United States Department of the Interior
Bureau of Land Management
Lower Potomac Field Station
LLES092000

Environmental Assessment

NEPA #: DOI-BLM-ES-0920-2012-0001-EA

Barn Deferred Maintenance
Meadowood Special Recreation Management Area

Date:	February 2014
Type of Action:	Environmental Assessment
Location:	Meadowood Special Recreation Management Area 10406 Gunston Road Lorton, Virginia 22079
Project Acreage:	5 acres

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Lower Potomac Field Station

Technical Review.

Program	Reviewer	Signature	Date
Air Quality	Derek Strohl Natural Resources Specialist		
Cultural/Paleontology	Jarrod Kellogg Archeologist		
Health and Human Safety	Derek Strohl Natural Resources Specialist		
Native American Religious Concerns	Derek Strohl Natural Resources Specialist		
Recreation	Derek Strohl Natural Resources Specialist		
Socioeconomics	Kurt Wadzinski Planning & Environmental Coordinator;		
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Special-Status Species	Derek Strohl Natural Resources Specialist		

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1. INTRODUCTION

PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action and alternatives is to provide for safe and enjoyable public equestrian use of the Meadowood Special Recreation Management Area (SRMA) by addressing the maintenance and future use of the Meadowood barn.

The Meadowood barn needs renovating to bring it into conformance with structural, plumbing, electrical, and ABA (Architectural Barriers Act) standards for Federal facilities. Several structural components need replacement or repair. The roof needs repair. The restroom needs renovating to meet accessibility standards and the existing facility also needs an upgrade to the outflow from the horse wash stalls.

CONFORMANCE WITH BLM LAND USE PLAN(S)

The land use plan (Meadowood Farm Planning Analysis/Environmental Assessment) for the Meadowood Special Recreation Management Area (SRMA) was approved by the State Director on March 25, 2003. This plan contains the environmental analyses of activities approved for the Meadowood SRMA to meet broad planning goals and objectives.

An Integrated Activity Management Plan/Environmental Assessment (IAMP/EA) was completed in June 2004. The IAMP/EA identified allowable equestrian uses to include:

- public access to horseback riding trails, trailer parking and related facilities;
- access to equestrian facilities (i.e. indoor and outdoor riding arenas) for scheduled educational events;
- horseback riding lessons and riding and training clinics;
- private horse boarding under a concession lease, permit, contract, or agreement;
- facilities and pastures for Federal and other public service or non-profit organizations' horses; and
- programs and facilities accessible to disabled visitors.

RELATIONSHIPS TO STATUTES, REGULATIONS AND OTHER PLANS

The United States Department of Interior (DOI) Bureau of Land Management (BLM) Lower Potomac Field Station is committed to making its programs and facilities accessible to disabled visitors. The BLM is required to comply with two Federal laws in making its facilities and programs accessible to all:

- **Architectural Barriers Act (ABA) of 1968 (Public Law 90-480)**
  This Act requires that all buildings and facilities constructed in whole or in part by Federal funds must be accessible to, and usable by, physically disabled persons. This includes any construction, renovation, restoration, remodeling, or site development completed by the agencies.
- **Section 504 of the Rehabilitation Act of 1973 (Public Law 93-112, as amended)**
  Section 504 states that all Federal programs, activities, and services must be accessible to disabled visitors, including those with physical, hearing, visual, and learning impairments (Federally assisted programs must also comply with this section). The Department of the Interior regulations for implementation of this law were issued in 1982.

Several laws, policies, and regulations guide management on the Meadowood SRMA:

