Demolition of 117 Buildings at the Henry A. Wallace Beltsville Agricultural Research Center Beltsville, Maryland

12305B21F0042 PA NEPA 64 Bldgs.

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USDA
Agricultural Research Service
U.S. DEPARTMENT OF AGRICULTURE

EXECUTIVE SUMMARY

The U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) is proposing to remove 117 surplus buildings at the Henry A. Wallace 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 by disposing of surplus buildings and to 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 (1) the aggressive disposal of surplus properties held by the federal Government, (2) more efficient use of its real property assets, and (3) a reduction in 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, 2019) provides for the annual reduction of office and warehouse/storage square footage by one percent per fiscal year. Removing surplus buildings will also support compliance with 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 (EOs) 11514, 12144, and 13807; 34 FR 4247, as amended by EO 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 1.2–1.3.

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 117 buildings and structures on the BARC campus 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). These buildings no longer support the mission of USDA-ARS or BARC and cannot be rehabilitated or updated to accommodate current or planned research endeavors. After the buildings are removed, the building sites would be returned to as close to pre-development conditions as feasible. However, there is always the possibility of reuse of these sites for future USDA research or reuse by other federal entities through lease agreements with the USDA-ARS. Because the scope, extent, and timing of potential future redevelopment of these areas is not defined or part of current campus planning efforts, 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 Action. 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.

For most resource categories, the direct and indirect effects of the Proposed Action would be temporary and short-term and associated with demolition-related activities including restorative actions at each building site/building cluster site to provide positive drainage. However, 114 of the 117 buildings and structures, (including supporting ancillary features such as corrals, fencing, stone retaining walls, etc.)

proposed for demolition are contributing features of the National Register of Historic Places-eligible BARC Historic District. USDA-ARS in consultation with the Maryland Historical Trust, who serves as the Maryland State Historic Preservation Office, and the Advisory Council on Historic Preservation has determined their demolition would adversely affect historic properties under Section 106 of the National Historic Preservation Act. All parties have agreed to develop a Programmatic Agreement (PA) as a mechanism to resolve and mitigate for the adverse effects under Section 106.

The Proposed Action would 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 disclosed in the EA to a less than significant level. Further, 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 EIS is not required.

TABLE OF CONTENTS

Page No.

EXECUTIVE SUMMARY I

1.0 PURPOSE AND NEED FOR ACTION 1-1

1.1 THE ENVIRONMENTAL ASSESSMENT 1-1

1.2 PURPOSE 1-2

1.3 BARC NEEDS 1-3

1.4 DECISIONS REQUIRED 1-4

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES 2-1

2.1 BELTSVILLE AGRICULTURAL RESOURCES CENTER FACILITY DESCRIPTION AND VICINITY 2-1

2.2 PROPOSED ACTION ALTERNATIVE 2-1

2.3 NO ACTION ALTERNATIVE 2-6

2.4 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION 2-6

2.4.1 Repair or Rehabilitation of the Buildings for Continued or Other Use 2-6
2.4.2 Transfer of Buildings for Use as Facilities to Assist the Homeless 2-6

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES 3-1

3.1 GEOLOGY, TOPOGRAPHY, AND SOILS 3-7

3.1.1 Affected Environment – Geology, Topography, and Soils 3-7
3.1.2 Environmental Consequences – Geology, Topography, and Soils 3-29

3.2 WATER RESOURCES 3-29

3.2.1 Affected Environment – Water Resources 3-29
3.2.2 Environmental Consequences – Water Resources 3-36

3.3 BIOLOGICAL RESOURCES 3-39

3.3.1 Affected Environment – Biological Resources 3-39
3.3.2 Environmental Consequences – Biological Resources 3-43

3.4 AIR QUALITY 3-50

3.4.1 Affected Environment – Air Quality 3-50
3.4.2 Environmental Consequences - Air Quality 3-52

3.5 NOISE 3-53

3.5.1 Affected Environment – Noise 3-53
3.5.2 Environmental Consequences – Noise 3-54

3.6 UTILITIES AND INFRASTRUCTURE 3-54

3.6.1 Affected Environment – Utilities and Infrastructure 3-54
3.6.2 Environmental Consequences – Utilities and Infrastructure 3-60

3.7 TRANSPORTATION 3-61

3.7.1 Affected Environment – Transportation 3-62

3.7.2 Environmental Consequences – Transportation....3-69
3.8 CULTURAL RESOURCES....3-70
3.8.1 Affected Environment – Cultural Resources....3-70
3.8.2 Environmental Consequences – Cultural Resources....3-87
3.9 LAND USE AND LAND COVER....3-90
3.9.1 Public and Federal Lands....3-92
3.9.2 Affected Environment – Land Use and Land Cover....3-101
3.9.3 Environmental Consequences – Land Use....3-102
3.10 SOCIOECONOMIC RESOURCES....3-102
3.10.1 Affected Environment – Socioeconomic Resources....3-102
3.10.2 Environmental Consequences – Socioeconomic Resources....3-103
3.11 HUMAN HEALTH AND SAFETY....3-104
3.11.1 Affected Environment – Human Health and Safety....3-104
3.11.2 Environmental Consequences – Human Health and Safety....3-118
4.0 CUMULATIVE IMPACTS, AGENCY COORDINATION, AND SUMMARY OF IMPACTS....4-1
4.1 CUMULATIVE IMPACTS....4-1
4.1.1 Summary of Impacts of the Proposed Action Alternative....4-5
4.1.2 No Action Alternative....4-7
4.2 AGENCY COORDINATION....4-7
5.0 RECOMMENDATIONS AND MITIGATION....5-1
5.1 RECOMMENDATIONS....5-1
5.2 MITIGATION....5-2
6.0 REFERENCES....6-1
7.0 LIST OF REVIEWERS AND PREPARERS....7-1
8.0 ACRONYMS AND ABBREVIATIONS....8-1

APPENDIX A – AGENCY COORDINATION (GENERAL)
APPENDIX B – AGENCY COORDINATION (SECTION 106)
APPENDIX C – RESOURCE PHOTOGRAPHS
APPENDIX D – MAPPED SOIL UNITS AT BARC
APPENDIX E – PROTECTED SPECIES
APPENDIX F – SECTION 106-CULTURAL RESOURCES MAPPING
APPENDIX G – HAZARDOUS MATERIALS ASSESSMENTS
APPENDIX H – PUBLIC COMMENTS

LIST OF TABLES

Page No.

Table 2-1: Buildings Proposed for Demolition at BARC 2-2
Table 3-1: Mapped Soil Units Associated with the Building Locations 3-15
Table 3-2: Summary of NWI Wetlands by Type on the North, Central, East, South, and Linkage Farms 3-35
Table 3-3: Federally Listed Species on or Near BARC Campus[a] 3-41
Table 3-4: General Conformity *De Minimis* Thresholds[(a)] 3-51
Table 3-5: Prince George's County Noise Standards 3-53
Table 3-6: BARC Historic District Associated Resources Proposed for Demolition 3-71
Table 3-7: Previously Recorded Archeological Sites within BARC 3-79
Table 3-8: Previously Conducted Cultural Resources Investigations within BARC 3-81
Table 3-9: BARC Facility Land Cover[(a)] 3-91
Table 3-10: Known or Potential Hazardous and Regulated Materials by Building 3-105
Table 3-11: BARC Facility Land Cover[(a)] 3-112
Table 4-1: Past, Present, and Reasonably Foreseeable Future Actions 4-2

LIST OF FIGURES

Page No.

Figure 3-1: Topographic Map of BARC and Building Sites 3-9
Figure 3-2: BARC Soils by Farm 3-17
Figure 3-3: BARC NRCS Prime Farmland and Farmland of Statewide Importance 3-21
Figure 3-4: BARC NRCS Soil Erosion Hazard 3-25
Figure 3-5: BARC Surface Water Resources: Streams, Wetlands, 100-Year Floodplains, and Groundwater Wells 3-31
Figure 3-6: Transportation Infrastructure Servicing BARC 3-63
Figure 3-7: BARC Land Cover 3-93
Figure 3-8: Federal and State Lands and Facilities 3-97
Figure 3-9: BARC Superfund Site Areas of Concern 3-114

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. 12305B21F0042. 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 (EOs) 11514, 12144, and 13807; 34 Federal Register (FR) 4247, as amended by EO 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 appropriate for the Proposed Action. The specific needs and purpose of the Proposed Action evaluated in this EA are described in Section 1.2 and Section 1.3.

The purpose of this EA is to inform decision makers and the public of the likely environmental consequences of the action proposed at the Henry A. Wallace 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 117 buildings and structures on the BARC campus. 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). Anticipated footprints for proposed demolition activities at and surrounding each building site are further described in Section 2.2. These buildings no longer support the mission of USDA-ARS or BARC, and the agency has no use for them. After the buildings are removed, the building sites would be returned to as close to pre-development conditions as feasible. However, there is always the possibility of reuse of these sites for future USDA research or for reuse by other federal entities through lease agreements with the USDA-ARS. Because the scope, extent, and timing of potential future redevelopment of these areas is not defined or part of current campus planning efforts, the effects of any redevelopment of these areas are not assessed in this EA and would be addressed individually at the time they are defined.

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 resulting from the demolition activities. Effects can be ecological, aesthetic, historical, cultural, economic, social, or health related. The following are the resource categories evaluated in this EA:

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

An interdisciplinary team identified the environment and physical features present on the BARC campus and associated with the proposed project sites and assessed the potential effects of the Proposed Action and No Action Alternatives. 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 potential effects 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 actions).

The USDA-ARS contracted the performance of Hazardous Materials Assessments (HMAs) for 52 of the 117 buildings proposed for demolition. All buildings would be subject to the completion of HMAs prior to demolition. Additionally, the USDA-ARS coordinated with the U.S. Department of Housing and Urban Development (HUD) to conduct a review of the suitability of these buildings for reuse to shelter the homeless (see Section 2.4.2 and Appendix A) and coordinated with the Maryland Historic Trust (MHT) to evaluate the National Register of Historic Places (NRHP) eligibility of 60 of the 117 buildings that were without formal NRHP determinations (see Section 3.8 and Appendix B).

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

- maximizing use of existing facility resources;
- use and potential reuse of existing buildings and supporting infrastructure;
- removal of physical, human health/safety, and security hazards;
- resource limitations (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; via publication of the Notice of Availability (NOA) of the EA for the Demolition of 22 Buildings at BARC on March 26, 2020 (USDA, 2020a); the completion of the EA Re-Evaluation of the Demolition of 12 Buildings at BARC and the development and execution of a Memorandum of Agreement (MOA) for those 12 buildings on June 1, 2021 (USDA, 2021b) involving Consulting Parties; the publication of the NOA of the EA for the Demolition of Building 11A at BARC on April 1, 2021 (USDA, 2021a); and is provided for this proposed action with publication of the NOA for the EA for Demolition of 117 Buildings at BARC on August 4, 2022.

Besides the Maryland (MD) State Historic Preservation Office (SHPO), agencies that responded during the 2019 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 surplus buildings. The MD SHPO concurred with USDA-ARS's determination that the Proposed Action would constitute an adverse effect to the contributing features of the NRHP-eligible BARC Historic District and to the district itself. They agreed to participate in preparation and execution of a Programmatic Agreement (PA) to account for and mitigate the adverse effects under Section 106 (see Section 3.8 and correspondence in Appendix B).

Final feedback will be based on the results of comments collected from the public when the 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 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, makes more efficient use of its real property assets, and reduces 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, 2019) provides for the annual reduction of office and warehouse/storage square footage by one percent per fiscal year. Removing surplus buildings will also support 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 and address ongoing health and safety risks to staff and the public due to the condition of many of the buildings, making the facility more sustainable and supportive of new and ongoing research opportunities.

1.3 BARC Needs

Research conducted at BARC focuses on agricultural production, protection, processing, consumption, and natural resources. The primary need for the BARC campus is to continue to support USDA-ARS's diverse and important mission. BARC's mission is to provide the American public with a talented, highly interdisciplinary scientific community in the USDA's largest scientific installation, and leverage these resources to envision, create, and improve knowledge and technologies that enhance the capacity of the nation – and the world – to provide its people with healthy crops and animals; clean and renewable natural resources; sustainable agricultural systems; and agricultural commodities and products that are abundant, high-quality, and safe (USDA, 2022a). Through the Proposed Action, the USDA-ARS would further its mission by reducing long-term operational and maintenance costs by removing buildings that no longer support BARC's desired research goals.

The primary need for the Proposed Action is to meet the 20-percent reduction of building retired stock no longer necessary to meet mission goals, as mandated by the 2015 *Reduce the Footprint Policy* (Executive Office of the President, Office of Management and Budget, 2015). Additionally, these removals would support BARC compliance with MS4 permit requirements by eliminating impervious surfaces. The 117 buildings and structures proposed for demolition are not in use, are in various states of disrepair, and have been determined to no longer meet Mission Critical requirements; and are therefore surplus and proposed for removal.

A number of the buildings were constructed between the 1930s through the 1970s and no longer meet current minimum criteria for laboratory and research standards as set forth by USDA's laboratory construction manual for chemical and biological research (USDA, 2016b; USDA, 2022b). Many of the buildings do not meet current code requirements for electrical, ventilation, fire suppression, and chemical and biological pathogens control. The cost to retrofit these buildings to meet current requirements and house new instrumentation and genetic research, even if there were personnel planned to occupy them, would be cost prohibitive. Additionally, the way these buildings were envisioned for laboratory and field research use has changed over the past 50 years. The size of the buildings and their associated floorplans, once considered cutting edge, are now dated and antiquated and cannot support the different space allocations and flow-through to meet current industry standards. The area surrounding each of the buildings or building clusters 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 secondary need is supporting 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 act requires building sites be returned to pre-development conditions, where feasible, including natural topography to promote natural water drainage patterns.

The tertiary need is to address human safety and security risks in support of the facility's mission. As noted previously, the 117 buildings and structures are unoccupied, some for decades, and in various states of disrepair. The dispersed pattern of development across the campus and the condition and

unsecured state of these buildings (e.g., entrances are not locked, or the lock has been breached; windows/doors are missing or damaged; openings in roofs and walls) makes maintaining security across the campus difficult. Additionally, the area surrounding the buildings and building clusters 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 ongoing deterioration of the buildings and structures has exposed building materials either known or presumed to contain asbestos, lead-based paint, polychlorinated biphenyls (PCBs), universal wastes, petroleum-based products, and various other hazardous or regulated materials to the surrounding environment. As the buildings continue to deteriorate, these materials and compounds are potentially being released into the air, soil, groundwater, and surface waters through stormwater runoff, and pose a possible health risk to maintenance workers and researchers working in neighboring buildings as well as private commercial and residential areas adjacent to the campus. The BARC campus 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. Fifteen of the 63 AOCs are located at or within 500 feet of one or more building sites proposed for demolition. Of these 15 AOCs, 12 have been given a final evaluation of “No Further Action,” indicating they have been formally closed and would have a low potential for impacting the proposed demolition activities. Three of the 15 sites (BARC 4, ENTECH7, and EPIC 8) have a current status of Further Investigations Planned. The BARC Superfund Site is further discussed in Section 3.11.1.

1.4 Decisions Required

This EA analyzes the effects of the Proposed Action, the demolition of 117 identified buildings and structures across the BARC campus and returning the building sites to as close to pre-development 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. Thomas Shanower, Northeast Area Director, Agricultural Research Service, USDA.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

As described in Section 1.0, the USDA-ARS proposes to demolish 117 buildings and structures to (1) reduce BARC's operational and maintenance costs, to (2) reduce the impervious footprint within BARC in compliance with the facility's MS4 permit goals, and to (3) address potential human health and safety and facility security risks.

2.1 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) using Public Works Administration (PWA) funding. 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 BARC. During subsequent years, land was transferred to various federal agencies, slowly reducing BARC's size. In June 2000, Henry A. Wallace's name was added to the facility in honor of his service as the 11th U.S. Secretary of Agriculture from 1933-1940. The current BARC campus, divided into five farms with distinct research missions, is administered by the USDA-ARS and contains the greatest concentration of diverse agricultural research programs within the ARS nationwide (USDA, 1996). The Campus consist of approximately 6,500 acres.

The entire BARC facility is a historic district determined eligible for inclusion in the NRHP in 1998 (see Section 3.8). 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 that in addition to contributing buildings and structures, the facility is significant as a landscape resource. As a result, landscape elements such as "*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*" contribute to the NRHP-eligible district.

Today the BARC campus is characterized by agricultural 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's farms support clusters of permanent laboratories and administrative buildings, numerous temporary agricultural storage structures, and open agricultural fields (depicted in **Error! Reference source not found.**). The 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.

2.2 Proposed Action Alternative

Under the Proposed Action Alternative, each of the 117 BARC buildings listed in Table 2-1 would be demolished in their entirety, including all associated systems and utility infrastructure above and below ground. Study areas described in this EA are associated with the individual buildings and clusters of buildings proposed for demolition. **Error! Reference source not found.** (Sheets 1-4) identifies and depicts the location of each building proposed for demolition under the Proposed Action Alternative.

The proposed project sites include a building/structure, or a cluster of buildings and structures, proposed for demolition, a defined area of potential disturbance around each building/structure or cluster of buildings and structures that would be cleared and regraded, and designated access routes and equipment laydown or storage areas to be used during demolition.

Table 2-1: Buildings Proposed for Demolition at BARC

Farm Location	Building ID	Building Name/Reference	Year Constructed	NRHP Eligibility[a]
000 Cluster				
North	009	Greenhouse Range 3	1941	Eligible/Contributing
North	018	Smallwood House	1934	Eligible/Contributing
North	038	Potato House	1934	Eligible/Contributing
North	039	Bulb House	1934	Eligible/Contributing
North	040	Fruit Storage House	1934	Eligible/Contributing
North	041	Fallout Shelter	1943	Eligible/Contributing
North	044	Storage	1958	Eligible/Contributing
North	050	Headhouse with Greenhouse	early to mid-1960s	Eligible/Contributing
South	060	Service Building D	1942	Eligible/Contributing
Linkage	085	Granary Building	1936	Eligible/Contributing
Linkage	085A	Granary Service Building	1950	Eligible/Contributing
Linkage	085B	Granary Garage	1933	Eligible/Contributing
100 Cluster				
Central	166A	Silo/Shed Building	1934	Eligible/Contributing
200 Cluster				
Central	203B	Pump House	1938/1977	Eligible/Contributing
Central	204A	Post-Mortem Building	1933	Eligible/Contributing
Central	205	Meat Laboratory Holding Shelter	1945	Eligible/Contributing
Central	288	Office/Laboratory	1933	Eligible/Contributing
300 Cluster				
Central	321	Office/Laboratory	1933	Eligible/Contributing
Central	321A	Walk-In-Box	1933	Eligible/Contributing
Central	321B	Walk-In-Box	1938	Eligible/Contributing
Central	322	Barn	1940	Eligible/Contributing
Central	323	Garage	1934	Eligible/Contributing
Central	324	Office/Laboratory	1934	Eligible/Contributing
Central	324A	Walk-In-Box	1934	Eligible/Contributing
Central	324B	Storage	1934	Eligible/Contributing
Central	327	Laboratory	1950	Eligible/Contributing
Central	328	Office/Laboratory	1934	Eligible/Contributing
Central	333	Laboratory	1934	Eligible/Contributing
Central	334	Poultry House	1939	Eligible/Contributing
Central	335	Storage	1938	Eligible/Contributing
Central	335A	Animal Quarantine	1940	Eligible/Contributing
Central	335B	Animal Shed	1949	Eligible/Contributing
Central	336B	Animal Shed	1949	Eligible/Contributing
Central	336C	Animal Shed	1949	Eligible/Contributing
Central	337	Laboratory	1955	Eligible/Contributing
Central	337A	Swine Research	1967	Eligible/Contributing

Table 2-1 continued: Buildings Proposed for Demolition at BARC

Farm Location	Building ID	Building Name/Reference	Year Constructed	NRHP Eligibility[a]
300 Cluster continued				
Central	337B	Storage	1940	Eligible/Contributing
Central	338	Office/Laboratory	1934	Eligible/Contributing
Central	338A	Laboratory/Storage	1934	Eligible/Contributing
Central	338B	Animal Building	1934	Eligible/Contributing
Central	339C	Animal Shed	1949	Eligible/Contributing
Central	339D	Animal Research Building	1967	Eligible/Contributing
Central	339F	Laboratory	1976	Eligible/Contributing
Central	340	Barn	1938	Eligible/Contributing
Central	341R	Hog Shed	1950	Eligible/Contributing
Central	342	Animal Shed	1950	Eligible/Contributing
Central	342A	Hog Shed	1950	Eligible/Contributing
Central	342B	Hog Shed	1950	Eligible/Contributing
Central	342C	Hog Shed	1950	Eligible/Contributing
Central	342D	Hog Shed	1950	Eligible/Contributing
Central	344	Barn	1938	Eligible/Contributing
Central	357	Laboratory	1940	Eligible/Contributing
Central	362	Storage	1955	Eligible/Contributing
Central	363	Storage	1955	Eligible/Contributing
Central	364	Storage	1950	Eligible/Contributing
Central	369	Log House/Storage	Pre 1947	Eligible/Contributing
Central	370	Poultry House	1945	Eligible/Contributing
Central	371	Poultry House	1945	Eligible/Contributing
Central	372	Poultry House	1945	Eligible/Contributing
Central	373	Poultry House	1945	Eligible/Contributing
Central	374	Colony House	1945	Eligible/Contributing
Central	375	Colony House	1945	Eligible/Contributing
Central	376	Colony House	1945	Eligible/Contributing
Central	377	Storage	1945	Eligible/Contributing
Central	378	Storage	1950	Eligible/Contributing
Central	385	Pole Shed	1958	Eligible/Contributing
Central	385A	Storage Shed	1993	Not Eligible/Non-Contributing
Central	391	Animal Shelter	1961	Eligible/Contributing
400 Cluster				
Central	452	Radio Shed	1933	Not Eligible/Non-Contributing
Central	467	Entomology C Building	1941	Eligible/Contributing
Central	468	Laboratory Annex C	1934	Eligible/Contributing
Central	469-1	Laboratory	1969	Eligible/Contributing
Central	470	Entomology Greenhouse	1934	Eligible/Contributing

Table 2-1 continued: Buildings Proposed for Demolition at BARC

Farm Location	Building ID	Building Name/Reference	Year Constructed	NRHP Eligibility[a]
400 Cluster continued				
Central	470B	Quonset Insecticide Storage Building	1962	Eligible/Contributing
Central	472	Spray Mixing Shed	1950	Eligible/Contributing
Central	473	Mushroom House	1934	Eligible/Contributing
Central	474	Mushroom House	1934	Eligible/Contributing
Central	475	Mushroom House	1957	Eligible/Contributing
Central	476	Entomology Laboratory A	1935	Eligible/Contributing
Central	485	Storage Shed	1940	Eligible/Contributing
Central	487-1	Storage Box	1959	Eligible/Contributing
Central	487-2	Storage Box	1959	Eligible/Contributing
Central	488	Storage Boxes	1959	Eligible/Contributing
500 Cluster				
East	506A	Storage and Shop Building	1952	No longer standing
East	524	Gas Station	1933	Eligible/Contributing
East	541C	Hog House	1942	Eligible/Contributing
East	541D	Hog House	1942	Eligible/Contributing
East	543	Main Dog Kennel and Animal Shed	1939	Eligible/Contributing
East	543A	Main Dog Kennel and Animal Shed	1939	Eligible/Contributing
1000 Cluster				
Central	1002	Feed Barn	1938	Eligible/Contributing
Central	1005	Pen Barn	1938	Eligible/Contributing
Central	1052	Chemical Storage Building	1940	Eligible/Contributing
Central	1053	Storage Building	1935	Eligible/Contributing
Central	1054	Walk-In-Box	1961	Eligible/Contributing
Central	1062	Horse and Cattle Barn	1934	Eligible/Contributing
Central	1063	Horse and Cattle Barn	1934	Eligible/Contributing
Central	1064	Horse and Cattle Barn	1934	Eligible/Contributing
Central	1070	Superintendent's House and Garage	1935	Eligible/Contributing
Central	1071	Superintendent's House and Garage	1935	Eligible/Contributing
Central	1072	Office/Laboratory	1935	Eligible/Contributing
Central	1073	Foreman's House Garage	1935	Eligible/Contributing
Central	1092	Water Pumping House, Well 9	1938	Eligible/Contributing
Central	1100	Parasitological Laboratory	1936	Eligible/Contributing
Central	1104	Field Pen	1935	Eligible/Contributing
Central	1120	Pathological Laboratory	1945	Eligible/Contributing
Central	1183	Water Pumping House, Well 10	1938	Eligible/Contributing
Central	1205	Animal Pen	1972	Eligible/Contributing
Central	1287	Poultry Laboratories	1952	Eligible/Contributing
Central	1288	Laboratory	1968	Eligible/Contributing
Central	1289	Poultry Laboratories	1952	Eligible/Contributing
Central	1292	Poultry Laboratories	1952	Eligible/Contributing

Table 2-1 continued: Buildings Proposed for Demolition at BARC

Farm Location	Building ID	Building Name/Reference	Year Constructed	NRHP Eligibility[(a)]
1000 Cluster continued				
Central	1328	Colony Brooder Houses	1945	Eligible/Contributing
Central	1329	Colony Brooder Houses	1945	Eligible/Contributing
Central	1330	Storage Shed	1940	Eligible/Contributing
Central	1390	Storage	1972	Eligible/Contributing
Central	1422	Swine Research Laboratory	1945	Eligible/Contributing
Central	1425	Swine Products barn	1945	Eligible/Contributing

(a) The BARC Facility was determined eligible for listing in the NRHP as a historic district in 1998 and buildings identified as "eligible" represent contributing features of the district. Additional information is provided in Section 3.8.

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 as close to pre-development conditions as feasible. The area of direct effects also includes ingress and egress routes for demolition equipment, most of which follow existing roadways to the extent practicable. These areas also comprise the area of potential effects referred to under Section 3.8.

The contractor may select to use other areas not assessed in this EA for use as waste storage or construction staging associated with the specific building or cluster of buildings being demolished. If that is the case, the effects of the use of those areas have not been included in this EA and would need to be evaluated individually prior to their use. The resource sections also indicate additional investigations and clearances or permits that would need to be obtained either by BARC/USDA-ARS or the contractor prior to initiating demolition activities as those site investigations were not included in the scope of this EA.

The buildings proposed for demolition are vacant and in various states of disrepair. 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. All hazardous materials would be removed and disposed of offsite at an approved Treatment, Storage, and Disposal Facility (TSDF), and all demolition debris would be removed and disposed offsite at an approved construction debris landfill. In compliance with EPA Section 438 of the EISA, building sites would be returned to pre-development 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, pre-development 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 could occur. Sites would be stabilized with a seed mix or plantings consistent with Maryland Department of Natural Resources (MDNR) or Maryland Department of the Environment (MDE) standard specifications to minimize surface erosion and colonization by 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. Requirements of Section 438 of the EISA are further described in Section 3.2.2.

Appendix C provides photographs of the 117 buildings as documented in field visits on October 22–24, 2019, and March 23-24, 2021, as well as from previous documentation efforts at the campus where noted.

The buildings remaining at BARC would continue to serve their existing purposes in support of ongoing research. Other areas used for livestock and crop production on BARC would not change with the

demolition of these 117 buildings. The Proposed Action Alternative does not include redevelopment of the areas where the buildings or building clusters are removed. 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 and other applicable legislation prior to execution of such development.

2.3 No Action Alternative

Under the No Action Alternative, USDA-ARS would not demolish the 117 identified buildings and structures 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. The No Action Alternative has the potential to adversely impact the Chesapeake Bay Watershed through long-term impacts on localized surface and groundwater quality as contaminants from deteriorated and collapsed buildings and surrounding soils are washed into receiving waters by rain and snow Retaining the buildings would not satisfy the needs to reduce the facility footprint and associated operational and maintenance costs, reduce the impervious area of the facility, nor reduce human health and safety and facility 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.

2.4 Alternatives Eliminated from Further Consideration

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

This EA does not consider the scenario of USDA-ARS repairing, rehabilitating, or reconstructing the buildings for continued or other use. The buildings were built for specific purposes and to house specific equipment types. Due to shifts in research focus and technological advances and changes in research methodologies, these buildings no longer support USDA-ARS research and long-term mission goals. As a result, most of these buildings have been unoccupied for years with many now in a deteriorated condition. The repair, rehabilitation, or reconstruction of these buildings would be cost prohibitive, would not satisfy current research requirements, and would negatively affect already scarce resources used 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 under the federal *Reduce the Footprint Policy* or EISA nor would it satisfy the requirements of the MS4 permit issued by the MDE. For these reasons, this alternative was eliminated from further consideration.

Two buildings originally slated for demolition (Buildings 196 and 209A) were re-evaluated as part of the Section 106 assessment and determined suitable candidates for preservation and mothballing. These resources have the potential for future re-use and are discussed further in Section 3.8.

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

The HUD periodically reviews federal property identified as unutilized, underutilized, excess, or surplus for suitability to assist the homeless. During April and August 2014, several BARC buildings (including Buildings 018, 1054, 1092, 1205, 1288, and 1390 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. Building 044 was deemed unsuitable to its poor condition and contamination issues. A NOA of the buildings for such use was published in the Federal Register 79:70 (April 11, 2014) p. 20222 and FR 79:158 (August 15, 2014) p. 48176 (Appendix A). The buildings were not claimed by a federal agency or another entity for use and have therefore remained vacant and in place. The remaining buildings would be assessed for suitability for reuse by the homeless once funding for their demolition is secured. If suitable, HUD Title V paperwork would be prepared, and a NOA would be published in the Federal Register. Many of the buildings would require costly repair, rehabilitation, or remediation to be suitable for use to assist the

homeless, and many are utilitarian structures such as animal pens and storage sheds that are not habitable. As a result, transfer of the buildings for this purpose is not considered a feasible alternative and was eliminated from further consideration.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The affected environment described in this EA focuses on resources currently present across the BARC campus that could be affected by the Proposed Action. Data were obtained from readily available sources including online digital information; documents from USDA-ARS and other federal entities, the state of Maryland, Prince George's County, and the city of Beltsville; communications and interviews with BARC campus staff and personnel; and field reconnaissance of the BARC campus conducted during October 22–24, 2019, and March 23-24, 2021. 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 the 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 009, or Range 3, was historically used as research laboratories and greenhouses. The 1.5 story Georgian Revival-influenced headhouse was historically attached to six greenhouses that no longer exist. It is of concrete block construction with brick veneer, concrete foundations, and limestone detailing. The building is within the North Farm at the intersection of 2nd Drive and 3rd Drive.
- Building 018 (the Smallwood House) is a 1-story wood-frame bungalow historically used for employee housing within the North Farm. It was moved to its current location on Agricultural Research Road between 1943 and 1950. It is situated immediately west of the property line between BARC and commercial and residential properties to the east, including the Camden College Park Apartments.
- Buildings 038, 039, 040, and 041 are grouped together and comprise former research facilities and a fallout shelter. Buildings 038, 040, and 041 are single-story, rectangular buildings built into the side of an embankment. Building 039 is two-story, rectangular building also built into the side of an embankment. Buildings 038, 039, and 040 are constructed of rusticated concrete blocks. Building 041 is made of poured-in-place concrete. This group of buildings is on the North Farm on Baltimore Avenue south of the intersection of West Road and Yuma Street.
- Building 044 is a single-story rectangular building constructed of concrete blocks with brick veneer walls and concrete foundation. The Georgian Revival-influenced building was historically used for storage and is on the North Farm between Buildings 018 and 050 on Agricultural Research Road immediately west of the property line between BARC and commercial and residential properties to the east.
- Building 050, or Range 4, was historically used as an experimental greenhouse with associated laboratory space. It consists of a 1.5-story headhouse with four attached greenhouses. The headhouse is of concrete block construction with brick veneer cladding. It is south of Building 009 at the intersection of the 3rd Drive and South Drive in the North Farm.
- Building 060 (Service Building D) is within the South Farm and comprised of a central two-and-a-half story section and two-story east and west sections. The 25,561-squre-foot, 32-bay building is constructed of concrete blocks and has a concrete slab and concrete walk-out basement foundation built into an embankment. Building 060 is 250

feet southwest of the intersection of National Agriculture Research Road and an unnamed road in a secure part of the BARC Campus.

- Buildings 085, 085A, and 085B comprise a former granary complex on the Linkage Farm. Building 085, the workhouse, is a three-story poured-concrete building with a gabled roof and clerestory divided into three sections with four poured-concrete silos. Building 085A, the granary warehouse, is a one-story brick building with a flat roof and central brick chimney. Building 085B, a former garage, is a small metal-clad shed with wood framing and a gabled roof. The buildings are within the northernmost boundary of the Linkage Farm, south of Powder Mill Road and bounded by the railroad to the west, private commercial and industrial development to the west and north, and dense forest to the south and east.

100 Cluster:

- Building 166A is a single-story masonry building at the base of four fodder silos approximately 40-50 feet in height. It is on the Central Farm approximately 465 feet southeast of the intersection of Powder Mill and South Dairy Roads.

200 Cluster:

- Building 203B, constructed in 1972, is on the Central Farm along Animal Husbandry Road approximately 1,400 feet northwest of its intersection with Powder Mill Road. The rectangular, single-story building features a side-gabled roof, concrete block end walls, and open animal pens surrounded by chain-link fencing. It historically served as a swine pen.
- Buildings 204A and 205 are adjacent to each other within the Animal Husbandry complex on the Central Farm. Building 204A is a single-story brick building located approximately 1,000 feet north of Powder Mill Road, 852 feet northwest of the intersection of Powder Mill Road and Animal Husbandry Road, and 795 feet northwest of the intersection of Powder Mill Road and Poultry Road. Building 205 is one-story building constructed of a combination of concrete block and wood-frame on a concrete foundation located approximately 34 feet northeast of Building 204A. Both were support structures associated with meat research.
- Building 288 is a 1-story, two-car concrete block garage with a front-gabled roof. The building is west of the Baltimore-Washington Parkway in an isolated grouping of buildings south of Beaver Dam Road within the Soil Conservation Area of the Central Farm.

300 Cluster:

- Buildings 321, 321A and 321B are grouped together within the former Zoology Division of the Central Farm. Building 321 is a one-story concrete block building with a stucco façade used as an office/barn. The building is comprised of two rectangular, side-gable buildings that telescope out from each other. Buildings 321A and 321 B are square, metal walk-in refrigerator units located north of Building 321. The buildings are in a cluster on the west side of Zoology Avenue.
- Building 322 is a two-story, rectangular former barn/office constructed of concrete blocks with a stucco façade and a gambrel roof. The building is approximately 100 feet northwest of Building 321 within the former Zoology Division of the Central Farm.
- Building 323 is a small front-gabled rectangular building historically used as a bull barn. It is of concrete block construction with stucco veneer. The building is approximately 60 feet west of Building 322 within the former Zoology Division of the Central Farm.
- Buildings 324, 324A, and 324B are grouped together. Building 324 is small garage and implement shed. The building is built into the side of a hill so one side is two-story and the other one-story. Building 324A is a one-story rectangular building once used as a

walk-in-box, and Building 324B is a two-story square storage building. All three buildings are constructed of concrete block with stucco cladding. The buildings are approximately 100 feet west of Building 321.

- Buildings 327, 328, and 333 are one-story rectangular laboratory buildings constructed of concrete block with gabled roofs and a stucco veneer. They are all within the former Zoology Division of the Central Farm. Building 327 is approximately 140 feet north of Building 322, Building 328 is approximately 120 feet east of Building 321, and Building 333 is approximately 210 feet southeast of Building 328.
- Buildings 334, 335, and 335A are clustered together along the north side of an unnamed roadway loop east of Zoology Road within the former Zoology Division of the Central Farm. Building 334 is a one-story rectangular building used as a parasite investigation laboratory constructed of concrete block with stucco finish. Building 335 is a one-story L-shaped brooder house constructed of concrete block with a stucco finish. Building 335A is a small, wood animal quarantine structure with a pyramidal roof on a raised concrete foundation.
- Building 335B is a one-story, rectangular feed barn with corrugated metal cladding and a concrete block foundation. It is on the south side of the unnamed roadway loop approximately 100 feet south of Building 335A.
- Buildings 336B and 336C are one-story rectangular hog sheds of concrete block construction with stucco veneer, corrugated metal roofs, and open bays on the southern façades. The buildings are in a field approximately 450 feet and 310 feet north, respectively, of Zoology Road.
- Buildings 337, 337A, and 337B are grouped together. Building 337 is a one-story rectangular laboratory building of concrete block construction with a stucco finish. Building 337A is a rectangular corrugated metal building historically used for swine research. Building 337B is a small concrete block storage building. The buildings are all on the south side of an unnamed roadway loop within the former Zoology Division of the Central Farm. Building 337A is approximately 90 feet west of Building 335B, and Buildings 337 and 337B are approximately 35 feet west of Building 337A.
- Buildings 338, 338A, and 338B are grouped together. Building 338 is a one-story, cross-gabled, laboratory building constructed of concrete block with a stucco veneer. Buildings 338A and 338B are one-story rectangular animal buildings constructed of concrete blocks with Building 338B partially clad in corrugated metal. The buildings are all on the north (Building 338) and south side (Buildings 338A and 338B) of an unnamed roadway loop within the former Zoology Division of the Central Farm. Buildings 338A and 338B are approximately 80 feet southeast of Building 338.
- Buildings 339C and 339D are adjacent to each other between Zoology Road to the west and an unnamed roadway loop to the east within the former Zoology Division of the Central Farm. Building 339C is a two-storied gabled building of concrete block construction housing office space and animal pens. Building 339D adjoins Building 339C to the west. It is one-story, concrete block, and partially built into an embankment. Active beehives are maintained in the associated parking lot.
- Building 339F is a former office and laboratory space occupied by the Food and Drug Administration (FDA). The asymmetrical building features a flat roof and brick veneer. It is south of the main grouping of buildings in the 300 cluster along an unnamed roadway loop approximately 100 feet east of Zoology Road.
- Buildings 340, 341R, and 342 are in close proximity along the east side of an unnamed roadway loop within the former Zoology Division of the Central Farm approximately 340

feet east of Zoology Road. Buildings 341R and 342 are approximately 83 feet northeast and 34 feet north of Building 340, respectively. Building 340 is a two-story stucco barn with a long rectangular wing attached to the eastern elevation. It is of concrete block construction with a stucco exterior and concrete foundation. Buildings 341R and 342 are small hog pens of concrete block construction with gabled roofs and stucco finishing.

- Buildings 342A-D comprise a row of hog sheds located north of Building 340. The wood-frame sheds are enclosed with corral fencing and a system of animal chutes and are in a field within the unnamed roadway loop connecting the buildings in the former Zoology Division of the Central Farm. They are on a north/south axis approximately 70 feet apart.
- Building 344 is a two-story, gambrel roofed barn and associated pen/corral system. The barn is of poured concrete construction with a concrete foundation. It is along the east side of an unnamed roadway loop within the former Zoology Division of the Central Farm, approximately 240 northeast of Building 340.
- Building 357 is a small, rectangular side-gabled laboratory building formerly used by the FDA. The one-story, side-gabled building is constructed of concrete blocks with stucco veneer and surrounded by a full-height chain-link and barbed wire fence. It is on the west side of an unnamed roadway loop within the former Zoology Division of the Central Farm, approximately 200 feet northeast of Zoology Road.
- Buildings 362, 363, and 364 are grouped together. All are one room, wood-frame chicken houses on concrete pier-and-beam foundations. Buildings 362 and 363 feature front gabled roofs and central open entries accessed by ramps. Building 364 has a shed roof. The buildings are approximately 150 feet north of Building 357.
- Building 369 is a one-story building of log construction with concrete joiner of unknown historic function. It is approximately 60 feet northeast of Building 364.
- Buildings 370-378 are grouped together and represent wood-frame former poultry buildings on concrete piers. The buildings are west of and to adjacent to Buildings 362, 363, and 364 approximately 100 feet northeast of Zoology Road within the former Zoology Division on the Central Farm.
- Buildings 385 and 385A are next to each other in the same grouping as Buildings 370 through 378. Both buildings are one-story rectangular storage sheds constructed of wood on concrete slabs.
- Building 391 is a one-story, linear animal shelter constructed of metal and wood on concrete slabs with open partitions divided by chain link fencing and covered with metal roofing. The building is approximately 170 feet north of Buildings 374-377.

400 Cluster:

- Building 452 is a collapsed former radio shed located within the Central Farm. The remains of the building are in a heavily wooded area approximately 500 feet northeast of Powder Mill Road.
- Buildings 467, 487-1, and 487-2 are grouped together. Building 467, originally known as the Entomology “C” Building, served as a headhouse and laboratory for the Bureau of Entomology and Plant Quarantine on the Central Farm. It features a single greenhouse extending to the south and is of concrete block with brick facing and a concrete foundation. Buildings 487-1 and 487-2 are walk-in boxes located immediately south of Building 467. The grouping is at the entrance to the former Entomology Complex on the south side of an unnamed connector road approximately 175 feet southeast of Entomology Road.
- Buildings 468 and 469-1 are adjacent to each other south of Building 467. Building 468 is a former laboratory building of wood-frame construction with a side-gabled roof. Building

469-1 also historically served as a laboratory building. It is immediately east of Building 468 and similar in form.

- Building 470 is a one-and-half-story Georgian Revival-influenced headhouse with attached greenhouses associated with the Bureau of Etymology and Plant Quarantine on the Central Farm. The building is constructed of reinforced concrete with brick facing and is approximately 400 feet east-southeast of the north end of Entomology Road.
- Buildings 470B and 488 are adjacent to each other east of Building 470. Building 470B is a Quonset Hut historically used to store insecticide. Building 488 is a small walk-in box located immediately west of Building 470B. The buildings are approximately 575 feet east-southeast of the northern end of Entomology Road.
- Building 472 is a one-story, L-shaped building historically used as a spray mixing shed. It is of steel-frame construction with corrugated metal siding and roof in a wooded area north of buildings 473 and 474, approximately 760 feet east of the terminus of Entomology Road.
- Buildings 473, 474 and 475 are former mushroom houses clustered together in a wooded area approximately 170 feet south of Building 472. Buildings 473 and 474 are parallel to each other and are two-story, rectangular buildings built into the side of an embankment and constructed of poured concrete with stucco exteriors. Building 475 is adjacent to Buildings 473 and 474 and is a one-story rectangular building built into a hillside with an elevated concrete masonry block foundation.
- Building 476, historically known as Entomology Lab “A,” is a two-and-one-half-story Georgian Revival-style building resting on a raised basement constructed of reinforced concrete and cinderblocks clad with brick. Building 476 is at the northern end of Entomology Road at the entrance to the main Entomology Complex on the Central Farm.
- Building 485 is a one-story, square walk-in box with a shed roof. The building is approximately 225 feet west-northwest of Building 476 in a wooded area near the entrance to the main Entomology Complex on the Central Farm.

