazardous wastes, which have less-stringent management requirements. Universal wastes handling and disposal are regulated under 40 CFR 273, and Code of Maryland Regulations 26.13. Universal wastes occur at the facility in the form of light bulbs, mercury containing equipment, batteries, and pesticides. Light bulbs will be removed intact and placed in labeled containers for recycling at a licensed universal waste facility. Batteries will be sorted by class (i.e., lead acid, nickel, cadmium, lithium, etc.) and packaged in labeled containers for recycling at a licensed universal waste facility. Mercury containing devices (ampoules) will be removed intact and placed into Department of Transportation (DOT)-approved containers. Mercury containing devices will be labeled "Universal Waste – Mercury Containing Devices." Universal wastes will be transported for recycling at a licensed universal waste facility

***Electronic Waste*:** Electronic waste in the form of computers, monitors, printers, electric switch boards, etc. will be recycled at a licensed electronic waste processing facility.

***Scrap Metal*:** Scrap metal including ferrous and non-ferrous metals will be segregated by material type and recycled.

***Construction and Demolition (C&D) Debris*:** C&D debris in the form of concrete, drywall, wood, windows, and other non-hazardous materials will be transported offsite and disposed of at a licensed regular solid waste disposal facility. Clean, unpainted concrete and brick may be crushed on site and used as foundation backfill.

The following outlines specific issues associated with the buildings and building clusters proposed for demolition.

000 Cluster: Demolition of Building 053 would generate several waste streams. Waste will be generated for each of the regulated materials identified in Section 3.11.2.1, as well as non-hazardous construction

and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

***100 Cluster*:** Demolition of Building 177B would generate several waste streams including each of the regulated materials identified in Section 3.11.2.1, as well as non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

***200 Cluster*:** Demolition of Building 288A would generate waste streams, including lead-based paint; electronic waste; PCBs and mercury from lighting ballasts, bulbs, and thermostats; refrigerants; and lab chemicals. Other waste will be non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

***300 Cluster*:** Demolition of Building 327A is anticipated to generate a lead-based paint waste stream. Other waste will be non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

400 Cluster: Demolition of Building 435A is anticipated to generate a lead-based paint waste stream. Other waste will be non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

Demolition of Building 465 would generate waste streams for each of the regulated materials identified in section 3.11.2.1, as well as non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

Demolition of Buildings 470A and Buildings 470AA-JJ would generate waste streams containing lead-based paint; electronic waste; and mercury and PCBs from lighting ballasts, bulbs, and thermostats. Other waste generated will be non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the buildings are removed; given each building sits on a concrete slab on grade, no soil import or export is expected.

Demolition of Building 470C would generate waste streams containing lead-based paint; electronic waste; and mercury and PCBs from lighting ballasts, bulbs, and thermostats. Other waste will be non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

Demolition of Building 471 is anticipated to only generate non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

1000 Cluster: Building1145 demolition would generate waste streams containing lead-based paint; electronic waste; and mercury and PCBs from lighting ballasts, bulbs, and thermostats. Other waste will be non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

Demolition of both Buildings 1204 and 2106 demolition is anticipated to include asbestos; lead-based paint; electronic wastes; and mercury and PCBs from lighting ballasts, bulbs, and thermostats. Other waste will be non-hazardous construction and demolition debris from inert building materials. Existing site grading may be maintained after the building is removed; given the building sits on a concrete slab on grade, no soil import or export is expected.

3.11.2.2 No Action Alternative

As noted previously, the buildings and the materials within and around them would continue to deteriorate lending to the continued release of hazardous materials into the environment under the No Action Alternative.

4.0 CUMULATIVE IMPACTS, AGENCY COORDINATION, AND SUMMARY OF IMPACTS

4.1 Cumulative Impacts

The CEQ regulations for implementing NEPA require the assessment of cumulative impacts in the decision-making process for Federal projects. Cumulative impacts are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts for each resource directly or indirectly affected by one or both alternatives are addressed in this section. Time interval and physical distance between the actions considered are important in determining the potential for cumulative impacts. For the purposes of this Draft EA, a 0.25mile buffer around the periphery of the BARC facility (conglomerate of the component farms) was considered for the analysis of cumulative impacts.

Past Actions – Past actions that may contribute to cumulative impacts in one or more of the analyzed resource topic areas include: previous clearing of land for agricultural development and construction or demolition of onsite buildings and facilities as well as adjacent buildings, roadways, utility lines, and other infrastructure. Past actions also include agricultural research activities previously conducted by USDA-ARS.