- **Federal Land Policy and Management Act (FLPMA) of 1976 (Public Law 94-579)**
  The FLPMA provides the BLM legal authority to establish public land policy, guidelines as amended for administering such policy and provides for the management, protection, development, and enhancement of public lands.
- **National Historical Preservation Act (NHPA) of 1966 (Public Law 89-665)**
  The NHPA requires all Federal agencies to administer federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generations. The regulations, 36 CFR 800 Section 106, stipulate that prior to the expenditure of any Federal funds on any project, the agency must take into account the effect of the undertaking on any historic properties.
- **Chesapeake Bay Preservation Act and Chesapeake Bay Preservation Ordinance**
  These two items establish Chesapeake Bay Resource Protection Areas, in which development is restricted to protect water quality in the Chesapeake Bay and associated watersheds.
- **Archaeological Resources Protection Act (ARPA) of 1979 (Public Law 96-95, as amended)**
  The ARPA provides protection for archaeological resources on public lands by prohibiting the "excavation, removal, damage or defacing of any archaeological resource located on public lands or Indian lands," and set up criminal penalties for these acts. It also encourages increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having archaeological resources and data that were obtained before October 31, 1979.

In addition to these specific laws, there will be compliance with all other applicable Federal laws, regulations, executive orders, and policies.

SCOPING AND ISSUES

The BLM hosted public meetings on November 16, 2010 and June 28, 2011, in Lorton, Virginia, to obtain comments and address concerns from interested stakeholders.

Comments received during and following the meetings dealt primarily with the following issues:

- Equestrian facilities should remain at the Meadowood SRMA and be accessible to all.
- The therapeutic riding program, Simple Changes, should continue to have access to the barn, stables, arenas, and pastures.
- The facility needs to be safe for public use.
- Public use of the equestrian facilities should be increased by public riding lessons and use of the indoor riding arena.
- The number of private horse boarders and total number of horses should be increased.

An EA and unsigned Finding of No Significant Impact (FONSI) were posted to the BLM Eastern States website on May 4, 2012 for a 30-day public comment period that was extended until July 24, 2012 due to complications with the comment functionality on the website. The EA described the proposed action, to renovate the barn using the existing footprint; an alternative to immediately close and demolish the barn; and a no-action alternative.

The BLM received approximately 1,000 comments on the 2012 EA, with almost 800 generated by an online petition. A great majority of the comments requested that the BLM consider:

- keeping the barn open and accessible during the repairs;

- completing the repairs in phases to accommodate current operations;
- scaling back the scope of the project to accomplish necessary and appropriate deferred maintenance repairs.

Several commenters questioned the basis of the following BLM claims in the 2012 EA:

- the indoor air quality being "poor due to an unacceptable frequency of communicable diseases among boarding horses" (p. 6);
- due to the narrow design of the existing indoor arena "several horses have fallen while turning corners at a canter, putting their riders in danger of injury" (p. 12);
- the tack storage location across the aisle of each stall "poses a hazard as people attempt to access tack while horses are being walked through the aisles" (p. 12); and
- photos of certain locations around the project area indicate erosion problems caused by horse traffic (Appendix B).

None of these BLM claims are germane to either the proposed action or no-action alternatives and are withdrawn from the 2014 EA. Photos included in the 2014 EA (in the Figures section) visually depict the project area and portions of the barn. The proposed repairs will not change the basic design layout of the barn and are described in greater detail in Chapter 2.

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

PROPOSED ACTION: BARN RENOVATION USING EXISTING FOOTPRINT

The BLM proposes basic repairs to the barn using existing Federal Deferred Maintenance funds to meet structural, plumbing, electrical, and ABA standards for Federal facilities. The BLM will prioritize the work to be completed in phases to eliminate the need to close the barn during the renovation.

Renovations will include the following:

- Structural repairs to include replacing columns, structural members including boards along the sidewalls and end walls, flat 2" X 4"'s in between roof trusses, stiffening and bracing of the roof structure, truss repair, and other bracing and blocking as needed;
- Electrical improvements to include new wiring, conduit, waterproof fixtures, new light fixtures, new electrical service to the barn and removal of old wiring and fixtures;
- Installation of a fire detection system including wiring;
- An ABA-compliant accessible restroom with new fixtures, sink, and commode;
- A new mechanical room for the water heater and storage;
- Loose or worn out fasteners on the roof will be replaced and small holes caulked; and
- Upgrade to the drainage outfall for the horse wash stalls.