500 Cluster:

- Building 506A represents the remnants of a former storage and shop building located on the East Farm that collapsed between 2017 and 2021. The resource remnants are in a field approximately 200 feet west of Soil Conservation Road approximately 1,700 feet southwest of its intersection with Beaver Dam Road.
- Building 524, previously utilized as a gas station, is one-story, two-room, rectangular plan building of poured concrete construction. The building is on the East Farm approximately 300 feet north of Beaver Dam Road.
- Buildings 541C and 541D are identical hog houses of concrete block construction with concrete slab foundations. The buildings are adjacent to one another approximately 200 feet apart along the south side of Powder Mill Road approximately 200 feet southeast of the intersection of Powder Mill Road and Soil Conservation Road on the East Farm.
- Buildings 543 and 543A are together in a wooded area on the west side of Springfield Road on the East Farm. They historically served as dog kennels used for the Army K-9 Corps. Building 543 is a one-and-one-half-story building of concrete-block construction with stucco cladding. Building 543A is a smaller support building of concrete block construction. Both buildings are heavily obscured by vegetation and are approximately 1,328 feet south of the intersection of Springfield Road and Powder Mill Road.

1000 Cluster:

- Buildings 1002 and 1005 are one-story former barns with laboratory facilities associated with the Bureau of Dairy Industry on the Central Farm. Both buildings are of concrete

block construction with stucco veneer and concrete slab foundations. Building 1002 has an attached silo on the north side of the building. The buildings are within a secure portion of the campus approximately 1,045 feet northeast from the intersection of Maryland Route 201 (MD 201) and Road C adjacent to a parking lot still in use.

- Buildings 1052, 1053, and 1054 are grouped together and were historically used for chemical storage. Buildings 1052 and 1053 are rectangular, one-story, front-gabled buildings constructed of concrete masonry block and covered with stucco. Building 1054 is one-story, rectangular walk-in-box with metal frames resting on concrete blocks. The buildings are 120 feet north of Road C with Building 1053 immediately north of Building 1052. The walk-in-box is in between Buildings 1052 and 1053. They are within a secure portion of the BARC campus associated with the Bureau of Dairy Industry on the Central Farm.
- Buildings 1062, 1063, and 1064 are single-story, L-shaped buildings constructed of concrete blocks with a stucco finish positioned parallel to each other approximately 100 feet apart. All were historically used as livestock barns with associated laboratory space. Buildings 1062 and 1063 are at the southwest corner of the intersection of Ridge Lastner Lane and Road C, while Building 1064 is southeast of the intersection. All are within a secure portion of the BARC campus associated with the Bureau of Dairy Industry on the Central Farm.
- Buildings 1070 and 1071 comprise the former Superintendent's Residence and Garage within a secure portion of the BARC campus associated with the Bureau of Dairy Industry on the Central Farm. The two-story, brick-clad dwelling is of Georgian Revival style. The two-bay standalone garage is of wood-frame construction with brick cladding. It is partially embanked. The buildings are at the end of a cul-de-sac at the terminus of Ridge-Lastner Lane south of its intersection with Road C.
- Buildings 1072 and 1073 comprise the former Foreman's Residence and Garage within a secure portion of the BARC campus associated with the Bureau of Dairy Industry on the Central Farm. The buildings are similar in design and form to Buildings 1070 and 1071 and are to east side of the cul-de-sac at the terminus of Ridge-Lastner Lane south of its intersection with Road C.
- Building 1092 is a small, one-story rectangular water pumping house (Well 9) of concrete block construction associated with a series of metal animal pens. The building is approximately 530 feet south of Road D and approximately 1,000 east of Building 1104.
- Building 1100 is a former parasitological laboratory associated with the Bureau of Animal Industry (BAI) on the Central Farm. It is constructed of concrete block with a stucco finish and rests on a concrete slab foundation. The building is along the south side of an unnamed service road approximately 220 feet east of Building 1064 within a secure portion of the BARC campus.
- Building 1104 is a former field pen and laboratory space associated with the BAI on the Central Farm. The one-story, rectangular-shaped building is constructed of concrete block and rests on a concrete slab foundation. A concrete slab surrounded by chain-link fencing extends off the rear projection. The building is along the north side of an unnamed service road approximately 465 feet east of the intersection of the unnamed service road and Ridge-Lastner Lane within a secure portion of the BARC campus.
- Building 1120 is a former pathological laboratory associated with the BAI on the Central Farm. The one-story building is of concrete block construction with a stucco finish and rests on a concrete slab foundation. The building has a flat roof with a tall concrete block interior chimney along the west elevation near the southwest corner. Building 1120 is

approximately 174 feet southeast of the intersection of Ridge Lastner Lane and Road C northeast of Building 1064 within a secure portion of the BARC campus.

- Building 1183 is a one-story, rectangular-shaped water pumping house (Well 10) of concrete block construction with a stucco finish and concrete slab foundation. Building 1183 is approximately 41 feet north of Road D and approximately 108 feet northwest of the intersection of Road D and Road E within a secure portion of the BARC Campus associated with the Bureau of Dairy Industry on the Central Farm.
- Building 1205 is a former animal pen associated with BAI on the Central Farm. The one-story, rectangular building is of concrete block construction with a concrete slab foundation. The building is just west of Road A approximately 480 feet north of Road D within a secure part of the BARC campus.
- Buildings 1287, 1288, 1289, and 1292 are clustered together at the terminus of Road A within secure portion of the BARC Campus on the Central Farm. The former poultry laboratories are of concrete block construction and are similar in form.
- Buildings 1328 and 1329 are former colony brooder houses located at the terminus of Road A within a secure portion of the BARC Campus on the Central Farm. The buildings are of concrete masonry unit (CMU) construction with concrete slab foundations, and Building 1329 features an enclosed pen on the southern elevation.
- Building 1330 is a one-story, rectangular open bay storage shed of CMU construction. The building is at the end of Road A approximately 215 feet north of Building 1289 within a secure part of the BARC campus on the Central Farm.
- Building 1390 is a former storage building of CMU construction. It is at the northeast corner of the intersection of Road B and Road E within a secure part of the BARC campus on the Central Farm.
- Buildings 1422 and 1425 comprise a former swine research facility including laboratory space and a barn. The linear buildings are oriented along a north/south axis at the northern terminus of Road E within a secure portion of the BARC campus on the Central Farm and connected by a feed portal. The buildings are of CMU construction and feature gabled roofs with ventilator systems. Building 1425 has an integrated brick chimney.

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, 2019).

3.1.1.2 Topography

North Farm – According to the United States Geological Survey (USGS) 7.5-minute topographic maps of the *Laurel Quadrangle, Maryland,* elevations across the North Farm range from approximately 110 to 260 feet (ft) above mean sea level (amsl). The highest point on the North Farm (benchmark 264 ft amsl) is located along Cherry Hill 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).

Central Farm – Elevations across the Central Farm range from approximately 70 to 230 ft amsl. 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 that crosses the southern portion of the Farm from east to west. Beaverdam Creek drains to Indian Creek along the southwest edge of the Farm. All drainages crossing the Central Farm drain to Beaverdam Creek or Indian Creek. Shallow groundwater is expected to flow in a similar direction to the surface topographic grade (USGS, 2016a, 2016b).

East Farm – Elevations across the East Farm range from approximately 100 to 200 ft amsl. The highest points occur in the far eastern portions (200 ft amsl) and southern portions (160-180 ft amsl) of the East Farm. The lowest elevations occur where Beaverdam Creek bisects the farm from west to east. Surface water flows towards Beaverdam Creek and its tributaries. Shallow groundwater is expected to flow in a similar direction to the surface topographic grades (USGS, 2016a).

South Farm – Elevations across the South Farm range from approximately 100 to 240 ft amsl. The highest point occurs in the western portion of the South Farm and lowest elevation occurs in the eastern portion in the Paint Branch valley. Paint Branch bisects the farm from the north to the southeast. The western portion of the South Farm is hilly, with a greater angle of slope, while the eastern portion is more gently sloping. Surface water flows towards Paint Branch. Shallow groundwater is expected to flow in a similar direction to the surface topographic grades (USGS, 2016a).

Linkage Farm – Elevations across the Linkage Farm range from approximately 70 to 160 ft amsl. The highest point occurs in the western portion of the Linkage Farm, and the lowest point occurs in the eastern portion. Indian Creek runs north to south along the eastern portion of the Linkage Farm and includes the confluence of Beaverdam Creek and Indian Creek. Surface water flows towards Indian Creek valley predominately from west to east. Shallow groundwater is expected to flow in a similar direction to the surface topographic grades described (USGS, 2016a).

Figure 3-1 (Sheets 1-4) provides topographic mapping of the BARC Campus and location of each building proposed for demolition under this EA.

Figure 3-1: Topographic Map of BARC and Building Sites

Sheet 1 of 4 (South, North, and Linkage Farms)

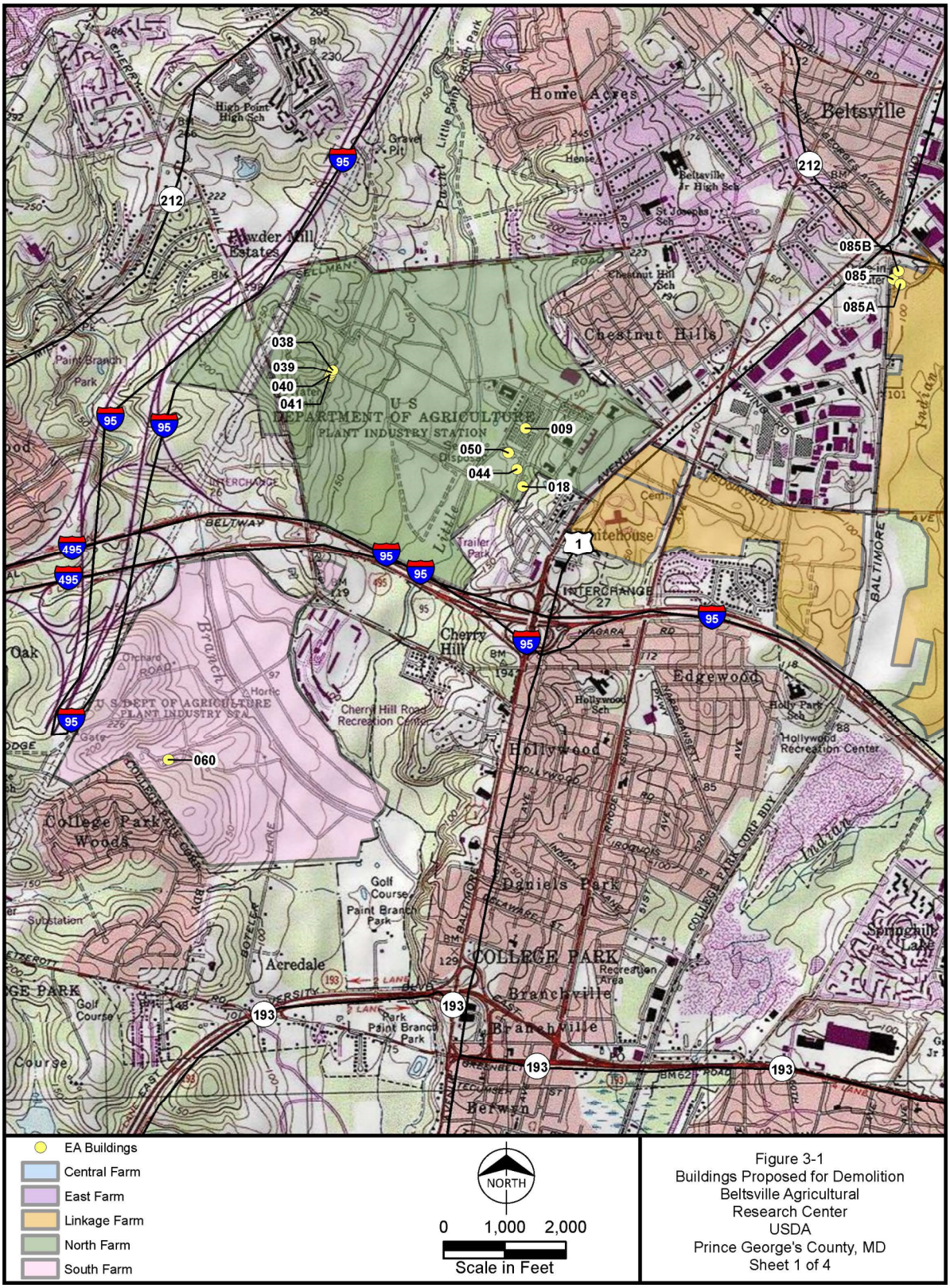


Figure 3-1 continued: Topographic Map of BARC and Building Sites
Sheet 2 of 4 (Central Farm)

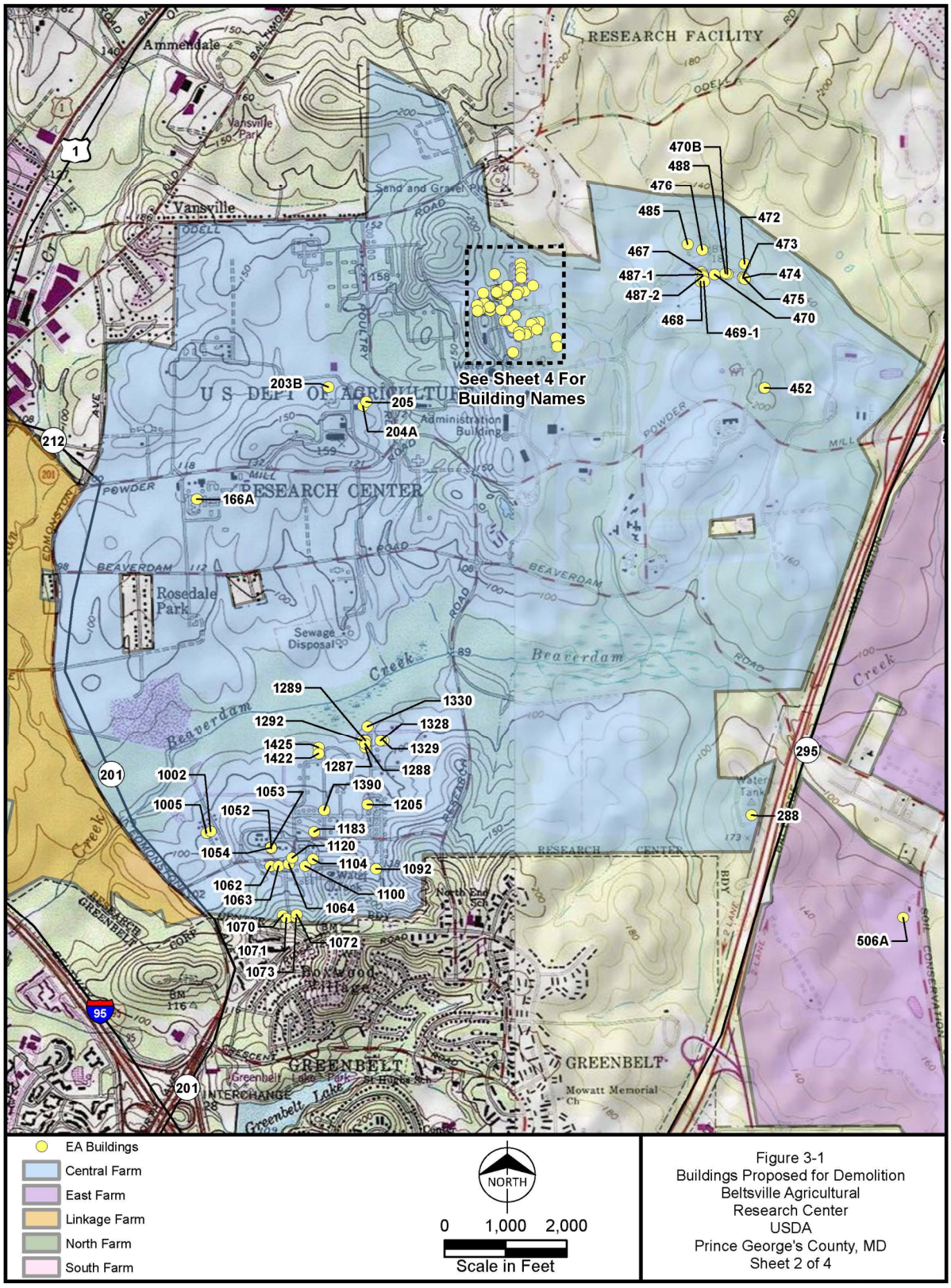


Figure 3-1 continued: Topographic Map of BARC and Building Sites

Sheet 3 of 4 (East Farm)

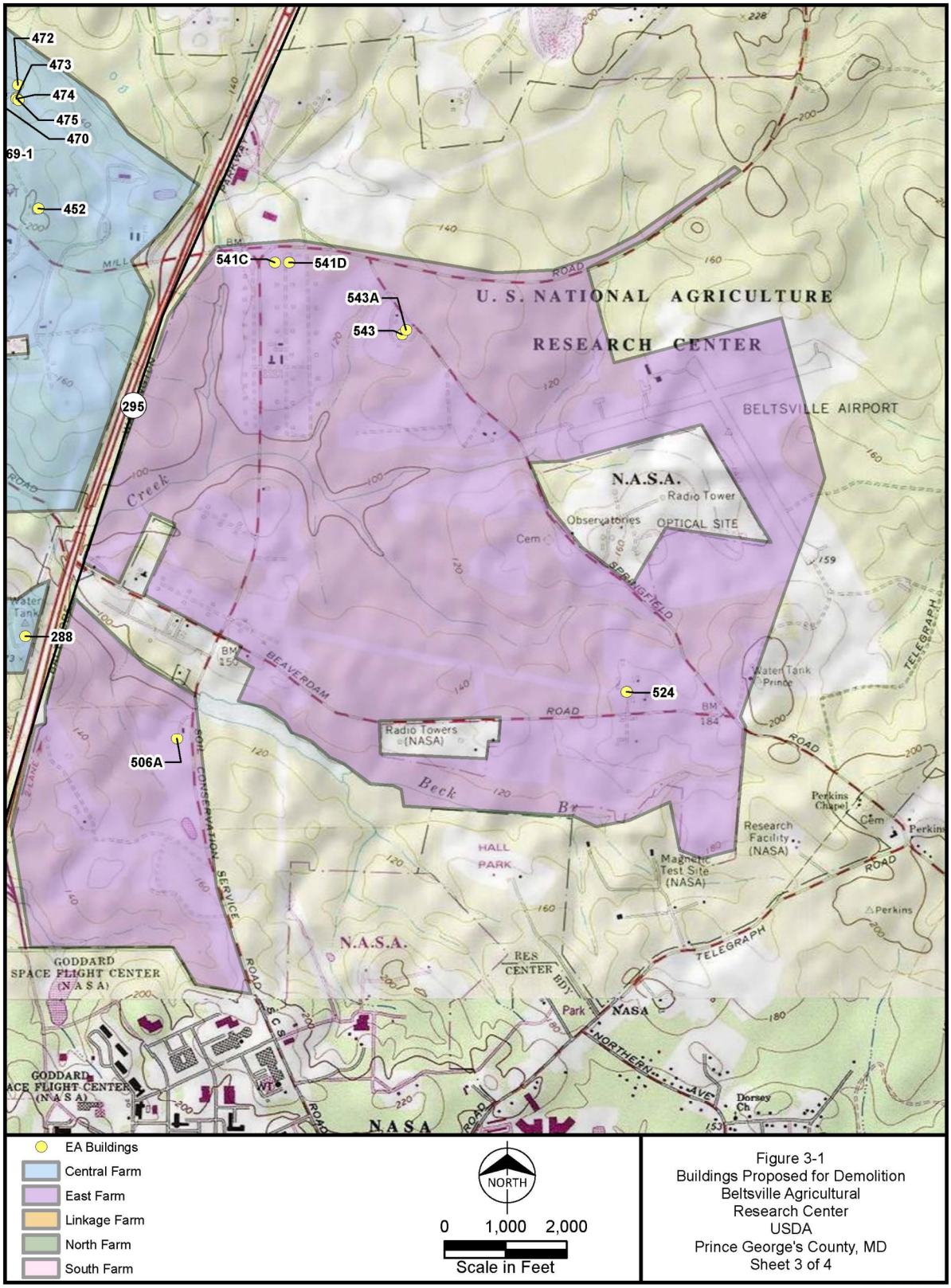


Figure 3-1 continued: Topographic Map of BARC and Building Sites

Sheet 4 of 4 (Central Farm Detail)

3.1.1.3 Soils

According to USDA Natural Resources Conservation Service (NRCS) mapping, BARC contains 53 distinct mapped soil units, ranging from zero percent to 65 percent slopes. Figure 3-2 depicts the mapped NRCS soil units across the BARC campus.

Ten of the 53 soil unit types are identified as prime farmland. Forty of these mapped soil units occur within the North and Central Farms. Approximately 2,775 acres of the BARC campus are identified as prime farmland. An additional 1,264 acres are designated as farmland of statewide importance. Another 77 acres would be considered prime farmland if irrigated or drained. Figure 3-3 illustrates areas designated as prime farmland and farmland of statewide importance. Twenty-two of the buildings or structures proposed for demolition are sited on soils classified as farmland of statewide importance, 45 are on soil classified as prime farmland, and one is on soils classified as prime farmland if drained. A total of 49 buildings are located on soils classified as not prime farmland or 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 includes prime farmland, most soils 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, 2022).

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. Figure 3-4 indicates level of soil erosion hazard potential across the BARC campus. Soil erosion hazard potential 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 soil units mapped under the buildings and building clusters identified for demolition and provides key soil characteristics of each mapped unit. Appendix D provides the same information for all mapped soil units on the BARC campus.

A summary of soil characteristics for each of the five farms on the BARC campus is provided below.

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.

Central Farm – The Central Farm is the largest of the five BARC farms at approximately 2,980 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.

East Farm – The East Farm is the second largest of the five BARC farms at approximately 2,100 acres. Soils on this farm are primarily loams, sandy loams, and silt loams. Approximately 51 percent of East Farm is designated as prime farmland, approximately 19 percent is designated as farmland of statewide importance, approximately 2 percent is designated prime farmland if drained, and approximately 1 percent is designated as prime farmland if irrigated. Approximately 2 percent of the soils on the East Farm have a severe erosion hazard, and 59 percent have a moderate erosion hazard.

South Farm – The South Farm is the smallest of the BARC farms and encompasses approximately 360 acres. Soils on this farm are primarily loams, sandy loams, and silt loams. Approximately 27 percent of South Farm is designated as prime farmland, and approximately 26 percent is designated as farmland of statewide importance. Approximately 50 percent of the soils on the East Farm have moderate erosion hazard.

Linkage Farm – The encompasses approximately 450 acres. Soils on this farm are primarily loams and sandy loams. Approximately 30 percent of South Farm is designated as prime farmland and approximately 10 percent is designated as farmland of statewide importance. Approximately 25 percent of the soils on the Linkage Farm have moderate erosion hazard.

Table 3-1: Mapped Soil Units Associated with the Building Locations

Mapped Soil Type	Hydric (b)	Farmland Classification (c)	Erodibility (c)	Acres					Buildings (c)
				North	Central	East	South	Linkage	
CcC Christiana-Downer complex, 5-10 percent slopes	Not Hydric	Farmland of Statewide Importance	Moderate	49.3	610.9	311.5	71.6	30.0	038-041, 204A, 205, 335, 335A, 336B, 336C, 337A, 337, 338, 338A, 338B, 340, 341R, 342, 344, 391, 473, 474
CcD Christiana-Downer complex, 10-15 percent slopes	Not Hydric	Not Prime Farmland or of Statewide Importance	Severe	2.8	204.7	20.7	10.6	1.8	1070-1073, 1104
CcE Christiana-Downer complex, 15-25 percent slopes	Not Hydric	Not Prime Farmland or of Statewide Importance	Severe	3.27	74.5	12.4	5.3	1.7	323, 333, 334
CdD Christiana-Downer-Urban land complex, 5-15 percent slopes	Not Hydric	Not Prime Farmland or of Statewide Importance	Not rated	19.7	65.3	5.8	0.5	0.5	231A, 321B, 1052-1054, 1062-1064, 1100, 1020
Codorus-Hatboro-Urban land complex, frequently flooded	Hydric	Not Prime Farmland or of Statewide Importance	Slight	18.2	0.0	0.0	0.2	0.0	009, 050
DoD Downer-Hammonton complex, 10-5 percent slopes	Not Hydric	Not Prime Farmland or of Statewide Importance	Moderate	9.8	56.3	59.0	9.1	7.0	060, 238, 322, 327, 339C, 339D, 357, 362-364, 369-378, 385, 385A, 391, 485, 1002
DoB Downer-Hammonton complex, 2 to 5 percent slopes	Not Hydric	Prime Farmland	Slight	24.7	148.0	179.550.3	1.6	50.3	337B, 339F, 541C, 541D, 1005
FaaA Fallsington sandy loams, 0-2 percent slopes	Hydric	Prime Farmland (if drained)	Slight	0.0	7.4	40.0	0.0	0.0	475
RcA Russett-Christiana complex, 0-2 percent slopes	Not Hydric	Prime Farmland	Slight	15.7	205.2	101.1	28.1	39.3	506A, 543, 543A

Table 3-1 continued: Mapped Soil Units Associated with the Building Locations

Mapped Soil Type	Hydric (b)	Farmland Classification (c)	Erodibility (c)	Acres					Buildings (c)
RcB Russett-Christiana complex, 2-5 percent slopes	Not Hydric	Prime Farmland	Moderate	89.0	877.9	669.0	67.5	36.4	018, 044, 050, 203B, 288, 321, 324, 342A-342D, 452, 467-470, 469-1, 470B, 472, 476, 487-1, 487-2, 488, 524, 1092, 1183, 1205, 1287-1289, 1292, 1328-1330, 1390, 1422, 1425
UrrB Urban land-Russett - Christiana complex, 0-5 percent slopes	Not Hydric	Not Prime Farmland or of Statewide Importance	Not Rated	0	25.3	0.0	0.0	3.5	085, 085A, 085B, 166A

(a) University of Maryland Extension, List of Hydric Soils for Prince George's County; accessed April 27, 2022.
(b) NRCS (2022)
(c) 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.

Figure 3-2: BARC Soils by Farm

Sheet 1 of 4 (South, North, and Linkage Farms)

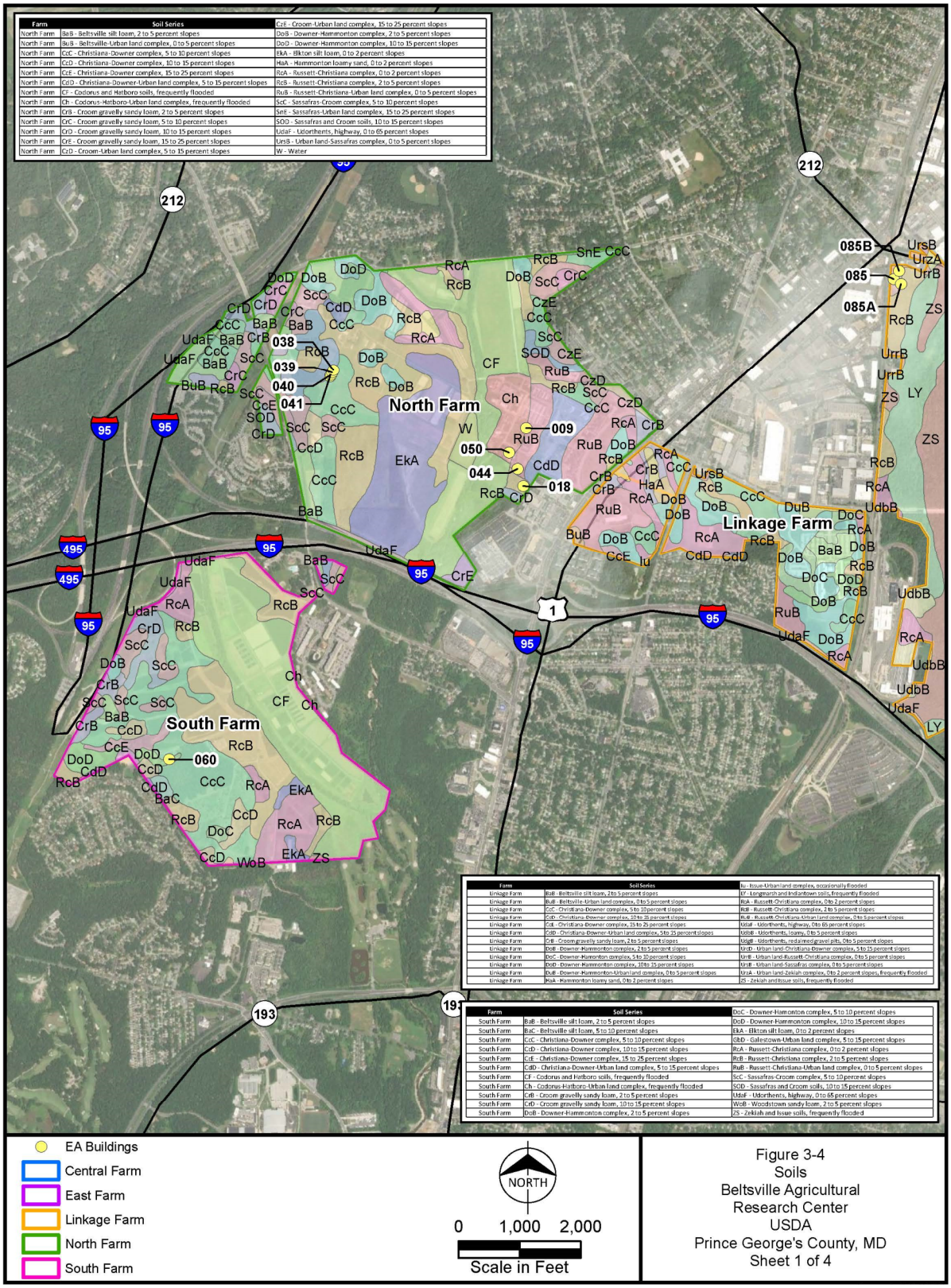
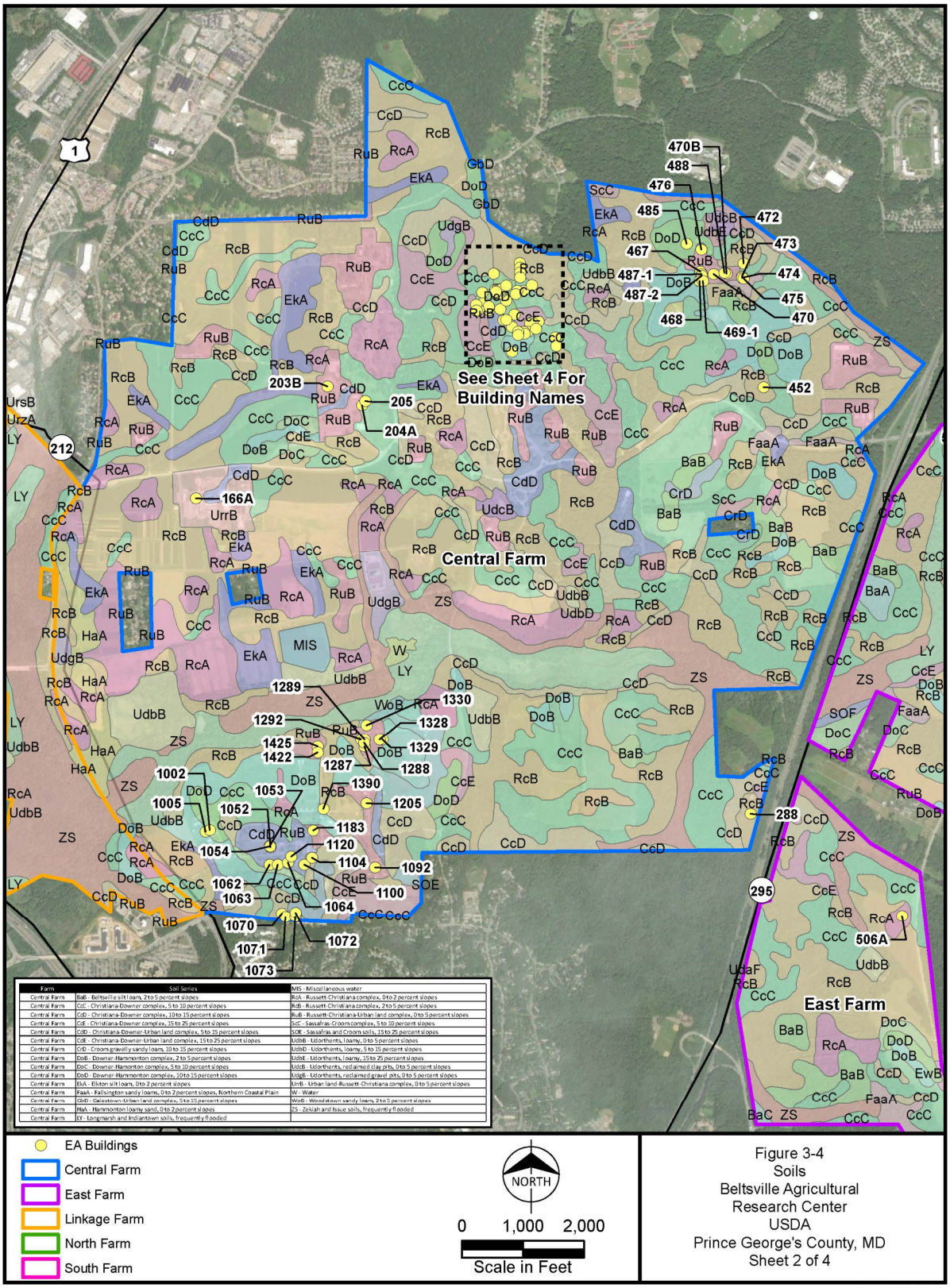


Figure 3-2 continued: BARC Soils by Farm

Sheet 2 of 4 (Central Farm)



Farm	Soil Series
Central Farm	BaB - Beltsville silt loam, 2 to 5 percent slopes
Central Farm	CcC - Christiana-Downer complex, 5 to 10 percent slopes
Central Farm	CdD - Christiana-Downer complex, 10 to 15 percent slopes
Central Farm	CdE - Christiana-Downer complex, 15 to 25 percent slopes
Central Farm	CdD - Christiana-Downer-Urban land complex, 5 to 15 percent slopes
Central Farm	CdE - Christiana-Downer-Urban land complex, 15 to 25 percent slopes
Central Farm	CrD - Croom gravelly sandy loam, 10 to 15 percent slopes
Central Farm	DoB - Downer-Hammonton complex, 2 to 5 percent slopes
Central Farm	DoC - Downer-Hammonton complex, 5 to 10 percent slopes
Central Farm	DoD - Downer-Hammonton complex, 10 to 15 percent slopes
Central Farm	EkA - Elkton silt loam, 0 to 2 percent slopes
Central Farm	FaaA - Fallsington sandy loams, 0 to 2 percent slopes, Northern Coastal Plain
Central Farm	GbD - Galestown-Urban land complex, 5 to 15 percent slopes
Central Farm	HaA - Hammonton loamy sand, 0 to 2 percent slopes
Central Farm	LY - Longmarsh and Indiantown soils, frequently flooded
Central Farm	MIS - Miscellaneous water
Central Farm	RcA - Russett-Christiana complex, 0 to 2 percent slopes
Central Farm	RcB - Russett-Christiana complex, 2 to 5 percent slopes
Central Farm	RuB - Russett-Christiana-Urban land complex, 0 to 5 percent slopes
Central Farm	ScC - Sassafras-Croom complex, 5 to 10 percent slopes
Central Farm	SOE - Sassafras and Croom soils, 15 to 25 percent slopes
Central Farm	UdbB - Udorthents, loamy, 0 to 5 percent slopes
Central Farm	UdbD - Udorthents, loamy, 5 to 15 percent slopes
Central Farm	UdbE - Udorthents, loamy, 15 to 25 percent slopes
Central Farm	UdcB - Udorthents, reclaimed clay pits, 0 to 5 percent slopes
Central Farm	UdgB - Udorthents, reclaimed gravel pits, 0 to 5 percent slopes
Central Farm	UnB - Urban land-Russett-Christiana complex, 0 to 5 percent slopes
Central Farm	W - Water
Central Farm	WoB - Woodstown sandy loam, 2 to 5 percent slopes
Central Farm	ZS - Zekiah and Issue soils, frequently flooded

Figure 3-2 continued: BARC Soils by Farm

Sheet 3 of 4 (East Farm)

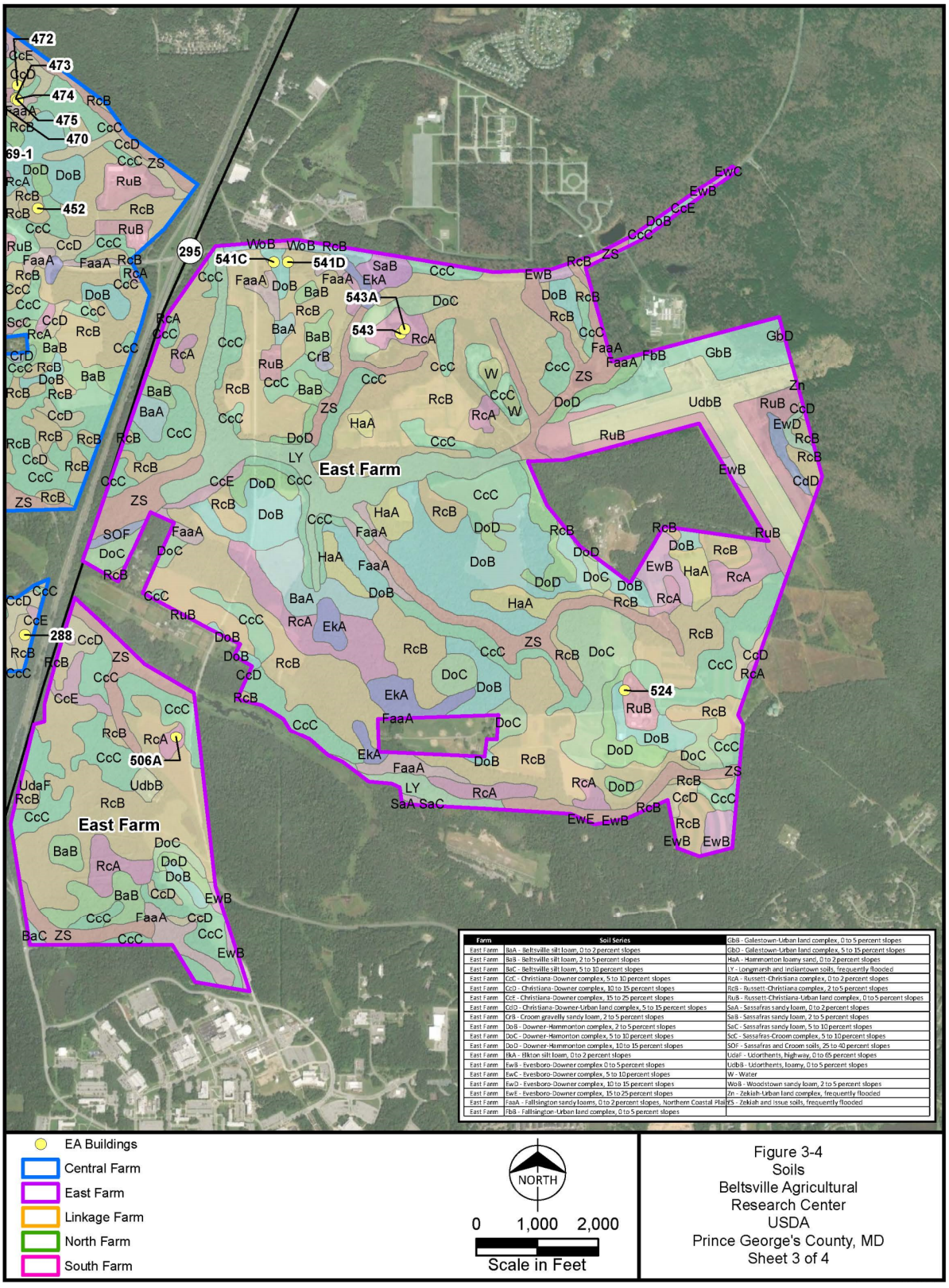


Figure 3-2 continued: BARC Soils by Farm

Sheet 4 of 4 (Central Farm Detail)

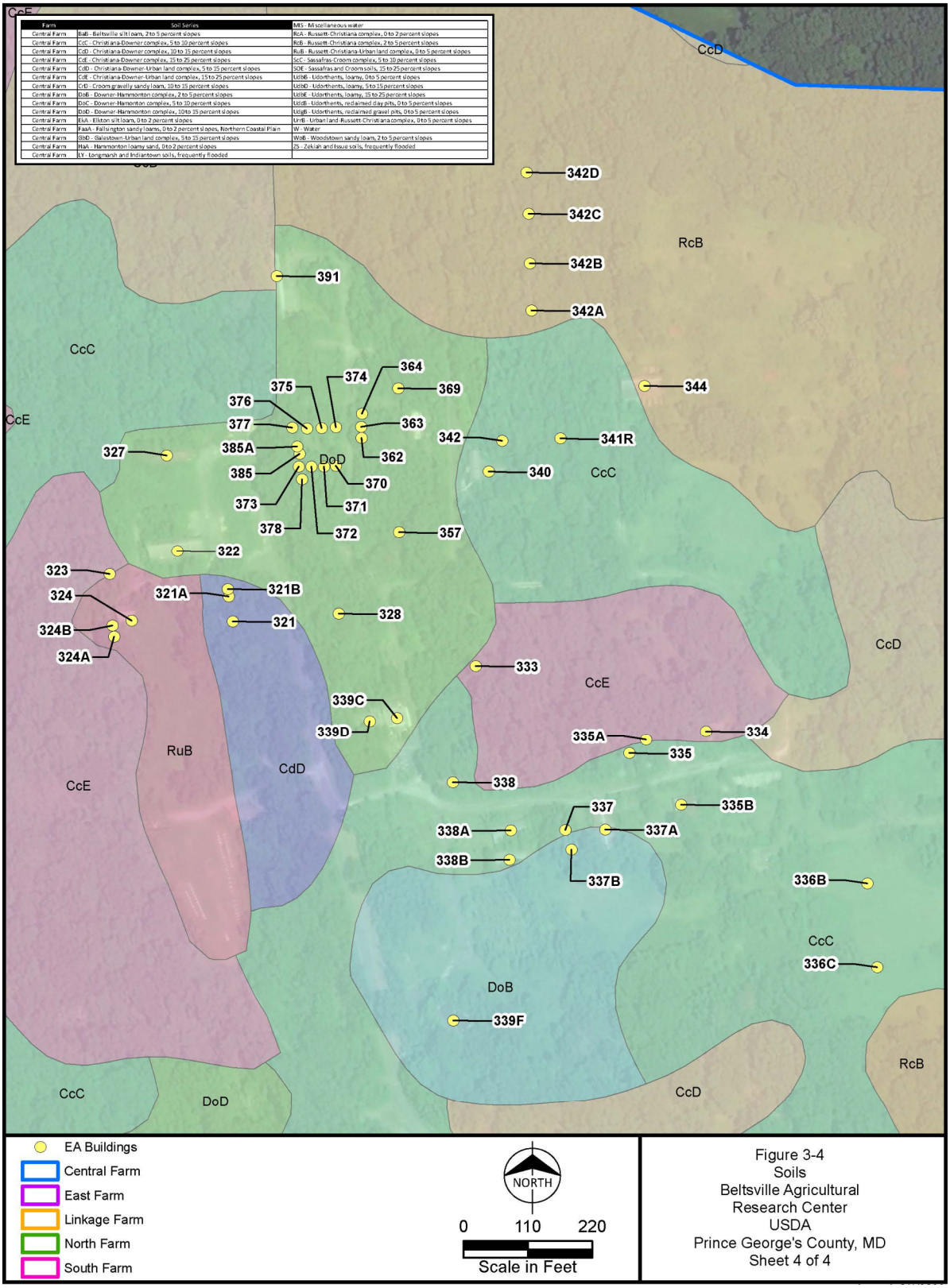


Figure 3-3: BARC NRCS Prime Farmland and Farmland of Statewide Importance

Sheet 1 of 4 (South, North, and Linkage Farms)

