Kimberly Run Natural Area Management Plan

January 2025

Updated by:

Board of Directors
Somerset County Conservancy Charitable Land Trust, Inc.
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"Conserving land…Enhancing habitat…Educating the community"

KIMBERLY RUN NATURAL AREA (KRNA)
RESOURCE MANAGEMENT PLAN

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Introduction Kimberly Run Natural Area Management Plan Updated January 2025

The Somerset County Conservancy Charitable Trust Inc., (hereinafter, the Conservancy) is a nonprofit 501(c)(3) land trust providing for the permanent protection of land and its resources since 1994. The Conservancy offers stewardship, education, and advice for the preservation and enhancement of natural, scenic, agricultural, historic, and open space lands.

The first Kimberly Run Natural Area (KRNA) Management Plan was completed by Ken Hotopp of Appalachian Conservation Biology in 2005. Although comprehensive and complete at the time, there have been numerous changes, additions, and improvements made since that time, and many of the goals of the original plan have been accomplished. It is with this in mind that the Conservancy's Board of Directors, owners and managers of the property, determined to update the original document to reflect the changes and evolving goals for the KRNA.

This document will use, and build upon, the original plan, with full credit going to Appalachian Conservation Biology's comprehensive background work, to bring the present status and future goals for the Conservancy and KRNA up-to-date.

KRNA presently consists of 647 acres of land bounded on the west by SR 219, on the north by the PA Turnpike and lands owned by the PA Turnpike and a private corporation, on the east by Menser Road and private landowners, and on the south by private landowners and Craig Road. The property's natural features include the Kimberly Run stream and an unnamed tributary with associated streamside wetlands, forests with both hemlock dominated and hardwood including older-growth sections, open fields with native grasses and forbs, two bogs, and other emergent wetlands created as both mitigation and net gain projects. Structural additions to the property include a 1950's era, three-room cabin that is used for meetings and a converted three-car garage serving as classroom space. There are approximately eight miles of marked, hiking trails, several parking areas, and several small bridges over the streams and low-lying drainage areas. There is a parking area associated at the cabin, another with the garage, and two parking areas and kiosks with maps at the trailheads.

This document is to serve as the updated guidance document for land, water, plant, and wildlife conservation and management, as well as, delineating educational and recreational uses for the property. Working towards future goals for the Conservancy and the KRNA will also be discussed.

The Somerset County Conservancy provides for the permanent protection of land and its resources. We offer stewardship, education, and advice for the preservation and enhancement of natural, scenic, historic, and open space lands.

History of KRNA Land Acquisitions

1996-2001 Commonwealth of Pennsylvania—248 acres

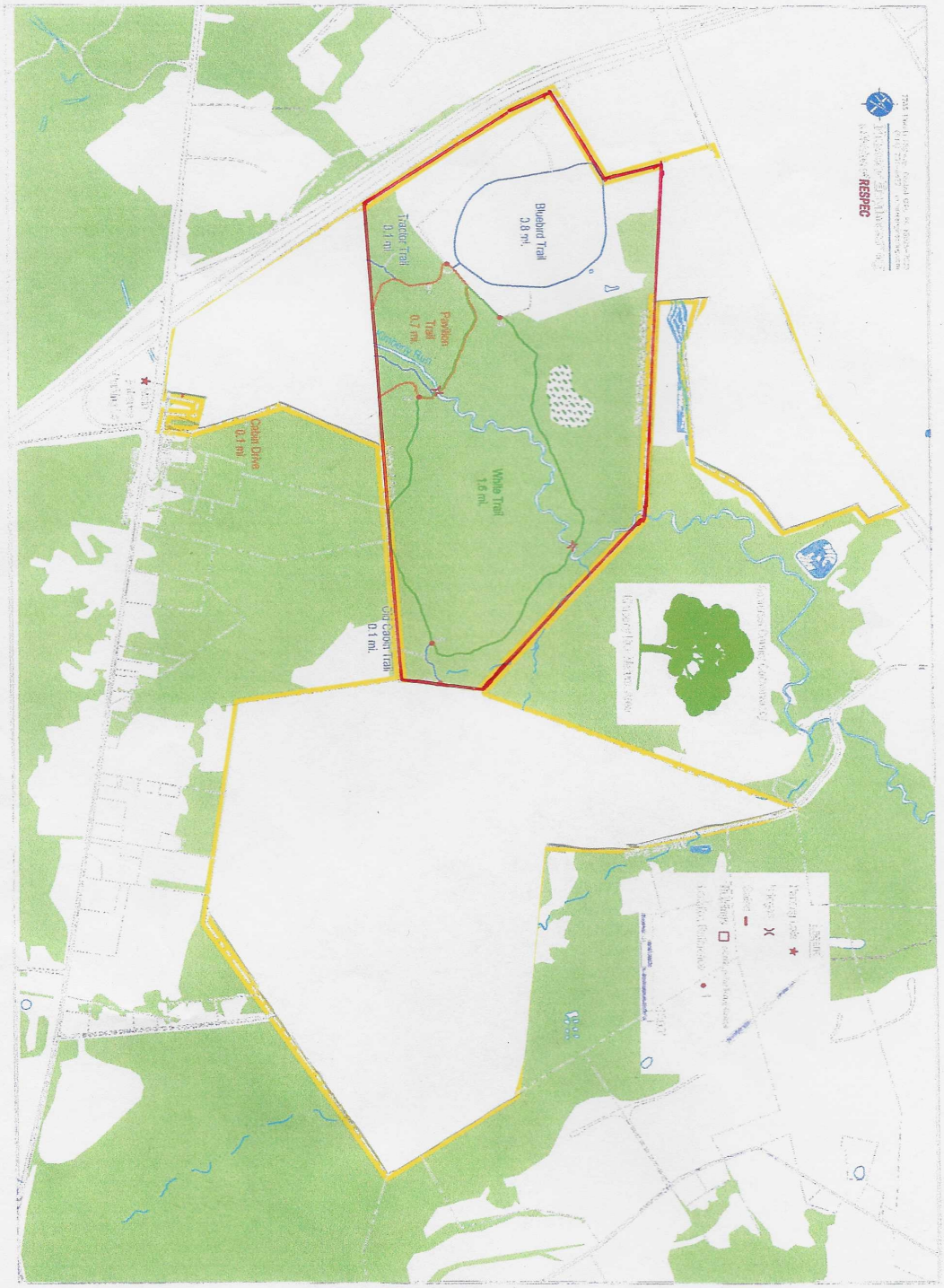
The initial land acquisition by the Conservancy to form KRNA was in 2001 when, after several years of negotiation, the Conservancy purchased 260 acres of land, which had previously belonged to the Somerset State Hospital and Somerset County Poor House, from the PA Department of General Services. Approximately 60 acres of open fields had been used for farming. The wooded areas had been logged extensively in about 1900, and a few trees had been cut after this for small projects at the partially self-sufficient State Hospital. This left a large, timbered area with 100+ year old trees. Over the years, construction of the PA Turnpike and four-lane SR 219 had isolated the property southeast of the main State Hospital Property which was converted to Laurel Highlands State Prison. An access bridge across the PA Turnpike was demolished which effectively landlocked the property. The property contained numerous wetlands which the Commonwealth of PA had attempted to drain with a series of long ditches and farming efforts had been discontinued. A purchase agreement was negotiated with the Commonwealth where the value of any timber commercially harvested would stay with the Commonwealth, and the Conservancy would control whether any timber would be cut. This agreement effectively reduced the value of the property and with the Conservancy's desire to keep the property open to the public. Meshing with the local legislator's desires, and ultimately the state's wishes, a mutually acceptable purchase price was successfully negotiated.