Renovations will not include the following:

- Windows will not be replaced;
- Siding will not be replaced, but patched where necessary;
- Roof will not be replaced, but will be secured with new fasteners;
- Dust suppression system is adequate and will not be upgraded;
- Automatic horse water system will not be repaired, but likely removed at a later date;
- Barn doors will not be replaced; and

- Stormwater runoff from the gutters will be addressed at a later date.

The contract for the renovation project is expected to be awarded before the end of the fiscal year, September 30, 2014, and construction is anticipated to be completed by the end of 2014 or beginning of 2015.

BLM will also solicit bids and issue a long-term recreation commercial lease (RCL) for management of the barn, designated adjacent outbuildings, and pasture. The lease will require these stipulations:

- broad public access to the barn requiring a specified number of stalls be reserved for horses that provide public recreation and education opportunities such as lessons, therapeutic riding, and trail rides;
- accommodation of special recreation permit (SRP) holders; and
- the barn must be economically self-sufficient.

NO-ACTION ALTERNATIVE

The no action alternative would mean not performing any maintenance on the Meadowood barn and it would not increase public use of the barn. The Meadowood barn would not comply with structural, plumbing, electrical, and ABA standards for Federal facilities. Activities that currently occur at the barn would eventually cease and the barn would be closed to public access, condemned, and demolished. In this event, use of the outdoor arena and pastures could continue.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS

In addition to the alternatives above, two other alternatives were considered but eliminated from further analysis. These alternatives are:

- An alternative in which the Meadowood barn is demolished and an entirely new barn is built on the existing footprint. This alternative was eliminated from consideration, as it would cost considerably more than the BLM has available in the existing Federal Deferred Maintenance fund.
- An alternative where the Meadowood barn would close immediately, be demolished, and not re-built. This alternative was eliminated from consideration, as it would:
    - not use the available Federal Deferred Maintenance funds allocated for this project;
    - end horse boarding at Meadowood; and
    - diminish public recreation and education opportunities such as lessons, therapeutic riding, and trail rides.

3. AFFECTED ENVIRONMENT

PROJECT AREA AND LOCATION

The **project area** (Figure 1) is part of the Meadowood Special Recreation Management Area, which is located in Fairfax County, Virginia, approximately 2.5 miles southeast of downtown Lorton, Virginia and approximately 17.5 miles southwest of downtown Washington D.C., east of Interstate 95 on the Mason Neck Peninsula. The project area is in the Kane Creek watershed and drains east and west into two on-site streams that run south and converge into Thompson Creek, flowing eventually to Belmont Bay, the Potomac River, and Chesapeake Bay. The project area includes the existing barn, hay storage shed, parking lot, and adjacent pastures (potential staging area for equipment and materials), a total area of five acres.

The existing barn, erected in 1976, is 104 feet wide and 248 feet long. It consists of an open wood frame pole barn, covered in light gage metal siding (4 foot wide) with opaque, translucent, plastic skylights. It consists of 46 stalls, a 190-foot by 60-foot indoor arena, manager's office, storage rooms, bathroom, mechanical room, two horse wash stalls, and a former hay storage area that functions as a smaller indoor setup/lesson area.

Twenty elements of the human environment (Table 3-1) were considered in evaluating the impacts associated with the proposed action and no-action alternative for the barn project at the Meadowood SRMA. Those elements identified as "Not Present" will not be affected by either alternative and will not be evaluated further.

Table 3-1 - Affected Human Environment

Element	Present	Not Present
Air Quality	**X**	
Climate Change		**X**
Cultural Resources	**X**	
Environmental Justice		**X**
Farmlands (Prime or Unique)		**X**
Fish and Wildlife		**X**
Floodplains		**X**
Geology/Mineral Resources/Energy		**X**
Hazardous Wastes		**X**
Health and Human Safety	**X**	
Invasive Species		**X**
Recreation	**X**	
Socioeconomics	**X**	
Soils		**X**
Special-Status Species	**X**	
Vegetation		**X**
Visual Resources		**X**
Water Resources and Quality (Surface and Ground)		**X**

Wetlands/Riparian Zones		**X**
Wild and Scenic Rivers		**X**
Wilderness		**X**

AIR QUALITY

Fairfax County, Virginia, is within an eight-hour non-attainment area for both ozone and small particulate matter ($PM_{2.5}$). Air in the Meadowood barn tends to become dusty during dry weather when horses are moving about in the indoor arena. The facility has a dust suppression system for reducing airborne dust.