Present Actions – Present actions that may contribute to cumulative impacts in one or more of the analyzed resource topic areas include: traffic on nearby roadways and any activities associated with adjacent public or private properties, and population growth. USDA-ARS prepared an EA for the installation of Solar Array on BARC in 2018. Solar arrays would be installed at 60 sites across the BARC facility. The arrays would be leased to an Independent Power Producer (IPP) [Energy Savings Performance Contract] to help USDA-ARS meet various Federal sustainability goals and maximize renewable energy production to support ongoing operations at the BARC facility. None of the sites is proposed near the buildings or building clusters proposed for demolition.

Internal Reasonably Foreseeable Future Actions – USDA-ARS is developing a plan for the potential redevelopment of areas cleared under the Proposed Action. NEPA reviews would need to be conducted for each development to determine its direct, indirect, and cumulative impacts on the selected project site, in addition to the existing transportation network, utility infrastructure, and present and planned development.

External Reasonably Foreseeable Future Actions – Reasonably foreseeable future actions external to the BARC facility include continuation of all present actions and future actions that may include planned future land development and development of the proposed MAGLEV high speed rail corridor between Baltimore and Washington DC.

4.1.1 Proposed Action Alternative

4.1.1.1 Geology, Topography, and Soils

Topography, geology, and soil impacts are site-specific and not affected by cumulative development in an area, except where soil erosion may contribute to degradation of water quality. With the implementation of soil erosion and sediment control measures, the Proposed Action alternative would likely result in negligible to minor adverse soils impacts from the implementation of the Proposed Action and would not incrementally cause a significant impact, regardless of other actions.

4.1.1.2 Water Resources and Wetlands

Continued livestock and agricultural research could result in adverse impacts on water resources if not managed properly by increasing the amount of sediment and stormwater entering the facility streams and wetlands. The resources currently filter surface water flows before they reach the Anacostia River and eventually the Chesapeake Bay. Increased development on the facility would increase the demand for groundwater and the amount of impervious surface on the facility, potentially increasing stormwater flows. New development may have to include pervious pavement, filter strips, and green roofs to support the goal of achieving the 20 percent reduction in impervious surface on the facility by 2025. In the context of current and reasonably foreseeable actions on the facility, the Proposed Action Alternative is not anticipated to incrementally cause significant adverse effects on water resources in the area.

4.1.1.3 Biological Resources - Protected Species

Through contact with State and Federal Agencies BARC has no know listings of threatened or endangered species in or adjacent to parcels being considered for demolition. However, BARC would minimize and avoid where practicable impacts on biological resources under the Proposed Action. Demolition activities are not anticipated to affect native habitats or protected species present on the facility. It is anticipated that the Patuxent Research Refuge, Greenbelt Park, and other area open spaces would be protected from development and continue to provide habitats that support the biological diversity of the area. Therefore, in the context of current and reasonably foreseeable actions on the facility, the Proposed Action Alternative is not anticipated to incrementally cause significant adverse effect to biological resources in the area.

4.1.1.4 Air Quality

Because the activities and developments anticipated at BARC would be like prior land uses and existing adjacent uses, the Proposed Action alternative would not result in a substantial increase in long-term vehicle traffic. Eventual redevelopment of the areas where the buildings were removed may increase traffic volumes across the facility depending on the type or research or business provided. Because of the rural nature of BARC and its surrounds, and that potential growth is limited at BARC by the requirements of the MS4 permit and need to reduce impervious cover by 2025, it is not anticipated that the Proposed Action in combination with any present or reasonably foreseeable future actions would cause vehicle traffic and resulting emissions to exceed the established *de minimis* thresholds.

4.1.1.5 Noise

Overall development of the BARC facility is limited due to the requirements of the MS4 permit and the goal to reduce impervious area by 2025. Short-term noise impacts would continue to occur at BARC associated with the Proposed Action (phased over time) the construction of the solar arrays, and other ongoing activities at the facility. Traffic noise is not anticipated to increase as no roadway capacity improvements are proposed for roads on the facility. It is not anticipated that the Proposed Action in combination with any present or reasonably foreseeable future actions would create events that would trigger high, long-term, non-abatable noise levels on the facility.

4.1.1.6 Utilities and Infrastructure

No improvements would be made to the existing utilities or infrastructure systems that serve the BARC facility. Under the proposed action, some aged and deteriorated utilities would be removed; while the remaining primary service lines would remain intact. The proposed solar array project would support future sustainability of the facility leading to greater improved energy efficiency that could in turn support replacement of existing facility utilities. Additional utility and infrastructure improvements would be dependent upon the future redevelopment of areas of BARC and the corresponding utility needs.