The Conservancy, despite difficult access to the property, commenced with several improvement projects including:

- building new foot trails
- rehabilitating a large picnic pavilion formerly used by the State Hospital
- repairing an old foot-bridge and constructing a new one across Kimberly Run
- partnering with US Fish & Wildlife Service to plug the old drainage ditches and creating new potholes for wildlife
- partnering with US Geological Service to allow use of a monitoring well on the property
- partnering with the PA Game Commission to manage the field areas, converting some to native warm season grasses, and allowing the stocking of pheasants for public hunting

The search for better access to the property was initiated and several options were explored and discarded as too costly or awkward for use of the property.

State Hospital Acquisition, *outlined in red*



History of KRNA Land Acquisitions, *continued*

2011 Louie-Beech Wetland Property—70 acres

The next addition of property came about through a wetland mitigation project known as the Louie-Beech property immediately north of the original State Hospital acquisition and south of the PA Turnpike.

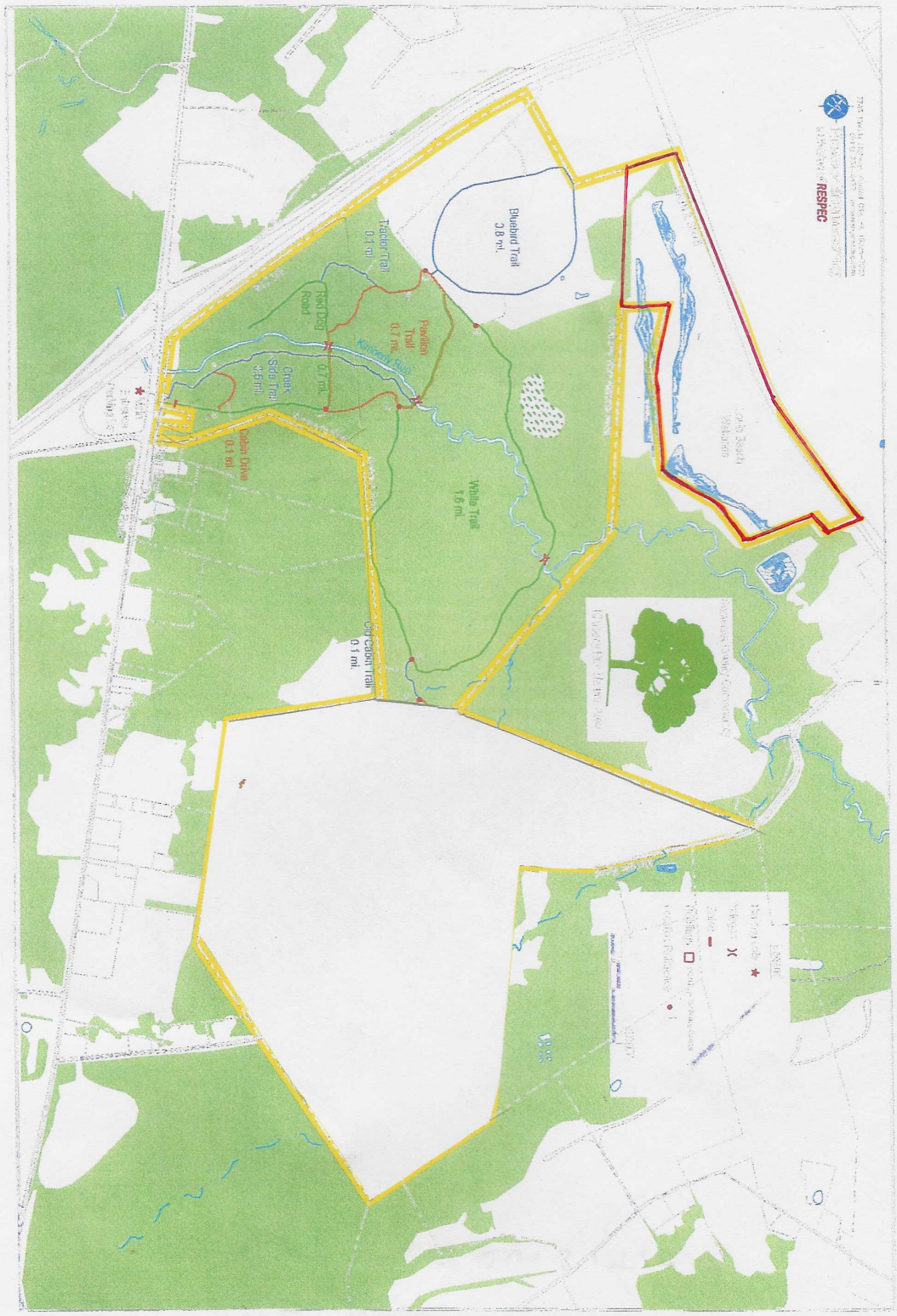
A 70-acre parcel of farmland located south of the PA Turnpike had been isolated when the Turnpike removed the access bridge and was subsequently bought by the State and used to construct a wetland mitigation bank for the PA Turnpike and PennDOT.