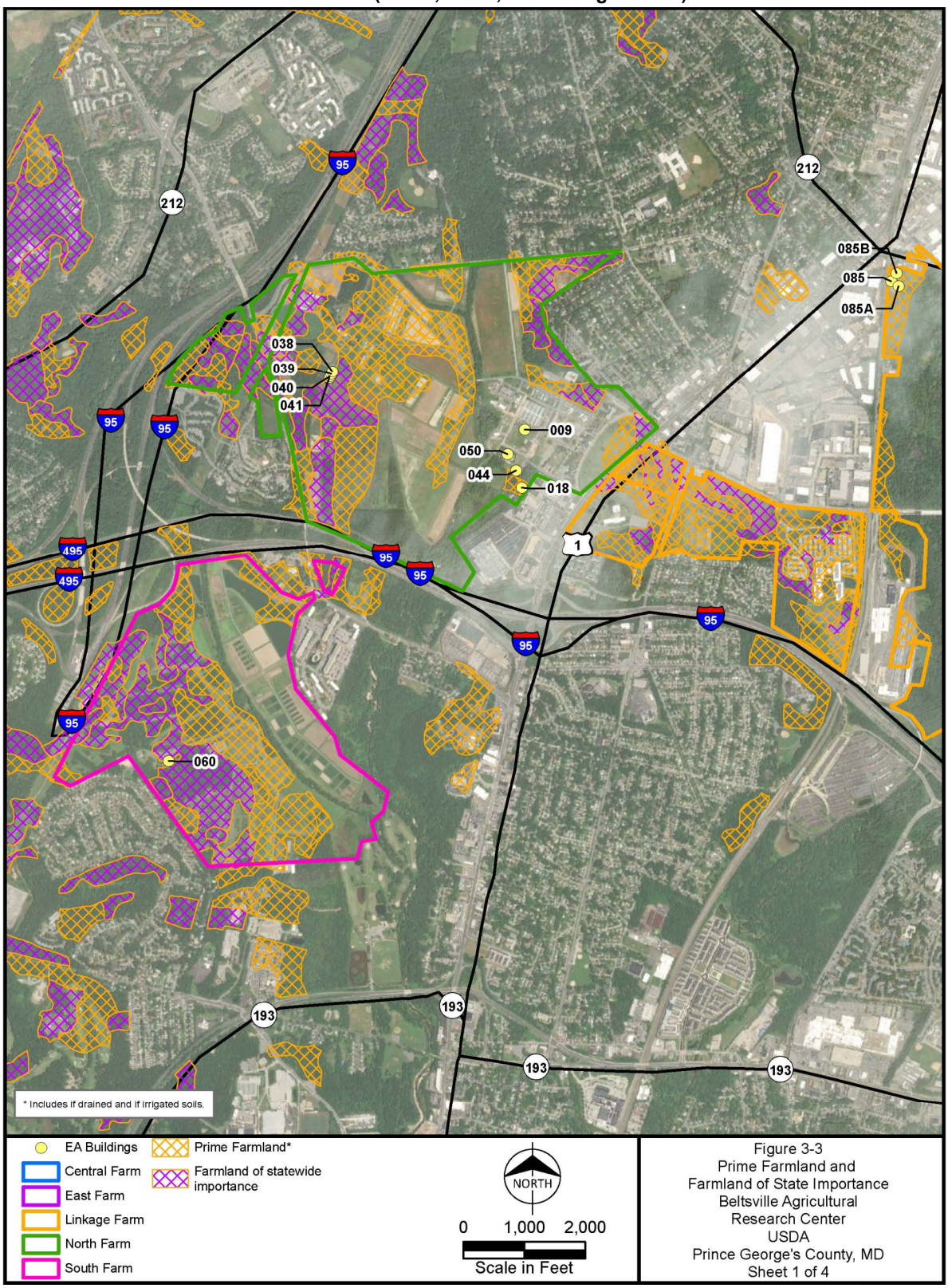


Figure 3-3 continued: BARC NRCS Prime Farmland and Farmland of Statewide Importance

Sheet 2 of 4 (Central Farm)

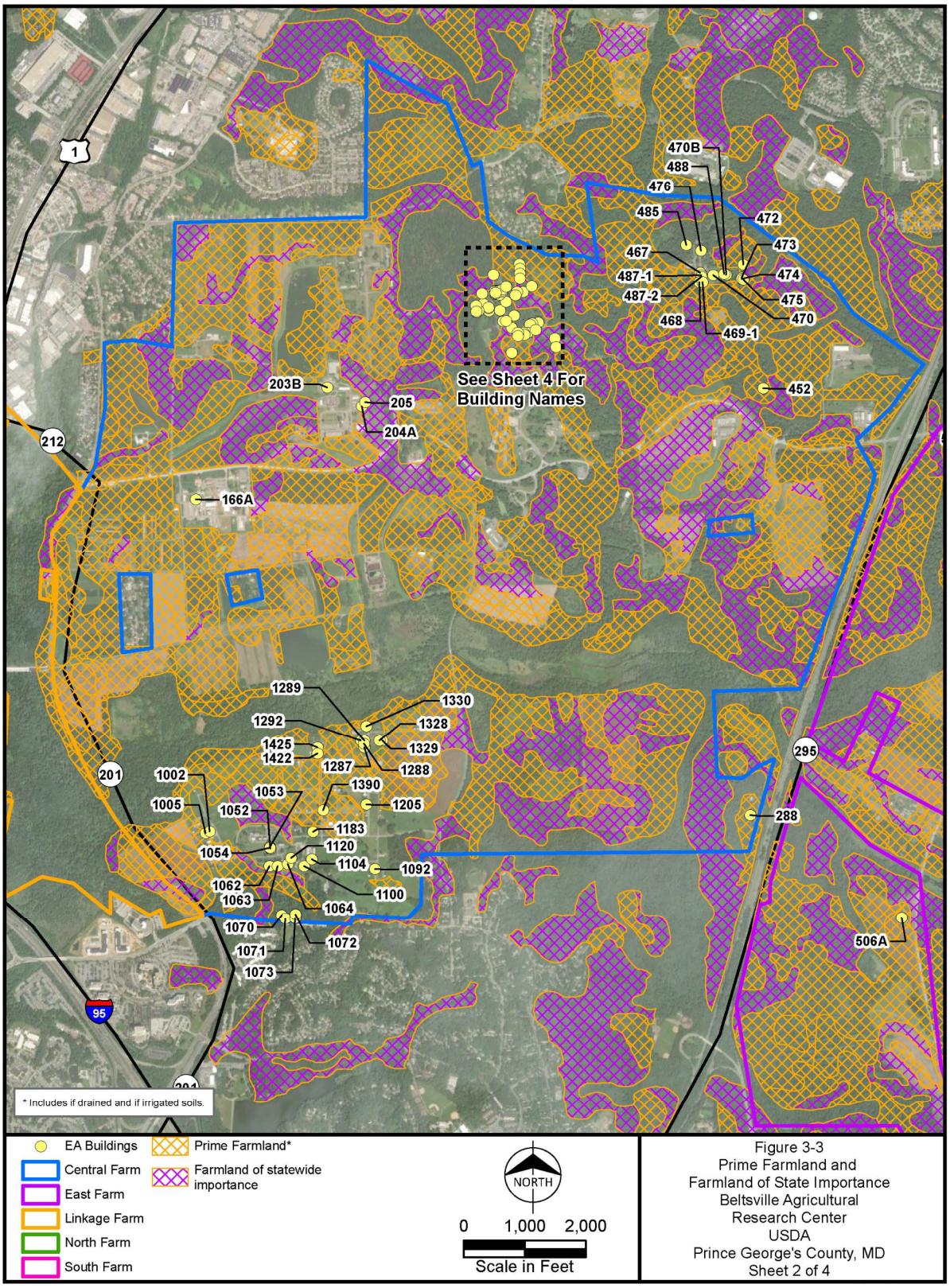


Figure 3-3 continued: BARC NRCS Prime Farmland and Farmland of Statewide Importance

Sheet 3 of 4 (East Farm)

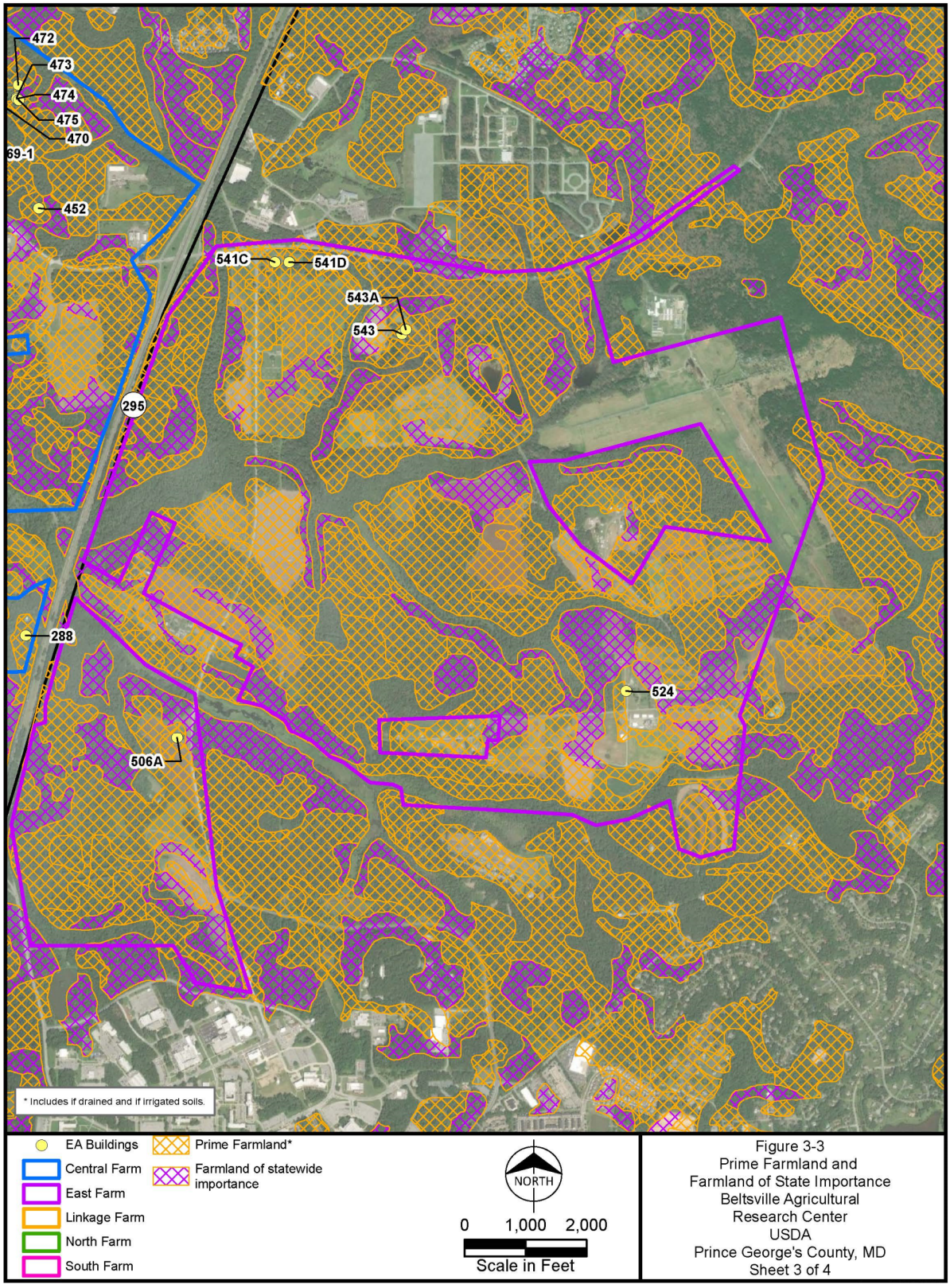


Figure 3-3 continued: BARC NRCS Prime Farmland and Farmland of Statewide Importance

Sheet 4 of 4 (Central Farm Detail)

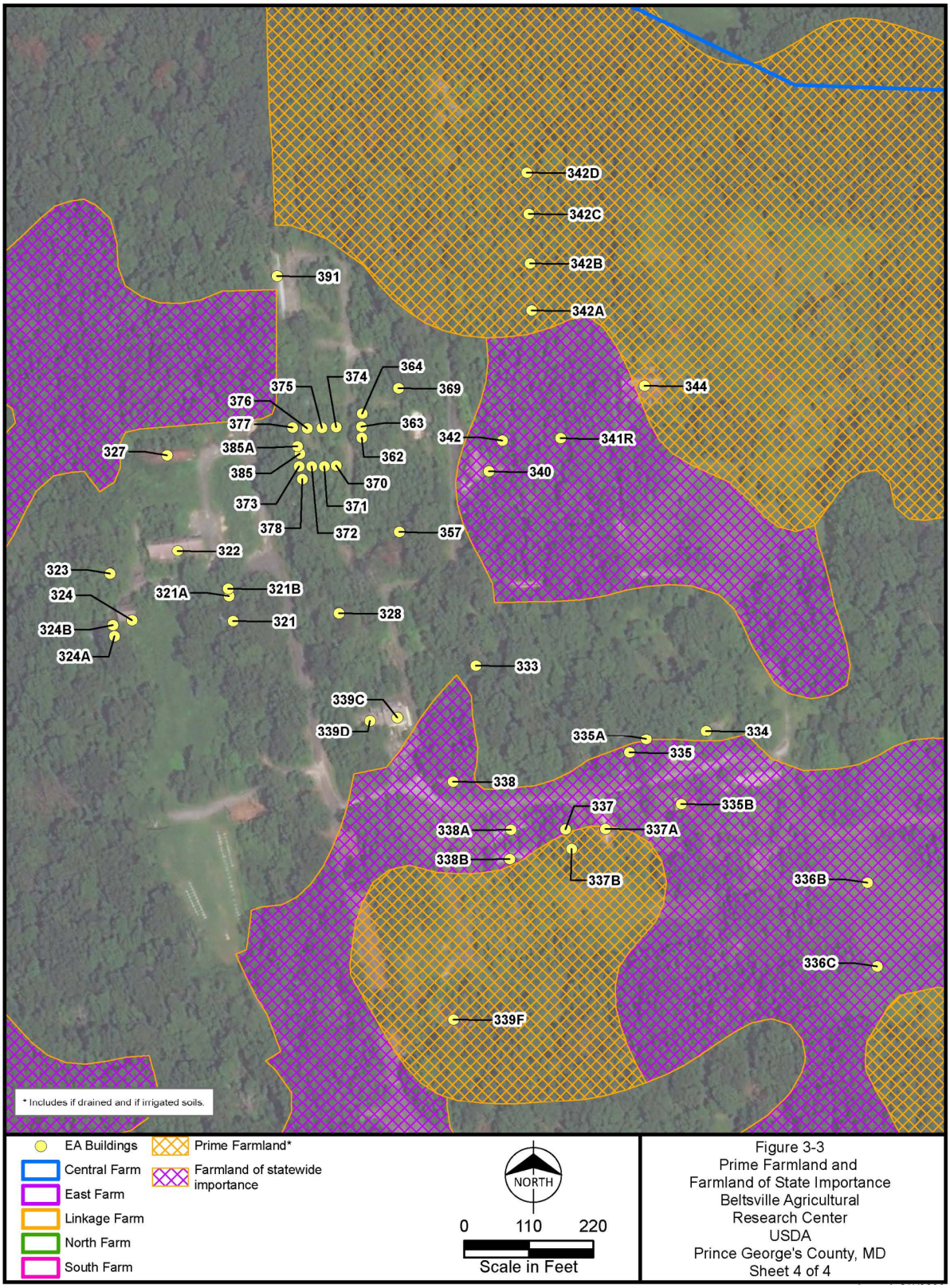


Figure 3-4: BARC NRCS Soil Erosion Hazard

Sheet 1 of 4 (South, North, and Linkage Farms)

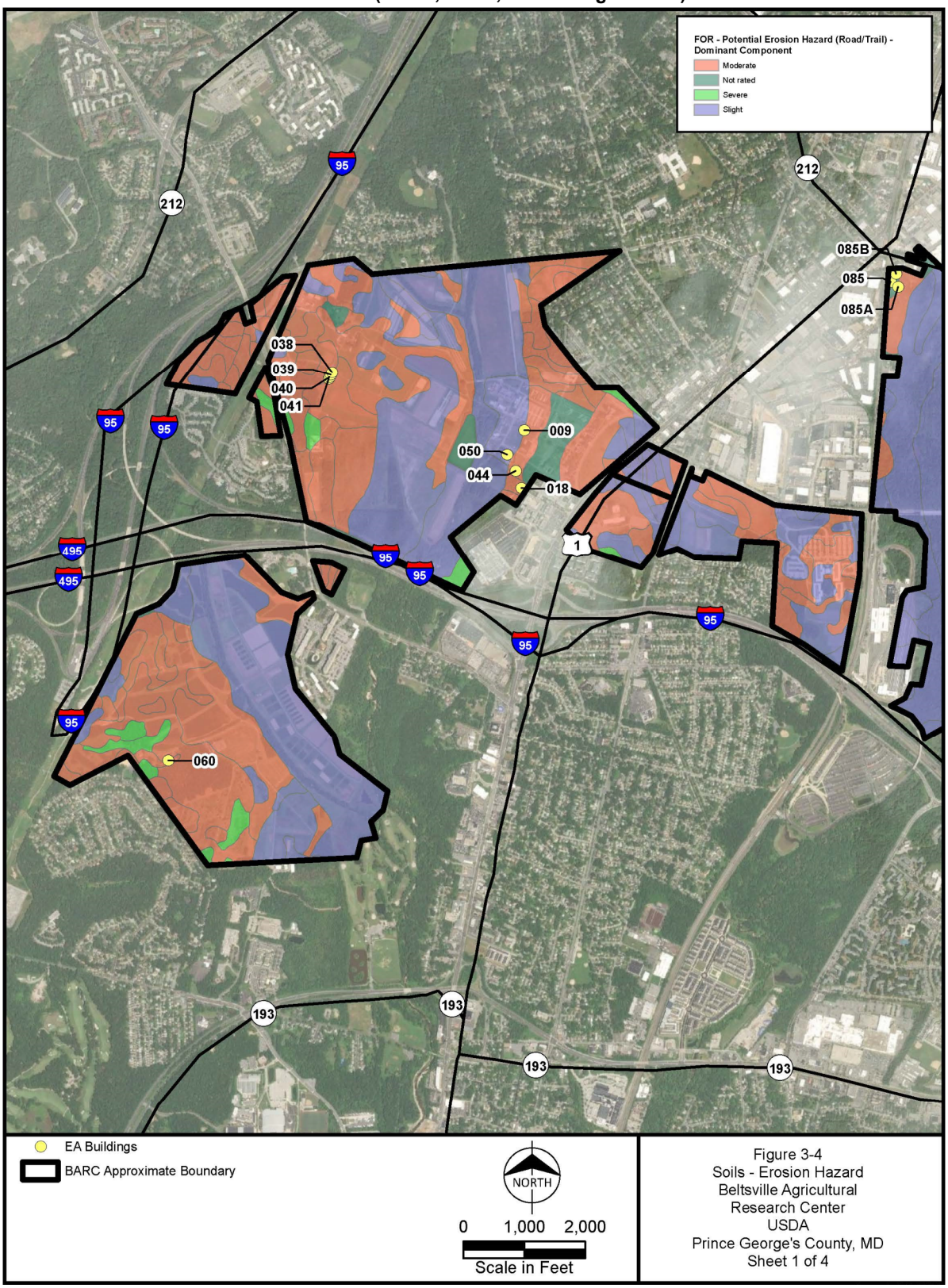


Figure 3-4 continued: ARC NRCS Soil Erosion Hazard

Sheet 2 of 4 (Central Farm)

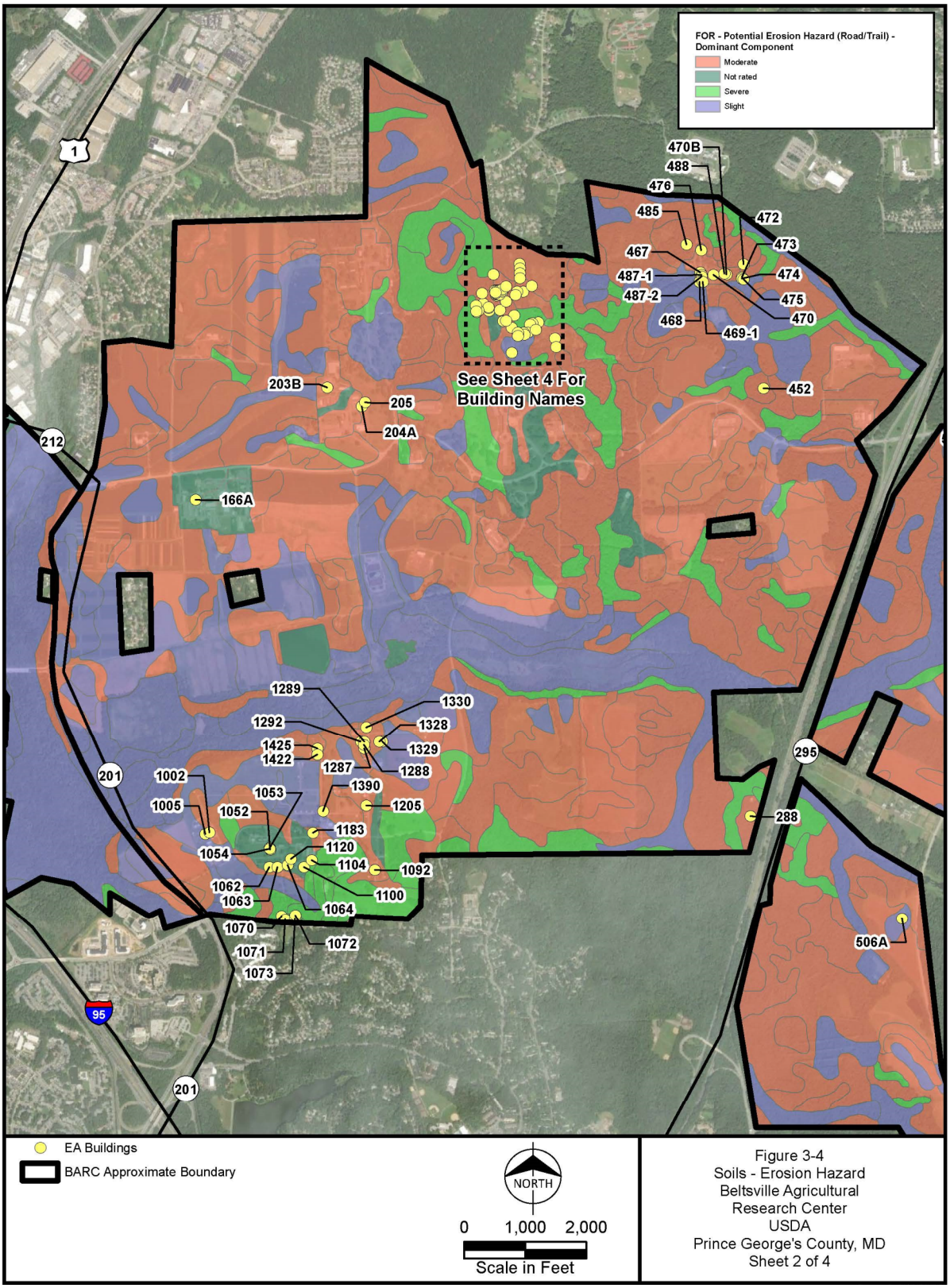


Figure 3-4 continued: BARC NRCS Soil Erosion Hazard

Sheet 3 of 4 (East Farm)

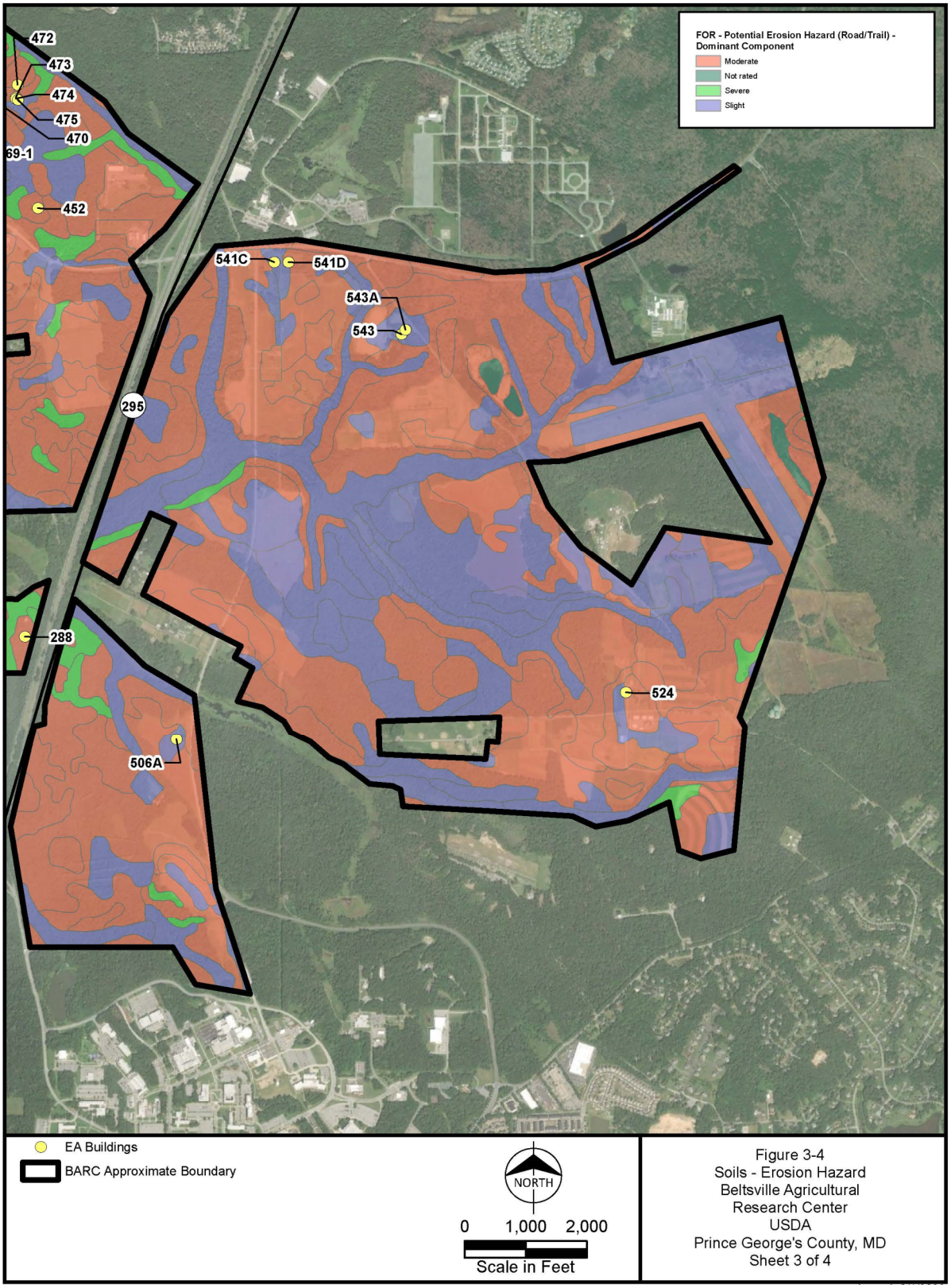
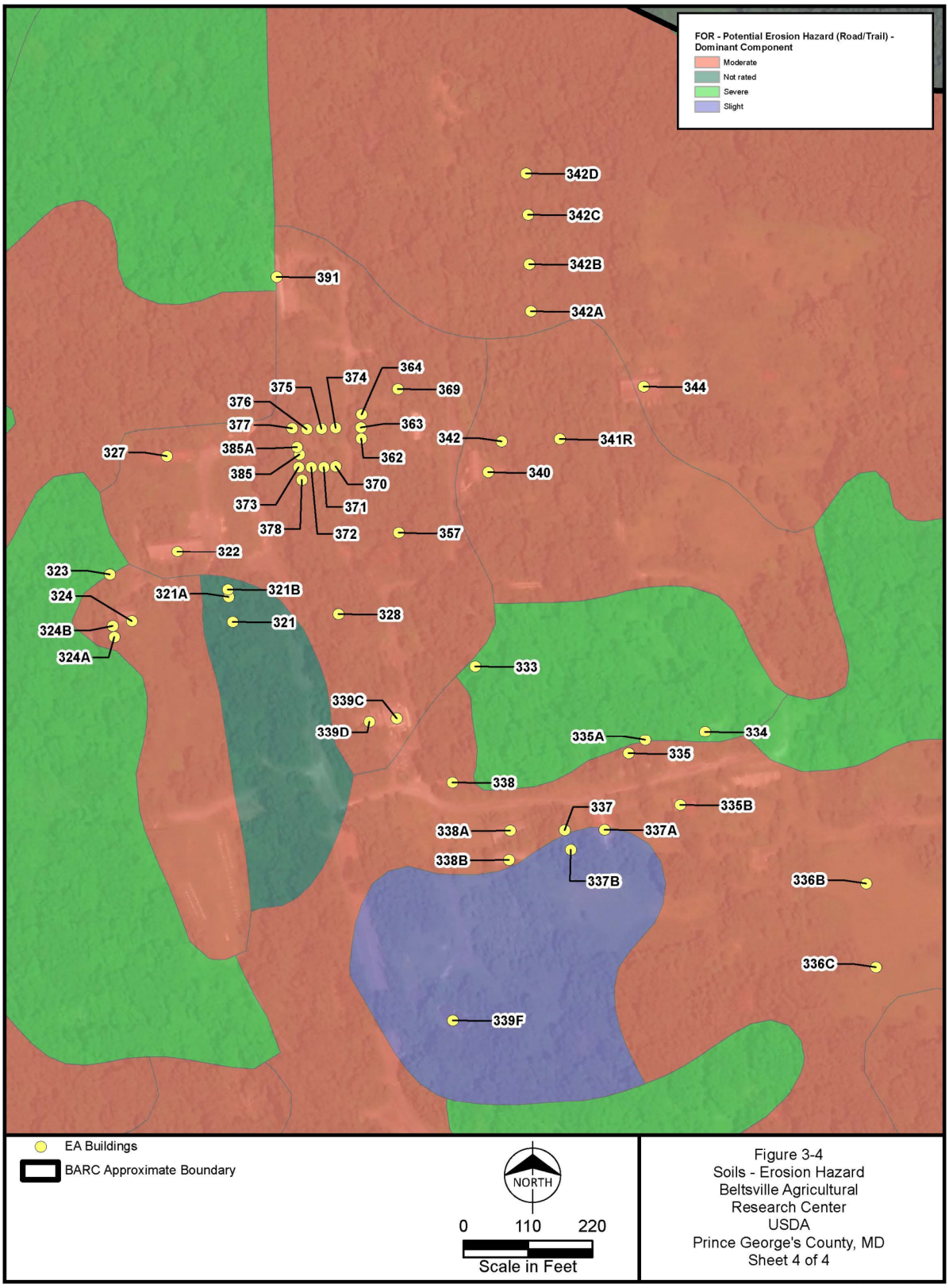


Figure 3-4 continued: ARC NRCS Soil Erosion Hazard

Sheet 4 of 4 (Central Farm Detail)



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 building 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 would be approved by Prince George's County prior to beginning demolition. Best management practices (BMPs) would be identified and implemented to minimize soil erosion, stormwater runoff, (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 so as not 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 structural components of the site are removed and disposed of properly, excavated areas would be filled with clean, native soil and the area would be graded to provide positive drainage. The extent of grading and site restoration would be considered according to the proximity of the site to remaining occupied structures, accessible roads/drives, and active utilities. Following demolition and grading, each demolition site would be stabilized with a seed mix or plantings consistent with MDNR or MDE standard specifications to minimize surface erosion and colonization by invasive species (MDNR, 2022b; MDE, 2022a).

3.1.2.2 No Action Alternative

Under the No Action Alternative, no grading or soil disturbance would occur. The existing topography in the areas of the 117 buildings would remain unchanged. No changes would be made in the amount of pervious vegetative cover present.

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, 2021). Numerous water features are mapped across the BARC campus ranging from small-unnamed headwater tributaries that originate within the facility boundaries to longer stretches of named creeks that receive and transport water offsite. Named streams on BARC include Paint Branch (South Farm), Little Paint Branch (North Farm), Indian Creek (Linkage Farm), Beaverdam Creek (East Farm, Central Farm, converging with Indian Creek on the Linkage Farm), and Beck Branch (South edge of East Farm).

Figure 3-5 depicts mapped surface waters based on the National Hydrography Dataset (NHD) (USGS, 2022b), 100-year floodplains (FEMA, 2022b), and wetlands based on the National Wetland Inventory (NWI) database (USFWS, 2022). Under Section 404 of the Clean Water Act (CWA), the EPA authorizes the U.S. Army Corps of Engineers (USACE) to regulate impacts to wetlands and waters of the United States through a permitting process. Waters of the United States is an inclusive term that includes streams, rivers, wetlands, and other aquatic sites that fall under the USACE's jurisdiction. No field

delineations in accordance with USACE protocols have been conducted for the surface water features illustrated in Figure 3-5. According to the data reviewed and presented in Figure 3-5, and observations made during the site visit conducted March 23-34, 2021, potentially jurisdictional streams or wetlands are anticipated to be present only within or adjacent to proposed demolition sites within the 300 Cluster of buildings. Based on the data reviewed, potentially jurisdictional streams or wetlands were not identified within or adjacent to proposed demolition sites within the other building clusters.

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 are from the Patuxent aquifer system 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, 2022).

The Patuxent and Arundel formations directly underlie the BARC campus, while portions of the far eastern reaches of the facility may be underlain by the Patapsco formation. The Patuxent and Patapsco formations are predominantly comprised of sand and gravel materials while the intervening Arundel formation is predominantly clay. All three formations dip to the southeast, which in turn controls the flow direction of regional groundwater resources.

Since the 1930s, BARC has drilled 11 production wells located within the Central Farm. Three of those wells have been taken offline. The BARC campus pumps and treats its own well-water used for all operational purposes, including potable, laboratory, sanitary, fire suppression, and irrigation (USDA, 2020a). All identified groundwater wells, both active and inactive, are located more than 250 feet from any proposed demolition site and would not be affected by demolition activities.

The sands and gravels of the Patuxent and Patapsco formations are the primary water-bearing aquifers serving the drinking water needs in Prince George's County and other counties to the east. The BARC itself pumps in excess of 600,000 gallons per day of water from an unspecified number of wells located within the facility. While the Patuxent Formation outcrops in the western portions of the facility, onsite well logs indicate that BARC's supply wells intercept the formation at depths of approximately 150 feet or greater. Most of the groundwater withdrawn (i.e., pumped) from the Patuxent is obtained under normal water table conditions. However, some areas are confined by the increasingly thickening Arundel clays, which create artesian conditions. Recharge of the Patuxent aquifer relies primarily on vertical and lateral movement of water through outcrops in the western portions of BARC. The clayey nature of the overlying Arundel formation effectively prevents downward percolation into the lower aquifer and creates a hydrologic barrier to flow.

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, which works with communities required to adopt and enforce floodplain management regulations that help mitigate flooding effects, and provides flood insurance to property owners, renters, and businesses in those communities (FEMA, 2022a; FEMA, 2022b). 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, 2022).

Based on the most recent FEMA Flood Insurance Rate Map (FIRM) database, approximately 887 acres of 100-year floodplain are mapped within BARC boundaries (FEMA, 2022a; FEMA 2022c), including approximately 119 acres across the North Farm, approximately 254 acres across the Central Farm, approximately 175 acres across the East Farm, approximately 124 acres across the South Farm, and

Figure 3-5: BARC Surface Water Resources: Streams, Wetlands, 100-Year Floodplains, and Groundwater Wells

Sheet 1 of 4 (South, North, and Linkage Farms)

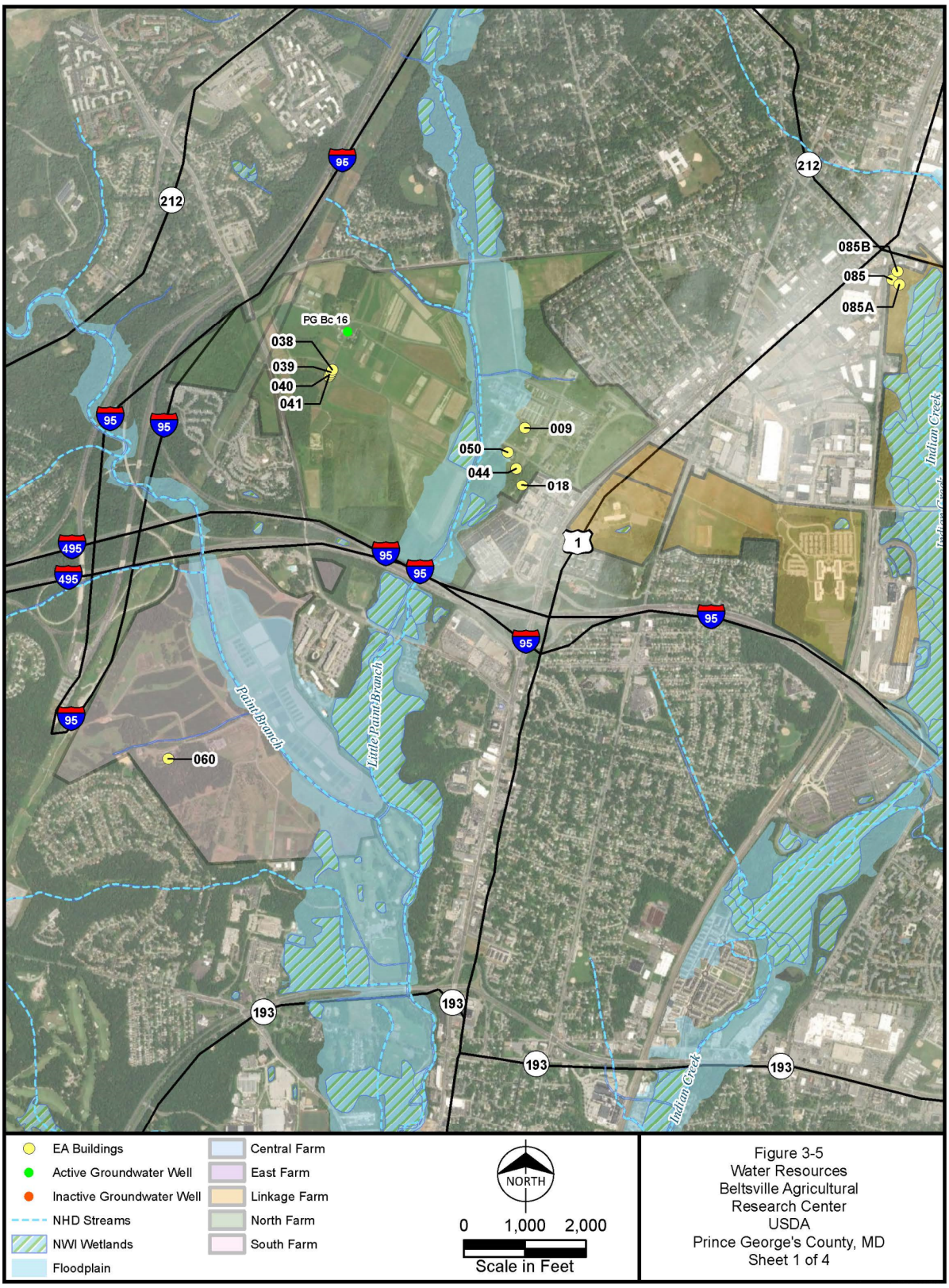


Figure 3-5 continued: BARC Surface Water Resources: Streams, Wetlands, 100-Year Floodplains, and Groundwater Wells

Sheet 2 of 4 (Central Farm)

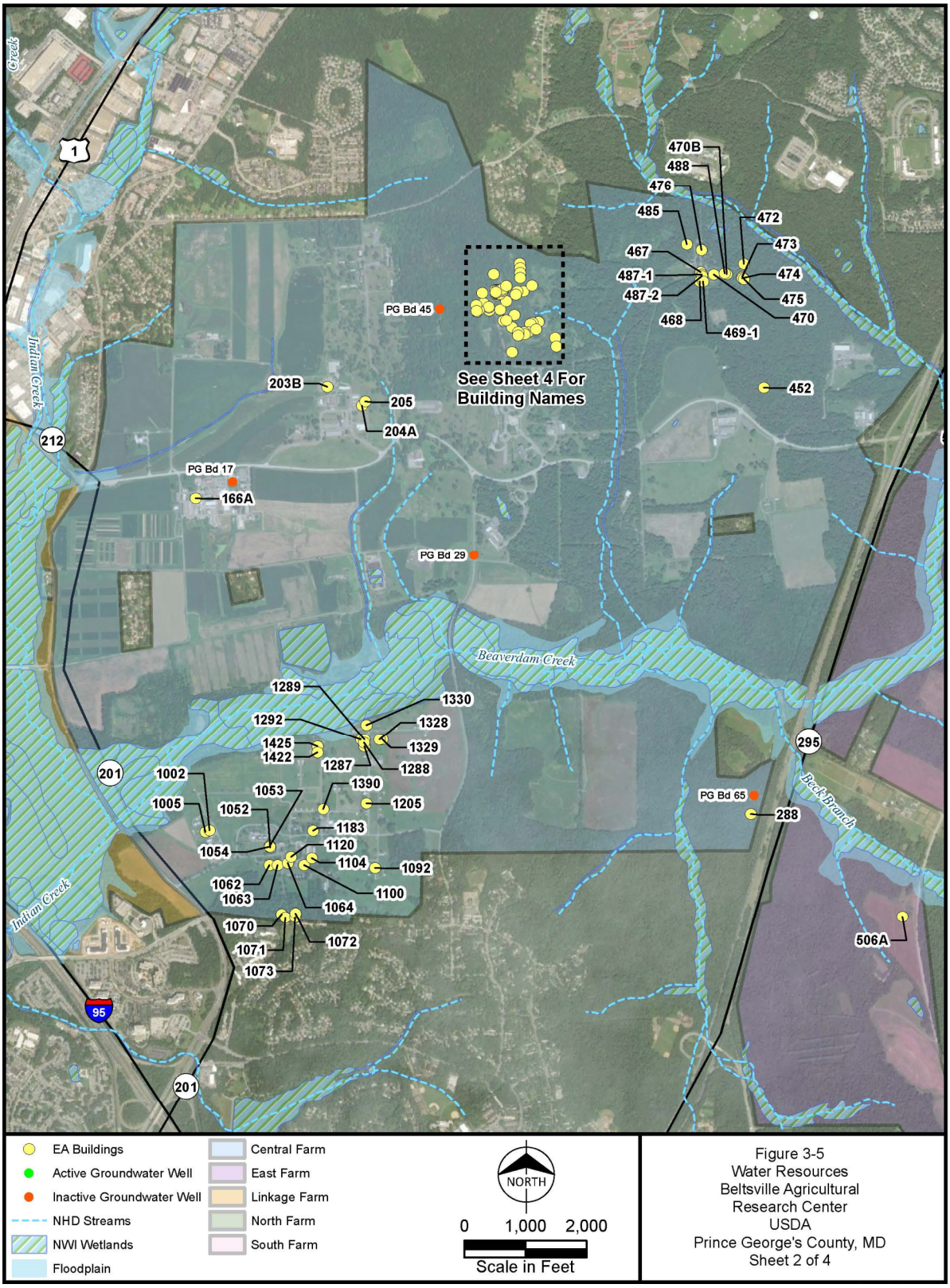


Figure 3-5 continued: BARC Surface Water Resources: Streams, Wetlands, 100-Year Floodplains, and Groundwater Wells