4.1.1.7 Transportation

The Proposed Action, present, and internal reasonably foreseeable future actions would not expand or improve the existing roadway network on the facility. Implementation of the proposed MAGLEV connection between Baltimore and Washington DC would occur outside of BARC. The addition of this type of service would increase the speed at which people could access the area but would still require some form of ground transportation (e.g., bus, shuttle, taxi, rideshare service) to get riders from the station to the BARC facility. Because the MAGLEV service, much like the existing rail service, provides regional connectivity for passengers, its implementation when coupled with current and future improvements at BARC are not anticipated to adversely affect the existing transportation network.

4.1.1.8 Cultural Resources

The buildings proposed for demolition under the Proposed Action were determined not to contribute to the BARC historic district. No changes in the overall setting or to other contributing elements such as the primary roadway system, agricultural fields, or native forest area would occur as the result of this or other current actions. Additional buildings may be proposed for demolition at BARC to address the impervious area reduction goal and to support sustainable and beneficial redevelopment of parts of the facility in the future. Additional assessment of the buildings, the remaining setting, and overall character of the facility would be assessed to determine what effect may occur on the district's continued designation. Through ongoing coordination with MHT, mitigation would be identified to address any adverse effect that may occur.

4.1.1.9 Land Use

The generalized pattern of land use at BARC is anticipated to undergo little change with implementation of current and reasonably foreseeable future actions. The area around BARC has changed little in the past 10 to 15 years but may be under pressure to develop as growth continues in the region over time and with the continued extension of regional and commuter rail services, including the proposed MAGLEV into the region. The Proposed Action, in combination with current and other reasonably foreseeable future actions, is not anticipated to have an adverse effect on land use.

4.1.1.10 Socioeconomic Resources

The Proposed Action and other current and reasonably foreseeable actions would not adversely affect the socioeconomic setting of the BARC facility. Employment on the facility is based on the types of research present. Future redevelopment could spawn additional employment opportunities as new research or educational facilities are developed. This development would continue to be constrained by the USDA-ARS mission and ongoing compliance with the MS4 permit and other regional conservation initiatives.

4.1.1.11 Human Health and Safety

Implementation of the Proposed Action would remove buildings that pose a current human health, safety, and security risk to employees and the public. Other buildings in similar states of disrepair have been removed at BARC during the past five to ten years. Other current and reasonably foreseeable future projects, including installation of solar arrays at BARC, would be implemented following current industry design requirements and safety standards. In the future, other buildings may be removed at BARC due to their condition that would also improve the overall health and safety of employees and the public.

4.1.2 No Action Alternative

Without the Proposed Action, BARC facilities and infrastructure would continue to deteriorate and release potentially hazardous substances into the air, soil, and groundwater. Existing utilities and infrastructure would also continue to deteriorate and like the aging buildings, continue to pose a safety and security risk

to employees and the public. Other current and reasonably foreseeable future actions around the BARC facility would continue to be implemented.

4.2 Agency Coordination

Early agency coordination was conducted by distributing scoping letters on September 25, 2019, indicating a comment period extending through October 25, 2019. USDA-BARC received written responses from the USFWS, the Maryland Department of Natural Resources (MDNR), and the MHT. Copies of the scoping letter and agency responses are provided in Appendix E.

USDA-ARS initiated consultation under Section 106 of the National Historic Preservation Act in 2015 to obtain concurrence on determinations of eligibility for the resources at BARC based on the MHT's determined that the BARC Facility was eligible for listing in the NRHP as a historic district 1998. USDA-BARC and MHT are negotiating a Programmatic Agreement to identify and implement mitigation appropriate for removal of multiple buildings over an extended period.

Public notices were published in the following local newspapers on October 10, 2019 indicating a public comment period extending through 30 days from publication. Copies of the Affidavits of Publication are provided in Appendix E.

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5.0 RECOMMENDATIONS AND MITIGATION

5.1 Recommendations

The purpose of this EA is to inform decision makers and the public of the likely environmental consequences of the action proposed at the Beltsville Agricultural Research Center (BARC) in Beltsville, Prince George's County, Maryland. This EA identifies, documents, and evaluates the potential effects of the demolition of 22 buildings on the BARC facility. However, there is always the possibility of reuse of these sites for future USDA research and by other Federal entities. Because the scope, extent, and timing of potential future redevelopment of these areas is not defined, the effects of any redevelopment of these areas are not assessed in this EA.