Long, linear pools were created and used to mitigate wetland damage due to road and bridge construction projects.

After a period of time, the agreement with the resource agencies in charge of wetlands, the PA Department of Environmental Protection, and the U.S. Army Corps of Engineers, was that the land would be turned over to a non-profit land organization and the Somerset County Conservancy was selected.

The property came with many deed restrictions and serves as a buffer between the PA Turnpike and the remainder of KRNA.

Louie-Beech Property Acquisition, *outlined in red*



History of KRNA Land Acquisitions, *continued*

2012 Florence Family Property—53 acres

The Florence family owned an adjoining 53-acre property on the south side of the original 248 acres off Craig Road, and they were approached about selling their property.

This parcel included:

- a three-room cabin, with utilities, used by the family for weekends
- a three-bay garage
- and most importantly, a concrete bridge across Kimberly Run allowing vehicle access to the picnic pavilion and the field area of the initial (PA State Hospital) parcel.

During this time, Elizabeth Piersol left the Conservancy a generous bequest, which allowed the Conservancy to negotiate a purchase with the Florence family.

In addition, a Community Conservation Partnership Program (C2P2) Grant was applied for and received from the PA Department of Conservation and Natural Resources towards the purchase of the property. Eventually an agreement was reached and the property was purchased in 2012.

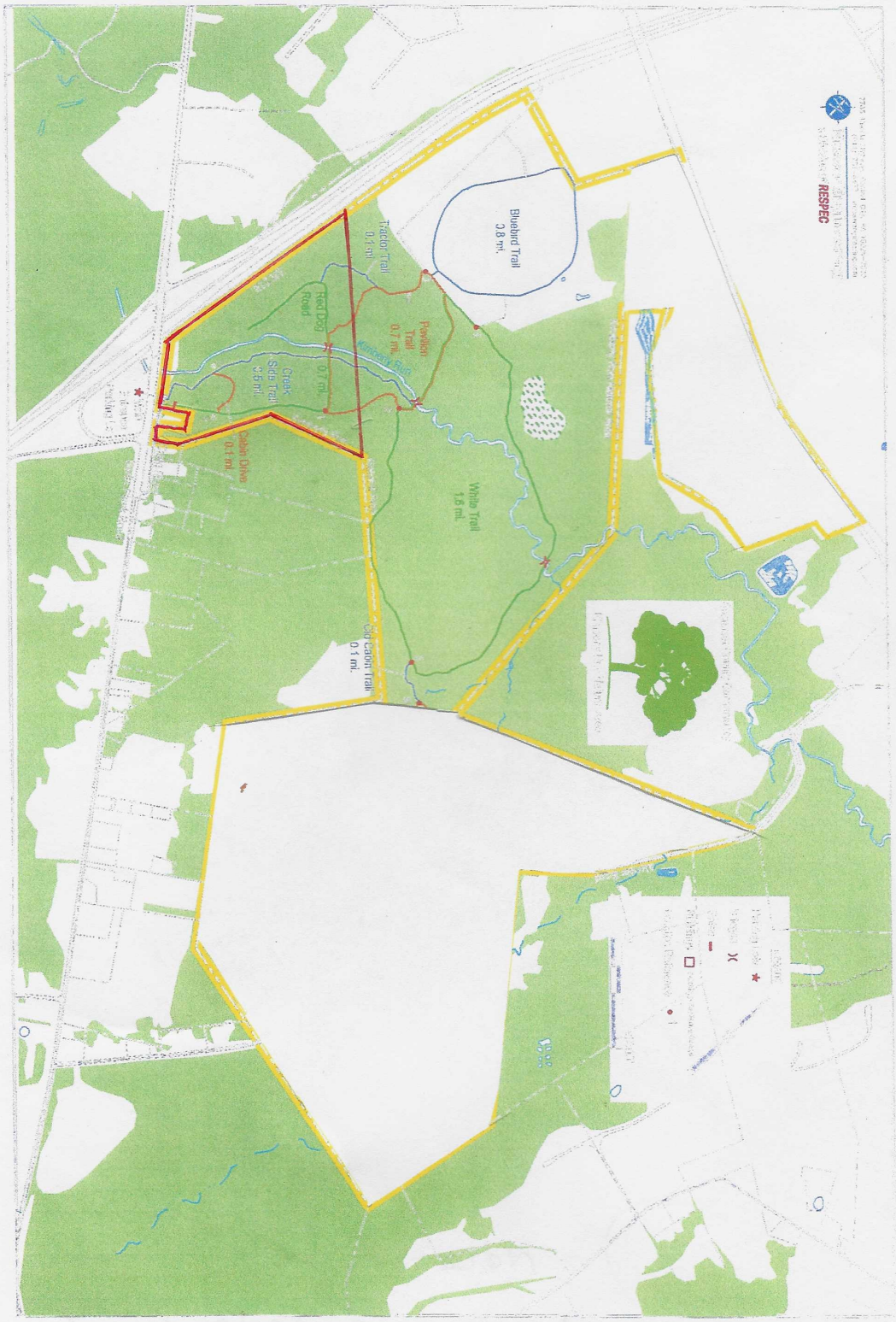
This property was all wooded with older growth trees of about the same age as the initial piece and contained mostly hemlock with interspersed oaks. The cabin and garage roofs were replaced and the garage bays were converted into a classroom area with work tables, lights, and microscopes, for stream-study workshops in partnership with local school districts.