CULTURAL RESOURCES

Three surveys for cultural resources have been conducted within Meadowood SRMA, all in 2003, only one of which, a survey for a proposed waterline paralleling the entrance road to the management facilities, is in close proximity to the barn. This survey was conducted in land previously disturbed by plowing and road construction, resulting in the discovery of a moderate scatter of quartz flakes, which is endemic to this region (Ferone, *Waterline Survey Report*, 2003), and at least three historic artifacts. The artifact density was such that it did not constitute an "archaeological site" by Virginia Department of Historic Resources standards and the BLM determined that the proposed pipeline would result in "no adverse effect to historic properties." This conclusion was reached not only by the density of the artifacts but also the possibility that some of the quartz debitage resulted from mechanical action.

The location of Meadowood Barn has not been surveyed for cultural resources, and for general maintenance on the structure that will not involve any ground disturbing activities there is no expected need for archaeological surveys. However, based on the results of surveys conducted in the area and discussions with Meadowood staff, it can be expected that the barn and vicinity contain both historic and prehistoric artifacts in subsurface deposits and potentially on the surface. Consequently, any ground disturbing, construction related activities done within the current footprint of the Meadowood barn would require, at a minimum, archaeological monitoring during work. Any ground disturbing, construction related activities done outside the current footprint of the barn will require a cultural resources survey and, if necessary, archaeological monitoring.

HEALTH AND HUMAN SAFETY

The barn poses risks to the health and safety of both horses and people (Fairfax County Department of Public Works and Environmental Services, 2010; POZ Environmental, 2011). The barn has structural deficiencies arising from improper construction and decades of wear. Some of the barn's trusses are bowing, while others are severely rotten, indicating that their load has exceeded their designed capacity. Some of the barn's beams are notched at their points of highest load. Some of the roof purlins are oriented in the wrong direction, causing them to be weaker than they were designed to be. Portions of the roof have become detached from the supporting structure. Two-by-fours have been used to extend beams that were not long enough for their intended use. The leaky roof is allowing water to rot structural wood and to penetrate electrical fixtures, making them unsafe to use.

RECREATION

The main purpose of the Meadowood SRMA is to provide and maintain an area for various forms of public recreation and environmental education/interpretation while managing and protecting its natural and cultural resources. Meadowood SRMA has a multiple use trail system that includes 7 miles of equestrian trails and an outdoor riding arena. The existing facility provides equestrian recreational

opportunities in the form of boarding and an indoor arena. Private boarding is available on a fee basis and conforms to the current lease structure for the facility.

SOCIOECONOMICS

According to the 2010 U.S. Census, Mason Neck Peninsula had a population of 2,005 people and Lorton had 18,610 residents. Lorton's population represents approximately 2 percent of the total population in Fairfax County (1,081,726 residents) and was distributed as approximately 39 percent White, 29 percent Black, 17 percent Asian and 15 percent Hispanic. Fairfax County had a population distribution of approximately 60 percent White, 9 percent Black, 17 percent Asian, and 15 percent Hispanic. Median household income in 2010 was $86,557 for Lorton and $102,325 for Fairfax County. Approximately 5.6 percent of the county population was below the poverty line. The top employers were the Fairfax County school system, the U.S. Government and Fairfax County Government. Ninety two percent of the population reported graduating high school.

The BLM conducted an internal study to determine the feasibility and viability of a long-term multi-use Recreation Commercial Lease for equestrian operations at the Bureau of Land Management (BLM) Lower Potomac Field Station's (LPFS) Meadowood Equestrian Facility (Meadowood Barn). The BLM took into consideration information as to the current market and the financial feasibility and viability of future equestrian operations at the LPFS. Under this scenario the successful Offeror may fully or partially invest in the renovation of the Meadowood Barn, pay the Government a lease payment (43 CFR 2920/2930), and operate the barn with the expectation of making a reasonable return on investment.