The purpose of the Proposed Action is to reduce long-term operational and maintenance costs and reduce BARC's impact on the Chesapeake Bay Watershed. The Proposed Action would accomplish this purpose through compliance with the 2015 *Reduce the Footprint Policy* and USDA's *Real Property Efficiency Plan for Fiscal Year 2019-2023*; and BARC's municipal separate storm sewer system (MS4) permit goal of achieving a 20-percent reduction of impervious surface area by 2025. Achieving these goals would support the ongoing mission of BARC and potential redevelopment of certain BARC areas making the facility more sustainable and supportive of new and ongoing research opportunities.

The buildings would be removed in their entirety, including the building envelopes, building footings and foundations, support systems (e.g., mechanical, electrical), site utilities servicing the buildings, concrete pads, and associated exterior concrete walkways and paved areas (e.g., drives and parking areas). The removal of these 22 buildings depends on the findings of this EA. USDA-ARS considers these buildings as not mission critical and has no need for them. After the buildings are removed, the sites would be restored to as close to pre-existing conditions as feasible, in compliance with EPA's *Technical Guidance on Implementing Stormwater Runoff Requirements for Federal projects under Section 438 of the EISA.*

Using the No Action Alternative as the baseline for assessing potential effects from the Proposed Action, the following potential issues and concerns have been identified:

- Temporary and localized, but not significant, adverse effects on soils are expected due to the amount of land disturbance required to remove the identified buildings. These effects will be further minimized through the implementation of appropriate best management practices (BMPs) to prevent and manage soil erosion and stormwater flows from demolition and land contouring activities.
- Temporary and localized, but not significant, effects on air quality are expected from heavy equipment emissions and increases in fugitive dust and airborne particulates from construction and demolition-related activities.
- Adverse, but not significant, impacts to biological resources (vegetation) are expected as a result of the Proposed Action where shrub or tree clearing is required to facilitate building demolition and site contouring. However, any adverse effect would be mitigated through site restoration.
- Temporary and localized, but not significant, increases in ambient noise are expected during demolition-related activities.
- Utilities services would not be interrupted to active buildings during demolition.
- Temporary and localized, but not significant, increases in solid wastes would be generated during demolition.

- Local roadways and parking are adequate to support movement of construction equipment and materials to project sites and there would be a minor and temporary impact to traffic accessing BARC during demolition and waste removal.
- Adverse, but not significant, effects on hazardous materials would occur due to their presence within the buildings proposed for demolition and the need to categorize, remove, and dispose of each type of material in accordance with applicable local, state, and Federal regulations.

Using the No Action Alternative as the baseline for assessing potential effects, the following findings have been identified and are not expected to be affected by the Proposed Action:

- Water resources, including wetlands and floodplains are not expected to be affected by the Proposed Action because they are located relatively distant from each project site and the implementation of appropriate BMPs would protect against sedimentation, leaks, and spills. No fill would be placed within the Little Paint Branch floodplain associated with Building 053. The restoration of the site to preexisting conditions would improve water quality and reduce surface water runoff.
- Threatened and endangered species are not expected to be affected by the Proposed Action due to the lack of species and species habitat within or near the vicinity of the Proposed Action. Each project site will be surveyed for potential northern long-eared bat habitat prior to demolition.
- Land use impacts would be expected to be consistent with existing and future land use planning and increase meadows or forest and reduce mowed grass.
- No adverse effects to cultural resources are expected because the buildings proposed for demolition are considered non-contributing to the BARC Historic District, as determined by the Maryland Historical Trust, the State Historic Preservation Office. Demolition activities are not anticipated to affect any known or archaeological sites or areas of high archaeological potential.
- Socioeconomics within the vicinity of the BARC facility are not expected to be affected by the Proposed Action. Overall impacts to socioeconomics and environmental justice would be negligible and further analysis has been dismissed.
- The Proposed Action is not expected to result in significant cumulative effects when considered along with other, known projects anticipated at the BARC Facility.

5.2 Mitigation

Although no significant impacts to the environment are anticipated, the USDA-ARS would ensure the following mitigation measures are implemented to minimize potential effects. These measures would be implemented through provisions stipulated in demolition/construction contracts. The potentially adverse environmental impacts related to the construction, operation, and dismantling of the Proposed Action could be minimized, mitigated and controlled to acceptable levels by implementation of the following measures:

- USDA-ARS will require the contractor to use dust abatement measures, such as wetting, mulching, or seeding exposed areas, where appropriate, to address any air quality concerns.
- USDA-ARS will require the contractor to mitigate vehicle emissions impacts as much as possible by prohibiting truck idling.
- USDA-ARS will require the contractor to provide lay down (i.e., temporary material storage) areas for demolition equipment and materials within existing cleared and paved areas to minimize disturbance to existing land and vegetation.