New connecting trails, a parking area, signage, and benches were also constructed. Outside of the garage, additional tables and benches were constructed to expand the teaching area for outdoor education programs.

A partnership with the PA Fish & Boat Commission was established to supplement the Conservancy-stocking program for public fishing opportunities at Kimberly Run.

The land portion of the acquisition with its improved road access greatly enhanced the Conservancy's ability to provide outdoor education programs and proved to be very popular for the general public to enjoy hiking, cross-country skiing, and dog walking.

Florence Property Acquisition, *outlined in red*



History of KRNA Land Acquisitions, *continued*

2021-2022 Menser Family Property—275 acres

The most recent land acquisition was the 275-acre Menser Family tract which connects to the east edge of the original State Hospital property and extends east across Menser Road to a low-lying unnamed tributary to Kimberly Run.

This property has a mix of habitats including regenerating hardwood forest, areas of hemlock-dominated forest, old fields, a reclaimed strip mine area with warm season grass plantings, several springs, and a shrub-scrub wetland along the tributary.

The purchase is the largest Conservancy acquisition, which was made possible with a matching DCNR C2P2 grant. A bridge-loan from the Colcom Foundation through the Western Pennsylvania Conservancy (WPC), generous donations from Doug and Elena Brant, Pheasants Forever, Somerset Trust Company, the Menser family, and many other individual donors completed the necessary funding for this land purchase.

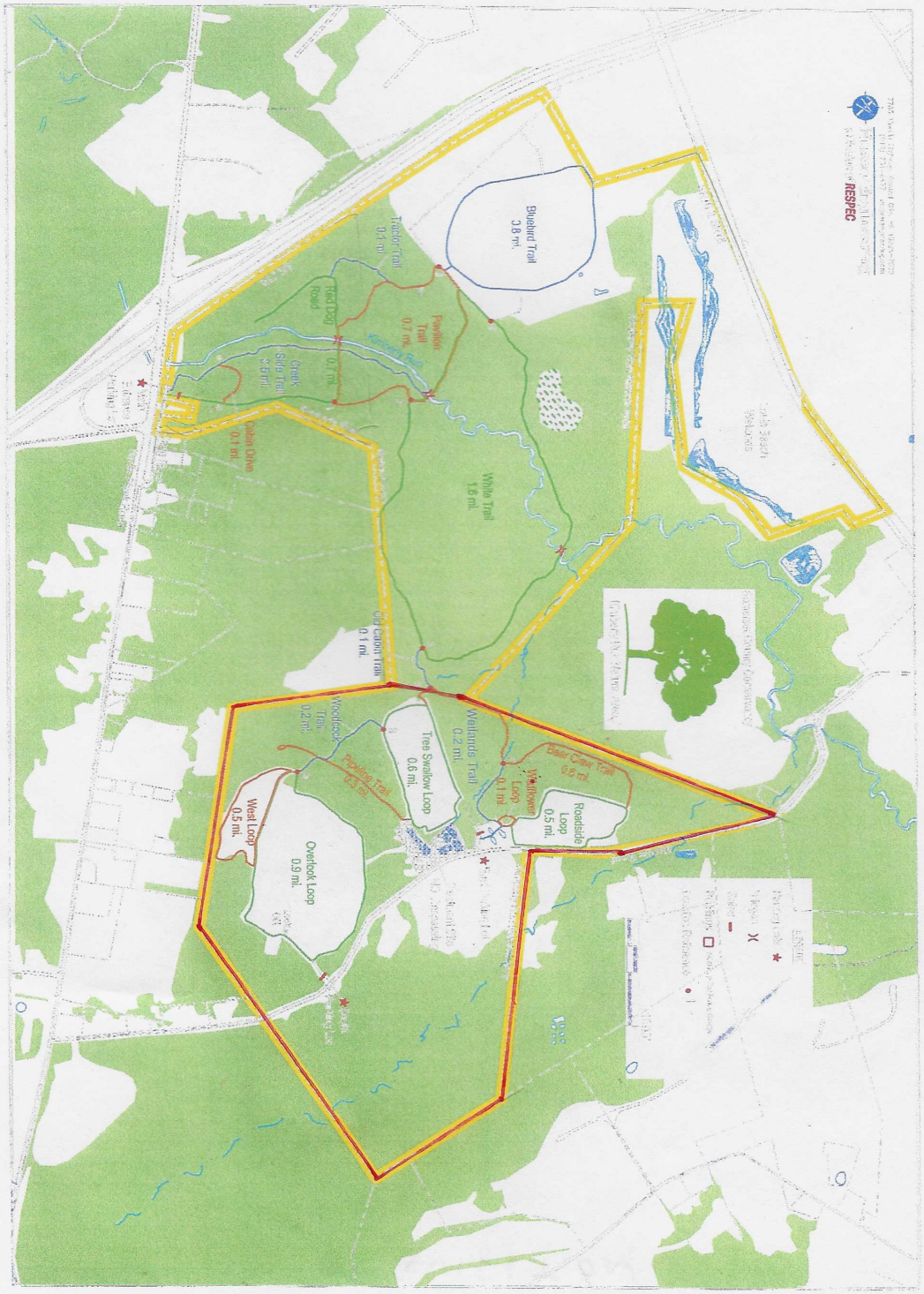
The Conservancy continues the previous management plan with the PA Game Commission to maintain established warm season grasses and native forbs, help control invasives, and stock Ring-necked Pheasants for public hunting.