SPECIAL-STATUS SPECIES

Table 3.2 below lists special-status species that are known to occur or have potential to occur in Fairfax County in habitat types that are present within the project area.

Table 3.2. Endangered Species Potentially Present in Project Area.

Common Name	Scientific Name	Group	Status	Habitat
Dwarf wedgemussel	*Alasmidonta heterodon*	Clam	E	Creeks and rivers
American eel	*Anguilla rostrata*	Fish	CAN	Creeks and rivers
Small whorled pogonia	*Isotria medeoloides*	Plant	T, Thr	Deciduous forests
Bald eagle	*Haliaeetus leucocephalus*	Bird	SEN, Thr	Coastal areas, near waterbodies
A brook floater	*Alasmidonta varicosa*	Mussel	End	Creeks and rivers
Wood turtle	*Glyptemys insculpta*	Reptile	Thr	Along permanent streams in deciduous woods and other terrestrial habitats

Key: *E – federally endangered; T –federally threatened; CAN – Federal candidate; SEN – BLM sensitive species due to recent delisting under the Endangered Species Act; End – state-endangered; Thr – state- threatened*

4. ENVIRONMENTAL IMPACTS OF ALTERNATIVES

AIR QUALITY

Neither the Proposed Action nor the No-Action Alternative would impact the status of the non-attainment zone for any air quality parameter. The Proposed Action would enhance indoor air quality by repairing the electrical system, enabling the dust suppression system to be used regularly. The No-Action Alternative would leave the indoor air quality issue unaddressed for the remaining life of the barn.

CULTURAL RESOURCES

Potential sources of disturbance to cultural resources would arise from further ground disturbance, including, but not limited to boring for new footings, erosion of the steep slopes to the south and west of the facility, and use of heavy construction equipment.

HEALTH AND HUMAN SAFETY

The No-Action Alternative could result in injuries to people and animals if the barn were to remain open without necessary repairs. Risks to people and animals from poor indoor air quality and other issues discussed in chapter 3 and described in the referenced engineering studies would continue. In a worst-case scenario, a portion of the barn may fail, causing a large piece of metal or wood to fall on a person or an animal, potentially resulting in serious injury or death.

Under the Proposed Action, the use of quality new or refurbished materials for repairs and adherence to structural, plumbing, electrical and ABA standards for Federal facilities will result in a barn that is structurally sound with safer functioning ventilation, electrical, and plumbing systems.

RECREATION

The No-Action Alternative would affect all users of the barn over time as the condition of the barn deteriorated, making stalls unsafe and gradually unavailable to boarders and public users until the building would eventually be condemned and demolished. Day use of the trails, outdoor arena and some pasture riding areas would continue to be available. The Proposed Action would require some temporary reassignment of stalls during renovation activities. It would have no permanent impact on recreation, since it would preserve public riding lessons, the public therapy program and boarding for the near future.

SOCIOECONOMICS

The No-Action Alternative would affect all users of the barn over time as the condition of the barn deteriorated, making stalls unsafe and gradually unavailable to boarders and public users until the building would eventually have to be condemned and demolished. Boarded horses would be removed by their owners to alternate horse boarding facilities in the general area. Horse feed, hay, and bedding would continue to predominantly be purchased outside of Fairfax County. The need for veterinarian and farrier (blacksmith) services would continue at the alternate locations.

The No-Action and Proposed Action would not increase or decrease the area's living resources. The Proposed Action may economically impact service providers such as the feed and hay dealers, farriers and veterinarians who provide services to resident horses. However, the majority of these services come from outside of Fairfax County and would likely continue in alternate horse boarding locations.

Potential impacts of improved and safer facilities include greater public access and use of facilities by local equestrians and more general public use. Depending on design and future options there could be the opportunity for use and increased revenue from clinics, shows, and a variety of other events and increased ability to hold Wild Horse and Burro adoptions, training demonstrations, and related equestrian activities.

SPECIAL-STATUS SPECIES

Since the Proposed Action would take place entirely within the existing barn footprint and a mowed pasture, the action will not affect threatened, endangered, or candidate species or migratory birds.