Sheet 3 of 4 (East Farm)

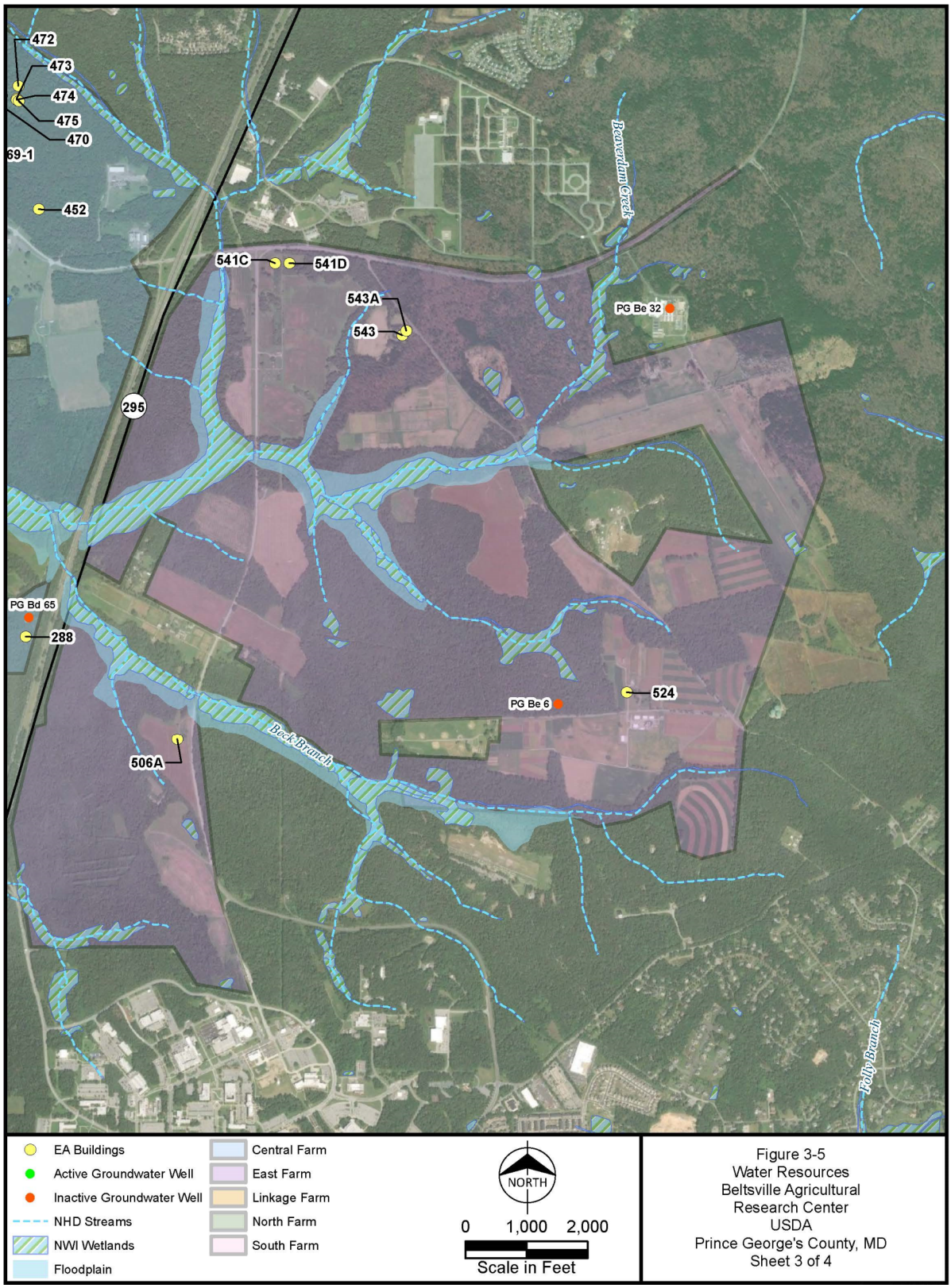
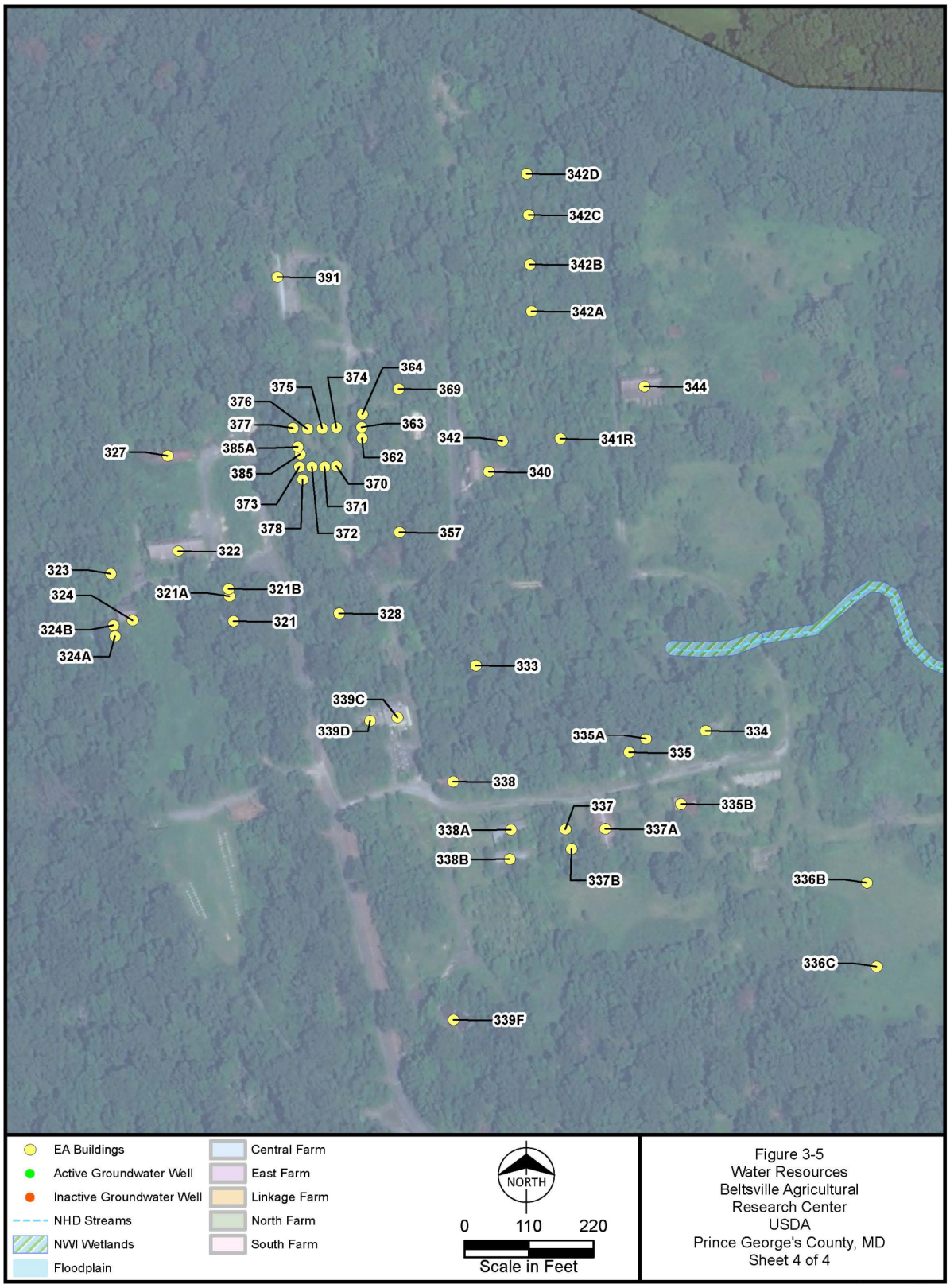


Figure 3-5 continued: BARC Surface Water Resources: Streams, Wetlands, 100-Year Floodplains, and Groundwater Wells

Sheet 4 of 4 (Central Farm Detail)



approximately 214 acres across the Linkage Farm. The floodplain areas follow the major streams that cross the BARC campus and are located outside most of the proposed project sites. The areas where Buildings 009 and 050 sit on the North Farm are partially located within the Little Paint Branch floodplain and Buildings 044 and 018 are located approximately 130 and 240 feet, respectively, outside of the 100-year floodplain. Buildings 085, 085A, and 085B sit on the northern Linkage Farm and are located approximately 140 to 330 feet outside of the Indian Creek floodplain. Of these, Building 085A is closest to the floodplain. On the Central Farm, Buildings 1287, 1288, 1289, 1292, 1328, 1329, 1330, 1422, and 1425 are located approximately 90 to 460 feet outside of the Beaverdam Creek floodplain. Of these, Building 1330 is located closest to the floodplain at 90 feet, and Buildings 1292 and 1425 are both located approximately 120 feet outside the floodplain. All other buildings proposed for demolition in this EA are located greater than 500 feet from a mapped floodplain area.

3.2.1.4 Wetlands

EO 11990 mandates that federal agencies “take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.” EO 11990 applies to actions undertaken and/or funded by federal agencies; therefore, it applies to the activities proposed under this EA. EO 11990 prohibits new construction in wetlands unless (1) there is no practicable alternative to such construction, and (2) the project includes all practicable measures to minimize harm to wetlands.

BARC contains approximately 640 acres of mapped wetlands according to the NWI (USFWS, 2022a). The wetland types mapped within the North, Central, East, South, and Linkage Farms are listed in Table 3-2.

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

Type	Type Description	Acres by Farm					Total NWI Wetlands by Type (Acres)
		North	**Central**	**East**	**South**	**Linkage**	
PEM	Palustrine emergent	1.4	58.4	1.3	1.1	7.5	**69.7**
PSS	Palustrine scrub-shrub	0.0	4.0	3.7	0.0	0.0	**7.7**
PFO	Palustrine forested	0.0	170.4	143.5	3.5	184.9	**502.3**
PUB	Freshwater pond	8.3	16.3	10.6	0.0	1.5	**36.7**
Riverine	Riverine (contained within channel)	3.9	11.1	7.2	3.7	0.1	**26.0**
Total NWI Wetlands by Farm		**13.6**	**260.3**	**166.3**	**8.3**	**194.0**	**642.5**

All mapped wetlands are freshwater wetlands and are concentrated along and adjacent to major drainage channels (see Figure 3-5). No mapped wetlands are within or immediately adjacent to the proposed demolition sites; however, several buildings proposed for demolition are located in relatively close proximity (from approximately 200 to 350 feet) to mapped palustrine forested (PFO) wetlands and riverine wetlands. Based on field observations during the site visit conducted March 23-24, 2021, wetland habitat may be present adjacent to proposed demolition sites within the 300 Cluster.

Field delineations of waters of the United States would be conducted prior to initiation of land disturbance activities, in accordance with USACE protocols. Additionally, MDE also regulates a 25-foot buffer around all non-tidal wetlands and a 100-foot buffer for non-tidal wetlands of special state concern, as well as alteration of hydrology and vegetation of wetlands (MDE, 2018).

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. While no waters of the United States, including wetlands, are mapped within the proposed demolition sites, several buildings proposed for demolition are located in relatively close proximity (from approximately 200 to 350 feet) to mapped PFO wetlands. Additionally, based on field observations during the site visit conducted March 23-24, 2021, wetland habitat may be present adjacent to proposed demolition sites within the 300 Cluster.

Field delineations of waters of the United States would be required prior to initiation of land disturbance activities, in accordance with USACE protocols. Demolition plans would avoid placing fill materials into wetland areas to the extent practicable. If demolition plans anticipate placement of fill material into wetland areas, coordination with the USACE would be conducted, and a Section 404 permit under the CWA may be required prior to initiating disturbance activities. Additionally, if impacts to the 25-foot buffer around any identified wetlands are anticipated, coordination with MDE would be required (MDE, 2018). It is anticipated that the clearing footprint at each site would be limited, to the extent practicable, to that required for removal of the building or structure and its associated foundation, supporting utilities, and access roads and parking areas used exclusively by that building or cluster. Where necessary to gain access to buildings proposed for demolition not serviced by existing drives or roadways, additional clearing may be conducted. Additionally, due to proximity of buildings and presumed interconnected utilities systems within the 300 Cluster of buildings, additional clearing may be conducted to ensure complete removal of structures and utilities.

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 pre-development hydrological conditions, to the extent technically feasible. If the water distribution system infrastructure is not removed prior to demolition; the contractor will install a cut-off valve in the potable water distribution line far away from the building to prevent contaminated elements from entering the treated water distribution lines. The cut-off would be installed where the pressure has dropped so it can no longer potentially crack or rupture the pipe. This action may require that all buildings or structures and associated materials in the immediate area, both above- and below-ground, are removed from each site. The removal may include, but not be limited to, 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 would 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.

The following descriptions identify the various water resources present at or in proximity to each building site proposed for demolition. This section then describes additional surveys that would be conducted prior to demolition and applicable mitigation measures to avoid or minimize impacts to water resources.

> ***000 Cluster:*** Buildings 009 and 050 encroach into the mapped 100-year floodplain of Little Paint Branch east of its bank. Buildings 044 and 018 are approximately 130 and 240 feet, respectively, outside of the 100-year floodplain. One large (approximately 6-acre) PUB pond occurs west and southwest of Buildings 009, 018, 044, and 050, and one smaller PUB pond occurs southwest of the buildings. The PUBs occur directly adjacent to Little Paint Branch. An existing stormwater detention basin is located near Building 050 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 would 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 009, 018, 044, or 050.

Buildings 038, 039, 040, and 041 are approximately 0.5 mile west of Little Paint Branch, outside of the 100-year floodplain. No mapped wetlands were identified near this grouping of buildings. One active groundwater well was identified approximately 660 feet north of the buildings.

Building 060 lies approximately 0.3 mile west of Paint Branch, outside of the 100-year floodplain. A mapped palustrine emergent (PEM) wetland is approximately 290 feet north of Building 060 along a drainage of Paint Branch. No groundwater wells have been identified near the building.

Buildings 085, 085A, and 085B are approximately 0.15 mile west of Indian Creek and approximately 140 to 330 feet outside of the creek's floodplain. The majority of the large floodplain area near this building grouping, associated with Indian Creek, is mapped as a PFO. Building 085A is closest (approximately 250 feet) to the mapped PFO wetland. No groundwater wells have been identified near the building.

100 Cluster: Building 166A is located outside the 100-year floodplain and approximately equidistant (0.5 mile) from Indian Creek to the west, and a tributary of Beaverdam Creek to the east. No mapped wetlands were identified near the building. One inactive groundwater well was identified approximately 620 feet east-northeast of Building 166A.

200 Cluster: Building 203B is located approximately 900 feet west of a tributary of Beaverdam Creek and is outside of the 100-year floodplain. Buildings 204A and 205 are located approximately 400 feet west of the same tributary to Beaverdam Creek and are outside of the 100-year floodplain. No wetlands are mapped in proximity to Buildings 203B, 204A, and 205. Building 288 is located approximately 0.2 mile east of a tributary to Beaverdam Creek and 0.25 mile southwest of Beck Branch and lies outside the 100-year floodplain of both streams. Mapped PFO wetlands are along the corridor of both streams but would not be anticipated to be impacted by demolition activities. One inactive groundwater well was identified approximately 280 feet north of Building 288.

300 Cluster: One mapped stream with associated mapped riverine wetlands was identified in proximity to buildings in the 300 Cluster. The unnamed stream flows east from the east side of the building cluster, then flows south approximately 1.2 miles and discharges into Beaverdam Creek. Buildings 334, 335 and 335A are the closet buildings to the mapped tributary and are approximately 135 feet, 160 feet, and 165 feet, respectively, south of the tributary. Multiple additional buildings, including Buildings 333, 335B, 337, 337A, 337B, 338, 338A, 338B, 339C, 339D, 340, 341R, 342, 344, and 357 lie within 500 feet of the mapped stream segment.

During the site visit conducted March 23-34, 2021, the stream or drainage feature was observed to extend west from the mapped stream segment. It was observed to potentially begin near the north side of Buildings 339C and 339D, flowing under the adjacent drive via a culvert, and continue east, flowing north of Building 338 and south of building 333, to connect to the mapped stream segment. Various erosional features were observed adjacent to the stream, as well as adjacent potential wetlands. Roadside drainages and culverts were observed adjacent to the drives and access roads throughout the 300 cluster.

A site-specific hydrological assessment would be needed to address the drainage issues associated with the site prior to developing the demolition and grading plan. Surface water

delineations, in accordance with USACE protocols, may also need to be conducted to identify waters of the United States, including wetlands. Delineations would be used to inform development of demolition plans to avoid placing fill materials within waters of United States and implementation of appropriate BMPs would protect against sedimentation, leaks, and spills. If impacts to jurisdictional features could not be avoided, coordination with USACE and Section 404 permit may be required.

All of the 300 Cluster buildings are outside of the 100-year floodplain. One inactive groundwater well was identified approximately 570 feet west of the 300 Cluster of buildings.

400 Cluster: An unnamed tributary of Beaverdam Creek is northeast of the 400 cluster. Building 467, 468, 469-1, 470, 470B, 472-476, 485, 487-1, 487-2, and 488 are 570 to 1,270 feet from the tributary with Building 472 closest to the feature. Another unnamed tributary to Beaverdam Creek is west/southwest of the 400 cluster. The buildings are 1,020 to 1,790 feet from the tributary with Building 485 closest to the feature A small PUB pond, less than 1-acre in size, is directly north of this building cluster. Building 476 is closest at 240 feet to the southwest of the pond. Building 452 is isolated and approximately 0.35 mile south-southeast of the cluster. The nearest mapped stream and wetland features are a tributary to Beaverdam Creek and its associated riverine wetlands, approximately 0.30 mile south of the building. None of the buildings are within or adjacent to a 100-year floodplain. No groundwater wells have been identified near this group of buildings.

500 Cluster: Building 506A is between (0.10 mile) Beck Branch and an unnamed tributary of Beck Branch and approximately 430 feet outside the 100-year floodplain to the northeast. The building is approximately 640 feet southwest of a 14-acre Soil Conservation Service lake within Beck Branch. No groundwater wells have been identified near the building.

Building 524 is located approximately 0.22 mile south-southwest of an unnamed tributary of Beaverdam Creek and is outside of the 100-year floodplain. One inactive groundwater well was identified approximately 0.20 mile west of Building 524.

Buildings 541C and 541D are approximately 0.15 and 0.20 mile, respectively, east of an unnamed tributary of Beaverdam Creek and are outside of the 100-year floodplain. A 50-acre PFO wetland area encompasses the tributary and connecting segment of Beaverdam Creek within the 100-year floodplain. No groundwater wells have been identified near the building.

Buildings 543 and 543A are approximately 0.15 mile southeast of an unnamed tributary of Beaverdam Creek and are outside of the 100-year floodplain. No groundwater wells have been identified near the building.

1000 Cluster: Buildings 1002 and 1005 are approximately 0.20 mile southeast of Beaverdam Creek and approximately 0.13 mile outside of the associated 100-year floodplain of Beaverdam Creek. A large PFO wetland area encompasses this segment of Beaverdam Creek and is within the 100-year floodplain. No groundwater wells have been identified near the buildings.

Buildings 1052, 1053, 1054, 1062, 1063, 1064, 1100, 1104, and 1120 are grouped together approximately 0.4 mile south of Beaverdam Creek and approximately 0.3 mile south of the 100-year floodplain of Beaverdam Creek. Buildings 1070, 1071, 1072 and 1073 are approximately 0.1 mile south of the of the previously described group of buildings. All four buildings are outside the 100-year floodplain. No groundwater wells have been identified near these buildings.

Buildings 1092, 1183, 1205, and 1390 are somewhat removed from the other buildings in the 1000 Cluster proposed for demolition and are 0.35 to 0.53 mile south of Beaverdam Creek and

outside of the 100-year floodplain. No groundwater wells have been identified near these buildings.

Buildings 1287, 1288, 1289, 1292, 1328, 1329, and 1330 are grouped together and approximately 0.11 to 0.18-mile south of Beaverdam Creek and approximately 90 to 460 feet outside of the 100-year floodplain of the creek. Buildings 1422 and 1425 are grouped together approximately 660 feet west of the previously described group of buildings, approximately 680 feet south of Beaverdam Creek, and approximately 110 feet outside of the 100-year floodplain. A mapped PFO wetland lies within the 100-year floodplain of this segment of Beaverdam Creek. No groundwater wells have been identified near these buildings.

Prior to initiating demolition, each site would be reviewed to identify soil types and determine drainage patterns. A Stormwater Pollution Prevention Plan would be developed, and BMPs would be implemented during demolition and grading activities at each site. Implementation of applicable BMPs would prevent sediment-laden stormwater or water containing hazardous substances from entering nearby drainages or streams. 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 infrastructure associated with the 117 buildings would reduce stormwater runoff volumes and increase absorption, increase groundwater recharge, and reduce displacement of floodwaters. The Proposed Action would also support USDA-ARS's effort to reduce its impact on the Chesapeake Bay Watershed and BARC compliance with MS4 permit requirements by eliminating impervious surfaces.

3.2.2.2 No Action Alternative

Under the No Action Alternative, no reduction in the amount of impervious surface area would occur as no buildings and associated improvements would be removed. No excavation or demolition activities would occur, therefore no sediment-laden runoff would be added to nearby surface waters; but existing surface and stormwater flows potentially carrying contaminants from deteriorating buildings would continue to enter nearby drainages and streams.

Long-term impacts on localized surface and groundwater quality would continue as the buildings continue to deteriorate 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. The No Action Alternative would not support the USDA-ARS's effort to reduce its impact on the Chesapeake Bay Watershed and would potentially lead to increased adverse impacts over time as described.

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, 2022a). The 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 campus including whitetail deer (*Odocoileus virginianus*), beavers (*Castor canadensis*), short-tailed weasels (*Mustela erminea*), striped skunk (*Mephitis mephitis*), woodchuck (*Marmota monax*), eastern chipmunk (*Tamias striatus*), squirrels, foxes, 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 (USDA, 1996).

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 United States. MBTA and BGEPA also include protection of nests.

The USFWS identifies one federally listed threatened and one candidate species that may occur on or near the BARC campus, as shown in (USFWS, 2022a). It should be noted that including this species does not necessarily mean that a species is known to occur within the BARC campus, but only acknowledges the potential for its occurrence based on historical records, known ranges, and presence of habitat. A brief description of the federally listed species included in Table 3-3.

Table 3-3: Federally Listed Species on or Near BARC Campus[a]

Common Name	Scientific Name	Federal Listing	State Listing	Potential for Occurrence within BARC
Mammals				
Northern long-eared bat	*Myotis septentrionalis*	Threatened[b]	Not listed	Likely
Insects				
Monarch butterfly	*Danaus plexippus*	Candidate	Not listed	Likely

(a) Source: USFWS IPaC Resource List; April 11, 2022 (USFWS, 2022a)
(b) USFWS proposes to reclassify the Northern long-eared bat to endangered, proposed rule published in the Federal Register, March 23, 0222.

***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, 2022). 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. On March 23, 2022, the USFWS issued a proposed rule to reclassify the Northern long-eared bat as endangered that would change the consultation process required if effects to the bat or its habitat are anticipated by the Proposed Action.

***Monarch butterfly*:** Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. The bright coloring of a monarch serves as a warning to predators that eating them can be toxic. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias* ssp.), with multiple generations being produced and adults living approximately two to five weeks. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distant migration, and live for an extended period of time. Migration can last over two months and cover 3,000 kilometers, and between February and March, they mate at the overwintering sites and begin their migration north (USFWS, 2022a). BARC is within the species' known range, and the monarch butterfly may occur in small numbers during the summer/fall within the proposed project sites where suitable habitat occurs.

According to the Maryland Bird Conservation Partnership one bald eagle nest (PG-037) is known to occur on the BARC Campus, located approximately 0.50-mile northeast of Building 1329, east of Research Road, and south of Beaver Dam Road (MBCP, 2022). Building 1329 is the nearest building proposed for demolition under this EA. Although not a federally listed threatened or endangered species, the bald and golden eagles are still protected by multiple federal laws, such as the BGEPA, the MBTA, the Lacey Act, and other state and municipal protections. Their feathers, nests, nest trees, and winter/nighttime roosts are all protected by federal laws.

Two federally listed threatened and endangered plant species are listed as potentially occurring in Prince George's County; however, these species were not identified as potentially occurring on or near the BARC Campus (MDNR, 2021; USFWS, 2022b).

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, 2021). A complete list of federally and state protected species in Prince George's County is included in Appendix E.

3.3.1.4 Pollinators

The 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 campus. Bee Yards and individual beehives were observed at the following locations, all on the Central Farm, during site visits conducted October 22–24, 2019 and March 23-24, 2021:

300 Cluster: A Bee Yard was observed adjacent to the south side of Buildings 339C and 339D in a paved former parking area. A large Bee Yard was observed on the southwest side of the 300 cluster, in an open area located approximately 300 feet southwest of Buildings 339C and 339D. Two Bee Yards were observed on concrete pads on the southeast side of the 300 Cluster, approximately 80 feet east of Building 335B and approximately 140 feet southeast of Building 335B. A single beehive was observed adjacent north of clustered Buildings 324, 324A, and 324B.

400 Cluster: A Bee Yard was observed on a paved area adjacent to the west side of Buildings 473 and 474. Another Bee Yard was observed in an open area north of Building 485, along the edge of an adjacent wooded area.

500 Cluster: A Bee Yard was observed approximately 180 feet west of Building 524 during the site visit conducted in October 2019.

1000 Cluster: A Bee Yard was observed in a paved former parking area on the west side of Building 1072. A few scattered hives were observed in proximity to Buildings 1070 and 1071. Stacked beehive boxes were observed at Buildings 1422 and 1425, within and near each structure.

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. 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 instructs 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 (*Phyllostachys aurea*), 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, 2022c). 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

Demolition plans would be developed to minimize the removal or disturbance of vegetation to the extent practicable. Prior to beginning demolition, each project site and the surrounding area would be reviewed for the presence of potential bat habitat, nesting migratory birds, or milkweed host plants during the breeding season for monarch butterflies. 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 to support recontouring of the site. Additional areas of vegetation may be removed to gain access to structures not serviced by existing drives or roadways and to facilitate removal of infrastructure or utilities connecting or shared by adjacent buildings proposed for demolition. This additional vegetation removal would be most likely to occur within the 300 Cluster of buildings proposed for demolition.

Prince George's County implements its Woodland Conservation Ordinance, passed in 1989. The purpose of the ordinance is to minimize the loss and modification of woodlands during and following the land development process in accordance with the state of Maryland Forest Conservation Act. However, the ordinance is not applicable to projects on federally-owned properties and is therefore not applicable to the proposed activities under this EA (MNCPPC, 2016; Prince George's County, 2022).

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 northern-long-eared bat may be present on the BARC campus 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 would not exceed the 15-acre threshold established by USFWS for habitat removal under the current 4(d) rule. Because the USFWS is proposing to reclassify the norther long-eared bat as endangered (possibly before the end of 2022), the 4(d) rule would be removed and informal consultation with USFWS is recommended to review the site assessment findings and determine, prior to demolition, the effect of the Proposed Action on the species and any potential habitat and any mitigation, including seasonal restrictions on the clearing of suitable bat habitat, the need for mist net surveys, etc.

Some areas of the BARC campus may provide breeding habitat, consisting of milkweed plant species, for monarch butterflies during the species breeding season. If demolition activities are planned to occur during the breeding season, proposed demolition sites and surrounding areas would be surveyed for suitable breeding habitat, and mitigation measures would be implemented to avoid or minimize impacts to habitat, such as fencing of areas of habitat and avoiding clearing or operation of equipment in those areas.

Following demolition and grading, each project site would be stabilized with a seed mix or plantings consistent with DNR or MDE standard specifications to minimize surface erosion and colonization by invasive species.

> ***000 Cluster:*** Buildings 009, 018, and 050 are in an area of bottomland forest adjacent to the 100-year floodplain of Little Paint Branch with Building 018 being in a heavily vegetated area. Vegetation would be cleared adjacent to buildings 009 and 050 with limited encroachment into the neighboring forest. The buildings and surrounding area would need to be evaluated for migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 038, 039, 040, and 041 sit in an open area adjacent to two small, wooded areas. Trees and shrubs would need to be removed to demolish all four buildings. The buildings would be evaluated for the presence of migratory bird nests prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 044 sits in an open area; however, it is currently overgrown with vegetation including small trees and shrubs surrounding the building in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 060 sits adjacent to a wooded area located to the east and south of the building. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The buildings 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. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 085, 085A and 085B are in wooded areas and the buildings are obscured by trees, shrubs, and vines. Woody vegetation and vines would need to be removed to demolish the buildings. The buildings would be evaluated for the presence of migratory bird nests and potential roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

100 Cluster: Building 166A sits in an open area. No vegetation would need to be removed to demolish the building. All three structures, including the four silos, would be evaluated for the presence of migratory bird nests prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

200 Cluster: Building 203B and its associated structures sit in an open area dominated by maintained grass. No vegetation would need to be removed to demolish the building. The building and surrounding area would need to be evaluated for migratory bird nests and potential roost areas for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 204A sits in an open area dominated by pavement and maintained grass. 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. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 205 sits in a vegetated area with trees and shrubs surrounding the building to the north and east. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building should be evaluated for the presence of migratory bird nests prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 288 is in a forested area with trees, vines, and shrubs surrounding the building in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

300 Cluster: Buildings 321, 321A, and 321B are in a vegetated area with trees and shrubs surrounding the buildings in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 322 is in a vegetated area with trees and shrubs surrounding the building in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 323 is in a vegetated area with trees and shrubs surrounding the building in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 324, 324A, and 324B are in a vegetated area with trees and shrubs surrounding the buildings in each direction except north. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 327, 328, and 333 are in a vegetated areas with trees and shrubs surrounding the buildings in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. Additionally, Building 328 has an attached bird house to the right of the chimney that should be checked for active bird nests. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 334, 335, and 335A are in a vegetated areas with trees and shrubs surrounding the buildings in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 335B is in a partially vegetated area with several shrubs surrounding the building in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting in the building for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 336B and 336C sit in a field with several shrubs or small trees surrounding the buildings in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence

of migratory bird nests, and the structures should be evaluated for potential roosting sites for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 337, 337A, and 337B are surrounded by overgrown vegetation including small trees and shrubs. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 338, 338A, and 338B are in an area overgrown with vegetation including mainly small trees and shrubs surrounding the buildings in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 339C and 339D sit within a somewhat open area adjacent to and partially within a wooded area on the west side, and the buildings are obscured by trees, shrubs, and vines. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 339F is within a wooded area and the building is obscured by trees, shrubs, and vines. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 340, 341R, and 342 are within a wooded area, except the west side of Building 340, and the buildings are obscured by trees, shrubs, and vines. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 342A-D sit within a wooded area obscured by trees, shrubs, and vines. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 344 is within a somewhat open area with the south side partially within a wooded area. The building is somewhat obscured by small trees, shrubs, and vines. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building, including loose roof shingles, and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 357 site in a wooded area, and the building is obscured by trees, shrubs, and vines. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building, including loose roof shingles and surrounding area, should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 362, 363, and 364 are in a partially vegetated area with several small trees and shrubs surrounding the buildings in each direction. Some woody vegetation and shrubs would likely need to be removed to demolish the buildings. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 369 sits within a wooded area obscured by trees, shrubs, and vines. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 370-378 are within a wooded area obscured by trees, shrubs, and vines. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 385 and 385A are within a partially wooded area obscured by trees, shrubs, and vines. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The buildings and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 391 sits within a wooded area obscured by trees, shrubs, and vines, except on the east side. Some woody vegetation and shrubs would likely need to be removed to demolish the building. The building and surrounding area should be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

400 Cluster: Building 452 is collapsed in a heavily wooded area obscured by vines, trees and shrubs that would need to be removed prior to removal. The building remnants would be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 467, 468, 469-1, and 470 and are within a somewhat open area adjacent to and partially within a wooded area, and the buildings are obscured by trees, shrubs, and vines. Building 470 greenhouses harbor tree and shrub growth on the exterior and interior. It is anticipated that the area of Building 470 would be cleared in its entirety, limiting encroachment into the adjacent forested areas. Clearing of building sites 467 and 468 would be limited to the area needed to remove the building and support positive drainage, thereby minimizing clearing of the adjacent forest. Buildings 467, 468, 470 would be evaluated for the presence of migratory bird

nests and potential roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 470B and 488 sit adjacent to each other in wooded areas obscured by trees, shrubs, and vines. Woody vegetation and vines would need to be removed to demolish the buildings. The buildings would be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 472, 473, 474, 475 and 485 are in wooded areas obscured by trees, shrubs, and vines. Woody vegetation and vines would need to be removed to demolish the buildings. Buildings 473 and 474 have beehive boxes located along the western and southern elevations of Building 473 and the northern and western elevations of Building 474. Buildings 472 – 475 and 485 would be evaluated for the presence of migratory bird nests and potential roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 476 is in a mostly open area adjacent to wooded areas to the north and east. Some woody vegetation and vines would need to be removed prior to demolition. The building would be evaluated for the presence of migratory bird nests and potential roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 487-1 and 487-2 are in a heavily wooded area obscured by vines, trees and shrubs that would need to be removed prior to demolition. The buildings would be evaluated for the presence of migratory bird nests and potential roosting/roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

500 Cluster: Building 506A sits in an open area dominated by maintained grass; but it is overgrown by trees, shrubs, and vines. Some vegetation would need to be removed to demolish the building. The building would need to be evaluated for migratory bird nests and potential roost areas for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 524 is in an open area comprised of maintained grasses adjacent to a wooden utility pole. The building houses beekeeping supplies. A Bee Yard was observed approximately 180 feet west of Building 524 during the site visit conducted in October 2019. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 541C and 541D are in wooded areas adjacent to open grassy fields but are obscured by trees, shrubs, and vines that would need to be removed prior to demolition. The building would be evaluated for the presence of migratory bird nests prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 543 and 543A are on the edge of a bottomland forest and heavily obscured by trees, shrubs, and vines that would need to be removed prior to demolition. The buildings would be evaluated for the presence of migratory bird nests and potential roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

1000 Cluster: Buildings 1002 and 1005 are within open areas. No vegetation would need to be removed prior to demolition the buildings. Both structures would be evaluated for the presence of

migratory bird nests prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 1052 and 1053 are in open areas with maintained grasses but partially obscured by trees and vines that would need to be removed prior to demolition. Both structures and trees would be evaluated for the presence of migratory bird nests prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 1054 sits in an open area dominated by maintained grass with a few trees and vines obscuring the southern and western elevations. Some vegetation would need to be removed to demolish the building. The building and surrounding area would need to be evaluated for migratory bird nests and potential roost areas for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 1062, 1063, 1064, 1100, 1104, 1120, and 1183 are in open areas with maintained grasses. Buildings 1100 and 1120 are partially covered by woody vines that would need to be removed prior to demolition. The structures would be evaluated for the presence of migratory bird nests prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 1070, 1071, 1072 and 1073 are in a heavily wooded area obscured by dense vines, trees and shrubs that would need to be removed prior to demolition. The buildings would be evaluated for the presence of migratory bird nests and potential roost trees for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 1092 sits in an open area dominated by maintained grasses, with some areas of small trees and woody vines adjacent to and on the structure, due to lack of maintenance. This vegetation would need to be removed prior to demolition. The structure would be evaluated for the presence of migratory bird nests prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 1205 sits in an open area dominated by maintained grass. No vegetation would need to be removed to demolish the building. The building would need to be evaluated for migratory bird nests and potential roost areas for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Buildings 1287, 1288, 1289, 1292, 1328, 1329, 1422, and 1425 are in open areas near a bottomland forest to the north. Each building has varying degrees of woody vegetation growing on or adjacent to the structures. Buildings 1288 and 1328 have vines growing on their exterior. Building 1329 contains a tree next to the structure within a fenced in area. Buildings 1422 and 1425 have stacked beehive boxes within and near each structure. The structures would be evaluated for the presence of migratory bird nests and potential roosting areas for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 1330 sits at the edge of a heavily wooded area. No vegetation would need to be removed prior to demolition. The building would be evaluated for the presence of migratory bird nests and potential roosting areas for the northern long-eared bat prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

Building 1390 sits in an open area dominated by pavement and maintained grass. No vegetation would need to be removed prior to demolition. The surrounding area would be evaluated for presence of milkweed host plants for monarch butterflies.

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 are 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 criteria 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 2022, Prince George's County was classified by the EPA as a marginal nonattainment area for ozone (8-hour) and an attainment area for all other criteria pollutants (EPA, 2022a).

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 would 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.

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 be required to demonstrate general conformity or may be subject to further conformity analyses.

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

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 do not 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 buildings and 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 ACM are disturbed; 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. Contractors should designate haul roads for managing debris to roads less traveled by the public.
- Identification and removal of ACM prior to structural demolition to mitigate emission of fugitive fibers. Building demolition plans would be prepared based on the findings of the hazardous materials assessments conducted for each building and project site. Identification and removal of ACMs would be conducted compliant with 40 CFR Part 61 Subpart M and Code of Maryland Regulations (COMAR) 26.11.21. The removal activities for friable asbestos would be conducted in negative air pressure within containment to further mitigate fugitive fibers. Removed asbestos would be placed in sealed containers for transport and offsite disposal in accordance with applicable state and federal regulations.
- Evacuate and capture refrigerant gasses from identified air conditioning and refrigeration equipment prior to structural demolition to mitigate release.

Refer to Section 3.11 for discussion related to the potential presence and handling of known or anticipated hazardous materials.

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 equipment 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 from construction or maintenance-related activities would be generated under the No Action Alternative. Vehicle traffic volumes would not change beyond what may be forecasted to reflect planned growth of areas around the BARC campus.

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
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.	65	55
Commercial	N/A	67	62
Industrial	N/A	75	75

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

The rural setting of the BARC campus allows for a relatively quiet soundscape. Brief increases 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. The USDA-ARS 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. The 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 demolition activities to be limited to daylight work hours to minimize the short-term effects on neighboring uses. Additionally, all demolition contractors would be required to develop and implement a hearing conservation program that assures the hearing protection of employees identified in their site-specific safety plan.

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

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 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 is a goal of the USDA, intended to support compliance with the Energy Policy Act of 2005 and the EISA. In 2019, the USDA issued an EA for the proposed installation and operation of a solar photovoltaic system onsite at BARC to supplement the facility's current power usage (USDA, 2019). The system had not been constructed at the time this EA was developed.

Overhead distribution lines and glass insulators were observed at most of the 117 building sites. Some buildings that were identified as former garages, storage sheds, or hog sheds did not appear to be tied into the electrical infrastructure. Many poles and lines observed near the project sites were leaning, sagging, or downed, while others remained upright. Several transformers were observed at various locations which may have the potential to contain PCBs. Potential for and handling of hazardous materials is discussed in Section 3.11.

3.6.1.2 Water

Potable water is supplied to the BARC campus utilizing two separate systems. Potable water for the South, North, and Linkage Farms is supplied 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 Central and East Farms are supplied by BARC's water service system, which includes BARC's 11 water production wells that draw water from the Patapsco aquifer; eight wells are used at a given time with water treated and distributed from the BARC's water treatment plant (Building 310), and storage tanks. The BARC potable water system is adequate to meet average daily demand, and pressure is sufficient for emergency and fire suppression purposes (USDA, 2020a).

Water main access caps and fire hydrants were observed at various locations, most prominently in the 000, 300, and 1000 building clusters, and were often found adjacent to one another, and adjacent to internal facility access roads. It is presumed that all buildings except for those identified as garages, storage sheds, or hog sheds were connected to either the WSSC or the BARC water system as described above. For buildings connected to a water supply, there would be underground waterlines present within and adjacent to the building footprints, potentially extending to watermains located adjacent to nearby facility service roads.

3.6.1.3 Wastewater

Wastewater management varies across the BARC campus. The 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 majority of the 117 buildings addressed in this EA are located on the Central Farm and would have been serviced by the BARC-East WWTP. Buildings in the 500 Cluster are located on the East Farm and would have been serviced by septic tanks and drain fields for wastewater management. Buildings in the 000 Cluster are distributed across the North, South, and Linkage Farms and would have been serviced by the BARC-West WWTP, WSSC, and septic tanks and drain fields.

3.6.1.4 Stormwater Management

As described previously, the BARC campus is crossed by numerous streams. 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. Several 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;
- USACE maintains jurisdiction over wetlands and waters of the United States; and
- Prince George's County Zoning and Maryland State Regulations restrict disturbance of floodplain areas established by FEMA.

MDE stormwater management procedures mandate minimum requirements and procedures to control adverse impacts associated with increased stormwater runoff. The BARC has not made major changes in its land use activities since the Maryland Stormwater Management regulations were first enacted during the mid-1980s. The few building projects that were constructed at a later date and, therefore, fall within the regulations were reviewed by the state and approved as in compliance.

Although non-confined feeding or animal feeding 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.

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 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 toward these goals and is required to report annual progress to the MDE that is provided to EPA (USDA, 2019).

3.6.1.5 Solid 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. Collection of nonhazardous solid waste and recyclables generated at BARC facilities is provided by a private waste hauling contractor. The contractor hauls materials to the appropriate materials management facilities offsite (USDA, 2019). The former airport site on the BARC property is utilized for management of animal waste and wastewater treatment sludge by land application (USDA, 1996a). All 117 buildings proposed for demolition are vacant, and solid waste is not currently generated at these building sites on a regular basis. No active solid waste collection containers associated with these buildings were observed during site visits, but formal field investigations were not conducted. Hazardous materials and waste management are discussed in Section 3.11.

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 campus'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 would be implemented to restore the steam system for buildings that are still in use (USDA, 2016c). The BARC Campus has several, smaller decentralized steam generation and distribution systems that were each constructed to service between three and 18 buildings on the Central Farm (USDA, 1996a).

Based on field observations, steam continues to be provided to both active and abandoned buildings at the North Farm. Steam generation and distribution infrastructure was not observed at building sites during site investigations conducted at the Central Farm; however, based on prior documentation, steam distribution systems may extend to several buildings proposed for demolition on the Central Farm, including Buildings 166A, 203B, 204A, 321, 321A, 321B, and 322 (USDA, 1996a).

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 (USTs) are known to be leaking (USDA, 2019).

Several aboveground storage tanks (AST) and containers were observed at the building sites addressed under the Proposed Action. Observations of building interiors was limited or not accessible at the majority of sites and storage containers may be present. Signage indicating storage of fuel oil was observed at several buildings at the BARC campus 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.