A lease with Somerset Township to allow storage of road building material on 1.5 acres was also continued.

In the first two years, the Conservancy:

- built a parking area at the trailhead
- established approximately three miles of new trails, including a connecting trail to the existing KRNA trails
- installed signage
- designed and built a net-gain wetland area with design and permitting assistance from Partners for Fish and Wildlife
- a wildflower trail has been started
- projects with the Girl Scouts include installing bluebird boxes and establishing a wildflower and pollinator meadow
- hired a contractor in the spring of 2024 to remove approximately five acres of invasive autumn olive shrubs from field edges

Menser Family Acquisition, *outlined in red*



History of KRNA Land Acquisitions, *continued*

2024—2025 Pending Schrock Property—25 acres

This property fronts on Craig Road near the junction with the Berlin-Plank Road and the KRNA Florence Property main entrance.

The property has access to a public sewer system, has good visibility from the road, and could be suitable for a future environmental education center.

The beautiful older growth forest on this property borders a more remote area of KRNA and the trail system and is in the recharge area of an isolated bog

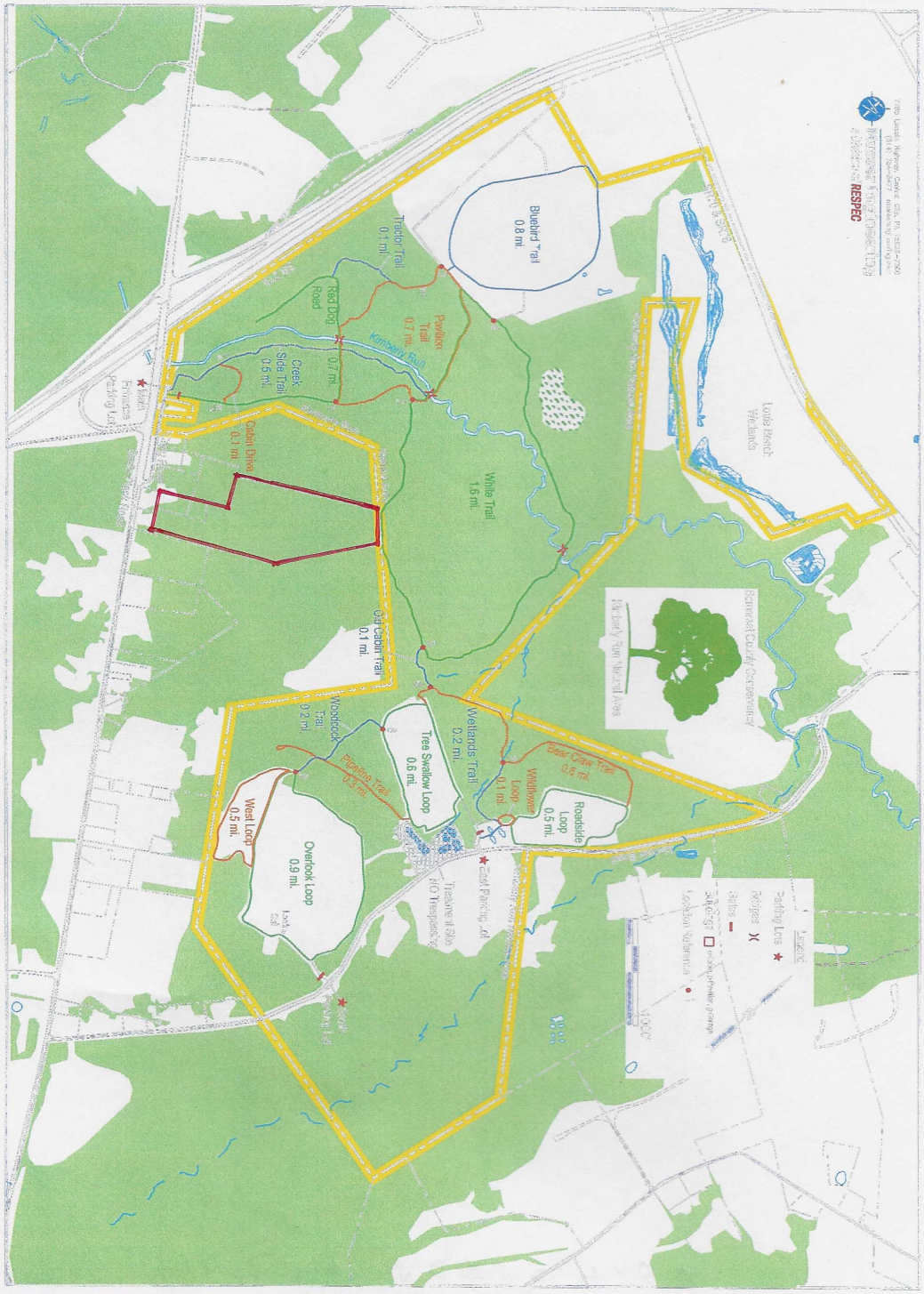
Appraisal was completed and the owners agreed to a bargain sale. Fundraising has begun and a DCNR C2P2 grant will be applied for in January 2025. Closing on this property is scheduled for March 2025.

2024 Total Area of KRNA—670 Acres

The culmination of five land acquisitions currently comprise a total a 670 acres of a contiguous preserve with multiple habitat types.

The KRNA provides open access to the land, and it is used extensively by the public for activities such as hiking, dog walking, outdoor education, nature-study outings, fishing hunting, snowshoeing, and cross-country skiing.

Proposed Schrock Family Acquisition, *outlined in red*



KRNA Future Goals for Expansion or Improvements

This plan is meant to discuss the present goals of the Conservancy, describe various management strategies, outline protocols, provide maps, and have appendices for present lists of various flora and fauna. It is meant to be a fluid document that can be updated as needed.