5. PERSONS, GROUPS, AND AGENCIES CONSULTED

CONSULTATION AND COORDINATION

List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Fairfax County Department of Public Works and Environmental Services (DPWES)	Barn/arena structural assessment	Report findings available on Meadowood website: http://www.blm.gov/es/st/en/prog/recreation.html
Virginia Department of Conservation and Recreation (VDCR)	Construction jurisdiction for State of Virginia	Provided construction requirements information
Virginia Department of Historic Resources (VDHR)	Cultural resources consultation	No cultural resources identified in project area
Virginia Department of Game and Inland Fisheries (VDGIF)	Threatened and Endangered Species	136 T&E species in Virginia, none in the project area
Bureau of Land Management National Operations Center (NOC)	Stable/Arena Replacement Evaluation	Report findings available on Meadowood website: http://www.blm.gov/es/st/en/prog/recreation.html

6. LIST OF PREPARERS

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Name	Title
Jarrod Kellogg	Archeologist, NSFO
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Derek Strohl	Natural Resource Specialist, NSFO
John Reffit	Acting LPFS Manager
Elena Fink	Deputy State Director, Natural Resources, Eastern States Office

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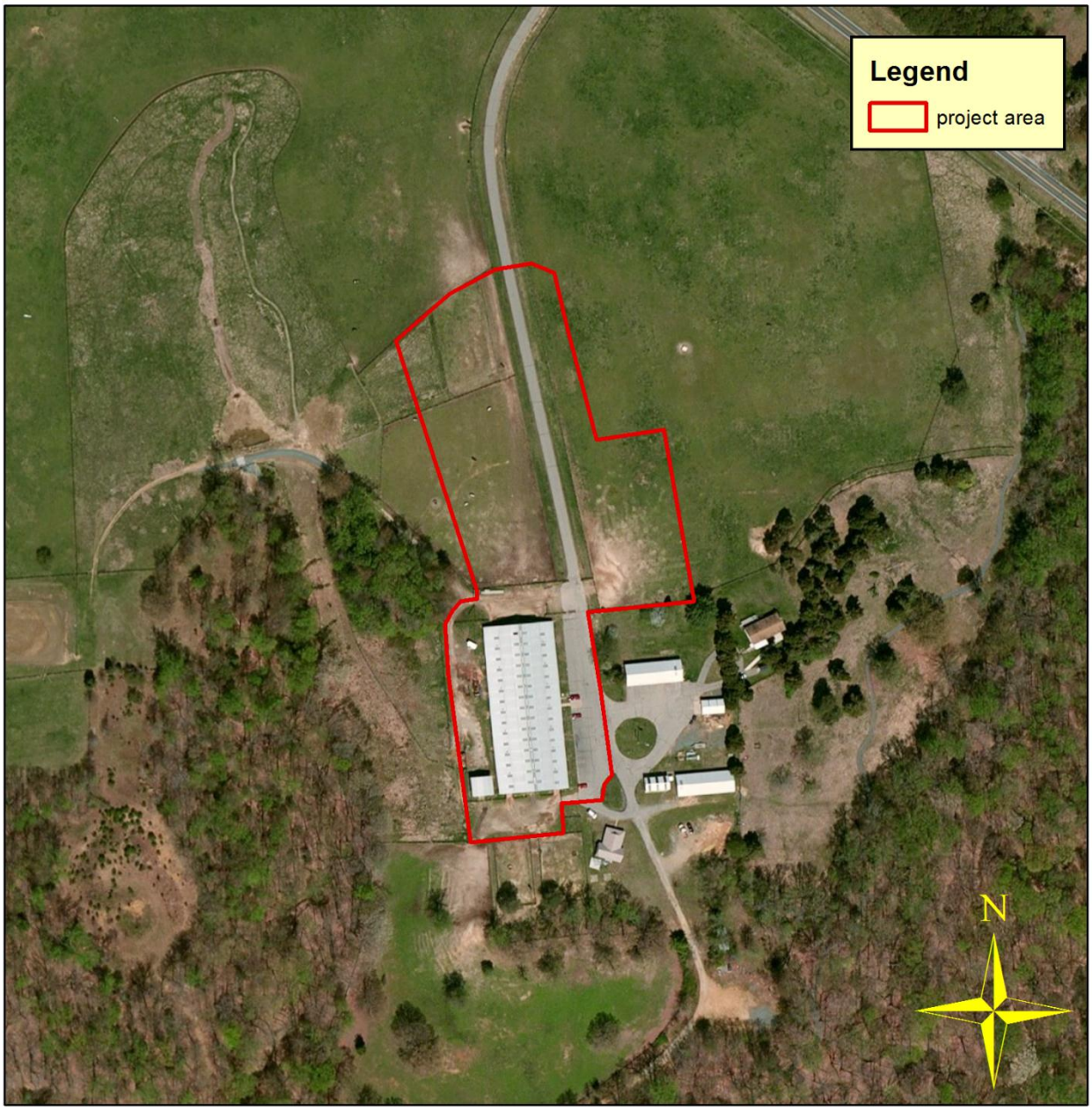
8. FIGURES