ASTs and storage containers observed during site visits include the following:

200 Cluster: Storage of numerous plastic drums of unknown contents was observed at Building 203B.

300 Cluster: Three ASTs were observed adjacent to the south side of Building 337A. Two of the ASTs were unlabeled cylindrical metal tanks, of approximately 500-gallon capacity. One AST was an unlabeled large plastic cone-bottom container. Two large cylindrical containers were observed mounted on an abandoned trailer under a corrugated metal roof at Building 391. The containers were unlabeled and appeared to be made of plastic material. An abandoned cylindrical metal container of unknown contents was observed laying on its side adjacent to Building 391.

400 Cluster: One unlabeled large cylindrical metal AST was observed abandoned and laying on its side near Building 472.

Two small, approximately 5-pound capacity propane tanks were observed upright on the ground adjacent to Building 476, set against a small out-building with signage indicating the outbuilding contained flammable materials.

3.6.1.8 Summary of Utility Infrastructure in the Affected Environment

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. Not all utilities were able to be observed and confirmed present or absent from the exterior of the buildings. Further evaluation of the utility infrastructure for each building and connections with larger systems onsite is required to inform development of demolition plans. A summary of the utilities and infrastructure present within each building cluster, in proximity to proposed demolition sites, is provided below based on field observations and available documentation.

000 Cluster: Overhead electrical distribution lines and glass insulators were observed throughout the 000 Cluster. Buildings at some project sites appeared to still be connected to the electrical infrastructure, and some were visibly disconnected from nearby distribution poles. Several pole-mounted transformers were observed at various locations which may have the potential to contain PCBs.

Water main access caps and fire hydrants were observed at various locations throughout the 000 Cluster, often found adjacent to one another, and adjacent to internal facility access roads. It is presumed that all or most buildings proposed for demolition had access to water supply and that underground water lines may be present within and adjacent to each building footprint.

Stormwater drains were observed throughout the 000 Cluster and an existing stormwater detention basin is located near Building 050 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.

Wastewater infrastructure was not observed during site visits conducted October 2019 and March 2021. Buildings in this cluster that historically received wastewater services would have been serviced by the BARC-West WWTP, WSSC, or septic tanks and drain fields, as described in Section 3.6.1.3.

Based on field observations, steam continues to be provided to both active and abandoned buildings in the 000 Cluster on the North Farm. Steam generation and distribution infrastructure was not observed at building sites during site investigations conducted at the Central Farm; however, based on prior documentation, steam distribution systems may extend to several buildings proposed for demolition on the Central Farm, including Buildings 166A, 203B, 204A, 321, 321A, 321B, and 322 (USDA, 1996a).

No active solid waste collection containers associated with these buildings were observed during site visits.

100 Cluster: Building 166A was historically used as a service/storage building. Observed utilities include only electrical, with no climate control observed. Wastewater infrastructure was not observed during site visits conducted October 2019 and March 2021. If Buildings 166A received wastewater services, it would have been serviced by the BARC-East WWTP.

200 Cluster: Observed utilities at Buildings 204A and 205 include only electrical, with no centralized climate control observed. In addition to electrical utilities, Building 203B utilities also include water. Multiple water pumps were observed at the exterior of Building 203B but it was not determined if pumps are active or inactive. Storage of numerous plastic drums of unknown contents were observed. Building 288 is accessible only to authorized personnel and was not observed during site visits.

Wastewater infrastructure was not observed during site visits conducted October 2019 and March 2021. Buildings in this cluster that historically received wastewater services would have been serviced by the BARC-East WWTP.

No active solid waste collection containers associated with these buildings were observed during site visits.

Storage of numerous plastic drums of unknown contents was observed at Building 203B.

300 Cluster: Overhead electrical distribution lines and glass insulators were observed throughout the 300 Cluster. Buildings at some project sites appeared to still be connected to the electrical infrastructure, and some were visibly disconnected from nearby distribution poles. Buildings that were identified as former garages, storage sheds, or hog sheds generally did not appear to be tied into the electrical infrastructure. Many poles and lines observed near the project sites were leaning, sagging, or downed, while others remained upright. Several pole-mounted transformers were observed at various locations and one large ground-mounted transformer was observed at Building 339F, which may have the potential to contain PCBs.

Underground cable boxes were observed throughout the 300 Cluster, in proximity to some sites proposed for demolition and adjacent to internal facility access roads. The observed underground cable boxes did not identify the type of cable present, and further investigation would be required to identify the type and location of the utility.

Water main access caps and fire hydrants were observed at various locations throughout the 300 Cluster, often found adjacent to one another, and adjacent to internal facility access roads. It is presumed that all buildings except for those identified as garages, storage sheds, or hog sheds

had access to water supply and that underground water lines may be present within and adjacent to each building footprint.

Stormwater drains were observed throughout the 300 Cluster. Wastewater infrastructure was not observed during site visits conducted October 2019 and March 2021. Buildings in this cluster that historically received wastewater services would have been serviced by the BARC-East WWTP. No active solid waste collection containers associated with these buildings were observed during site visits.

Several ASTs and storage containers were observed within the 300 Cluster, all of unknown current or former contents. Three ASTs were observed adjacent to the south side of Building 337A, and two large plastic containers and one cylindrical metal container were observed at the Building 391 site.

400 Cluster: Overhead electrical distribution lines and glass insulators were observed throughout the 400 Cluster. Buildings at some project sites appeared to still be connected to the electrical infrastructure, and some were visibly disconnected from nearby distribution poles. Many poles and lines observed near the project sites were leaning, sagging, or downed, while others remained upright.

Water utility connections were not observed during site visits, but it is assumed that buildings within the 400 Cluster were BARC's water service system, and that underground water lines may be present within and adjacent to each building footprint.

Wastewater infrastructure was not observed during site visits conducted October 2019 and March 2021. Buildings in this cluster that historically received wastewater services would have been serviced by the BARC-East WWTP. No active solid waste collection containers associated with these buildings were observed during site visits.

One unlabeled large cylindrical metal AST was observed abandoned and laying on its side near Building 472, and two small, approximately 5-pound capacity propane tanks were observed upright on the ground adjacent to Building 476, set against a small out-building with signage indicating the outbuilding contained flammable materials.

500 Cluster: Buildings proposed for demolition in the 500 Cluster are scattered and are generally do not share interconnected utility infrastructure with each other. Building 506A represents the remnants of a former storage and shop building and no existing utilities connections were observed; however, the presence of a local electrical distribution pole approximately 50 feet to the north suggest the building formerly had electrical service. Observed utilities at Buildings 524, 543, and 543A include only electrical. Buildings 541C and 541D are former hog houses and likely had former access to electrical service, as evidenced by a local electrical distribution pole located between the buildings, and an existing distribution line paralleling Powder Mill Rd approximately 220 feet to the north.

Water and wastewater infrastructure was not observed during site visits conducted October 2019 and March 2021. Buildings in this cluster that historically received wastewater services would have been serviced by septic tanks and drain fields. No active solid waste collection containers associated with these buildings were observed during site visits.

1000 Cluster: Overhead electrical distribution lines and glass insulators were observed throughout the 000 Cluster. Buildings at some project sites appeared to still be connected to the electrical infrastructure, and some were visibly disconnected from nearby distribution poles. Several pole-mounted transformers were observed at various locations which may have the potential to contain PCBs.

Water main access caps and fire hydrants were observed at various locations throughout the 300 Cluster, often found adjacent to one another, and adjacent to internal facility access roads. It is presumed that all or most buildings proposed for demolition had access to water supply and that underground water lines may be present within and adjacent to each building footprint.

Stormwater drains were observed throughout the 1000 Cluster. Wastewater infrastructure was not observed during site visits conducted October 2019 and March 2021. Buildings in this cluster that historically received wastewater services would have been serviced by the BARC-East WWTP. No active solid waste collection containers associated with these buildings were observed during site visits.

3.6.2 Environmental Consequences – Utilities and Infrastructure

3.6.2.1 Proposed Action Alternative

Further investigation of each building site would be conducted to identify all utilities serving each building/structure proposed to be demolished under the Proposed Action Alternative. A demolition plan and utility abandonment plan would be created to achieve the objective of removal while following applicable local regulations. Utility cutting and capping would be conducted prior to building structure demolition. Based on the hazardous material reviews conducted for many of the buildings to be demolished, the following protocols would be followed for utility disconnection and removal prior to and during demolition.

Electrical Utilities: Electrical and communication lines would be cut at the main line where the branch serving the structure begins. Electrical and communication lines observed onsite have been predominantly overhead, 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 3 to 4 feet below ground surface. Overhead lines would 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 would be recycled, and wood overhead utility poles would be disposed of at a licensed landfill.

Water: 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 1- to 2-inch diameter range and buried approximately five feet below the ground surface. It is not anticipated that insulation or contamination would be encountered with removal. Soil would be excavated and replaced, and metal pipe would be recycled. Minimal and temporary increases in water usage may occur with the use of water in association with removal of asbestos containing materials (ACM) or to minimize fugitive dust during clearing, grading, and demolition activities.

Wastewater and Stormwater Management: 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 5 feet below ground surface. It is not anticipated that insulation or contamination would be encountered with removal. Soil would simply be excavated and replaced. Metal pipes would be recycled, while other pipe types would be disposed of at a licensed landfill.

Wastewater management infrastructure, including potential septic tanks and sanitary sewer system, would require confirmation 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. The removal of the 117 buildings would have a positive effect on stormwater management and would support BARC's adherence to its MS4 permit requirements.

Solid Waste Management: A project-specific management plan for nonhazardous solid wastes would be developed prior to initiation of demolition activities under the Proposed Action Alternative. Nonhazardous solid wastes generated from the proposed demolition activities would be expected to consist primarily of construction and demolition debris. Collection and disposal of waste materials would be contracted to a licensed waste hauling contractor and disposed or recycled at a licensed facility.

Because the 117 buildings proposed for demolition are vacant and facility activities do not currently generate solid waste at these building sites on a regular basis, the Proposed Action Alternative would be expected to have minimal effect on the daily solid waste management operations at BARC.

Hazardous materials and waste management are discussed in Section 3.11.

Steam Generation: 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 1- to 2-inch diameter range and buried approximately 3 to 4 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 metal pipe would be recycled. Asbestos-insulated pipes are typically disposed of in whole pieces as asbestos waste.

Storage Tank Management: Prior to initiation of demolition activities under the Proposed Action Alternative, a review of regulatory databases and other available historical documentation would be required to determine the existence of any storage tanks at or in the vicinity of the building sites proposed for demolition. Removal and disposal plans would be developed for any identified storage tanks and a contingency plan would be developed for removal and disposal of any additional storage tanks that may be encountered during demolition activities.

3.6.2.2 No Action Alternative

No plans are currently proposed to make major improvements to the existing utility infrastructure at BARC under the No Action Alternative. As the BARC campus 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 potentially 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 sinkhole but given the small diameter of sanitary and storm sewer laterals, the risk of surface sinkholes is minimal.

3.7 Transportation

The BARC campus 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 campus and destinations within the surrounding area. Parking is provided within most building complexes accessible to employees and visitors at no cost (USDA, 2019). A number of the roads within the BARC campus, including major through roads and minor service roads are contributing elements of the NRHP-eligible BARC Historic District (see Section 3.8). No separate bicycle facilities were observed on the BARC Campus and pedestrian facilities, where present, are limited to internal facility walkways.

3.7.1 Affected Environment – Transportation

The primary roads providing access to and within the BARC campus are shown in Figure 3-6 and described below generally from west to east:

- I-95 is a major arterial roadway that links Beltsville to Baltimore. It passes adjacent to the west side of the North Farm, to the northeast of its interchange with I-495.
- I-495 runs east-west, between the South Farm and North Farm, and provides connection to Baltimore Avenue (US 1), Edmonston Road (Maryland Route [MD] 201), and the Baltimore-Washington Parkway, which provide access to multiple collector roads servicing the five BARC farms.
- Baltimore Avenue (US 1) runs generally north-south between the North Farm and the Linkage Farm, providing access to the North Farm from the east and the Linkage 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 campus.
- 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 (MD 201) 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 campus.
- The Baltimore-Washington Parkway is a major arterial roadway, passing between the Central and East Farms. It provides access to Powder Mill Road.
- 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. The road is specifically identified as a contributing feature of the NRHP-eligible BARC Historic District.
- 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. The road is specifically identified as a contributing feature of the NRHP-eligible BARC Historic District.

Figure 3-6: Transportation Infrastructure Servicing BARC

Sheet 1 of 4 (South, North, and Linkage Farms)

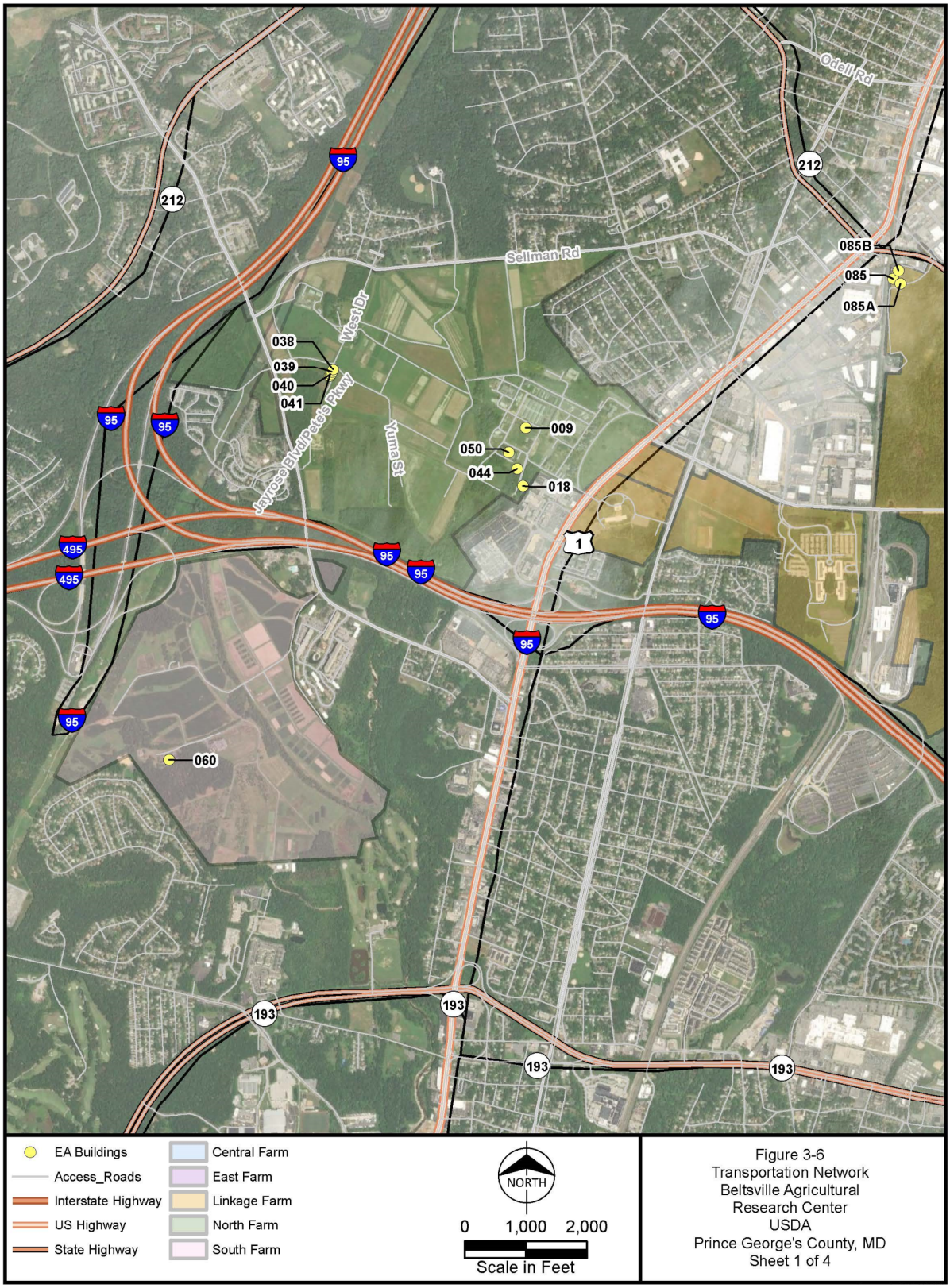


Figure 3-6 continued: Transportation Infrastructure Servicing BARC

Sheet 2 of 4 (Central Farm)

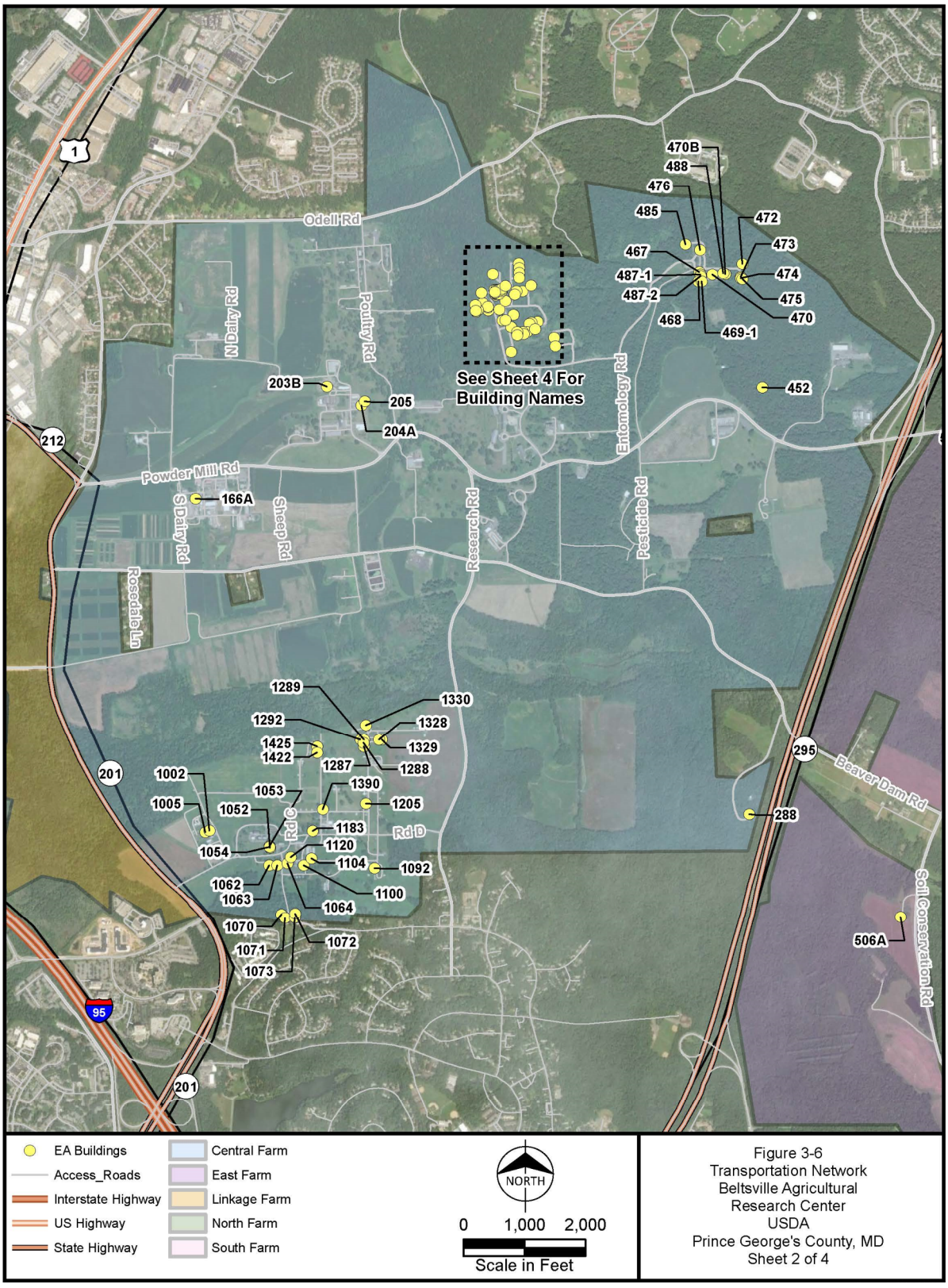


Figure 3-6 continued: Transportation Infrastructure Servicing BARC

Sheet 3 of 4 (East Farm)

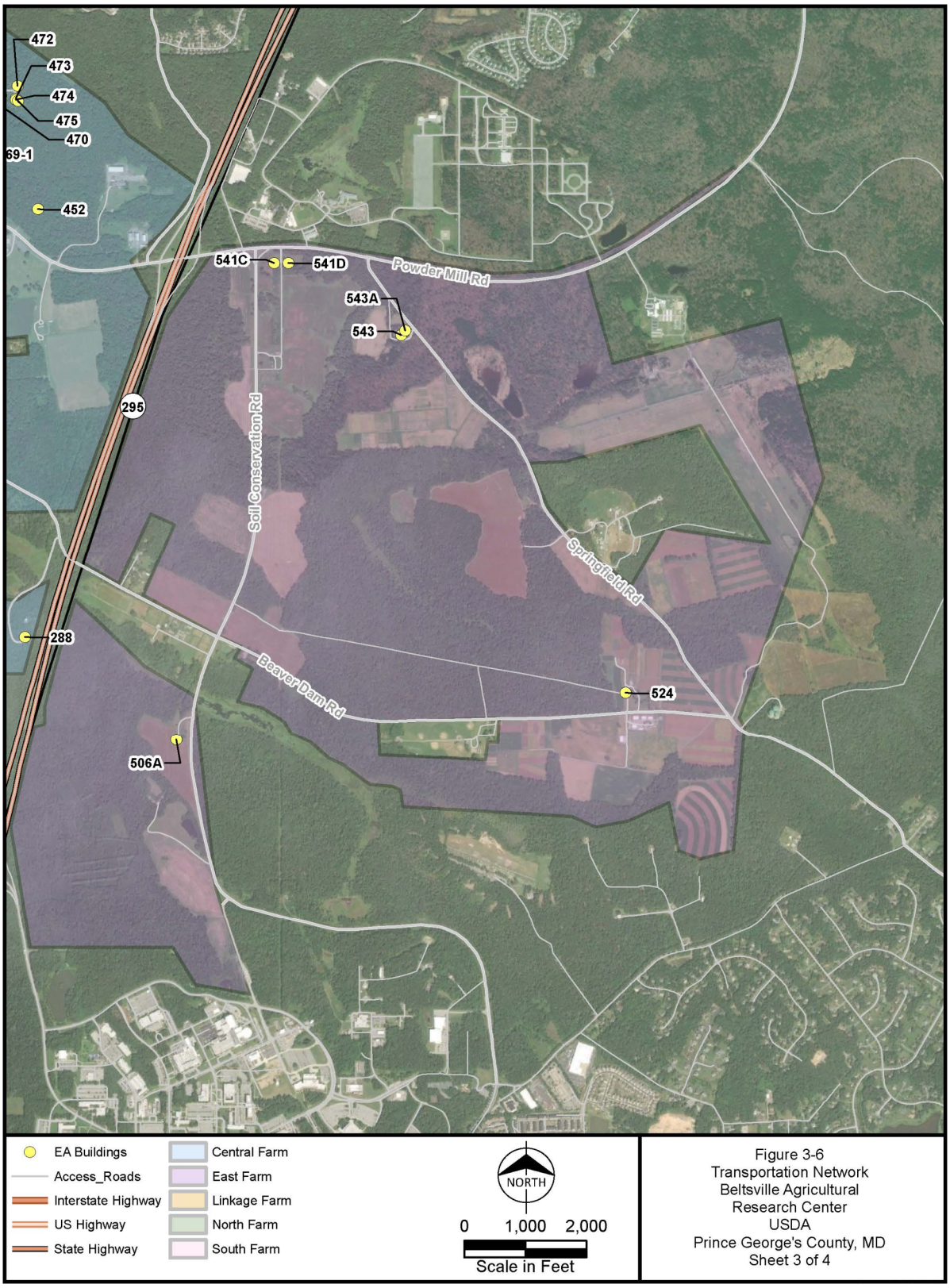
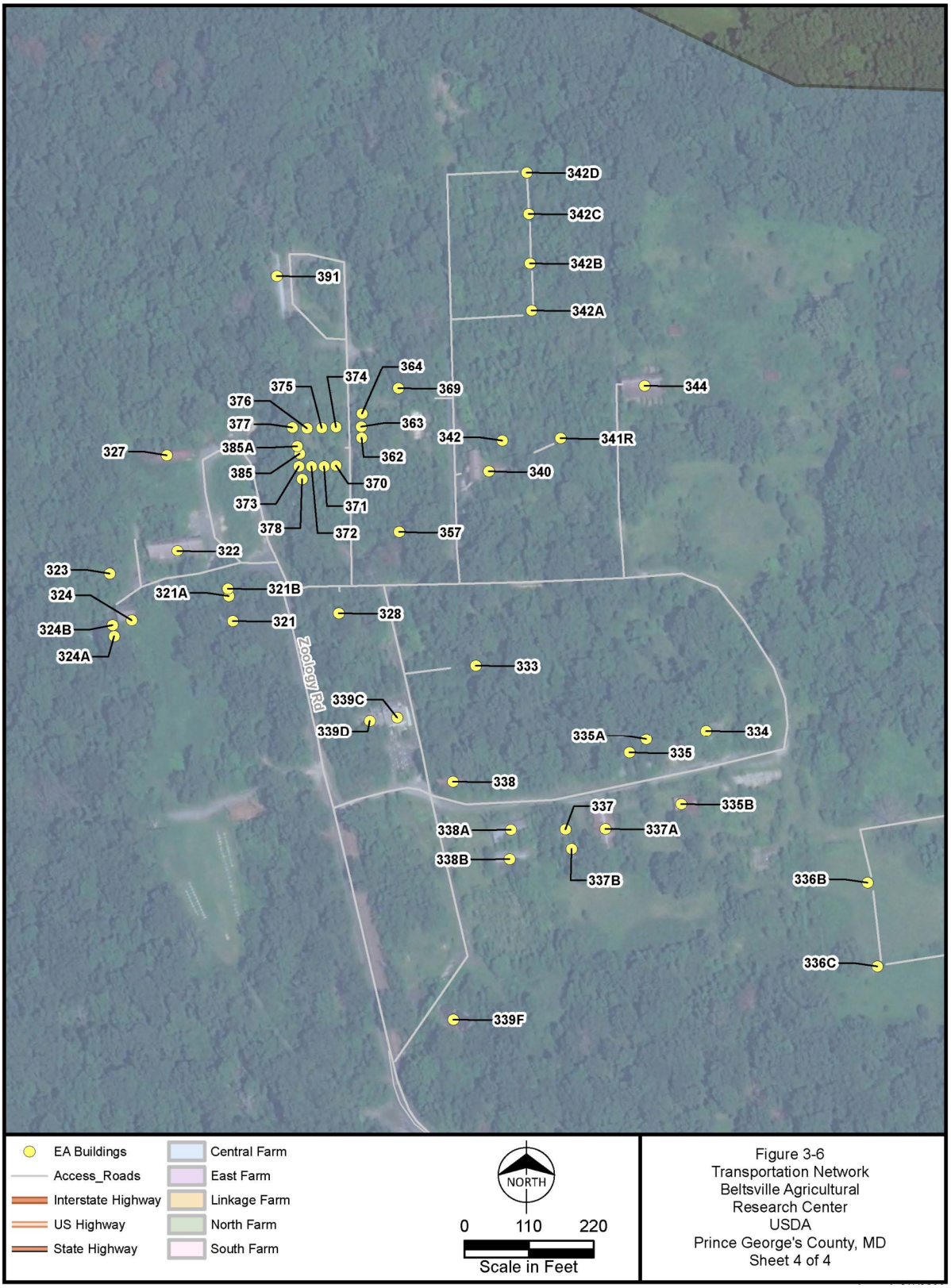


Figure 3-6 continued: Transportation Infrastructure Servicing BARC

Sheet 4 of 4 (Central Farm Detail)



- 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 East 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: Buildings 009, 018, 044, and 050 are at the southern end of the main facility road network on the North Farm. Buildings 009 and 050 are accessible from the east side of 3rd Drive, and Buildings 018 and 044 are accessible from a paved drive extending south from South Drive. This building grouping is accessible from Baltimore Avenue via South Drive to 3rd Drive. Transportation infrastructure providing access to these buildings also provides access to other facility areas and buildings not proposed for demolition under this EA.

Buildings 038, 039, 040, and 041 are grouped together and within the western area of the North Farm. The buildings are clustered and accessible from Cherry Hill Road via West Drive and sit near the south side of the intersection of West Drive and Yuma Street. A deteriorating paved drive provides direct access to the buildings from Yuma Street. Transportation infrastructure providing access to these buildings also provides access to other facility areas and buildings not proposed for demolition under this EA.

Building 060 is located on the southwest side of the South Farm and is accessible from the west side of Cherry Hill Road via a network of unnamed internal facility roads and drives. The drive providing direct access to Building 060 is paved and in deteriorating condition. Transportation infrastructure providing access to this building also provides access to other facility areas and buildings not proposed for demolition under this EA.

Buildings 085, 085A, and 085B are at the north end of the Linkage Farm and are accessible from the south side of Powder Mill Road via an unnamed paved drive. This drive is publicly accessible until just prior to reaching Building 085A, and provides access to one additional unknown dilapidated structure via the private segment of the drive.

100 Cluster: Building 166A is accessible via driveway access from S. Dairy Road, south of Powder Mill Road, and approximately 0.5 mile east of the intersection with Edmonston Road. S. Dairy Road runs along the western edge of the Dairy Complex. Multiple drives and smaller roads cross the Dairy Complex and provide secondary access to Building 166A. Transportation infrastructure providing access to Building 166A also provides access to other facility areas and buildings not proposed for demolition under this EA.

200 Cluster: Buildings 203B, 204A, and 205 are within the Animal Husbandry complex on the Central Farm and are accessible from Powder Mill Road, via Animal Husbandry Road and connecting paved drives. Building 203 is at the north side of this building grouping, and Buildings 204A and 205 are along the east side, with paved facility drives providing direct access to each building. Transportation infrastructure providing access to these buildings also provides access to other facility areas and buildings not proposed for demolition under this EA.

Building 288 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 288. Transportation infrastructure providing access to Building 288 also provides access to other facility areas and buildings not proposed for demolition under this EA.

300 Cluster: The 300 Cluster of buildings is accessible from Powder Mill Road via Center Road or Entomology Road, which connect to Zoology Road and a subnetwork of paved facility roads and drives, providing direct access to most of these buildings. The various paved drives accessed from Zoology Road are unnamed and in degrading condition. Several buildings in the northwest section of the building cluster are not serviced by the paved drive subnetwork and were accessible via unpaved dirt drives at the time of the site visit conducted March 23-24, 2021. Several of the smaller buildings, located in the northern section of the cluster and identified as hog sheds (Buildings 342 A-D, 341R, and 342) and a small laboratory (Building 333), are heavily overgrown with trees and woody vines, and any unpaved drives that may have previously been present are no longer accessible to vehicles. Buildings 336C and 336D are within a fenced pastureland area at the southeast corner of the cluster and are not accessible by vehicle. The various paved and unpaved roads and drives that service the 300s Cluster from Zoology Road generally provide access only for this building grouping and do not provide access to other facility buildings or areas. The unnamed connector roads and drives may be demolished during demolition of the buildings.

400 Cluster: Most buildings proposed for demolition in the 400 cluster are accessible from Powder Mill Road, via Entomology Road and a connecting small subnetwork of paved roads and drives. Buildings 467, 468, 469-1, 470, 470B, 473, 474, 475, 476, 487-1, 487-2 and 488 are serviced by these unnamed paved roads and drives. Building 472 is on the east end of the cluster, approximately 70 feet northeast of the nearest paved drive and is not accessible to vehicles due to dense vegetation. Building 485 is on the northwest end of the cluster and was accessed via an unpaved drive at the time of the site visit conducted March 23-24, 2021. These unnamed paved and unpaved roads and drives, accessed from Entomology Road, primarily service buildings proposed for demolition under this EA. They additionally service a fenced, isolated area south of the building cluster utilized for agricultural purposes.

Building 452 is isolated and approximately 0.35 mile south-southeast of the building cluster. It sits approximately 500 feet northeast of a driveway on the north side of Powder Mill Road and is not accessible by vehicle due to vegetation.

500 Cluster: Building 506A is accessible from Soil Conservation Road via a paved drive on the west side of the road. This drive provides access to an adjacent open agricultural area but does not service additional facility buildings.

Building 524 is accessible from Springfield Road, via Beaver Dam Road, connecting to an unpaved drive on the north side of Beaver Dam Road. This unpaved drive provides access to the surrounding open agricultural area and an additional facility building to the north.

Buildings 541C and 541D are accessible from Powder Mill Road, just east of its intersection with Soil Conservation Road, via an unpaved drive. The buildings are approximately 220 feet south of Powder Mill Road. This unpaved drive provides access to an adjacent open agricultural area but does not service additional facility buildings.

Buildings 543 and 543A are accessible from Powder Mill Road via Springfield Road to the south, connecting to an unpaved drive on the west side of Springfield Road. This unpaved drive provides access to an adjacent open agricultural area but does not service additional facility buildings.

1000 Cluster: The 1000 Cluster is within the southwest section of the Central Farm, and is serviced by a subnetwork of paved roads and drives, accessible from the west by Edmonston Road, connecting to a facility road (Road C) and from the east by Research Road, connecting to a facility road (Road D). Both entrances to the building cluster are accessible only to authorized personnel. All buildings in this cluster proposed for demolition under this EA are directly accessed by this network of paved drives. Transportation infrastructure providing access to the 1000 Cluster also provides access to other facility areas and buildings not proposed for demolition under this EA.

The northern terminus of the collocated WMATA green and yellow Metrorail lines are 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 campus, at the Greenbelt Station just south of the Linkage Farm and the Muirkirk Station north of the Central Farm (MDOT, 2019a).

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 campus. These routes provide access to the Central, Linkage, and North Farms (WMATA, 2018). 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, 2016a).

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 campus, including NRHP-eligible components of the BARC Historic District, though interior drives used to access groups of buildings (300 Cluster and 400 Cluster) proposed for demolition may be removed. 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 building 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 campus 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 building demolition activities. Routine roadway maintenance would continue, and any damage to existing roads 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. The subnetworks of paved facility roads and drives within the building clusters, as described in Section 3.7.1 are in various states of functionality and

deterioration, as observed during site visits conducted October 22–24, 2019, and March 23-24, 2021. If left in place, the local, internal paved roads and drives would continue to deteriorate.

3.8 Cultural Resources

As part of USDA-ARS's responsibilities outlined in Section 110 of the NHPA, BARC was first documented as a historic property in the 1970s with updated survey and an official NRHP eligibility determination occurring in 1998. The boundaries of the NRHP district include the entire research center (Appendix F: Figure F-1). It is eligible under both NRHP Criteria A and C for its historic associations and as a designed landscape.

Under NRHP Criterion A, the facility is significant for its role in "the development of a national center for agriculture experimentation and testing" (Farris, 2017a). It maintains associations with the New Deal and federal Depression-era programs of the 1930s and 1940s, and 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" (P.A.C. Spero & Company, 1998).

Under NRHP Criterion C, the facility is significant as a designed landscape with significant influences from "the planning team of A.D. Taylor, landscape architect, and Delos Smith, architect" during the 1930s. It also maintains associations with the PWA and the CCC and was influenced by the individual divisions within BARC and their research missions. Contributing features 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***" (P.A.C. Spero & Company, 1998) The district's period of significance extends from the facility's founding in 1910 through its reclassification as a regional research facility in 1984.

Specific historic contexts associated with the historic district and its contributing resources include the federal role in agricultural research, experimental agricultural research, New Deal policies and programs, landscape architecture, experimental agricultural architecture, and Georgian Revival architecture, each encompassing numerous subthemes. In total, 114 of the 117 buildings and structures proposed for demolition contribute to the NRHP-eligible district. The resources encompass the entire period of significance and most of the relevant themes and are spread across the facility's five farms (North, South, Linkage, Central, and East).

3.8.1 Affected Environment – Cultural Resources

As of 1998, the historic district included 696 buildings or structures. A total of 117 buildings are proposed for demolition,114 of which contribute to the NRHP-eligible BARC Historic District (Appendix F). The buildings are discussed individually in Section 3.0. Of the 117 buildings and structures proposed for demolition under the Proposed Action and listed in Table 3-6, 55 have Maryland Inventory of Historic Places (MIHP) numbers, and 62 do not.

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
North	PG:61-17	0009	Greenhouse Range 3	1941	Identified as contributing feature of district on 6/13/17
North	PG:61-34	0018	Smallwood House	1934	Identified as contributing feature of district on 6/13/17
North	PG:61-79	0038	Potato House	1934	Identified as contributing feature of district on 12/1/17
North	PG:61-80	0039	Bulb House	1934	Identified as contributing feature of district on 12/1/17
North	PG:61-81	0040	Fruit Storage House	1934	Identified as contributing feature of district on 12/1/17
North	PG:61-82	0041	Fallout Shelter	1943	Identified as contributing feature of district on 3/17/17
North	N/A	0044	Storage	1958	Identified as contributing feature of district on 9/1/21
North	PG:61-83	0050	Headhouse with Greenhouse	early to mid-1960s	Identified as contributing feature of district on 12/1/17
South	PG:66-79	0060	Service Building D	1942	Identified as contributing feature of district on 12/1/17
Linkage	PG:67-45	0085	Granary Building	1936	Identified as contributing feature of district on 12/1/17
Linkage	PG:67-62	0085A	Granary Service Building	1950	Identified as contributing feature of district on 7/10/18
Linkage	PG:67-76	0085B	Granary Garage	1933	Identified as contributing feature of district on 12/17/20
Central	PG:67-47	0166A	Silo/Shed Building	1934	Identified as contributing feature of district on 12/1/17
Central	PG:62-84	0203B	Swine Pens	1972	Identified as contributing feature of district on 7/15/20
Central	PG:62-43	0204A	Post Mortem Building	1933	Identified as contributing feature of district on 12/1/17

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

Farm Location	MIHP No.	BARC Building ID	Building Name/ Reference	Year Built	Notes/NRHP Eligibility Status
Central	PG:62-44	0205	Meat Laboratory Holding Shelter	1945	Identified as contributing feature of district on 12/1/17
Central	N/A	288	Office/Laboratory	1933	Identified as contributing feature of district on 9/1/21
Central	N/A	0321	Office/Laboratory	1933	Identified as contributing feature of district on 9/1/21
Central	N/A	0321A	Walk-In-Box	1933	Identified as contributing feature of district on 9/1/21
Central	N/A	0321B	Walk-In-Box	1938	Identified as contributing feature of district on 9/1/21
Central	N/A	0322	Barn	1940	Identified as contributing feature of district on 9/1/21
Central	N/A	0323	Garage	1934	Identified as contributing feature of district on 9/1/21
Central	N/A	0324	Office/Laboratory	1934	Identified as contributing feature of district on 9/1/21
Central	N/A	0324A	Walk-In-Box	1934	Identified as contributing feature of district on 9/1/21
Central	N/A	0324B	Storage	1934	Identified as contributing feature of district on 9/1/21
Central	N/A	0327	Laboratory	1950	Identified as contributing feature of district on 9/1/21
Central	N/A	0328	Office/Laboratory	1934	Identified as contributing feature of district on 9/1/21
Central	N/A	0333	Laboratory	1934	Identified as contributing feature of district on 9/1/21
Central	N/A	0334	Poultry House	1938	Identified as contributing feature of district on 9/1/21
Central	N/A	0335	Storage	1939	Identified as contributing feature of district on 9/1/21

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

Farm Location	MIHP No.	BARC Building ID	Building Name/ Reference	Year Built	Notes/NRHP Eligibility Status
Central	N/A	0335A	Animal Quarantine	1940	Identified as contributing feature of district on 9/1/21
Central	N/A	0335B	Animal Shed	1949	Identified as contributing feature of district on 9/1/21
Central	N/A	0336B	Animal Shed	1949	Identified as contributing feature of district on 9/1/21
Central	N/A	0336C	Animal Shed	1949	Identified as contributing feature of district on 9/1/21
Central	N/A	0337	Laboratory	1955	Identified as contributing feature of district on 9/1/21
Central	N/A	0337A	Swine Research	1967	Identified as contributing feature of district on 9/1/21
Central	N/A	0337B	Storage	1940	Identified as contributing feature of district on 9/1/21
Central	N/A	0338	Office/Laboratory	1934	Identified as contributing feature of district on 9/1/21
Central	N/A	0338A	Laboratory/Storage	1934	Identified as contributing feature of district on 9/1/21
Central	N/A	0338B	Animal Building	1934	Identified as contributing feature of district on 9/1/21
Central	N/A	0339C	Animal Shed	1949	Identified as contributing feature of district on 9/1/21
Central	N/A	0339D	Animal Research Building	1967	Identified as contributing feature of district on 9/1/21
Central	N/A	0339F	Laboratory	1976	Identified as contributing feature of district on 9/1/21
Central	N/A	0340	Barn	1938	Identified as contributing feature of district on 9/1/21
Central	N/A	0341R	Hog Shed	1950	Identified as contributing feature of district on 9/1/21

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

Farm Location	MIHP No.	BARC Building ID	Building Name/ Reference	Year Built	Notes/NRHP Eligibility Status
Central	N/A	0342	Animal Shed	1950	Identified as contributing feature of district on 9/1/21
Central	N/A	0342A	Hog Shed	1950	Identified as contributing feature of district on 9/1/21
Central	N/A	0342B	Hog Shed	1950	Identified as contributing feature of district on 9/1/21
Central	N/A	0342C	Hog Shed	1950	Identified as contributing feature of district on 9/1/21
Central	N/A	0342D	Hog Shed	1950	Identified as contributing feature of district on 9/1/21
Central	N/A	0344	Barn	1938	Identified as contributing feature of district on 9/1/21
Central	N/A	0357	Laboratory	1940	Identified as contributing feature of district on 9/1/21
Central	PG:62-60	0452	Radio Shed	1933	Identified as a non-contributing feature of district on 7/9/18
Central	N/A	0362	Storage	1955	Identified as contributing feature of district on 9/1/21
Central	N/A	0363	Storage	1955	Identified as contributing feature of district on 9/1/21
Central	N/A	0364	Storage	1950	Identified as contributing feature of district on 9/1/21
Central	N/A	0369	Log House	1947	Identified as contributing feature of district on 9/1/21
Central	N/A	0370	Poultry House	1945	Identified as contributing feature of district on 9/1/21
Central	N/A	0371	Poultry House	1945	Identified as contributing feature of district on 9/1/21
Central	N/A	0372	Poultry House	1945	Identified as contributing feature of district on 9/1/21

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

Farm Location	MIHP No.	BARC Building ID	Building Name/ Reference	Year Built	Notes/NRHP Eligibility Status
Central	N/A	0373	Poultry House	1945	Identified as contributing feature of district on 9/1/21
Central	N/A	0374	Colony House	1945	Identified as contributing feature of district on 9/1/21
Central	N/A	0375	Colony House	1945	Identified as contributing feature of district on 9/1/21
Central	N/A	0376	Colony House	1945	Identified as contributing feature of district on 9/1/21
Central	N/A	0377	Storage	1945	Identified as contributing feature of district on 9/1/21
Central	N/A	0378	Storage	1950	Identified as contributing feature of district on 9/1/21
Central	N/A	0385	Pole Shed	1958	Identified as contributing feature of district on 9/1/21
Central	N/A	0385A	Storage Shed	1993	Identified as non-contributing feature of district on 9/1/21
Central	N/A	0391	Animal Shelter	1961	Identified as contributing feature of district on 9/1/21
Central	PG:62-60	0452	Radio Shed	1933	Identified as a non-contributing feature of district on 7/9/18
Central	PG:62-61	0467	Entomology C Building	1941	Identified as contributing feature of district on 7/10/18
Central	PG:62-62	0468	Laboratory Annex C	1934	Identified as contributing feature of district on 7/10/18
Central	N/A	0469-1	Laboratory	1969	Identified as contributing feature of district on 9/1/21
Central	PG:62-63	0470	Entomology Greenhouse	1934	Identified as contributing feature of district on 7/10/18
Central	PG:62-64	0470B	Quonset Insecticide Storage Building	1962	Identified as contributing feature of district on 7/10/18

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

Farm Location	MIHP No.	BARC Building ID	Building Name/ Reference	Year Built	Notes/NRHP Eligibility Status
Central	PG:62-51	0472	Spray Mixing Shed	1950	Identified as contributing feature of district on 7/10/18
Central	PG:62-52	0473	Mushroom House	1934	Identified as contributing feature of district on 7/10/18
Central	PG:62-52	0474	Mushroom House	1934	Identified as contributing feature of district on 7/10/18
Central	PG:62-53	0475	Mushroom House	1957	Identified as contributing feature of district on 7/10/18
Central	PG:62-54	0476	Entomology Laboratory A	1935	Identified as contributing feature of district on 7/10/18
Central	PG:62-54	0485	Storage Shed	1940	Identified as contributing feature of district on 7/10/18
Central	PG:62-66	0487-1	Storage Boxes	1959	Identified as contributing feature of district on 7/10/18
Central	PG:62-66	0487-2	Storage Boxes	1959	Identified as contributing feature of district on 7/10/18
Central	PG:62-66	0488	Storage Boxes	1959	Identified as contributing feature of district on 7/10/18
Central	PG:64-21	0506A	Storage and Shop Building	1935	Identified as a non-contributing feature of district on 5/11/21
East	PG:64-22	0524	Gas Station	1933	Identified as contributing feature of district on 12/1/17
East	PG:64-24	0541C	Hog House	1942	Identified as contributing feature of district on 7/10/18
East	PG:64-24	0541D	Hog House	1942	Identified as contributing feature of district on 7/10/18
East	PG:64-25	0543	Main Dog Kennel and Animal Shed	1939	Identified as contributing feature of district on 7/10/18
East	PG:64-25	0543A	Main Dog Kennel and Animal Shed	1939	Identified as contributing feature of district on 7/10/18

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

Farm Location	MIHP No.	BARC Building ID	Building Name/ Reference	Year Built	Notes/NRHP Eligibility Status
Central	PG:67-50	1002	Feed Barn	1938	Identified as contributing feature of district on 7/10/18
Central	PG:67-51	1005	Pen Barn	1938	Identified as contributing feature of district on 7/10/18
Central	PG:67-52	1052	Chemical Storage Building	1940	Identified as contributing feature of district on 7/10/18
Central	PG:67-53	1053	Storage Building	1935	Identified as contributing feature of district on 7/10/18
Central	N/A	1054	Walk-In-Box	1961	Identified as contributing feature of district on 9/1/21
Central	PG:67-54	1062	Horse and Cattle Barn	1934	Identified as contributing feature of district on 7/10/18
Central	PG:67-55	1063	Horse and Cattle Barn	1934	Identified as contributing feature of district on 7/10/18
Central	PG:67-55	1064	Horse and Cattle Barn	1934	Identified as contributing feature of district on 7/10/18
Central	PG:67-63	1070	Superintendent's House and Garage	1935	Identified as contributing feature of district on 7/10/18
Central	PG:67-63	1071	Superintendent's House and Garage	1935	Identified as contributing feature of district on 7/10/18
Central	N/A	1072	Office/Laboratory	1935	Identified as contributing feature of district on 9/1/21
Central	N/A	1073	Foreman's House Garage	1935	Identified as contributing feature of district on 7/10/18
Central	N/A	1092	Water Pumping House, Well 9	1938	Identified as contributing feature of district on 9/1/21
Central	PG:67-56	1100	Parasitological Laboratory	1936	Identified as contributing feature of district on 7/10/18
Central	PG:67-57	1104	Field Pen	1935	Identified as contributing feature of district on 7/10/18

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

Farm Location	MIHP No.	BARC Building ID	Building Name/ Reference	Year Built	Notes/NRHP Eligibility Status
Central	PG:67-58	1120	Pathological Laboratory	1945	Identified as contributing feature of district on 7/10/18
Central	PG:67-60	1183	Water Pumping House, Well 10	1938	Identified as contributing feature of district on 7/10/18
Central	N/A	1205	Animal Pen	1972	Identified as contributing feature of district on 9/1/21
Central	PG:67-61	1287	Poultry Laboratories	1952	Identified as contributing feature of district on 7/10/18
Central	N/A	1288	Laboratory	1968	Identified as contributing feature of district on 9/1/21
Central	PG:67-61	1289	Poultry Laboratories	1952	Identified as contributing feature of district on 7/10/18
Central	PG:67-61	1292	Poultry Laboratories	1952	Identified as contributing feature of district on 7/10/18
Central	PG:67-65	1328	Colony Brooder Houses	1945	Identified as contributing feature of district on 7/10/18
Central	PG:67-65	1329	Colony Brooder Houses	1945	Identified as contributing feature of district on 7/10/18
Central	N/A	1330	Storage Shed	1940	Identified as contributing feature of district on 9/1/21
Central	N/A	1390	Storage	1972	Identified as contributing feature of district on 9/1/21
Central	PG:67-66	1422	Swine Research Laboratory	1945	Identified as contributing feature of district on 7/10/18
Central	PG:67-67	1425	Swine Products barn	1945	Identified as contributing feature of district on 7/10/18

(a) *MEDUSA*; Maryland's Cultural Resources Information System; USDA-ARS BARC Realty Information

The review of Maryland's Cultural Resources Information System *MEDUSA* identified 46 previously recorded archeological sites and 27 previously conducted cultural resources surveys within the BARC boundary (Table 3-7 and Appendix F). Six of the 46 previously recorded sites are located within 1,000 feet of a building or building cluster proposed for demolition. None are within the Area of Potential Effect(s) (APE) of buildings proposed for demolition. Archeological resources are discussed individually in Section 3.8.1.3.