As of 2024, the physical attributes of the Kimberly Run Natural Area include about 647 acres of land and about eight miles of hiking trails. The property has one, three-bay garage that is partially converted to an outdoor classroom space with one bay for maintenance equipment storage. In addition we have a cabin with a propane heater and flush toilet (with a very poor quality water well) used for Board meetings and during some outings on the property.

The land consists of multiple habitat types including:

- a long section of Kimberly Run stream
- a section of unnamed tributary with extensive shrub-scrub swamp
- two bog areas containing sphagnum moss and typical bog plants
- a mitigation wetland area near the PA Turnpike
- four, 20-year old, created potholes in the large field bordering SR 219; three larger net gain pothole wetlands created in 2023 near Menser Road
- large field habitats with warm season grasses and pollinator forbs on both SR 219 side and Menser Road side
- a large forested area containing 120+ year old trees, areas of more recently logged woodland, and a large area regenerating from older strip mining operations

The KRNA property is of sufficient size to provide considerable open space in the central part of Somerset County in very close proximity to Somerset Borough. Public access on this large tract allows people to experience nature close to town. On the landscape level, there is connectivity to SGL 50 across the Berlin Plank Road. This habitat connectivity is recognized as being important to allow expansion and movement of plants and animals (see Appendix H).

There are some properties around the KRNA which would be desirable to protect from development to help maintain the integrity and remoteness of the core areas of KRNA. The main properties of interest due to their mature woodlands, proximity to an isolated bog, and potential for developing an environmental education center are the Schrock and Lyons properties on the Craig Road close to the main KRNA entrance. Also of interest is some of the wetland area owned by New Enterprise Stone and Lime Company (NESL). Present negotiation with the Schrock family who are willing sellers is nearing completion. This purchase will necessitate fundraising and grant writing. We have had discussions with NESL about our interest in the northwestern portion of their property. Pursuing purchase from willing sellers, using conservation easements, or accepting donations could all be satisfactory methods to protect these surrounding properties.

The trail system (see Appendix F) is fairly extensive with only the east side of Menser Road and the area around the Louie-Beech (mitigation) Wetlands not having trails. Trails take work to develop and especially to maintain over time. It may be prudent to leave some undeveloped areas without trails—they could still be accessed with a good pair of boots.

KRNA Future Goals for Expansion or Improvements, *continued*

Wetland areas have been a major asset of the KRNA. The Commonwealth of Pennsylvania has lost many of its original wetlands and the losses continue to this day. Many plant, bird, mammal, amphibian, and insect species depend on wetland areas and it has been the goal of the Conservancy to encourage net gain wetland areas to help counter this trend. The Louie-Beech Wetlands were done as a mitigation project for PennDOT and the PA Turnpike and were turned over to us. They do provide wetland habitat that complements other natural wetland areas on the property.

Early in the Conservancy's ownership of the original 248-acre property, we partnered with US Fish and Wildlife Service to plug some old drainage ditches going through one of our bog areas and to create several pothole type areas in a large field. The bog regained lost water and the potholes now teem with amphibians, dragonflies, and wetland plants.

In 2023, we undertook a pothole creation project on the recently acquired Menser property which created about 1/2 acre of new wetland area that has already attracted shorebirds, multitudes of frogs and toads, Painted Turtle, and nesting Wood Duck.

Potentially building a larger wetland on the east side of Menser Road is presently being pursued with planning assistance from Partners for Wildlife. Permitting logistics and possible funding sources will be explored.

A future, new physical structure to provide a headquarters office, meeting room, and an environmental education center with educational space is a very desirable, long-term goal. Potential siting considerations need to include accessibility, parking, proximity to utilities, zoning, surrounding natural attributes, security, and enough visibility to draw visitors. Actual size and design would obviously be impingent upon funding being available for construction and long-term operation and maintenance. At this time, areas along Craig Road which have access to public sewage and good visibility are being considered.

Another area of importance to the Conservancy is to plan for hiring an Executive Director to help direct the planning and running of programs, promotion of the Conservancy, maintenance of property and equipment, and fundraising.

The above have been successfully done by the all-volunteer Board of Directors for 30 years, but long-term continuance of effective operations would be best assured by an employee whose time and efforts are dedicated to further the Conservancy's goals.

Exploring qualified candidates, initial funding, and endowed monies needed for long-term funding of a position will be necessary to establish this position. (see Appendix A—Job Description)

Financial Planning and Long-Term Funding

The Somerset County Conservancy was incorporated and obtained 501(c)(3) status as a not-for-profit organization in 1994. It was started with no funding source and throughout the early years, necessary expenses were paid by memberships, donations, a few small grants, and fundraisers such as the World Series of Birding.

Early land acquisitions for abandoned mine drainage treatment systems were largely donated with the exception of the Mallard's Rest project, near Boswell, that was purchased with a donation from the Jenner's Sportsmen organization.

The initial 248-acre Kimberly Run Natural Area was purchased from the PA Department of General Services for a modest fee covered, by the initial above-named sources, after a long negotiation and with the help of our local, state-elected officials, including State Representative, Bill Lloyd, State Representative, Bob Bastian, and State Senator Richard Kasunic.

The landlocked initial KRNA property dilemma was solved with a very generous bequest from the estate of Elizabeth and William Piersol. The money from that bequest allowed us to purchase the 53-acre Florence Property which abuts Craig Road and has a concrete bridge over Kimberly Run allowing vehicle and maintenance equipment access to the original KRNA lands. A retroactive matching grant from DCNR's C2P2 Grant program then refreshed the treasury enough to do needed maintenance and improvements.

In 2010, a fund was set up with the Trust Department at Somerset Trust Company which invested some of our funds allowing those monies to grow much faster than in a savings account.