Figure 1. Project Area for most resources.



Aerial photograph source: ESRI

0 150 300 600 Feet

Figure 2. Aisle between stalls and tack storage.

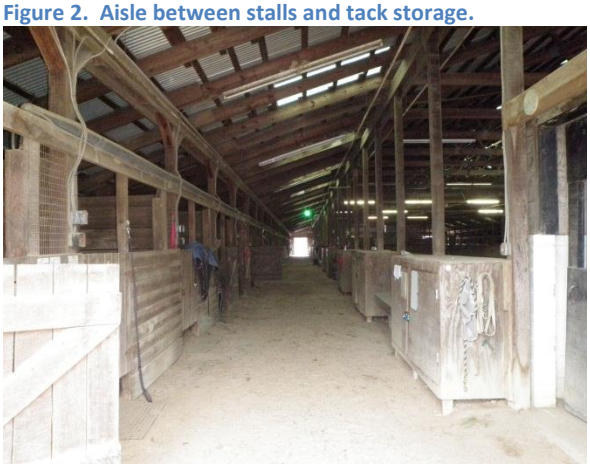


Figure 3. Main indoor arena.

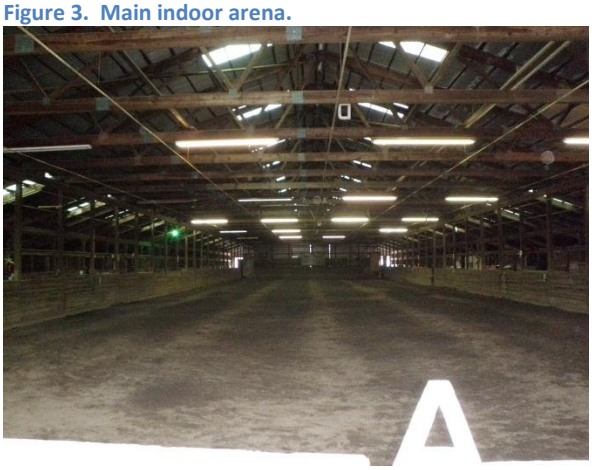


Figure 4. Exterior view of barn.

Figure 5. Windowless stall.