Table 3-7: Previously Recorded Archeological Sites within BARC

Trinomial	Site Type	Determination of Eligibility	Within 1,000 ft of building to be demolished
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	Yes
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
18PR545	Early, Middle & Late Archaic and Early, Middle, and Late Woodland base & short-term camps	Eligible	No
18PR546	Middle & Late Archaic and Early, Middle, and Late Woodland base camp	Not eligible	Yes

Table 3-7 continued: Previously Recorded Archeological Sites within BARC

Trinomial	Site Type	Determination of Eligibility	Within 1,000 ft of building to be demolished
18PR547	19th-Early 20th century artifact concentration	Not eligible	Yes
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
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	Not eligible	No
18PR1157	Early to Mid-20th century refuse disposal area	Undetermined	No
18PR1158	Mid-20th century dumping activity associated with BARC construction.	Not eligible	No
18PR1159	Mid-20th century dumping activity associated with BARC construction.	Not eligible	No
18PR1160	Mid-20th century dumping activity associated with BARC construction or poultry coops	Not eligible	No
18PR1161	Early 20th Century BARC building; 18th & 19th century artifact scatter; Prehistoric lithic scatter	Not Eligible	Yes
18PR1162	Prehistoric lithic scatter; Mid-20th century glass scatter	Not eligible	Yes
11PR1163	Prehistoric lithic scatter	Not eligible	No
11PR1164	Prehistoric lithic scatter; Early-Mid 20th century artifact scatter	Not eligible	No
18PR1165	Late 19th-Early 20th century artifact scatter	Not eligible	No
18PR1184	Late Archaic resource procurement camp; 19th century domestic artifact scatter	Not eligible	Yes
18PR1190	Late Archaic, Terminal Archaic, Late Woodland short-term resource procurement site	Undetermined	No
18PR1191	Prehistoric short-term resource procurement	Undetermined	No
18PR1192	Prehistoric short-term resource procurement	Not eligible	No

(a) *MEDUSA*; Maryland's Cultural Resources Information System, Accessed May 2022

Table 3-8: 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	Maryland Department of Transportation (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
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.

Table 3-8 continued: Previously Conducted Cultural Resources Investigations within BARC

Call Number	Project Name	Date	Consultant	Agency
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/MD 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), Inter-county 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.
PR708	Phase I Archaeological Survey: Bureau of Engraving and Printing Facility, BARC	2020	AECOM	U.S. Army Corps of Engineers

(a) *MEDUSA;* Maryland's Cultural Resources Information System, Accessed May 2022

3.8.1.1 Historic-Age Architectural Resources

One-hundred fourteen (114) of the 117 buildings and structures (i.e. corrals, retaining walls, etc.) slated for demolition as part of the Proposed Action are contributing elements of the NRHP-eligible BARC Historic District. The buildings are located across the BARC campus within the five farms. In addition to buildings and structures, contributing features of the BARC Historic District include crop fields, roadways, and other landscape and natural features. Brief descriptions of each farm and its historic context and composite resources are provided in the following sections.

North Farm – The North Farm includes approximately 540 acres initially acquired in 1933 and expanded in 1940 by the Bureau of Plant Industry (BPI). It is located northeast of the South Farm and features "cultivated farmland to the west and a densely developed area to the east" (Farris, 2017a). It is roughly bounded "on the east by U.S. Route 1 (a major Beltsville arterial roadway); by woodland and Cherry Hill Road to the west; woodland and I-495 to the South; and Sellman Road to the north" (Robinson & Associates et al., 1998). The farm comprises two distinct areas divided by Little Paint Branch Creek,

which runs north to south through the farm, and three distinct land use zones: administration, laboratory research, and field crops research.

Most of the built environment associated with the North Farm was constructed between 1932 and 1944. Under NRHP Criterion A, the North Farm is significant for its associations "with events related to long standing research on a national level and…with events and federal programs under the New Deal" (Robinson & Associates et al., 1998). Under Criterion C, it is significant for its professionally designed master plan created by National Park Service (NPS) landscape architect Malcom Kirkpatrick and the incorporation of Georgian Revival style architecture, which became the primary aesthetic for the BARC campus (Robinson & Associates et al., 1998).

In 1933, the PWA allocated funds to the North Farm site "for land clearing, drainage and water lines, irrigation system installation, road and fence construction and electric service" (Robinson & Associates et al., 1998). The following year, the CWA allotted additional funds for improvements. Many of the features from this period remain part of the landscape today including "bridge locations…[an] irrigation reservoir, storage buildings, various portions of roads, ditch and drainage systems and the Little Paint Branch Creek levee" (Robinson & Associates et al., 1998).

The North Farm landscape is characterized by "lawns, specimen trees, and beds of shrubs, perennials and annuals." In the administrative zone, plantings are "fairly formal," while "foundation plantings at the outbuildings, associated with research fields, appear informal and somewhat arbitrary" (Robinson & Associates et al., 1998). Eight buildings that are contributing features of the BARC Historic District within the North Farm are planned for demolition (Table 3-6; Appendix F).

South Farm – The approximately 360-acre South Farm is located near the southeastern boundary of the BARC campus and comprises "open cultivated fields with a small number of farm buildings on land purchased by the…[BPI]…between 1941 and 1943 for plant research" (Farris, 2017a). The farm is defined primarily by research fields accessed "via a two-lane paved road from Cherry Hill Road on the eastern side of the farm" (Robinson & Associates et al., 1998). Like the North Farm, the South Farm is separated into two sections by Little Paint Branch Creek; the land east of the creek comprises primarily "flat bottomland," while land to the west is "both flat bottomland and rolling hillside" (Robinson & Associates et al., 1998).

Under Criterion A, the South Farm is significant for its associations "with events related to long standing agricultural research on a national level and…events and federal programs initiated under the New Deal" (Robinson & Associates et al., 1998). Though Criterion C is not specifically referenced in the 1998 NRHP assessment of the South Farm, the fields, roads, and other landscape features associated with the farm are identified as significant to the overall landscape of the BARC Campus. Building 60, Service Building D, is slated for demolition within the South Farm (Table 3-6; Appendix F).

Linkage Farm – The Linkage Farm contains approximately 460 acres and connects the North Farm and the Central Farm. It lies across Route 1 from the North Farm and includes two noncontiguous tracts of approximately 310 acres and 150 acres, respectively (Robinson & Associates et al., 1998). In addition to the National Agricultural Library and the George Washington Carver Center, the farm comprises primarily open and cultivated fields (Farris, 2017a). The buildings to be demolished in the Linkage Farm include a granary complex located on the 150-acre tract. This tract is bounded by "Powder Mill Road, the Baltimore and Ohio Railroad, Edmonston Road, and Interstate 495" and divided by Sunnyside Road (Robinson & Associates et al, 1998).

The granary complex, "which served as a processing plant for regular feeding operations for the Bureau of Dairy Industry [BDI]" was constructed using PWA funds and represents the only such facility at BARC (Farris, 2017b). Its primary purpose was to prepare feed for dairy and other research cattle, and it was designed by dairy engineers from the facility's Bureau of Agricultural Engineering. The granary complex

provided a cost-effective way to feed the facility's dairy cattle and contributed to the significant research the BDI conducted, which "led to major improvements for small dairy farms, larger commercial dairies, and dairy production and manufacturing industries nationwide" (Farris, 2017b). The complex includes Buildings 085 (Granary Building); 085A (Granary Service Building); and Resource 085B (Granary Garage).

Central Farm – The Central Farm is the oldest of the five farms, comprising approximately 2,980 acres, and contains the majority of the resources proposed for demolition. It is adjacent to the Linkage Farm and "contains approximately 12 clusters of farm or research-related buildings, as well as pasture and forested areas" (Farris, 2017a). The Central Farm includes the original acreage acquired by USDA in 1910 and originally served "the Bureaus of Dairy Industry and Animal Industry, and their successor organizations" (Farris, 2017a).

The Central Farm is significant under Criterion A for its associations with "events related to long standing agricultural research on a national level and…events and federal programs initiated under the New Deal" (Robinson & Associates et al., 1998). Under Criterion C, the farm was developed using a professionally designed master plan including specially oriented farmyard layouts. The PWA, Civil Works Administration, and CCC were all involved in the development and construction of the Central Farm, which reached its zenith during the New Deal era. The team of A.D. Taylor and Delos Smith along with Robert T. Walker, a CCC landscape architect, were responsible for both building and landscape design during that period.

Additionally, buildings in the 300 Area Cluster, including 324, 324A, 324B, 328, 333, 334, 338, and 338A among the subject buildings, were designed by the Bureau of Agricultural Engineering with input from Dr. Maurice Hall, Chief of the Division of Zoology. These buildings, constructed in 1934, displayed a "similar architectural vocabulary, with the majority of concrete block construction covered with a warm, cream-colored stucco." Many of the buildings had cornerstones inscribed with their construction date, a detail requested by Dr. Hall (Robinson et al., 1998).

The buildings and landscaping were constructed primarily by CCC workers. There were four CCC camps at BARC between 1933 and 1942, when most of the Central Farm was developed, and they were responsible for reshaping "a vernacular, rural landscape into the 'largest farm demonstration in the world'" (Robinson & Associates et al., 1998). The CCC "played an important role in shaping the landscape of BARC" via installation and construction of utilities, roads, fencing, and other landscaping features (Farris, 2017a). Further, at least three African American CCC companies worked at the camp during the period beginning in 1937 (Farris, 2017a). Little is known about these workers and their experience at BARC.

The Central Farm "is located at the geographic center of" BARC and "consists primarily of large, open farm fields and pastures at its west end and forests at its east end" (Robinson & Associates et al. 1998). The built resources proposed for demolition are associated with several research missions at the farm including Animal Husbandry, Pathology, Zoological, and Insecticide Divisions of the BAI, and Entomology and Plant Quarantine and are located throughout the farm. In total, 98 buildings within the Central Farm are proposed for demolition. They range in age from 1933 to 1976 with the majority dating from circa 1933 through 1940 (Table 3-6; Appendix F).

East Farm – USDA acquired the East Farm in the 1930s "for the Bureau of Animal Husbandry and other agencies, including the Soil Conservation Service" (Farris, 2017a). Though large in size, the East Farm has only scattered clusters of built resources. Like the Central Farm, the East Farm is significant under NRHP Criterion A for its associations with "events related to long standing agricultural research on a national level and…events and federal programs initiated under the New Deal." Under NRHP Criterion C, it was developed following a professionally designed master plan and exhibits similar landscape characteristics to the rest of the BARC campus.

The East Farm consists of two tracts bisected by Beaver Dam Creek and private property. It is characterized by a "network of access and service roads, field crops, grazing pastures, and buffer forests" along with 55 buildings or structures in eight primary cluster groups (Robinson & Associates, et al., 1998). Its existence as a planned landscape began in 1934 when the Division of Animal Husbandry, part of the BAI, "produced two land use plans under the direction of division chief E.W. Sheets" (Robinson & Associates, et al., 1998). The Swine Investigation Area, where several of the buildings proposed for demolition are located, was established after 1939 with the majority of the hog houses (i.e., Buildings 541C and 541D) constructed in 1942. Other resources within the farm proposed for demolition include a dog kennel and auxiliary building (Buildings 543 and 543A) as well as a former gas station (Building 524) (Table 3-6, Appendix F).

3.8.1.2 Cemeteries

Three documented cemeteries are within the BARC Campus. The Brown Cemetery and an unnamed family cemetery are in the Linkage Farm, and a possible burial ground for enslaved people is located in the East Farm (Robinson & Associates, et al., 1998). Descriptions of each cemetery follow:

Brown Cemetery
The Brown Cemetery is a small cemetery with seven to nine grave markers located west of MD 201 near Indian Creek. The cemetery dates to at least 1862 and is associated with the Brown family dwelling depicted on an 1861 map. The property where the cemetery is situated was purchased by the USDA in 1938, and it was in poor condition when documented for the 1998 Historic Site Survey (Robinson & Associates, et al., 1998). The cemetery is located within a grove of trees behind the National Agricultural Library and demarcated by a metal fence.

Unnamed Family Cemetery
This family plot is errantly named the 'Central Farm' cemetery (see Robinson & Associates, et al., 1998). It is actually in the Linkage Farm area and located west of Rhode Island Avenue in a small field. The cemetery is described only as a family vernacular cemetery, and it is unknown how many headstones, if any, are associated with the cemetery.

Possible Cemetery of Enslaved People
A vernacular cemetery that is commonly referred to a burial ground for enslaved people is on the west side of Springfield Road. The cemetery location is overgrown and not well maintained. It is included on USGS topographic maps as a cemetery but is largely undocumented. A 1934 survey for the Wildlife Demonstration Area identifies it as the "Old Negro Cemetery", east of the Maier farm. It is situated on a small hill with a steep, unimproved road leading to it. It contains several burial markers consisting of small stones and a few formal headstones, with three headstones documented as having a more "modern appearance" to them. The oldest observed headstone reads 1909. Secondary sources state that enslaved people from the Snowden plantation are buried in the cemetery and that it belongs to residents of Muirkirk, a community north of BARC (Robinson & Associates, et al., 1998).

3.8.1.3 Archeological Resources

The following descriptions provide summaries of previously recorded archeological sites identified through review of resources Maryland's Cultural Resources Information System *MEDUSA*. Of the 47 previously recorded archeological sites in BARC, seven are within 1,000 feet of buildings proposed for demolition: 18PR361, 18PR456, 18PR546, 18PR547, 18PR1161, 18PR1162, and 18PR1184 (see Table 3-8).

> Site 18PR361 is a Late Archaic/Early Woodland base camp comprising a surface scatter of prehistoric artifacts on a small rise adjacent to the floodplain of Little Paint Branch Creek. Advocational archaeologist Denis Curry recorded the site in 1988. The site is of undetermined

eligibility and is in an agricultural field approximately 350 feet northeast Buildings 038, 039, 040, and 041.

Site 18PR456 is the remains of an early nineteenth century plantation site with standing brick house and smokehouse and associated historic-period artifact scatter. MAAR Associates recorded and tested the site in 1994. It is immediately south of the former Walnut Grant Plantation House and Smokehouse. MHT determined Site 18PR456 ineligible for NRHP inclusion because testing demonstrated the site was heavily disturbed by grading activities resulting in loss of integrity and lack of research potential. The site is approximately 965 feet southwest of Buildings 204A and 205.

Site 18PR546 represents a series of campsites occupied from the Late Archaic through the Late Woodland periods. It is along both sides of Edmonson Road approximately 300 feet east of Beaverdam Creek. Phase I and II investigations were completed in 1997. Based on those studies, MHT determined the site ineligible for the NRHP due to extensive disturbance. It is part of a series of similar sites along the roadway and is in a wooded area just under 1,000 feet northwest of Buildings 1002 and 1005.

Site 18PR547 is a mixed plowzone scatter of nineteenth and early-twentieth century artifacts in an agricultural field along both sides of Edmonson Road. Hornum, Thursby, and Clarke recorded the site in 1997. MHT determine the site ineligible for NRHP inclusion in 2008. It is approximately 1,200 feet southeast of Site 14PR456 and 950 feet southwest of Buildings 1002 and 1005.

Site 18PR1161 consists of a low-density scatter of historic period and prehistoric artifacts recovered from plowzone contexts. The historic period domestic debris dates from the late-eighteenth through the early-twentieth centuries and is likely associated with early occupation nearby and at extant Building 281 (PG:62-27/Poultryman's Residence). The prehistoric component consisted of two lithics. AECOM recorded the site in 2019 and tested it in 2020. They recommended it is not eligible for NRHP listing. The USACE concurred, as did MHT. It is approximately 200 feet south of Site 14PR1160 and 950 feet north of Building 203B.

Site 18PR1162 consists of a low-density scatter of historic period and prehistoric artifacts recovered from plowzone contexts. The site is situated on a finger-ridge/knoll within a plowed corn field. The historic period artifacts consist of three colorless bottle glass fragments dating to the early-twentieth century. The prehistoric artifacts include a late-stage quartz biface, two flakes, and a piece of shatter. AECOM recorded the site in 2019 and tested it in 2020. They recommended it is not eligible for NRHP listing. The USACE concurred, as did MHT. It is approximately 500 feet southwest of Site 14PR1160 and 800 feet northwest of Building 203B.

Site 18PR1184 is a multi-component site comprising a Late Archaic resource procurement camp and a nineteenth century domestic artifact scatter. It is north of the intersection of Powder Mill Road and the eastern end of Animal Husbandry Road. The site was determined ineligible for the NRHP by the USACE with concurrence by MHT in 2020 following Phase II investigations. It is approximately 300 feet northeast of Site 14PR456 and 200 feet south of Buildings 204A and 205.

Of the remaining 40 archeological sites, 25 are prehistoric, 15 are historic-age, and six have both prehistoric and historic-age components. Of the 40 sites, three sites have been determined eligible for NRHP inclusion, 18 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 is unlikely 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-ARS's obligations under Section 106 if the areas are determined to be within the 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 117 BARC buildings would be demolished in their entirety, including all associated systems and utility infrastructure above and below ground.

BARC NRHP District and Contributing Buildings

The buildings would be razed, resulting in direct physical effects to the buildings themselves and adverse effects to the overall setting and feeling of the BARC Historic District landscape. The Proposed Action would have both direct (physical, visual, etc.) and indirect and cumulative (reasonably foreseeable) effects to the subject historic properties, other contributing features of the NRHP-eligible BARC Historic District, the BARC Historic District itself, and possibly other as yet unidentified resources.

As demolition and associated redevelopment plans have not been finalized, and thus the specific timing and nature of potential adverse effects to historic (NRHP-listed or eligible) properties is unknown. USDA ARS is developing a Programmatic Agreement (PA) pursuant to § 800.14 of Section 106 of the NHPA (54 U.S.C. § 306108) as codified in its implementing regulations at 36 CFR Part 800 to facilitate the surplus building removal and associated demolition activities at BARC. This PA would allow demolition activities to proceed in a timely manner as funding becomes available.

The PA is also mandated as per Stipulation II.B in the executed MOA among USDA-ARS, the MD SHPO, and the Advisory Council on Historic Preservation (ACHP), Regarding the Proposed Demolition of 12 Buildings at the Beltsville Agricultural Research Center executed on June 1, 2021 (Appendix B). Signatories to the PA would be the ACHP, Maryland SHPO, and the USDA-ARS. The PA must be executed before USDA-ARS can finalize the NEPA decision document. The draft PA is included in Appendix B.

To facilitate development of the PA, USDA-ARS developed presumed APEs for both physical and non-physical (visual, atmospheric, etc.) effects (Appendix F). The physical APE is the footprint of the subject buildings and access roads plus a buffer to allow for the return of the surrounding land as closely as possible to pre-construction contours, and the non-physical APE comprises the boundaries of the NRHP-eligible BARC Historic District.

In addition to public outreach via a public-facing website (https://www.ars.usda.gov/northeast-area/beltsville-md-barc/beltsville-agricultural-research-center/docs/barc-demolition-project/), USDA-ARS notified the ACHP of its adverse effect determination with specified documentation, and the ACHP is participating in the consultation process as a signatory to the PA. USDA-ARS also engaged in consultation with federally recognized tribes with potential interest in the undertaking, including the Delaware Nation and the Delaware Tribe of Indians. Neither tribe responded to the invitation to consult. Finally, USDA-ARS invited additional potential consulting parties to participate in Section 106 consultation including: the Accohannock Indian Tribe, Inc., the Piscataway Indian Nation, the Piscataway Conoy Tribe of Maryland, Choptico Band of Indians, Conoy Creations, American Indian Cultural Center, the Maryland Commission on Indian Affairs, the Maryland Indian Tourism Association, the Maryland Milestones Heritage Area, the National Agricultural Library, the National Capital Planning Commission, the Prince George's County Historical Society, and the Prince George's County Maryland Planning Department. None of the tribal groups responded to the invitation. The Maryland Milestones Heritage Area and the National Agricultural Library accepted the invitation and participated in the consultation regarding the effects of the undertaking on historic properties in consulting parties' meetings held on February 11, 2022 and March 22, 2022.

Through consultation, USDA-ARS agreed to implement the following stipulations to account for adverse effects to the contributing resources and the district as a whole:

I. Research and Recordation

USDA-ARS will conduct Historic American Building Survey (HABS)/Historic American Landscape Survey (HALS) level documentation of buildings within the 300 Area Cluster, including assessment of the complex itself and the associated landscape. The documentation will be prepared in accordance with the *Schedule of Documentation for the Recording of the Beltsville Agricultural Research Center* (SOD) provided by the National Park Services (NPS) North Atlantic-Appalachian Office on July 28, 2022 (Appendix B). The documentation will include an overview and outline format reports for the following buildings constructed between 1933 and 1947: Buildings 321 (Eradiation Laboratory), 322 (Cattle Barn), 328 (Food and Drug Laboratory), 333 (Quarantine Building/Dog Kennel), 334 (Parasite Investigation Laboratory), 335 (Parasite Brooder House), 335A (Insectary/Low Storage), 338 (Coccidiosis Laboratory), 340 (Swine Barn), 344 (Sheep Barn), 357 (Food and Drug Barn), and 369 (Log House). The buildings display common and distinctive architectural characteristics including concrete block construction, stucco parging, and cornerstones inscribed with their construction date. Many of the buildings and associated landscaping were constructed by Civilian Conservation Corps (CCC) workers using Public Works Administration (PWA) funding. For those buildings not documented to HABS/HALS standards, USDA-ARS will complete new or updated MIHP forms for submission to MD SHPO.

II. Public Interpretation

USDA-ARS will provide an electronic copy of the contextual and photographic materials developed during the HABS documentation to the Living New Deal website hosted by the University of California at Berkley for inclusion on their existing webpage detailing the New Deal history of the BARC facility. Concurrently with the Living New Deal web content update, USDA-ARS will develop a Story Map on the history and architecture of BARC. The content will span the history of the property from antebellum times and plantation use through the 1970s highlighting significant research areas, landscape and architectural development trends, significant events and trends at the campus, and place BARC within the larger context of scientific research at other nearby research facilities such as the National Aeronautics and Space Administration, the National Institute of Standards and Technology, and the FDA.

Furthermore, prior to initiation of demolition on a building or cluster basis, USDA-ARS will coordinate with consulting parties to determine if any architectural elements would be candidates for salvage and display at BARC or an appropriate local repository or museum such as the Maryland Milestones Heritage Center. The donation of the artifacts or architectural elements would be supported by a historic narrative and description to facilitate their interpretation and display. The narrative would be submitted for review and approval by the MD SHPO and other consulting parties as appropriate.

III. Positive Preservation Measures

USDA/BARC's commitment to undertake the retention, reuse, and preservation of BARC historic properties will help offset the considerable loss of contributing resources through this demolition initiative. USDA-ARS will provide consulting parties with a list of buildings and structures that are planned to be retained as per current Master Planning initiatives. The list will be maintained and updated if a building is determined surplus or in need of renovation for early consultation with MD SHPO and other interested parties who may facilitate leasing, relocation, or other assistance. In addition, USDA-BARC has committed to preserve Building 010 and has removed Buildings 209B and 156 from the current demolition list. The latter two will be mothballed for potential future reuse in consultation with the MD SHPO and other consulting parties.

Cemeteries

No known cemeteries are near any of the buildings planned for demolition listed in this EA and are not within the Project APE. However, should any human remains or funerary objects be discovered, they would be subject to both Maryland Burial Law and the Native American Graves Protection and Repatriation Act (NAGPRA). Inadvertent discoveries would be handled as outlined in the Unanticipated Discoveries Plan (UDP).

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. The sites proposed for demolition were previously disturbed during construction of building foundations and surrounding and underlying utilities. Any unrecorded archaeological resources that may be present would not be disturbed. As demolition plans are formalized and areas within the district subject to direct impacts from demolition and construction activities are identified, USDA-ARS will coordinate with the MD SHPO to determine appropriate APEs and identification methods as required to comply with Section 106.

Based on the current demolition plans, USDA-ARS and the MD SHPO agree that the undertaking is not likely to affect archeological resources in the physical APE. If final plans for the demolition require impacts outside of the current undertaking footprint, USDA-ARS will assess the potential for intact archeological deposits to exist in those areas. The assessment would be conducted by a Secretary of the Interior (SOI)-qualified archeologist who would prepare written documentation, including survey/monitoring recommendations, if justified, for review by MD SHPO and other interested parties. If deemed necessary through consultation, USDA-ARS will ensure that any archeological survey and/or monitoring shall be performed in accordance with the standards in Stipulation I.

Large portions of the property have not been surveyed for archaeology. If construction impacts occur outside of previously disturbed areas, then SHPO may require an archeological survey. The draft PA outlines procedures for SHPO consultation (summarized below). USDA-ARS will ensure that the final PA stipulations are carried out prior to taking any action that could adversely affect an NRHP-eligible archeological property. Those stipulations will likely include:

- Consultation with the MD SHPO to define an APE for the undertaking based on the nature of the proposed impacts, including area and depth of disturbance;
- Seeking the appropriate information from consulting parties, other individuals, and organizations likely to have knowledge of, or concerns with, cultural resources in the area. If sites of Native American origin are encountered, this consultation would include Indian Tribes who consult on federal undertakings in Prince George's County;
- Adequate archeological survey is conducted for portions of the APE that could contain archeological sites. Archeological investigations will be conducted to identify and evaluate archeological sites, assess the effects of the proposed undertaking on NRHP-eligible archeological sites, and develop means to minimize and mitigate any adverse effects of the project on NRHP-eligible archeological sites that cannot be avoided;
- If a resource is found, apply the NRHP Criteria for Evaluation (36 CFR Part 63), in consultation with the MD SHPO, appropriate Indian Tribes, and other interested parties, and guided by the SOI's Standards and Guidelines for Evaluation, to evaluate the NRHP eligibility of identified archeological sites;
- Proper consultation occurs with the MD SHPO, appropriate Indian Tribes, and other interested parties, regarding evaluation of adverse effects on archaeological resources identified as eligible for the NRHP, and to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on NRHP-eligible archeological sites. If the

undertaking is found to have adverse effects on NRHP-eligible archeological sites, USDA-ARS would consult with the MD SHPO, appropriate Indian Tribes and other interested parties to resolve the adverse effects, consistent with guidance provided in 36 CFR Part 800.6, through the implementation of an Archeological Data Recovery Plan(s) developed in accordance with the ACHP's "Recommended Approach for Consultation on the Recovery of Significant Information from Archaeological Sites" (64 FR 27085-87 published in the Federal Register on May 18, 1999), the ACHP's Handbook on Treatment of Archaeological Properties, and the SOI Standards for Archaeological Documentation;

- Recognition that any human remains or funerary objects that may be discovered during data recovery operations are subject to both Maryland Burial Law and the Native American Graves Protection and Repatriation Act (NAGPRA). Inadvertent discoveries would be handled as outlined in the UDP; and
- Procedures to be used for the processing, analysis, and curation of collected materials follow the ACHP's Section 106 Archaeology Guidance, the SOI's Standards and Guidelines for Archaeology and Historic Preservation, and currently accepted standards for the analysis and curation of archaeological remains.

3.8.2.2 No Action Alternative

No excavation or disturbance of native soils (previously undisturbed) would occur; therefore, any remaining archeological resources present on the building sites would not be disturbed. The NRHP-eligible buildings would remain as they are today and continue to deteriorate and pose a 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, resulting in an adverse effect to the historic district via neglect. The No Action Alternative would not affect archeological resources.

3.9 Land Use and Land Cover

The BARC campus 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, 2019). ARS's greatest concentration of agricultural research programs nationally are housed at the BARC campus. The general land use at BARC has remained consistent throughout its history (USDA, 1996).

The dominant land cover of the BARC campus consists of forests, crop and pasture lands, wetlands, and developed open space. Developed areas including buildings and manmade structures account for approximately 8.6 percent of the total land cover. Figure 3-7 shows the land cover classifications of the BARC campus listed in Table 3-9 (MRLC, 2019).

Table 3-9: BARC Facility Land Cover[a]

Land Cover Classification	Acres by Farm					Total BARC Facility	
	North	Central	East	South	Linkage	Total Acres	Percent Total Acres
Developed, Open Space	92.8	342.0	127.9	49.1	106.5	718.2	11.1%
Forested	57.9	979.3	1,081.3	36.3	4.5	2,159.3	33.4%
Hay/Pasture	231.3	487.7	202.7	247.3	0.2	1,169.2	18.1%
Wetland	10.8	281.6	214.1	5.1	225.9	737.4	11.4%
Cultivated Crops	11.0	620.3	354.4	7.1	0.0	992.8	15.3%
Developed, Low Intensity	69.1	151.5	62.6	10.7	53.7	347.6	5.4%
Developed, Medium to High Intensity	57.2	72.1	12.5	2.3	62.9	206.9	3.2%
Undeveloped Herbaceous, Shrub/Scrub, or Barren Land	11.9	39.0	70.7	4.2	0.0	125.7	1.9%
Open Water	0.8	10.0	2.0	0.0	0.2	13.0	0.2%
Total Land Use	**542.6**	**2,983.5**	**2,128.2**	**362.1**	**454.0**	**6,470.4**	**100.0%**

(a) *MRLC (2019)*

Current county zoning of the BARC campus 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). However, the BARC facility is under federal jurisdiction, and is not subject to county laws governing land use and planning (USDA, 2019). 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, 2022a). Existing land uses and activities of the BARC campus align with current zoning designations.

Prince George's County is a member of the Metropolitan Washington Council of Governments (COG) and is included in the COG's Region United: Metropolitan Washington Planning Framework for 2030. The plan identified four regional priorities that make up the COG's planning framework, including an emphasis on equity in identified underserved areas, focused planning for high-capacity transit modes and areas, targeting the regions housing needs, and strategies for addressing climate change at the regional level (Metropolitan Washington COG, 2022). The Proposed Action Alternative would not be anticipated to affect the implementation of the COG's current or future planning efforts (Prince George's County Code of Ordinances, 2022b).

3.9.1 Public and Federal Lands

Several federal lands and public recreational facilities occur directly adjacent to the BARC campus, and additional lands and facilities are present in the region surrounding BARC. Figure 3-8 shows the locations of the public and federal lands and recreational facilities within the vicinity of BARC, and descriptions are provided below:

- **Patuxent Research Refuge:** The Patuxent Research Refuge is adjacent to the eastern boundary of the East Farm and is presently approximately 13,000 acres. It was established in 1936, the refuge's mission is to conserve and protect wildlife and wildlands through research (USFWS, 2022c). In 2021, the refuge became part of the USGS Eastern Ecological Science Center (EESC), the largest USGS ecosystem science center in the U.S. The EESCs other facilities are the Leetown Research Laboratory in Kearneysville, West Virginia and the S.O. Conte Research Laboratory in Turners Falls, Massachusetts (USGS, 2022a).
- **Goddard Space Flight Center:** Goddard Space Flight Center is 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, 2022).
- **Baltimore-Washington Parkway:** The Baltimore-Washington Parkway is a 29-mile highway connecting Baltimore, Maryland and Washington, DC. It is managed by the NPS and has been in operation since 1954. A segment of the parkway runs between the Central and East Farms (NPS, 2021).
- **Anacostia River Trail System:** A segment of the Anacostia River Trail System, the Paint Branch Trail, crosses tracts of state-owned parkland, adjacent to the eastern boundary of the South Farm, south of Cherry Hill Road (Prince George's County, 2022c).
- **Cherry Hill Road Community Park:** Cherry Hill Road Community Park is north of Cherry Hill Road, between the South Farm and North Farm. The Park is managed by the Maryland-National Capital Park and Planning Commission and includes trails, tennis courts, a community garden, and wooded areas.
- **Greenbelt Observatory:** The Greenbelt Observatory is a small local community observatory utilized primarily by residents and astronomy hobbyists. It is across MD 295 from the southwestern portion of the East Farm.