There had been suggestions from early on to establish an endowment fund, especially by one of our founding Board members, Lester Brunell. We did not at the time have excess money to tie up.

In 2021, the opportunity came up to buy the adjoining, 275-acre Menser Farm. With enough money to cover the appraised price, we were able to do a purchase agreement; subsequently, with the help of the Western Pennsylvania's Colcom Bridge Loan, a DCNR C2P2 grant, generous contributions from Doug and Elena Brant, Pheasants Forever, the Somerset Trust Company and many others, we were able to raise the money needed for that purchase and some improvements in a timely manner.

In 2023, with some of the extra money from fundraising, a bequest from the Bill McMaster Estate, and some proceeds from the sale of donated land in Gray, we were able to establish an endowment within our Trust Fund for maintenance costs at KRNA .

Financial Planning and Long Term Funding, *continued*

At present, our annual operating budget is running in the neighborhood of $20,000. Income from the endowment is presently $4,800 and rent from a small piece of our property to Somerset Township brings in $2,400. The rest is derived from membership dues and donations. We anticipate an increase in budgetary needs for insurance in the near future.

To begin to meet some of the following future goals will require significant enhancement of our endowment and other fundraising:

- hiring an Executive Director
- enlarging our education offerings
- building an environmental education center

Some ideas to pursue towards this goal include:

- grant writing
- encouraging memorial donations
- increasing memberships
- encouraging estate planning bequests
- educating the public on making direct contributions from required IRA distributions to minimize taxes
- organizing banquets
- having annual fund drives
- creating a paid speaker's program to benefit the Conservancy

Another attractive option would be to identify another conservancy or foundation with similar goals to cooperate.

Establishing a target amount for the Endowment Fund with a well-delineated reason for the goal should be a priority. For instance, if the goal is to have an Executive Director, and the budget for that is $50,000, then the target amount for the Endowment is $1.25 million (using 4% annually) if the entire salary cost is to be covered by the Endowment.

Other scenarios can certainly be set and a variety of strategies employed to reach the goal.

Environmental Education Center Goal

The Conservancy is committed to providing an appreciation for nature through hands-on experiences at the KRNA with programs designed for children, families, and adults.

Our school programs are designed to give an introduction to water quality and its association with a healthy ecosystem starting with macroinvertebrates and leading into fish.

Our nature investigative programs have included birds, trees, ferns, wildflowers, fungi, spiders, moths, and amphibians with people having all levels of knowledge to learn about the natural world.

This commitment follows our motto ***"conserve land, enhance habitat, and educate the community."***

Somerset County has a population of 74,129 (2020 Census) and a land mass of 1,081 square miles and does not have an environmental education center.

Historically the county has been heavily reliant on resource extraction with timber, coal, natural gas, and wind turbine sites. There has been environmental degradation associated with some of these industries and having a Center to show the benefits of judicious and gentle use of these resources would be desirable.

The Conservancy envisions building a environmental education center to provide programs, display biological specimens, and create a local destination to learn about the natural environment and responsible management of our natural resources for our current and future needs.

The envisioned environmental education center will have:

- room for displays, indoor classroom, and offices
- ideally it will be new construction designed with energy efficiency and sustainability
- alternatively, an existing structure could be retrofitted to meet the goals
- visibility to the passing public
- adequate utilities
- parking areas
- ADA accessibility
- proximity to the KRNA trail system is important

Ultimately, the environmental education center will serve the Conservancy to meet the educational goals set forth.

Educational Goals

1. **School Programs** - continue to provide educational opportunities for high school and elementary students at the KRNA which meet PA state curriculum and standards and will be matched to the classroom lesson plan. Strict attention to safety, transportation logistics, and consent forms will be required. There will also be opportunities for in-classroom environmental, water chemistry, and biological educational programs for all grade levels.

2. **Onsite Programs** - continue to provide and expand its environmental and biological programs for the public led by knowledgeable persons and experts in the field. Topics for these on-site field trips will include wildflowers, trees, geology, birds, snakes, frogs, macroinvertebrates, mushrooms, and fungi, etc. Photography and videography of these programs will be used to create educational resources for future learning and an opportunity for those unable to walk in the field to learn from these experiences.

3. **Educational Page in Conservancy newsletter** - design a recurring education page in the newsletter that will include educational information, as well as, recommended activities for children and families.

4. **Accumulate educational resources** - create a library of books, biological and geological specimens, photographs, videography, web-links, apps, and laminated posters, which will be accessible to the community.

5. **Identify and recruit** conservationists, environmentalists, biologists, and other professionals to present programs, serve on committees, and become Board members of the Conservancy.

6. **Partner** with civic organizations and youth groups to provide educational experiences and opportunities to enhance the habitat at KRNA.

7. **Environmental Education Center** - determine a site to build and design a building to become the Somerset County Conservancy environmental education center.

Succession Planning

Planning for the future means finding ways to assure that the mission and goals of the Conservancy can outlive the present Board of Directors.

Finding younger board members that share the vision is important and sometimes daunting due to generational shifts in volunteering and overall interests.

People who participate in our events and new, younger members should be offered the opportunity to join the Board. The Board does need to have a good balance of workers, educators, speakers, planners, and fundraisers for long-term health and growth of the organization.

Perhaps having a good Executive Director combined with an engaged and active Board is the best long-term hope for the survival of our organization. This should always be a top priority.

If, in the future, the organization is having trouble maintaining a dedicated volunteer Board, then the top priority should be to maintain the overall goals and the integrity of the KRNA as publicly accessible, open space, undeveloped land preserving all its natural assets. This could possibly be done by passing the land to another like-minded organization (such as a land Conservancy like the Western Pennsylvania Conservancy and The Nature Conservancy) or turning it over to a governmental agency for a park or game lands. The first option would be the best to preserve the overall goals and would be much more likely to happen if there was money for maintenance to accompany the land.