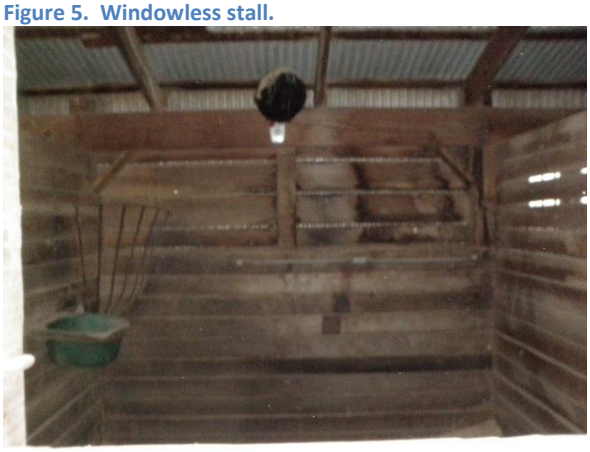
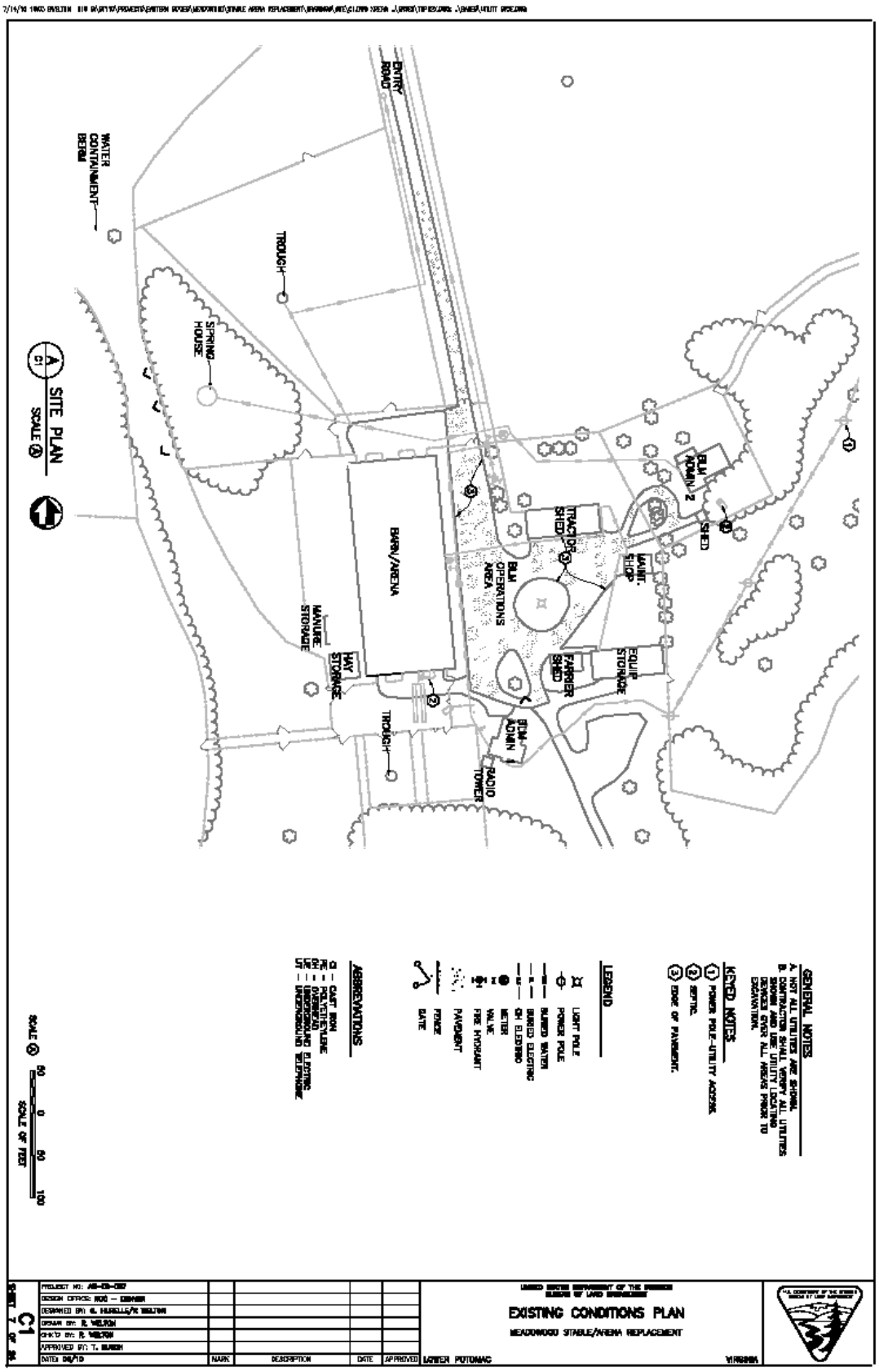



Figure 6: Proposed Meadowood Stables/Arena Renovation