Figure 3-7: BARC Land Cover

Sheet 1 of 4 (South, North, and Linkage Farms)

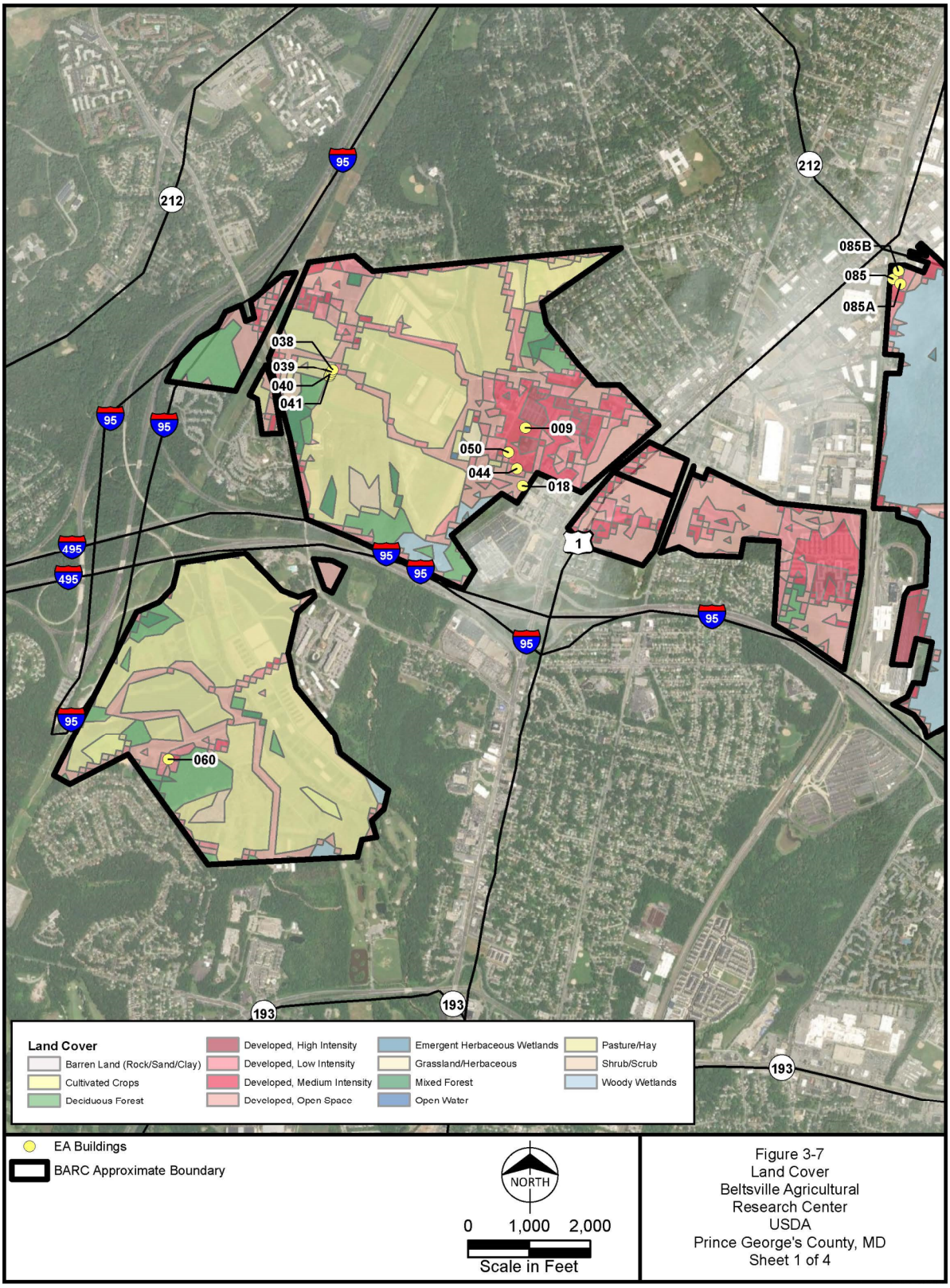


Figure 3-7 continued: BARC Land Cover

Sheet 2 of 4 (Central Farm)

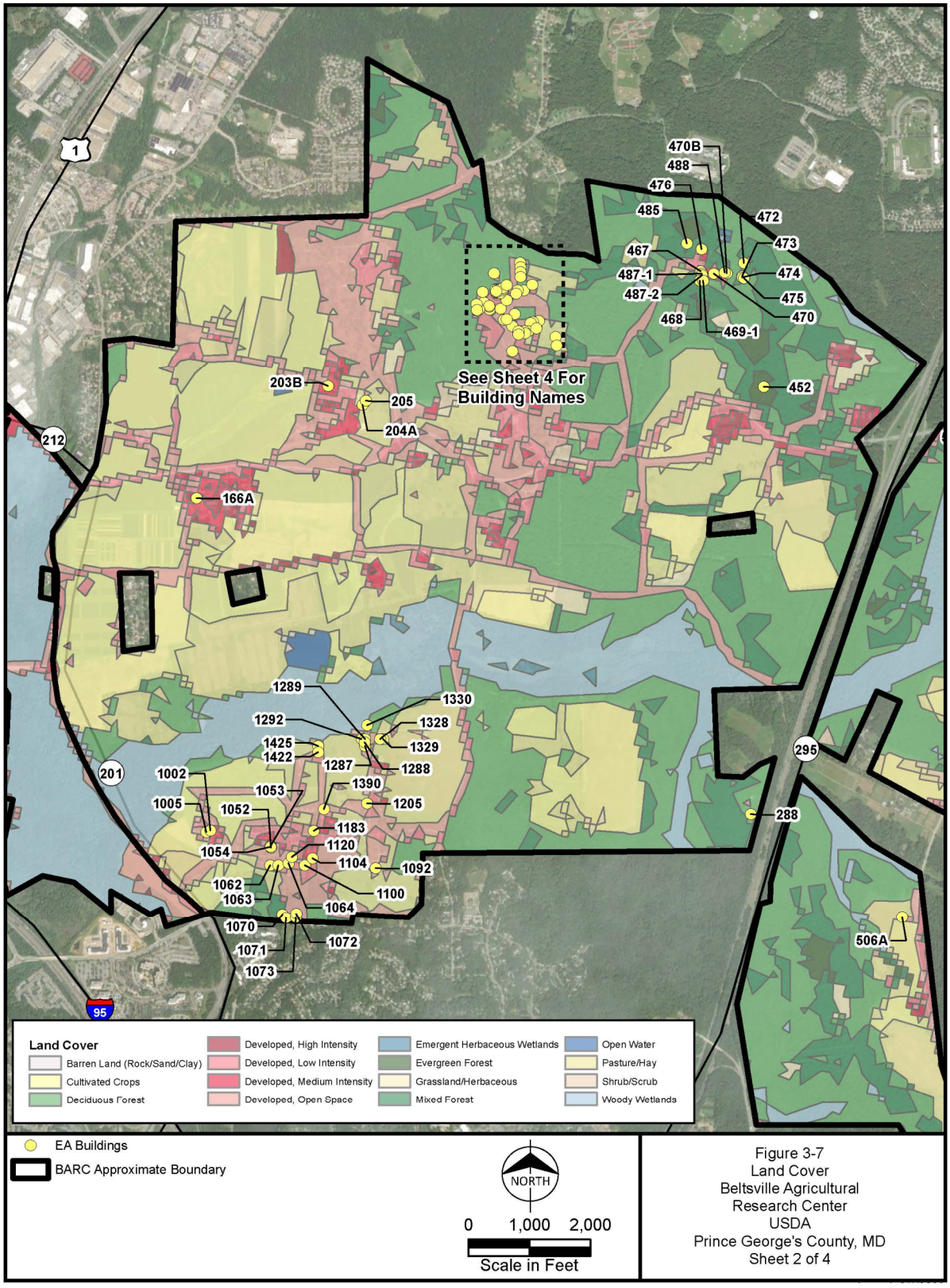


Figure 3-7 continued: BARC Land Cover

Sheet 3 of 4 (East Farm)

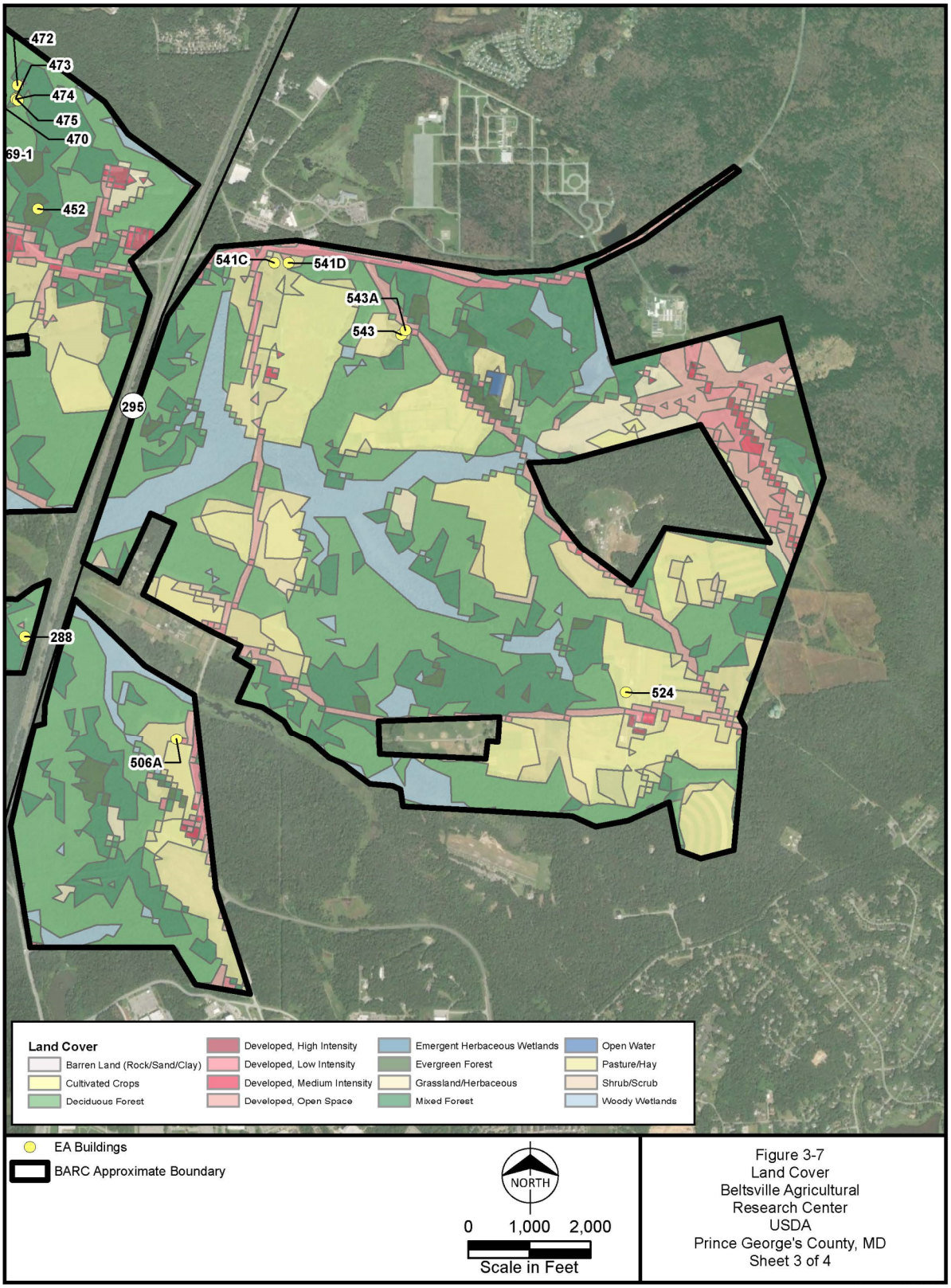


Figure 3-7 continued: BARC Land Cover

Sheet 4 of 4 (Central Farm Detail)

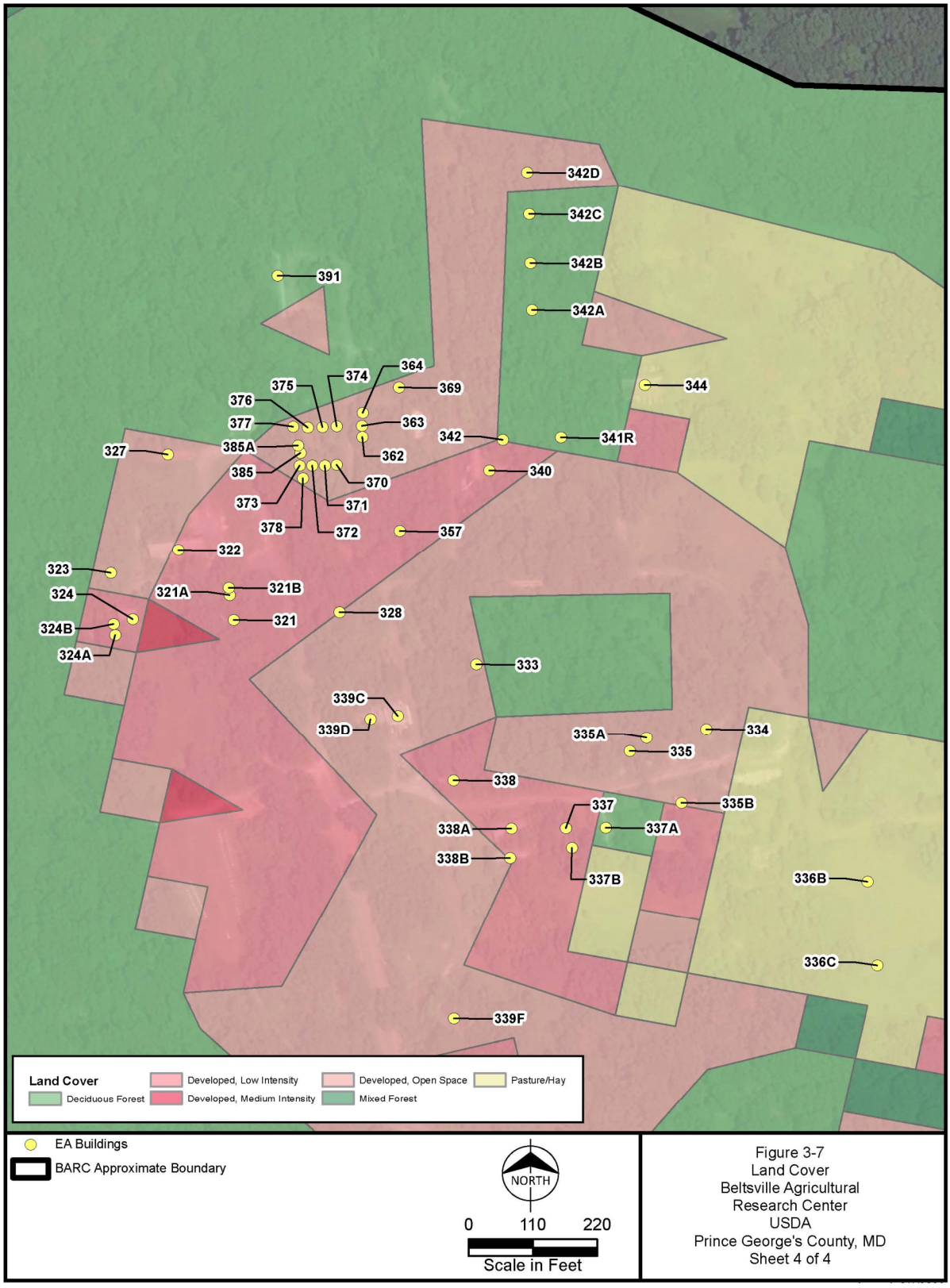


Figure 3-8: Federal and State Lands and Facilities

Sheet 1 of 4 (South, North, and Linkage Farms)

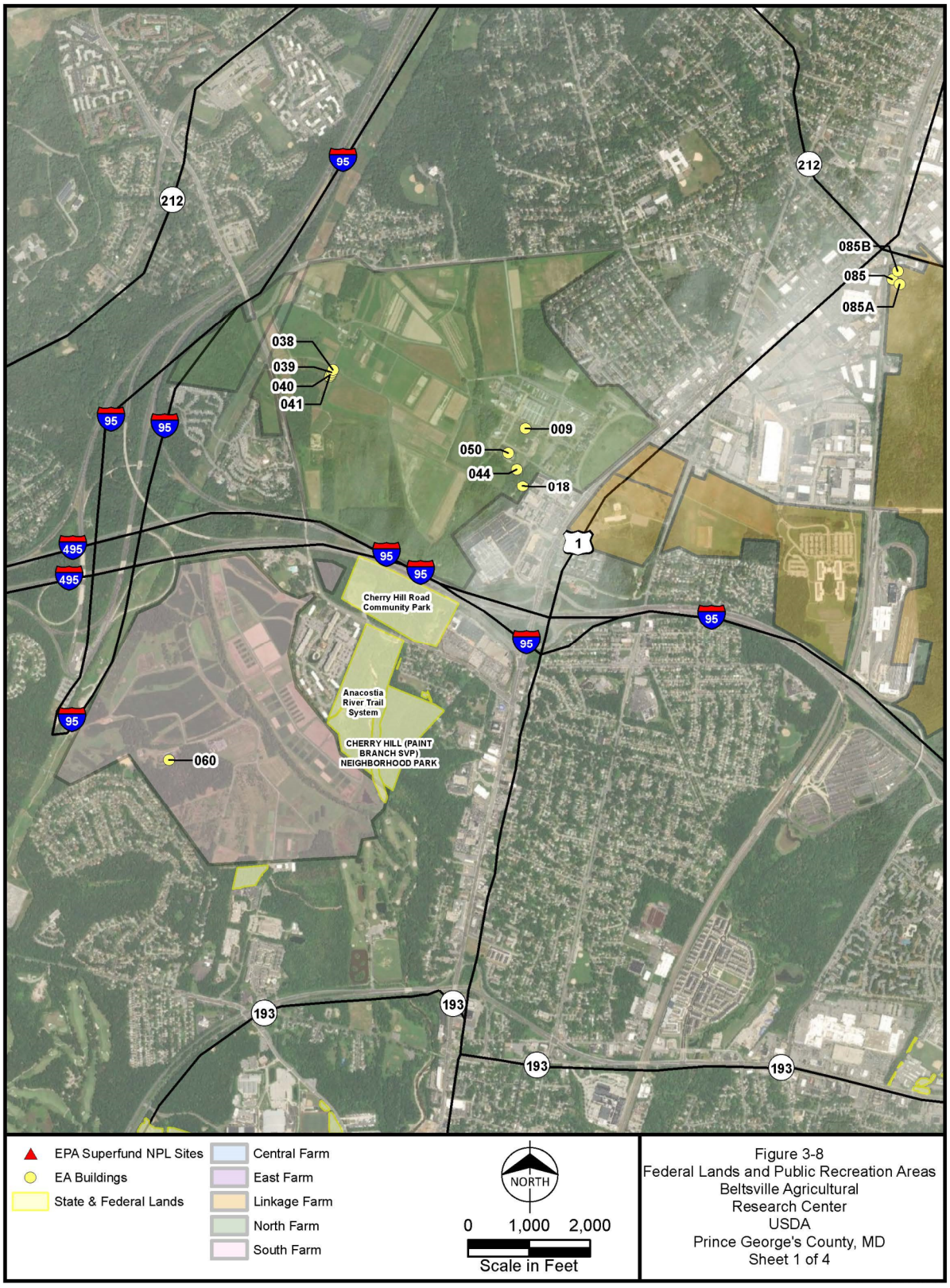


Figure 3-8 continued: Federal and State Lands and Facilities

Sheet 2 of 4 (Central Farm)

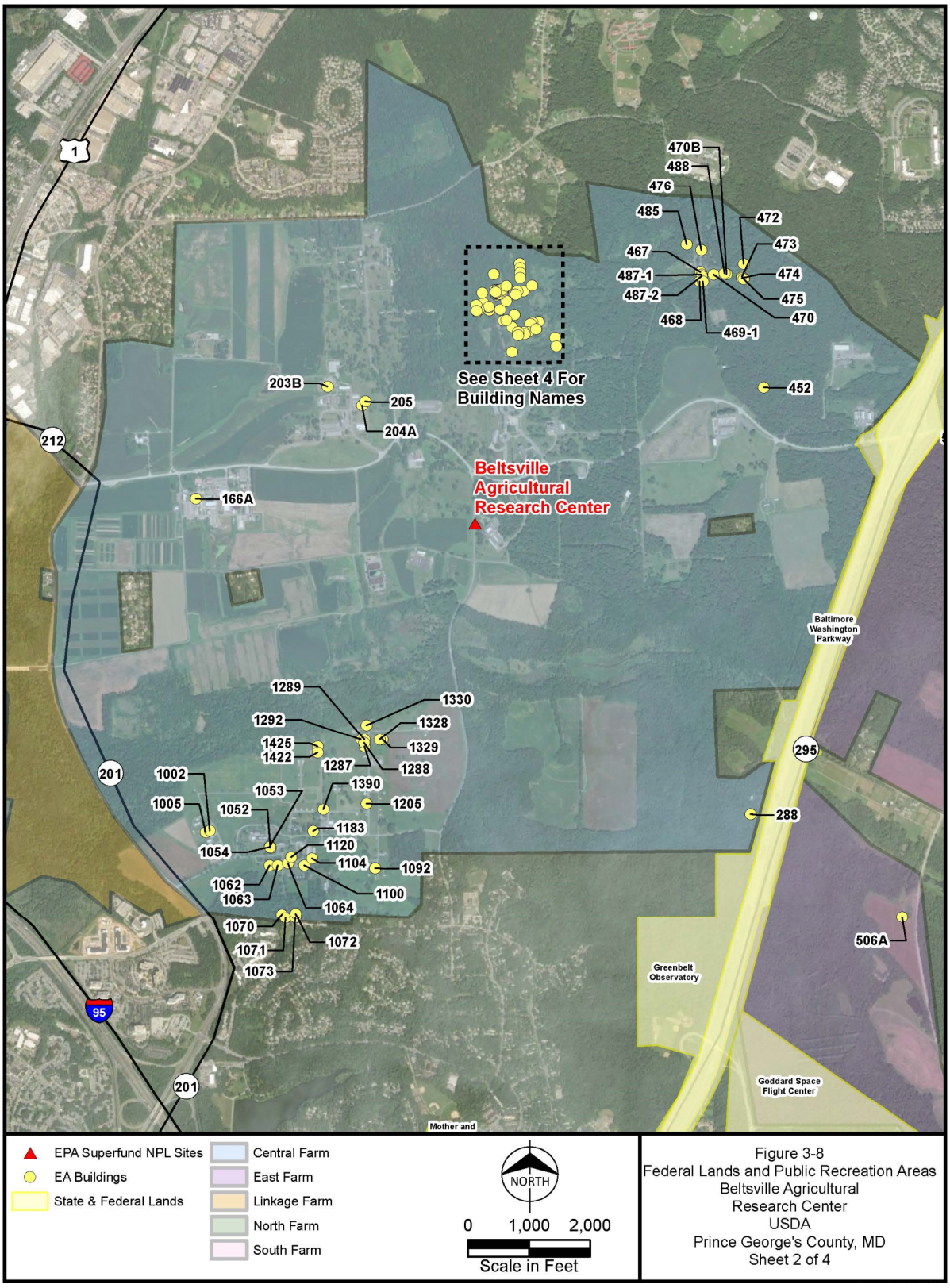


Figure 3-8 continued: Federal and State Lands and Facilities

Sheet 3 of 4 (East Farm)

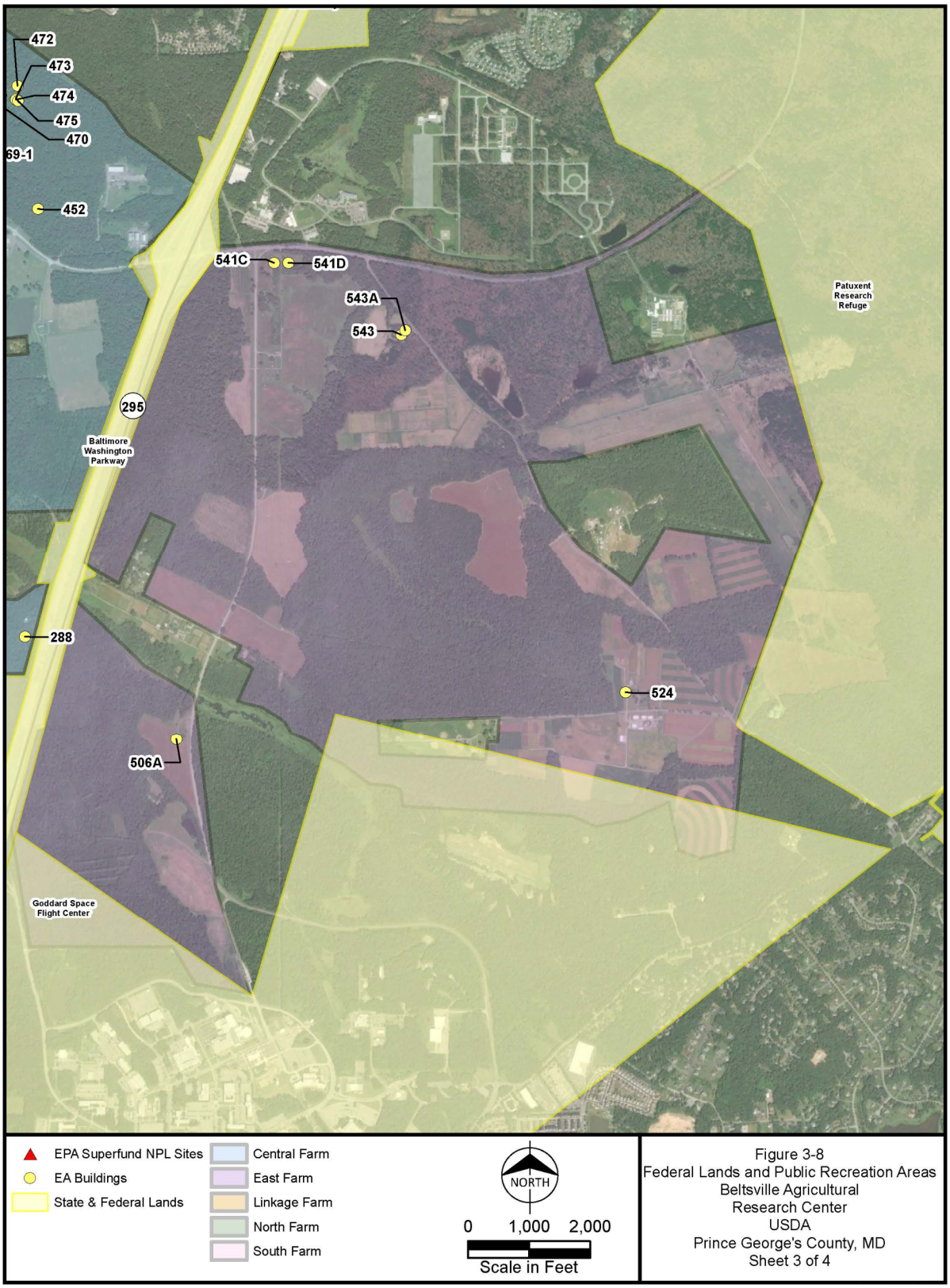
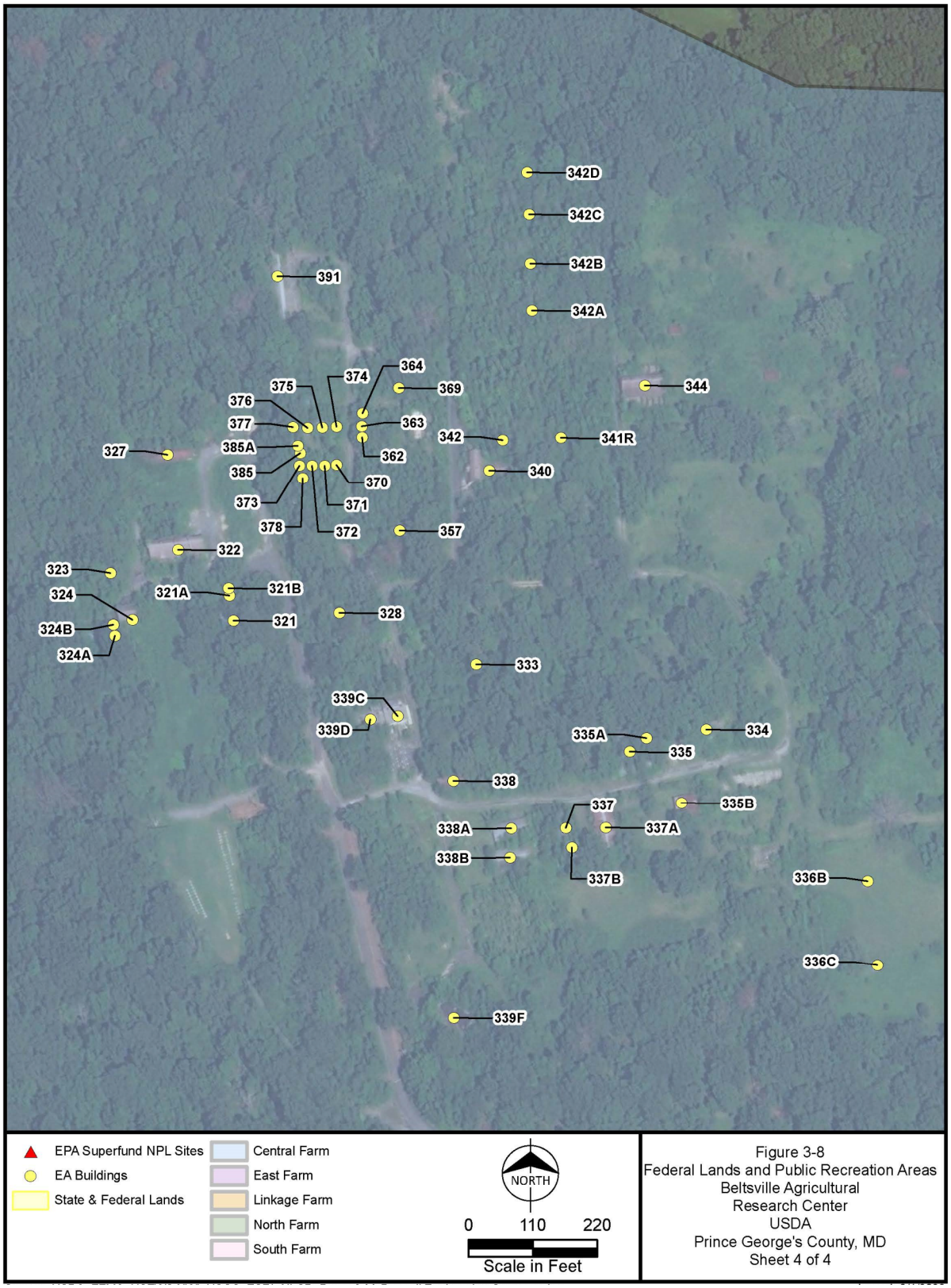


Figure 3-8 continued: Federal and State Lands and Facilities

Sheet 4 of 4 (Central Farm Detail)



3.9.2 Affected Environment – Land Use and Land Cover

Currently, each of the buildings proposed for demolition are 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 immediate surrounding areas (MRLC, 2019).

000 Cluster: Buildings 009, 018, 044, and 050 sit within the largest developed area on the BARC campus. Buildings 018 and 044 sit within and adjacent to wooded areas, and Buildings 009 and 050 are adjacent to additional structures and developed open areas. Buildings 038, 039, 040, and 041 are clustered within a larger area dominated by pastureland and hay production, with wooded areas to the southwest. Building 060 is isolated adjacent to a large, wooded area to the east, south, and west, with areas currently utilized as pastureland to the north. Buildings 085, 085A, and 085B sit at the northern boundary of the Linkage Farm. These buildings sit adjacent at the edge of a large, wooded area extending to the east and south. A railroad corridor runs directly adjacent to the west of this cluster of buildings outside of the farm boundary, and large densely developed areas are located to the north and west.

100 Cluster: Building 166A sits within the Dairy Complex of the Central Farm, classified as a medium to high density developed area, and is surrounded by larger areas of pastureland and cultivated crops.

200 Cluster: Buildings 203B, 204A, and 205 are within a low to medium density developed area of the BARC campus. This small, developed area is surrounded primarily by undeveloped open areas utilized for pastureland, hay production, and cultivated crops. A large, wooded area is located to the east of this cluster of buildings. Building 288 is isolated within a large, densely wooded area, sitting approximately 300 feet west of Baltimore-Washington Parkway, bisecting the wooded area.

300 Cluster: The 300 Cluster of buildings is situated in the north-central area of the Central Farm. Most buildings within this cluster sit within areas classified as low-density development with interspersed areas of developed open-space due to the prior development of facilities and structures at this location. Over time, the surrounding forested areas have encroached on the buildings and open areas, and the building cluster sits largely within densely wooded areas. Buildings 336B and 336C sit within a pocket of pastureland, surrounded by large, wooded areas.

400 Cluster: Similar to the 300 Cluster, buildings in the 400 Cluster sit within an area classified as low to medium density development that has since been encroached upon by surrounding forested areas. Buildings 467, 468, 469-1, 470, 476, 487-1, and 487-2 are in areas that remain somewhat open and accessible, with adjacent wooded areas. Building 485 sits at the edge of a small open area utilized for beekeeping, within a larger densely wooded area. Buildings 470B, 472, 473, 474, 475, and 488 are removed from the other buildings and set back into an area of more mature forest cover. Building 452 is isolated and approximately 0.35 mile south-southeast of the building cluster within a large, densely wooded area.

500 Cluster: Building 506A sits within an undeveloped open area utilized for cultivated crops. This area is adjacent to large, densely wooded areas to the east, west, and north. Building 524 is in a large undeveloped open area utilized for pastureland, hay production, and cultivated crops, with a large, densely wooded area to the west. Buildings 541C and 541D are situated at the edge of dense tree stands, adjacent to open areas utilized for pastureland and cultivated crops. Large areas of cropland are to the south, with wooded areas to the east and north. These buildings are near the southeast side of the intersection of Soil Conservation Road and Powder Mill Road.

Buildings 543 and 543A sit near the edge of a large, wooded area, adjacent to a smaller pocket of pastureland or cropland to the west. Springfield Road is approximately 100 feet northeast of these buildings.

1000 Cluster: Most buildings included in the 1000 Cluster sit within an area of low-intensity developed and developed open spaces, as part of a larger mosaic of low-intensity developed, developed open, cropland, and pasture or hayfield areas. The 1000 Cluster was previously used for research activities by the USDA's BAI for various research activities. Buildings 1070, 1071, 1072 and 1073 are at the southern end of this building cluster and situated within a wooded area adjacent to the southern boundary of the Central Farm.

3.9.3 Environmental Consequences – Land Use

3.9.3.1 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 areas. Following demolition and grading, each project site would be stabilized with a seed mix or plantings consistent with MDNR or MDE standard specifications to minimize surface erosion and colonization by invasive species. The sites would be returned to as close to pre-development conditions as feasible. If left undeveloped, former building sites would naturally revegetate over time in unmaintained areas, depending on location and surrounding dominant cover type. Building sites located in maintained areas of the BARC campus, such as the majority of sites in 000 Cluster, 200 Cluster, and 1000 Cluster, may be maintained as pastureland or open developed areas. Demolition and removal of these buildings would also present the potential for redevelopment of the sites. Reuse and redevelopment of these sites for future USDA research or by other federal entities is possible. Because the scope, extent, and timing of potential future redevelopment of these areas is not defined or part of current campus planning efforts, the effects of any redevelopment of these areas are not assessed in this EA. Alternatively, the sites may become available for future purchase by other public or private entities, at the discretion of the USDA, for redevelopment for other uses. The Proposed Action Alternative would result in no direct effects on the public and federal lands located adjacent to or near the BARC campus.

3.9.3.2 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 would eventually collapse, and the 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 536 people, including scientists, professional staff, administrative and facilities support, and visiting scientists and students (USDA, 2019). This workforce represents a relatively small portion of the Prince George's County Maryland estimated 2020 population of 967,201 (U.S. Census Bureau [USCB], 2022a) and average estimated 2020 labor force of 505,803. (USCB, 2022b).

The population of Maryland increased by approximately four percent from 2010 to 2020. The population growth rates of Prince George's County and Beltsville were higher than the statewide average over the same period, at approximately 12 percent and 20 percent, respectively (USCB, 2022b; 2022c). However, the population of Prince George's County is projected to grow at an average annual rate of approximately

0.32 percent from 2020 to 2030, slower than the projected state population average growth rate of approximately 0.54 percent annually over that same period (Maryland State Data Center, 2020).

3.10.1.1 Environmental Justice

EO 12898, *Federal Action to Address Environmental Justice in Minority and Low-Income Populations*, was signed 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 campus, 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, 2022b).

The Proposed Action would occur completely within the interior of the BARC campus, 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 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 campus, 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. Socioeconomic and environmental justice impacts would not occur, and further analysis is not warranted.

3.10.2.2 No Action Alternative

Under the No Action Alternative, no demolition activities would occur and there would be no short or long-term economic impacts to the surrounding communities. The building sites are contained entirely within the interior of the BARC campus, in areas where no residential areas or community facilities exist. The No Action Alternative would not directly, indirectly, or disproportionately affect low income, minority, or child populations. Socioeconomic and environmental justice impacts would not occur, and further analysis is not warranted.

3.11 Human Health and Safety

3.11.1 Affected Environment – Human Health and Safety

3.11.1.1 Hazardous Waste Generation and Management at BARC

Under 40 CFR 261, a large quantity generator (LQG) of 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, 2021). Based on this definition, BARC is categorized as a 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, 2019). All 117 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.

3.11.1.2 Hazardous Materials at Proposed Demolition Sites

Many buildings are in such advanced states of disrepair that they need to be demolished and removed to minimize health and safety risks. The lack of maintenance and its resulting effect on the structural integrity of many of the buildings has made them unsafe for entry. Building materials currently exposed that present a human exposure risk include, but are not limited to, flaking lead-based paint, friable and non-friable ACM, PCB caulk, 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, potential for PCB containing electrical transformers and lighting ballasts, nuclear devices in self-luminous exit signs, fuel, heating oil, pesticides, aerosol cans, refrigerants in air-conditioning equipment, fire extinguishers, and other undocumented chemicals.

The USDA-ARS contracted the performance of HMAs for 52 of the 117 buildings proposed for demolition (Appendix G). For the remaining 65 buildings, comprehensive assessments of the buildings and the materials they contain have not been completed by BARC at the time this EA was published. Buildings for which a HMA has not been completed were reviewed to the extent possible to determine potential for occurrence of hazardous materials at each proposed demolition site. For these buildings, preliminary determinations were made based on review of site photographs obtained during site visits conducted October 22–24, 2019 and March 23-24, 2021 and review of available prior documentation including a 1998 historic site survey of BARC (Robinson & Associates et al., 1998). These preliminary determinations of known or suspected hazardous materials, where HMAs have not yet been conducted, are conservative in nature without a comprehensive assessment of each building.

All buildings would be subject to completion of a comprehensive HMA prior to demolition. General references and descriptions are provided in this section to allow BARC and contractors to adapt demolition methods (including remediation) to address the specific issues of each building once HMAs have been completed. Demolition, abatement, and remediation plans would be developed by BARC and contractors prior to demolition activities. Refer to Section 3.11.2 for discussion related to the handling of known or anticipated hazardous materials.

Table 3-10 identifies hazardous materials known, suspected, or likely to occur at each building demolition site, based on prior conducted HMAs, when available, and preliminary determinations as described above. The table identifies whether an HMA has been conducted for each building.

Table 3-10: Known or Potential Hazardous and Regulated Materials by Building

Building Number	Prior HMA Conducted	Asbestos		Lead-Based Paint	PCB- Containing Materials	Universal Wastes				Other Regulated and Hazardous Materials								Scrap metal	Construction and Demolition Debris
		Asbestos-Containing Materials	Presumed Asbestos-Containing Materials			Bulbs & Ballasts (PCBs & non-PCBs)	Mercury-Containing Materials	Batteries	Aerosols	Used Oils/Oil-Containing Equipment	Miscellaneous Chemicals or Containers	Electronic Waste	Nuclear Devices	Refrigerants	Fire Extinguishers	Sumps	Mold		
000 Cluster																			
009			X	X		X											X	X	X
018 [c]	X	X	X	X		X	X						X				X	X	X
038	X	X		X	X		X					X		X	X		X		
039	X			X	X		X					X					X		
040	X			X	X		X			X					X		X		
041	X										X						X		
044 [d]			X	X		X	X	X	X	X	X			X				X	X
050	X	X		X		X	X	X		X	X	X		X			X		
060	X	X	X	X	X		X			X	X	X		X	X		X		
085	X		X	X	X					X	X			X	X				
085A	X	X	X	X		X	X										X		
085B			X	X														X	X
100 Cluster																			
166A	X			X															
200 Cluster																			
203B			X			X					X							X	X
204A	X		X				X					X		X			X		
205	X	X																	
288	X			X	X		X				X	X		X			X		

Table 3-10 continued: Known or Potential Hazardous and Regulated Materials by Building

Building Number	Prior HMA Conducted	Asbestos		Lead-Based Paint	PCB- Containing Materials	Universal Wastes				Other Regulated and Hazardous Materials								Scrap metal	Construction and Demolition Debris
		Asbestos-Containing Materials	Presumed Asbestos-Containing Materials			Bulbs & Ballasts (PCBs & non-PCBs)	Mercury-Containing Materials	Batteries	Aerosols	Used Oils/Oil-Containing Equipment	Miscellaneous Chemicals or Containers	Electronic Waste	Nuclear Devices	Refrigerants	Fire Extinguishers	Sumps	Mold		
300 Cluster																			
321			X	X		X	X	X						X				X	X
321A			X	X		X	X	X						X				X	X
321B			X	X		X	X	X						X				X	X
322			X	X		X	X	X				X		X	X			X	X
323			X	X		X		X	X					X				X	X
324			X	X		X		X						X				X	X
324A			X	X		X	X	X						X				X	X
324B			X	X		X	X	X						X				X	X
327			X	X		X	X	X						X				X	X
328			X	X		X	X	X	X	X	X	X	X	X				X	X
333			X	X	X	X	X	X						X				X	X
334			X	X		X	X	X	X	X	X	X	X	X				X	X
335			X	X		X	X	X						X				X	X
335A			X			X												X	X
335B			X			X												X	X
336B			X															X	X
336C			X															X	X
337			X	X		X		X										X	X
337A			X	X		X								X				X	X
337B			X	X		X		X	X	X	X							X	X
338			X	X		X		X						X				X	X

Table 3-10 continued: Known or Potential Hazardous and Regulated Materials by Building

Building Number	Prior HMA Conducted	Asbestos		Lead-Based Paint	PCB- Containing Materials	Universal Wastes				Other Regulated and Hazardous Materials								Scrap metal	Construction and Demolition Debris
		Asbestos-Containing Materials	Presumed Asbestos-Containing Materials			Bulbs & Ballasts (PCBs & non-PCBs)	Mercury-Containing Materials	Batteries	Aerosols	Used Oils/Oil-Containing Equipment	Miscellaneous Chemicals or Containers	Electronic Waste	Nuclear Devices	Refrigerants	Fire Extinguishers	Sumps	Mold		
300 Cluster continued																			
338A			X	X		X												X	X
338B			X	X		X												X	X
339C			X	X		X		X						X				X	X
339D			X	X		X		X						X				X	X
339F			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
340			X	X		X		X						X				X	X
341R			X															X	X
342			X															X	X
342A			X															X	X
342B			X															X	X
342C			X															X	X
342D			X															X	X
344			X	X		X	X	X	X		X							X	X
357			X	X		X												X	X
362			X												X			X	X
363			X															X	X
364			X															X	X
369			X			X		X						X	X			X	X
370			X			X												X	X
371			X			X												X	X
372			X			X												X	X

Table 3-10 continued: Known or Potential Hazardous and Regulated Materials by Building

Building Number	Prior HMA Conducted	Asbestos		Lead-Based Paint	PCB- Containing Materials	Universal Wastes				Other Regulated and Hazardous Materials								Scrap metal	Construction and Demolition Debris
		Asbestos-Containing Materials	Presumed Asbestos-Containing Materials			Bulbs & Ballasts (PCBs & non-PCBs)	Mercury-Containing Materials	Batteries	Aerosols	Used Oils/Oil-Containing Equipment	Miscellaneous Chemicals or Containers	Electronic Waste	Nuclear Devices	Refrigerants	Fire Extinguishers	Sumps	Mold		
300 Cluster continued																			
373			X			X												X	X
374			X			X												X	X
375			X			X												X	X
376			X			X												X	X
377			X			X												X	X
378			X			X												X	X
385			X			X												X	X
385A			X			X												X	X
391			X			X												X	X
400 Cluster																			
452	X	X		X													X		
467	X	X		X						X	X	X				X	X		
487-1			X			X												X	X
487-2			X			X												X	X
468	X	X		X													X		
469-1			X			X												X	X
470	X	X	X	X													X		
470B	X			X	X		X							X	X				
472	X			X					X			X							
473	X						X					X		X			X		
474	X						X										X		

Table 3-10 continued: Known or Potential Hazardous and Regulated Materials by Building

Building Number	Prior HMA Conducted	Asbestos		Lead-Based Paint	PCB- Containing Materials	Universal Wastes				Other Regulated and Hazardous Materials								Scrap metal	Construction and Demolition Debris
		Asbestos-Containing Materials	Presumed Asbestos-Containing Materials			Bulbs & Ballasts (PCBs & non-PCBs)	Mercury-Containing Materials	Batteries	Aerosols	Used Oils/Oil-Containing Equipment	Miscellaneous Chemicals or Containers	Electronic Waste	Nuclear Devices	Refrigerants	Fire Extinguishers	Sumps	Mold		
400 Cluster continued																			
475	X	X		X	X		X							X			X		
476	X	X		X	X		X				X	X		X	X		X		
485	X				X		X												
488	X			X													X		
500 Cluster																			
506A	X			X													X		
524	X		X																
541C	X			X															
541D	X			X															
543	X	X	X														X		
543A	X			X															
1000 Cluster																			
1002	X		X	X	X		X				X	X		X					
1005	X	X		X	X		X				X	X		X					
1052	X			X			X								X				
1053	X			X			X								X				
1054			X	X		X	X	X	X	X	X	X		X				X	X
1062	X	X	X	X	X		X							X					
1063	X		X	X	X		X							X					
1064	X			X	X		X							X					
1070	X	X	X	X	X		X					X		X	X		X		

Table 3-10 continued: Known or Potential Hazardous and Regulated Materials by Building

Building Number	Prior HMA Conducted	Asbestos		Lead-Based Paint	PCB- Containing Materials	Universal Wastes				Other Regulated and Hazardous Materials								Scrap metal	Construction and Demolition Debris
		Asbestos-Containing Materials	Presumed Asbestos-Containing Materials			Bulbs & Ballasts (PCBs & non-PCBs)	Mercury-Containing Materials	Batteries	Aerosols	Used Oils/Oil-Containing Equipment	Miscellaneous Chemicals or Containers	Electronic Waste	Nuclear Devices	Refrigerants	Fire Extinguishers	Sumps	Mold		
1000 Cluster continued																			
1071	X			X	X		X												
1072			X	X		X	X	X						X				X	X
1073	X			X															
1092			X	X														X	X
1100	X	X			X		X			X		X		X					
1104	X	X	X	X	X		X				X	X							
1120	X	X		X	X		X			X		X							
1183	X		X	X															
1205			X	X		X		X										X	X
1287	X	X		X	X		X					X		X			X		
1288			X	X		X		X										X	X
1289	X			X	X		X								X				
1292	X		X	X	X		X					X			X				
1328	X	X		X	X		X								X				
1329	X	X																	
1330			X	X														X	X
1390			X	X		X		X										X	X

Table 3-10 continued: Known or Potential Hazardous and Regulated Materials by Building

Building Number	Prior HMA Conducted	Asbestos		Lead-Based Paint	PCB- Containing Materials	Universal Wastes				Other Regulated and Hazardous Materials								Scrap metal	Construction and Demolition Debris
		Asbestos-Containing Materials	Presumed Asbestos-Containing Materials			Bulbs & Ballasts (PCBs & non-PCBs)	Mercury-Containing Materials	Batteries	Aerosols	Used Oils/Oil-Containing Equipment	Miscellaneous Chemicals or Containers	Electronic Waste	Nuclear Devices	Refrigerants	Fire Extinguishers	Sumps	Mold		
1000 Cluster																			
1422	X	X		X	X		X							X					
1425	X	X		X	X		X					X							

(a) HMAs were contracted by USDA in April 2020 for the buildings indicated in the table, and additional buildings not included in this EA (USDA, 2020a). Determinations of known or potential hazardous materials for buildings not included in this prior assessment were completed through review of site photographs obtained during site visits conducted October 22–24, 2019 and March 23-24, 2021 and review of prior building documentation as described in Section 3.11.1.
(b) USDA. (2020b). Beltsville Agricultural Research Center Hazardous Materials Assessment, Part 2. Copy on file at the USDA-ARS.
(c) USDA. (n.d.). Building 018 Suspect Asbestos-Containing Materials Inventory and Sample Results. Copy on file at the USDA-ARS.
(d) A Notice of Availability from HUD published in April 2014, identified the Building 044 site as containing "radioactive soil" and the building was deemed unsuitable to assist the homeless (Federal Register (FR) 79:70 (April 11, 2014) p. 20222). A comprehensive HMA has not been conducted for Building 044. An HMA would be conducted, and a hazardous materials disposal plan and/or remediation plan would be developed prior to initiating proposed project activities.