- USDA-ARS will require contractor compliance with erosion and sediment control measures related to stabilization of disturbed areas.
- USDA-ARS will require the contractor to provide and maintain silt fencing, or other suitable BMPs, to be placed around demolition areas to mitigate erosion and sediment runoff.
- USDA-ARS will require the contractor to implement BMPs for erosion/sediment control and stormwater management to minimize impacts to the existing stormwater collection system, wetlands, and other environmental resources.
- USDA-ARS will require all necessary measures be taken by the contractor to prevent, control, and mitigate the release of oils, trash, debris, and other pollutants to air, water and land.
- USDA-ARS will require contractors to safely handle and dispose of solid and hazardous waste in accordance with applicable local, state and Federal regulations.
- USDA-ARS will require contractors to provide appropriate health and safety training, precautions and other protection for their workers.
- USDA-ARS will require contractors to recycle or reuse materials to the greatest extent possible, and to dispose of construction debris in accordance with local, state, and Federal waste disposal regulations.
- USDA-ARS will require, in the event that unexpected cultural resources were found during construction activities, the contractor to stop work and allow USDA-ARS to consult with the Maryland Historic Trust (MHT).
- USDA-ARS will require that the transportation of demolition equipment and materials over local roads be scheduled to occur after peak traffic periods, whenever possible.
- USDA-ARS will require contractors to minimize demolition-related noise impacts by limiting demolition-related activities to the hours between 7:00 a.m. and 5:00 p.m. on weekdays.

USDA-ARS will require that, upon commencement, demolition be executed expeditiously to minimize the period of disturbance to the affected environment. Consideration of the activities involved in the demolition and recontouring of the building sites at BARC would have no significant impacts on the quality of the human environment or on local natural resources. As a result of this EA, it is determined that an EIS is not required for the Proposed Action. In conclusion, a Finding of No Significant Impact (FONSI) is appropriate for the Proposed Action.

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8.0 ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Material
AOC	Area of Concern
APE	Area of Potential Effect(s)
ARS	Agricultural Research Service
AST	Above-ground Storage Tank
BAI	Bureau of Animal Industry
BARC	Beltsville Agricultural Research Center
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practice
C&D	Construction and Demolition Debris
CAA	Clean Air Act
CCC	Civilian Conservation Corps
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1976
CFC	Chlorofluorocarbons
CFR	Code of Federal Regulations
CMU	Concrete Masonry Unit
CO	Carbon Monoxide
CWA	Clean Water Act
DOT	United States Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Environmental Site Assessment
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FR	Federal Register
GHG	Greenhouse Gas
I-	Interstate Highway
IPP	Independent Power Producer
HUD	U.S. Department of Housing and Urban Development
LQG	Large Quantity Generator
MARC	Maryland Area Regional Commuter
MBTA	Migratory Bird Treaty Act

MDE	Maryland Department of the Environment
MHT	Maryland Historic Trust
MIHP	Maryland Inventory of Historic Places
msl	Mean Sea Level
MS4	Municipal Separate Storm Sewer System
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
NO_2	Nitrogen Dioxide
NOA	Notice of Availability
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
NWIS	National Water Information System
O_3	Ozone
O-S	Open Space Zoning
PA/SI	Preliminary Assessment/Site Inspection
Pb	Lead
PCBs	Polychlorinated Biphenyls
PEM	Palustrine Emergent Wetland
PEPCO	Potomac Electrical Power Company
PFO	Palustrine Forested Wetland
PM	Particulate Matter
PSS	Palustrine Scrub-shrub Wetland
PUB	Palustrine Unconsolidated Bottom
RCRA	Resource Conservation Recovery Act
REC	Renewable Energy Credits
R-O-S	Reserved Open Space Zoning
R-R	Rural Residential Zoning
RTA	Regional Transportation Agency
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SWPPP	Stormwater Pollution Prevention Plan
TCLP	Toxic Characteristic Leaching Procedure
TSCA	Toxic Substances Control Act
U.S.C.	United States Code

USACE	United States Army Corps of Engineers
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
WMATA	Washington Metropolitan Transit Authority
WSSC	Washington Suburban Sanitary Commission
WWTP	Wastewater Treatment Plant