3.11.1.3 BARC Superfund Site

The BARC campus is a Superfund Site, listed on the National Priority List (NPL) in 1994 and a Federal Facility Agreement in 1998. Under the Federal Facilities Agreement between BARC and EPA, 167 potential Areas of Concern (AOCs) have been currently identified. Sixty-three of the AOCs were recommended for further investigation. Of the AOCs that required further investigation, 44 have achieved site closure. The AOCs include several former landfills, chemical disposal pits, and open storage areas with contaminated soil, groundwater, and surface water with hazardous chemicals (USDA, 2019).

Fifteen AOCs are at or within 500 feet of one or more building sites proposed for demolition under this EA. Table 3-11 identifies each of these AOCs and provides the current status, a brief description of the AOC, and identifies the buildings proposed for demolition within 500 feet of the AOC. Of these 15 AOCs, 12 have been given a final evaluation of "No Further Action," indicating that they have been formally closed and would have a low potential for impact to the proposed demolition activities. Three of the 15 sites (BARC 4, ENTECH7, and EPIC 8) have a current status Further Investigations Planned.

Figure 3-9 presents the locations of the 15 identified AOCs located within 500 feet of one or more building sites proposed for demolition.

Refer to Section 3.11.2 for discussion related to the handling of known or anticipated hazardous materials.

Table 3-11: BARC Facility Land Cover[(a)]

AOC ID	AOC Name	AOC Status	AOC Description	Buildings within 500 Feet of AOC
BARC 1	Dump Off Odell Road	Removal Action complete, No Further Action Necessary	Used through the mid-1950s for treating wood with chemicals, thought to include creosote, pentachlorophenol, copper naphthalate, and copper chromated arsenate. Treated wood was dried on ground surface.	060
BARC 17	Open Storage Yard	Investigations complete, No Further Action Necessary	Identified in 1991 as a long-term open storage area. Reportedly contained used piping, clay pots, and farm equipment. A large structure was once located in this area but was removed in the late 1980s.	060
BARC 4	Possible Disposal Area	Further Investigations Planned	Identified in 1991 as a pesticide vehicle and equipment rinse and wash area for BARC. Pesticides in high quantities have been detected in the soil.	038, 039
BARC 8	Open Storage	Investigations complete, No Further Action Necessary	1987 aerial photography indicates disposal activity has stopped and a cap applied. Originally used as a land use disposal for various APU wastes that could not be burned.	1002, 1005
BARC 9	NASA Laser Test Mast	Investigations complete, No Further Action Necessary	Identified in 1991 as a surface disposal area. Aerial photography shows continued operations until approximately 1963 when it was abandoned. Several dump trucks, debris, and solid waste were removed for offsite disposal.	321, 321A, 321B, 322, 323, 324, 324A, 324B, 327, 328, 340, 342, 342A, 342B, 342C, 342D, 357, 362, 363, 364, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 385, 385A, 391

Table 3-11 continued: BARC Facility Land Cover[(a)]

AOC ID	AOC Name	AOC Status	AOC Description	Buildings within 500 Feet of AOC
ENTECH 7	Open Storage	Further Investigations Planned	Former grain holding and coal transfer facility with concrete storage bins and gantry crane. Now inactive and used for unauthorized disposal of trash and debris.	085, 085A, 085B
ENTECH R3	Rose Garden Site	Investigations complete, No Further Action Necessary	1996 field survey identified spray paint cans, scrap metal, small animal hutches, aluminum trash cans, metal buckets, and metal cones.	323, 324, 324A, 324B
EPIC 11	Open Storage	Investigations complete, No Further Action Necessary	Aerial photography identified site as an open storage area that was used for radiation studies in 1950s and 1960s. 1996 field survey identified site as service yard for activities in adjacent lab and greenhouse.	009, 018, 044, 050
ENTECH R2	Disposal/Fill Area	Investigations complete, No Further Action Necessary	Field surveyed in 1996, used as a test station in the 1970s and 1980s. Three empty 55-gallon drums and possible groundwater monitoring well were observed.	452
EPIC 21	Disposal/Fill Area	Investigations complete, No Further Action Necessary	Three elongated mounds of material, or windows, were identified on aerial photographs and were determined to be actively managed.	1002, 1005
ENTECH R23	Overgrown Clearing on Edge of Woods and Animal Pen	Removal Action complete, No Further Action Necessary	Building observed by USDA-BARC to be in disrepair, with known storage of acetone, 4,4'-DDT, and numerous cylindrical shaped objects.	485
EPIC 8	Dump Off Odell Road	Further Investigations Planned	Identified in 1952 as an open storage lot for coal piles. Converted to a parking lot in 1963. 1996 field survey, identified bits of coal in an earthen berm.	009
EPIC 34	Open Storage Yard	Investigations complete, No Further Action Necessary	Field surveyed in 1996, shallow pits south of the production well #3 pumphouse building contained scrap metal and laboratory bottle in some pits. A non-Comprehensive Environmental Response, Compensation, and Liability Act of 1976 (CERCLA) removal plan was created in 1997.	336C
EPIC 39	Possible Disposal Area	Investigations complete, No Further Action Necessary	Field surveyed in 1996, no evidence of recent disposal or fill activities were observed.	452
FDA 1	Open Storage	Investigations complete, No Further Action Necessary	Discovered in 1993. Glass containers with unidentified contents, syringes, bottles containing unidentified liquids and powders, test tubes, and other related wastes were removed.	336B, 336C

(a) USDA ARS Beltsville Agricultural Research Center Information Repository; Retrieved April 27, 2022 from https://cercla.ba.ars.usda.gov/mapsearch

Figure 3-9: BARC Superfund Site Areas of Concern

Sheet 1 of 4 (South, North, and Linkage Farms)

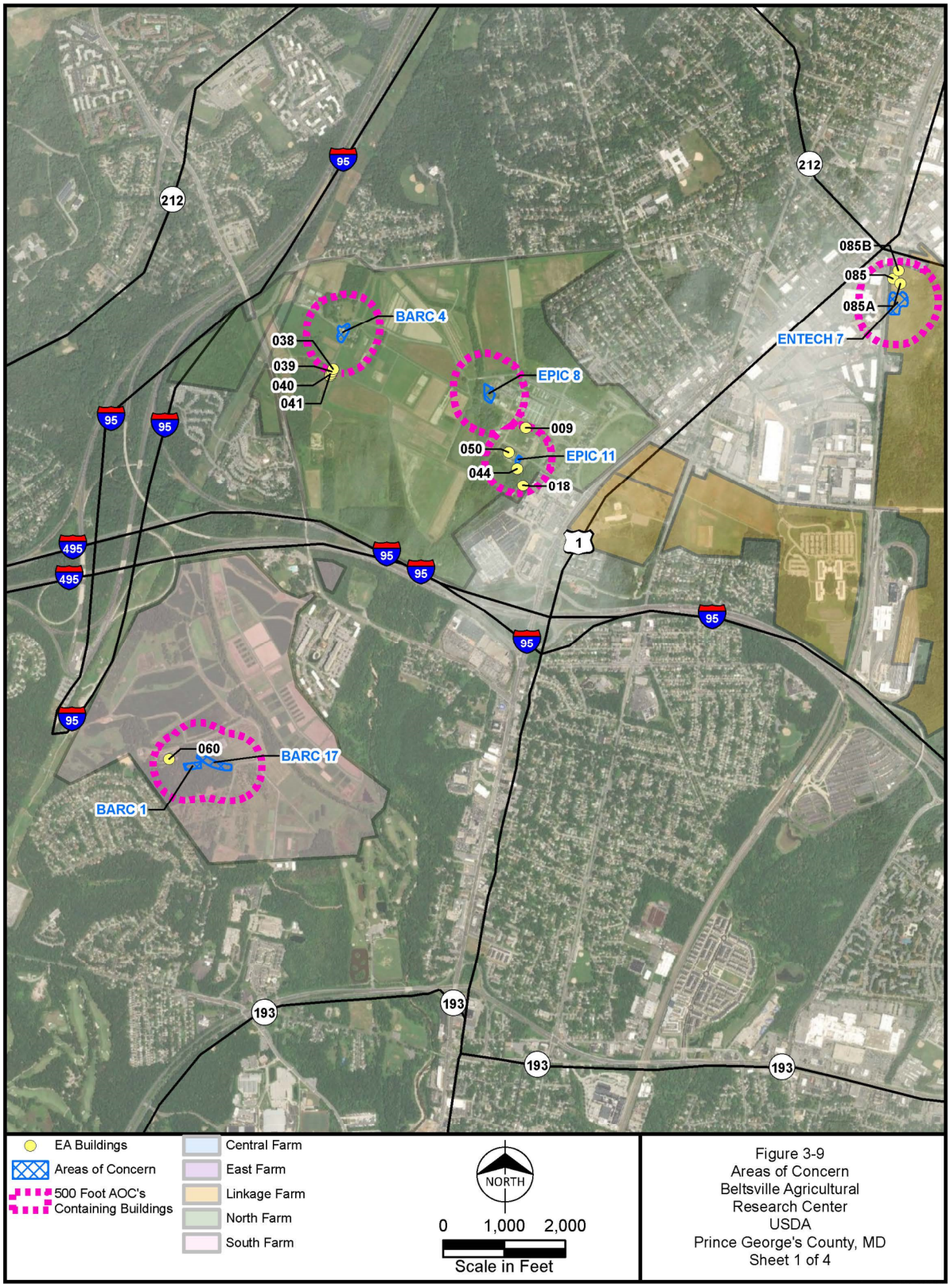


Figure 3-9 continued: BARC Superfund Site Areas of Concern

Sheet 2 of 4 (Central Farm)

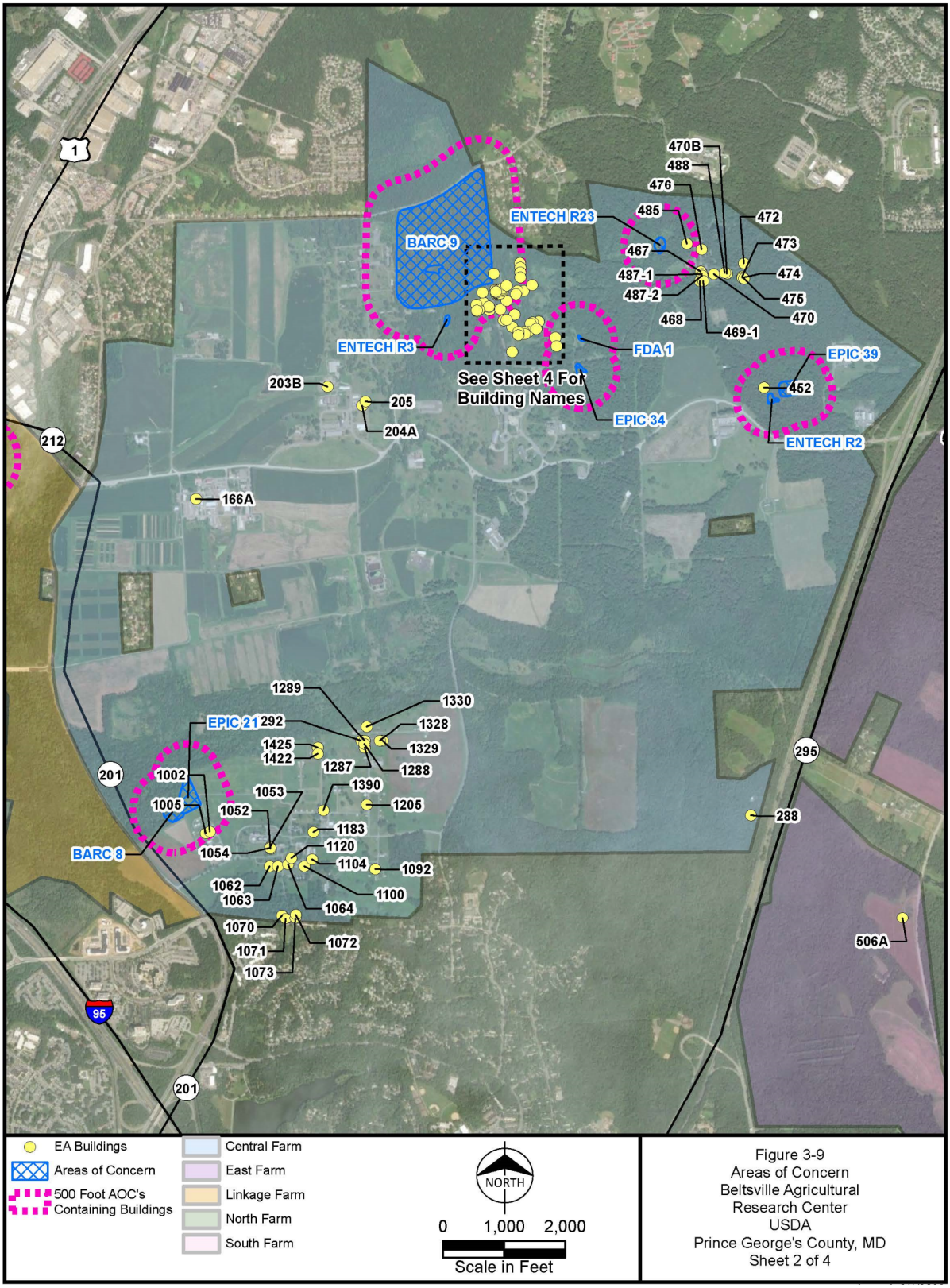


Figure 3-9 continued: BARC Superfund Site Areas of Concern

Sheet 3 of 4 (East Farm)

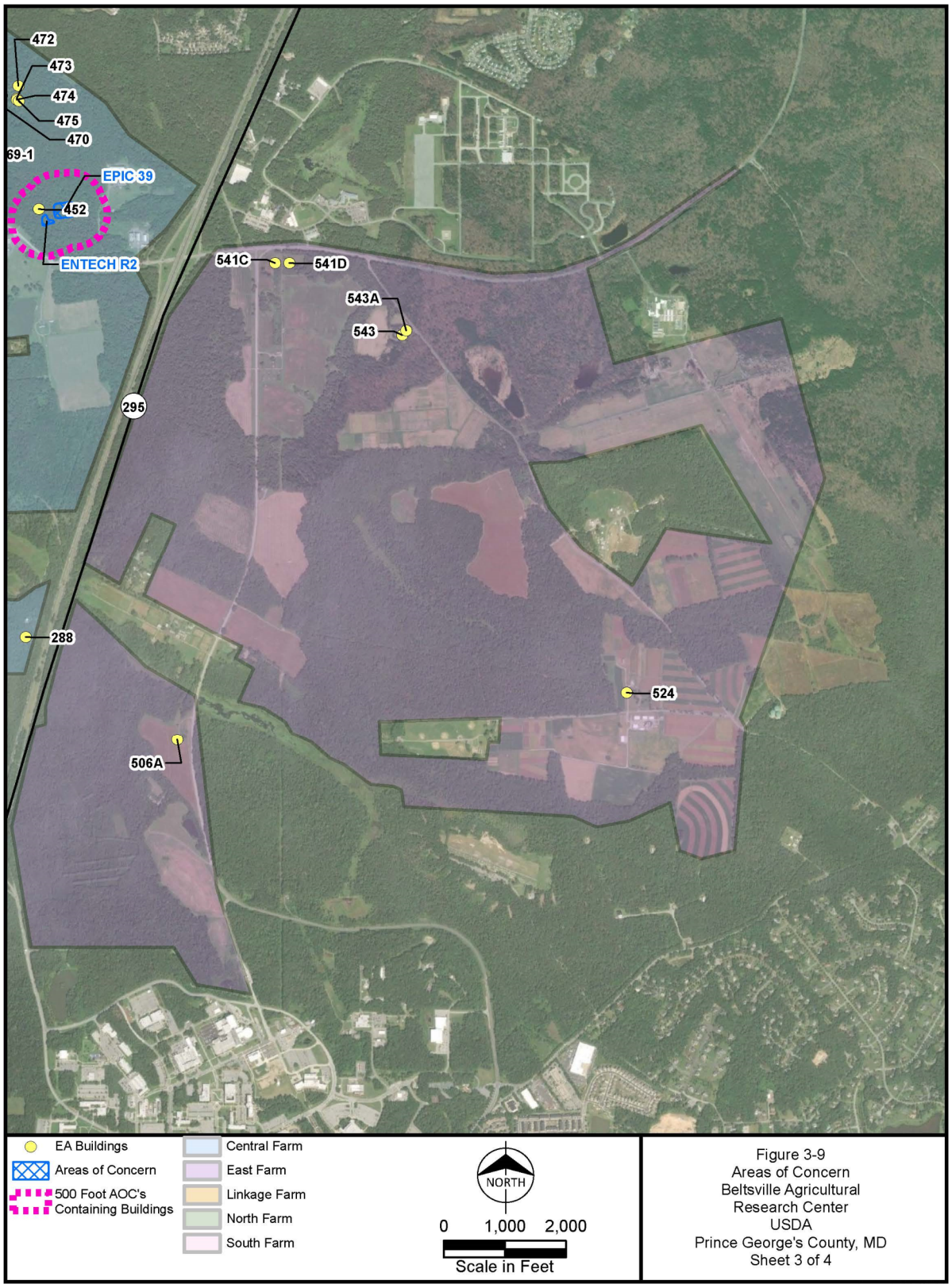
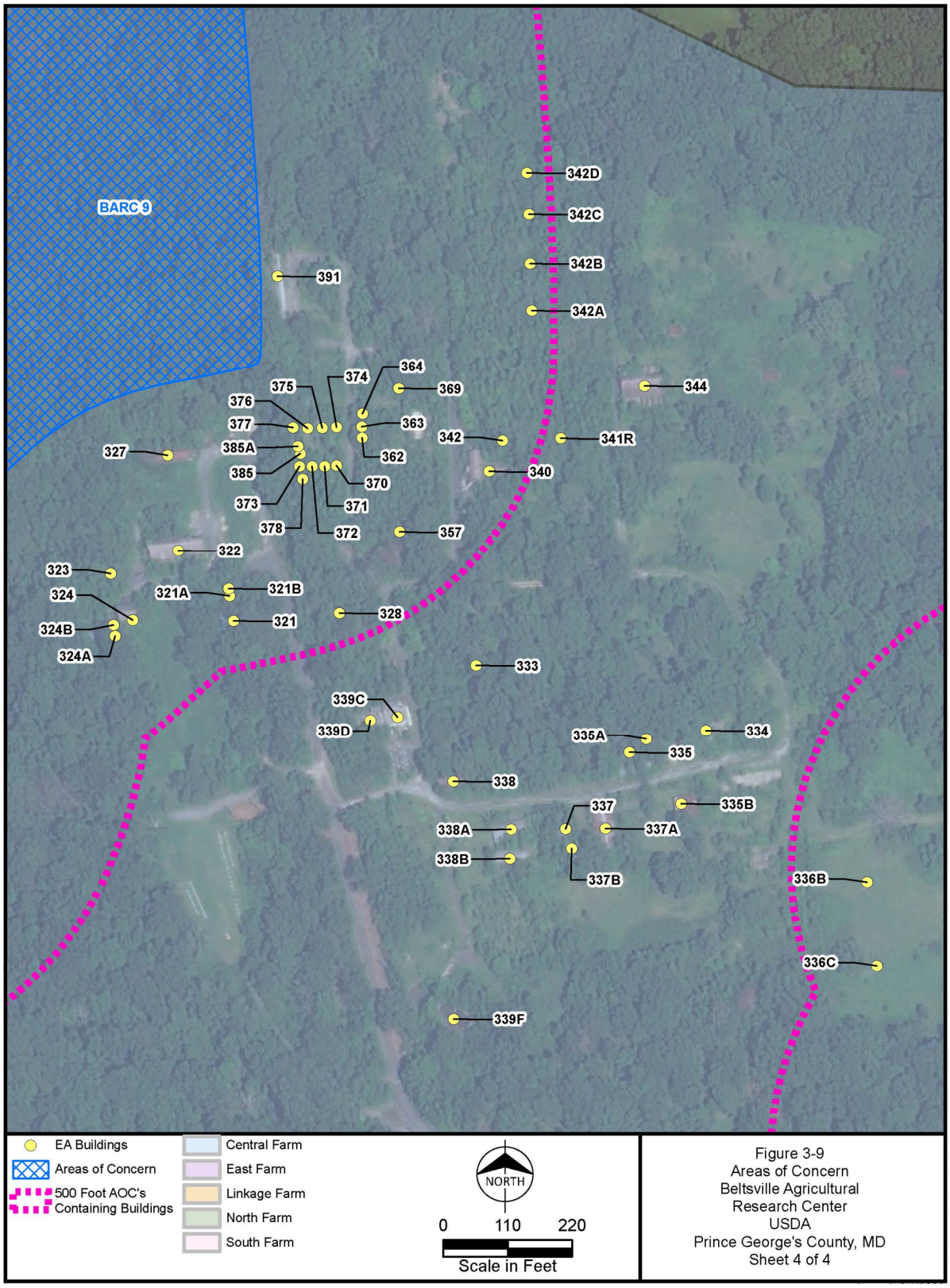


Figure 3-9 continued: BARC Superfund Site Areas of Concern

Sheet 4 of 4 (Central Farm Detail)



3.11.2 Environmental Consequences – Human Health and Safety

3.11.2.1 Proposed Action Alternative

Under the Proposed Action Alternative, each building or structure proposed for demolition for which an HMA has not yet been conducted would be assessed by appropriately licensed professionals prior to demolition or disturbance activities. Demolition, abatement, and remediation plans would developed accordingly after completion of the assessment. Hazardous materials identified at each building site during the assessments would be handled and disposed of in accordance with applicable state and federal regulations. All hazardous materials would be removed and disposed of offsite at an approved TSDF.

The following descriptions identify hazardous materials that may be present at a building or structure proposed for demolition, based on previously completed assessments and preliminary site reviews, and provide summaries of applicable regulations and proper handling and disposal for each material type. Depending on the type of material present, exposure by unprotected workers would be minimized and all appropriate precautions would be taken to protect workers prior to investigating each site and during demolition.

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

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

***Polychlorinated Biphenyls (PCBs)*:** PCBs found in liquid form, such as in fluorescent light ballasts, would be collected prior to demolition, processed at a licensed recycling facility to remove the PCBs, and then the PCBs would 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 would 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. PCB 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 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.

***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 COMAR 26.13. Universal wastes occur at the facility in the form of light bulbs, aerosols, mercury containing equipment, batteries, and pesticides. Light bulbs would be removed intact and placed in labeled containers for recycling at a licensed universal waste facility. Aerosols cans should be collected intact (not punctured and/or drained), packaged in appropriate containers, and transported to a licensed facility to be managed as a hazardous waste in accordance with requirements of the RCRA. Batteries would 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) would be removed intact and placed into Department of Transportation (DOT)-approved containers.

Mercury containing devices would be labeled “Universal Waste – Mercury Containing Devices.” Universal wastes would be transported for recycling at a licensed universal waste facility.

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

***Miscellaneous Chemicals or Containers*:** Unused or partially used chemicals that are still in their manufacturer’s containers would be packaged and palletized. If containers with chemicals are identified without labels or lack legible labels, the containers would be stored at an onsite satellite waste storage area, sampled, and analyzed for characterization purposes. Characterized chemicals would be packaged and labeled in accordance with 40 CFR, 29 CFR 1926, other applicable laws and regulations, and disposed of at an appropriately licensed waste facility.

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

***Nuclear Devices*:** In the event self-luminous, self-powered exit signs contain radioactive material, the items would be removed, packaged, transported, and disposed at a licensed low-level radioactive waste disposal facility.

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

***Fire Extinguishers*:** Fire extinguishers would be collected and stored at an onsite satellite waste storage area. Fire extinguishers containing dry chemicals would be palletized or containerized into an MDOT approved container and transported to a hazardous waste disposal facility. Fire extinguishers with water-based contents (without dry chemical) or which are empty may be transported with ferrous metals.

***Sumps*:** Sumps would have any liquids and/or contents sampled and analyzed for proper waste characterization. Liquids and contents shall be collected and containerized in appropriate containers should disposal be required. Concrete would be inspected, and if staining exists, would be disposed with other construction and demolition (C&D) debris at a licensed regular solid waste disposal facility.

***Mold*:** Materials known or found to contain mold shall be removed according to the guidelines established by U.S. Department of Labor Occupational Safety and Health Administration (OSHA), based on the level of contamination (OSHA, 2013). The four levels of contamination are defined as follows: Level I (less than 10 square feet), Level II (10 to 30 square feet), Level III (30 to 100 square feet), and Level IV (greater than 100 square feet). All personnel conducting the work would be required to wear the appropriate personal protective equipment as defined by OSHA standard 1910.134. Mold or mold-contaminated materials would be transported offsite and disposed at a licensed regular solid waste disposal facility.

***Scrap Metal*:** Scrap metal including ferrous and non-ferrous metals would be segregated by material type to the extent practicable, processed for shipment, and transported off-site for recycling.

***Construction and Demolition (C&D) Debris*:** C&D debris in the form of concrete, drywall, wood, windows, and other non-hazardous materials would be transported offsite and disposed of at a licensed regular solid waste disposal facility. Concrete and brick generated from the demolition would be segregated from other various C&D debris. Clean, unpainted concrete and brick may be pulverized and/or crushed onsite and used as backfill for voids, trenches, pits, and similar uses.

AOCs that have not been designated as No Further Action and are located within 500 feet of proposed demolition sites would be delineated and fenced-off prior to initiation of demolition activities. Contractors would be notified of the locations of these AOCs and instructed not to perform any activities within the delineated boundaries, including but not limited to storage of materials, driving vehicles and equipment, and ground-disturbing activities.

If contaminated soils are found during HMAs, or if site conditions change during demolition, soils would be tested, and any contaminated soils would be removed and properly disposed offsite according to material type and applicable state and federal regulations. All hazardous materials would be removed and disposed of offsite at an approved TSDF. Refer to Section 3.11 for discussion related to the handling of known or anticipated hazardous materials.

3.11.2.2 No Action Alternative

Under the No Action Alternative, the buildings and the materials within and around them would continue to deteriorate leading to potential for the continued release of hazardous materials into the environment. If left in place, the buildings and surrounding areas would continue to pose a safety and health risk to workers due to their structural condition and the presence of potentially hazardous materials. The ongoing deterioration of the buildings and structures has exposed building materials either known or presumed to contain hazardous materials, as described in the preceding sections of this EA, to the surrounding environment. As the buildings continue to deteriorate, these materials and compounds are potentially being released into the air, soil, groundwater, and surface waters through stormwater runoff, and pose a possible health risk to maintenance workers and researchers working in neighboring buildings as well as private commercial and residential areas adjacent to the campus.

Long-term impacts on localized surface and groundwater quality would continue as the buildings continue to deteriorate 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. The No Action Alternative would not support the USDA-ARS's effort to reduce its impact on the Chesapeake Bay Watershed and would potentially lead to increased adverse impacts over time as described.

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 0.25-mile buffer around the periphery of the BARC campus (conglomerate of the component farms) was considered for the analysis of cumulative impacts. Table 4-1 summarizes these past, present, and reasonably foreseeable future actions, and further detailed descriptions follow the table.

Table 4-1: Past, Present, and Reasonably Foreseeable Future Actions

Project Name	Project Proponent	Type of Project	Project Status	Description of Project
BARC Solar Array Development	USDA	Infrastructure	Proposed	Install solar arrays throughout the BARC campus to meet various federal sustainability goals and encourage development of as many sites as feasible to maximize renewable energy production.
Purple Line	MDOT, Maryland Transit Administration, Purple Line Transit Partners	Transportation	Under Construction	The Purple Line is a 16-mile light rail line that will extend from Bethesda in Montgomery County to New Carrollton in Prince George's County. It will provide a direct connection to the Metrorail Red, Green and Orange Lines at Bethesda, Silver Spring, College Park, and New Carrollton.
Sunnyside Avenue Bridge Replacement over Indian Creek	Prince George's County DPW&T	Transportation	Under Construction	Replace Sunnyside Avenue Bridge over Indian Creek and widen the roadway west of the CSX rail line crossing to Kenilworth Avenue.
BARC Internal Roadway Inventory	USDA	Transportation	Proposed	USDA-ARS plans to conduct an inventory of the existing roadway infrastructure across BARC to assess the needs for ongoing and future repairs and replacement to support BARC's redevelopment program. These actions would require clearance under NEPA.
Proposed Renovation of Buildings 001, 002, 004, 005, and 308	USDA	Infrastructure	Proposed	The project would utilize existing BARC buildings, in accordance with the 2015 Reduce the Footprint Policy mandates to reduce the footprint of federal government properties, while providing updated and expanded space for the programs within Buildings 002, 003, and 308.
Demolition of Building 11A	USDA	Infrastructure	Proposed	The project would demolish Building 11A in its entirety, including the building envelope, building footings and foundation, support systems (e.g., mechanical, electrical), site utilities servicing the building, concrete pads, and associated exterior concrete walkways and paved areas.

Table 4-1 continued: Past, Present, and Reasonably Foreseeable Future Actions

Project Name	Project Proponent	Type of Project	Project Status	Description of Project
High-Speed Superconducting Magnetic Levitation (SCMAGLEV) System	Federal Railroad Administration (FRA), Maryland DOT and Maryland Transit Administration (MDOT-MTA)	Transportation	Proposed	The FRA and MDOT-MTA are proposing to construct and operate a high-speed superconducting magnetic levitation (SCMAGLEV) system between Washington, DC and Baltimore, Maryland with an intermediate stop at Baltimore-Washington International Thurgood Marshall Airport (BWI).
BEP Currency Facility	U.S. Department of the Treasury	Industrial	Proposed	This project includes planning, design, and construction of an approximately 1 million-square-foot currency printing facility located north of the intersection of Poultry Lane and Powder Mill Roads.
MD 201	MDOT	Transportation	Proposed – Under Public Comment	This project will widen MD 201 to four lanes between north of I-495, Capital Beltway to Ammendale Way. It will also extend the MD 201 designation from its current endpoint at Powder Mill Road to continue along Edmonson Road and Old Baltimore Pike. Additionally, it will construct a 4-lane extension from Muirkirk Road to U.S. 1.
Innovation Corridor	Prince George's Planning Department	Infrastructure	Proposed	BARC is included in the 2035 recommendation of Innovation Center designation. This area is well positioned to capitalize on the synergies that derive from businesses, research institutions, and incubators locating in close proximity to one another and on existing and planned transportation investment, such as the Purple Line.
MD 212 (Powder Mill Rd) Pine Street to US-1 (Baltimore Ave)	MDOT State Highway Administration	Transportation	Under Construction	This project will reconstruct and resurface the roadway, improve drainage infrastructure including curb and gutter, improve sidewalks and crosswalk ramps to Americans with Disabilities Act (ADA) compliance, provide street lighting, and improve traffic signals.
Emission Reductions Projects	U.S. Department of the Treasury	Industrial	Proposed	U.S. Department of the Treasury plans to implement emission reduction efforts including evaluating alternatives to chromium plating, installing new low-VOC press for printing money bands, using electricity from renewable energy sources, and continuing to conduct comprehensive air emission and GHG analyses.

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. In February 2019, a FONSI was issued for the installation of a solar array on BARC. Solar arrays would be installed at 60 sites across the BARC campus. 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 to maximize renewable energy production to support ongoing operations at the BARC campus. None of the sites is proposed near the buildings or building clusters proposed for demolition.

Additional building demolition activities are being cleared at BARC. In March 2020, a FONSI was issued for a group of 22 buildings supplemented by a Re-Evaluation of 12 of the buildings determined NRHP-eligible. The buildings were removed in early 2021.

MDOT is completing construction on the Purple Line, a 16-mile light rail extending into Prince George's County. The Purple Line will connect to Metrorail Red, Green and Orange Lines at Bethesda, Silver Spring, College Park, and New Carrollton. MDOT is also constructing and resurfacing MD 212 Pine Street to US-1 to improve drainage structure, sidewalks, street crossings, and improve traffic signals and lighting.

Prince George's Department of Public Works & Transportation is replacing the Sunnyside Avenue Bridge over Indian Creek and widening the roadway west of the CSX rail line crossing to Kenilworth Avenue (MD 201) (Prince George's County, 2021).

Internal Reasonably Foreseeable Future Actions – USDA-ARS will be conducting an inventory of the existing roadway infrastructure across BARC to assess the needs for ongoing and future repairs and replacement to support the redevelopment program. These actions would require environmental clearance under NEPA and require approval of relevant state and federal agencies. Individual redevelopment projects, as proposed, will be assessed in terms of their effects on the local environment by the appropriate lead agency.

USDA-ARS is completing NEPA documentation for the proposed Renovation of Buildings 001, 002, 004, 005, and 308 within the BARC campus. These projects would utilize existing BARC buildings to provide updated and expanded space for programs.

The USDA-ARS also completed a FONSI for the demolition of Building 11A at the BARC. Demolition will reduce long-term operational and maintenance costs and reduce impact on the Chesapeake Bay Watershed.

External Reasonably Foreseeable Future Actions – Reasonably foreseeable future actions external to the BARC campus include continuation of all present actions and future actions such as planned future land development and development of the proposed superconducting magnetic levitation railway system (SCMAGLEV) high speed rail corridor between Baltimore and Washington DC, also referred to as the rapid rail. A Draft EIS for the proposed SCMAGLEV project was published in January 2021 to determine the effect of the project on the region (USDOT-FRA, 2021). The EIS process was paused in mid-2021 while the FRA further evaluates components of the project.

In 2020, the U.S. Department of the Treasury's Bureau of Engraving and Printing (BEP) acquired approximately 100 acres within BARC to develop a new production facility to replace their current facility

in Washington DC. The proposed facility will support BEP's important mission of printing United States paper currency and other federal security products. The USACE, working on behalf of the BEP, initiated the scoping process for the proposed project in November 2019 and intends to complete an EIS by 2021.

MDOT is proposing to widen MD 201 between north of I-495 and Capital Beltway to Ammendale Way. MD 201 will also be extended from its current endpoint to Old Baltimore Pike. The project will also include a four-lane extension from Muirkirk Road to US-1.

Prince George's Planning Department released the 2035 Approved General Plan (Plan 2035) outlining the Innovation Corridor. The BARC is included as an area of future economic growth, research, and investment.

MDOT is reconstructing and resurfacing MD 212 (Powder Mill Road) from Pine Street to US-1 (Baltimore Avenue). The purpose of the project is to improve drainage infrastructure including curb and gutter, improve sidewalks and crosswalk ramps to Americans with Disabilities Act (ADA) compliance, provide street lighting, and improve traffic signals (MDOT, 2019b).

U.S. Department of the Treasury plans to implement emission reduction efforts including evaluating alternatives to chromium plating, installing new low-VOC press for printing money bands, using electricity from renewable energy sources, and continuing to conduct comprehensive air emission and GHG analyses (USDT-BEP, 2021).

4.1.1 Summary of Impacts of the 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 need 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

No known occurrences of federally listed threatened or endangered species have been documented on or adjacent to sites proposed for demolition activities. However, based upon preliminary review of habitat present at or near the sites, northern long-eared bats or monarch butterflies may occur in small numbers near the sites where suitable habitat occurs, in certain seasons. Demolition plans would be developed to minimize and avoid impacts, where practicable, 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 campus 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 campus. 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. The proposed SCMAGLEV (also referred to as the rapid rail) will not serve BARC, Beltsville, College Park, or Greenbelt. The SCMAGLEV demonstration project proposal is only designed to serve a very small population of travelers between Baltimore and Washington, DC with an intermediate stop at BWI. The project will run below and above ground due to costs per mile, emerging just south of the BARC property and descending beneath the ground as it nears Baltimore. A Draft EIS for the proposed SCMAGLEV project was published by the Federal Railroad Administration and the MDOT-Maryland Transit Administration (MTA) in January 2021 to determine the effect of the project on the region. The documents were available for public review through May 24, 2021. Due to the COVID-19 pandemic, FRA conducted remote (telephonic) public hearings in April 2021. FRA is currently pausing the EIS for the Baltimore-Washington DC SCMAGLEV Project on the USDOT Permitting Dashboard while they continue to review various project elements.

The SCMAGLEV Preliminary Alternatives Screening Report (PASR), dated January 2018, outlined the reasons the proposed BARC RSD location was dropped from further consideration. The PASR based its determination on public and agency comments and concerns, and the identified site location challenges presented in Chapter 4-Section C of the PASR (USDOT-FRA, 2021).

The Proposed Action, in combination with current and other reasonably foreseeable future actions, is not anticipated to have an adverse effect on other current or future transportation infrastructure.

4.1.1.8 Cultural Resources

On-hundred fourteen (114) of the 117 buildings proposed for demolition as part of the proposed undertaking are contributing elements of the NRHP-eligible BARC Historic District. Their phased demolition would adversely affect the district's overall setting and could diminish the integrity of other contributing elements such as the primary roadway system, agricultural fields, and native forest areas. To account for direct and potential cumulative effects to the historic district, USDA-ARS developed a PA specifying minimization, mitigation, and offset preservation measures. The document allows for additional buildings to be added and includes mitigation relevant to the entire campus rather than just the buildings proposed for demolition. Coordination with MHT and other consulting parties under Section 106 regarding PA implementation and potential effects to archeological resources will be ongoing during the demolition program.

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 SCMAGLEV 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 campus. 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 10 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 campus 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 MDNR, and the MHT. Copies of the scoping letter and agency responses are provided in Appendix A. Documentation of the ongoing consultation to develop a PA as required for compliance with Section 106 of the NHPA is included in Appendices B and F.

Public notices will be published in Prince George's Post and Greenbelt News Review indicating a public comment period on the EA. Copies of the Affidavits of Publication will be provided in Appendix H in the EA/FONSI is published.

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 BARC in Beltsville, Prince George's County, Maryland. This EA identifies, documents, and evaluates the potential effects of the demolition of 117 buildings on the BARC campus. 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 supporting BARC's 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. Further, removal of the buildings would serve to reduce safety and health risks to workers due to their structural condition and the presence of potentially hazardous materials

The buildings would be removed in their entirety, including the building envelopes, building footings and foundations, support systems (e.g., mechanical, electrical, etc.), 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 returned to as close to pre-development 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 substantial, 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 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.
- Adverse effects to historic (NRHP-listed or eligible) properties are anticipated. However, these effects are being mitigated via development of a PA. This document contains measures to avoid, minimize, and mitigate the effects, resulting in a less than significant impact to Section 106 resources. Mitigation requiring documentation will be completed and approved prior to building demolition activities.
- 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 for buildings within the 300 Cluster. One mapped stream and associated riverine wetlands were identified and observed adjacent to buildings within this cluster. Surface water delineations, in accordance with USACE protocols, would need to be conducted to identify waters of the United States, including wetlands. Delineations would be used to inform development of demolition plans to avoid placing fill materials within waters of United States and implementation of appropriate BMPs would protect against sedimentation, leaks, and spills. If impacts to jurisdictional features could not be avoided, coordination with USACE and Section 404 permit may be required. Water resources, including wetlands and floodplains are not expected to be affected by the Proposed Action associated with any other buildings or building clusters 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 Buildings 009 and 050. 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. Prior to demolition, each project site would be evaluated for potential northern long-eared bat habitat, migratory bird nests, and milkweed host plants during the breeding season for monarch butterflies.
- 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, where possible. Site restoration will be determined on a site-by-site basis; however, restoration to meadow or forest is most preferred where feasible and would receive the maximum stormwater credit because this habitat is the most beneficial to the Chesapeake Bay Watershed.
- Socioeconomics impacts within the vicinity of the BARC campus are not expected as a result of the Proposed Action; therefore, 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

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 would 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. All hazardous materials would be removed and disposed of offsite at an approved TSDF.
- 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 the contractor to stop work and allow USDA-ARS to consult with MHT if unexpected cultural resources are found during construction activities
- 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 FONSI is appropriate for the Proposed Action.

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Gary Newgord	Senior Environmental Scientist	BS Zoology	15 years	Biological Resources

8.0 ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
ACM	Asbestos containing material
amsl	Above mean sea level
AOCs	Areas 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
BDI	Bureau of Dairy Industry
BEP	Bureau of Engraving and Printing
BGEPA	Bald and Golden Eagle Protection Act
BMPs	Best Management Practices
BPO	Bureau of Plant Industry
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
BWI	Baltimore-Washington International Thurgood Marshall Airport
C&D	Construction and Demolition
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
COG	Council of Governments
COMAR	Code of Maryland Regulations
CWA	Clean Water Act
DOT	Department of Transportation
EA	Environmental Assessment
EESC	Eastern Ecological Science Center
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact

FR	Federal Register
ft	Feet
GHGs	Greenhouse Gases
HABS	Historic American Building Survey
HMA	Hazardous Materials Assessments
HUD	Housing and Urban Development
I-	Interstate Highway
I-495	Capital Beltway Inner Loop
IPP	Independent Power Producer
HUD	U.S. Department of Housing and Urban Development
LQG	Large Quantity Generator
LSY	Louviere, Stratton & Yokel, LLC
MARC	Maryland Area Regional Commuter
MBTA	Migratory Bird Treaty Act
MD	Maryland
MDE	Maryland Department of the Environment
MDNR	Maryland Department of Natural Resources
MDOT	Maryland Department of Transportation
MHT	Maryland Historic Trust
MIHP	Maryland Inventory of Historic Places
MOA	Memorandum of Agreement
MS4	Municipal Separate Storm Sewer System
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
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
O_3	Ozone
O-S	Open Space Zoning
OSHA	U.S. Department of Labor Occupational Safety and Health Administration
PA	Programmatic Agreement
PA/SI	Preliminary Assessment/Site Inspection
PASR	Preliminary Alternatives Screening Report
Pb	Lead
PCBs	Polychlorinated Biphenyls

PEM	Palustrine Emergent Wetland
PFO	Palustrine Forested Wetland
PM	Particulate matter
PSS	Palustrine Scrub-shrub Wetland
PUB	Palustrine Unconsolidated Bottom
PWA	Public Works Administration
RCRA	Resource Conservation Recovery Act
R-O-S	Reserved Open Space Zoning
R-R	Rural Residential Zoning
RTA	Regional Transportation Agency
SCMAGLEV	Superconducting magnetic levitation railway system
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	Sulfur dioxide
TCLP	Toxic Characteristic Leaching Procedure
TSDF	Treatment, Storage, and Disposal Facility
UDP	Unanticipated Discovery Plan
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