Field Management

At the time of this writing the Conservancy is applying for a PA Priority Grasslands Grant to facilitate the following outlined goals. This application is being overseen by West Penn Universities in cooperation with Pheasants Forever. Continued cooperation with the PA Game Commission will continue if this plan is funded.

The KRNA contains six, distinct open-field areas (see Appendix B—Field Management Map). These will need management if it is desired to keep them as more open grassland/pollinator type habitats or succession will convert them to early forest or shrubby thickets. Unfortunately, several introduced and now invasive shrub types (primarily Autumn Olive, Multiflora Rose and Japanese or Bush Honeysuckle) dominate in early succession and hamper the growth of native shrubs or trees so even areas that may be desired to return to forest need some management until well established. The objective of the Conservancy is to encourage the persistence of multiple habitat type on the KRNA to allow as much species diversity as possible, therefore maintaining field habitat is important for our long-term goals.

The majority of the field areas are desired to stay as grasslands, pollinator/forb fields, or emergent wetlands. These type habitats support plants necessary for pollinators such as bees, butterflies, and moths. Grassland nesting bird species such as Eastern Meadowlark, Bobolink, Grasshopper, Vesper, Henslow's and Savannah Sparrow, Upland Sandpiper, Northern Harrier, and American Kestrel are some of the fastest declining bird species in Pennsylvania mostly due to loss of suitable habitat due to changing farming practices and old strip mines reverting to invasive shrub habitat. Several of these bird species have been known to nest at KRNA.

Emergent wetland and pothole type habitat supports many amphibians, reptiles, and insects such as the Odonates (dragonflies and damselflies). Past projects creating small potholes in the open field areas have had dramatic success in drawing all these taxa for breeding and feeding.

Management of fields starts with control of the above-mentioned invasive shrubs and any non-woody, weed species that crowd out more desirable plants. Control of invasive shrubs can be accomplished by several different methods including manual cutting, with or without, chemical spraying with herbicides, machine cutting with brush hog or forestry head type equipment, or controlled burning programs. All these type regimens have been employed at KRNA and will need to continue if open field habitat is to persist. Prescribed fire and some mowing has been done with cooperative programs with the PA Game Commission. Volunteer work parties have done hand removal and the Conservancy has hired some mowing. It is hoped that the cooperative program with the PA Game Commission continues and new management programs can be established through other programs through agencies such as NRCS, US Fish and Wildlife, and the Western Pennsylvania Universities system.

Construction of pothole/emergent wetland habitats have been accomplished with help from the US Fish and Wildlife Service and West Penn Universities as well as direct funding by the Conservancy. It is a goal to build a few more of these net-gain wetland types. In addition, the Conservancy took over ownership of the Louie-Beech Wetlands, a mitigation wetland built through a partnership between PennDOT and the PA Turnpike Commission which adds diversity to the overall Conservancy.

The attached Field Management Map identifies six, open-field areas. Following is a brief description of past and future management goals. Fields 1, 3, 4, and 5 have mowed hiking trails around their periphery which also serve as fire breaks when controlled burns are performed.

Field 1 is also known as the Bluebird Field and is the first field from the original KRNA parcel. It had been a farmed field of marginal productivity up until the early 1990's. After acquisition, the Conservancy entered into PGC cooperative agreement and prescribed fire, planting of warm season grasses, and for a short time, the planting of food plots have been practiced. The Conservancy has done some mowing and manual removal of invasives. A series of small potholes were created around the east and south field edges by US Fish & Wildlife Service which have been successful. The field has had breeding Northern Harrier, American Kestrel, and several sparrow species. Continued similar management practices are anticipated in the future.

Field 2 is the Louie-Beech wetlands with several deed restrictions limiting development on the site. There is presently a heavy overgrowth of Autumn Olive and thick beds of Reed Canary grass. The PGC has plans to use prescribed fire and some mowing to attempt to establish more diverse wildlife habitat. This site has had nesting Wood Duck and Hooded Merganser.

Field 3 is known as the Roadside Field and, along with the following three fields, is part of the Menser Property acquisition. A farmed field up until the early 2000's. This field presently has a narrow strip of planted Switch Grass, extensive native goldenrods and asters, and a light growth of invasive shrubs; some have been removed by hand. PGC performed one controlled burn was prior to Conservancy's ownership. In the southerly portion of this field, a parking area (built in 2022 with assistance of Somerset Township), three potholes (constructed in 2023 with technical assistance from US Fish and Wildlife Foundation and West Penn Universities), and wildflower gardens were established (with help from Girl Scout troops). Continued management of the field with controlled burns is anticipated and a bluebird box trail is planned.

Field 4 is known as the Tree Swallow Field due to two lines of nesting boxes installed and maintained by Girl Scouts. The field was formerly farmed until the early 2000's and now consists of a central strip of goldenrod/aster habitat and outside edges of Big Bluestem predominate habitat. The southeast corner of this field had a heavy growth of Autumn Olive which was removed by a contractor hired by the Conservancy in Spring 2024. The PGC performed a controlled burn on the Big Bluestem edges in September 2024. Continued management of the fields with periodic controlled burns is anticipated.

Field 5 is known as the Overlook Field due to the long, scenic views of Somerset Borough and the Laurel Mountain from the field's higher elevation southside. This field is reclaimed strip mine and now consists of large areas of Big Bluestem, strips of goldenrod/aster, several clumps of Black Locust trees, and fairly extensive areas of invasive Autumn Olive/Multiflora Rose/ Bush Honeysuckle. Approximately two acres of thick invasive shrub was removed in 2024 by the Conservancy-hired contractor, and the area has been burned several times by the PA Game Commission, most recently in September 2024. Continued management with controlled burns will be necessary and areas of pollinator plantings will be future management goals.

Field 6 is an area that had some farm-field operation and some indication of being an old quarry area with a hill of fine, rocky debris in the center. It has large areas, especially on the south and east sides, which have growths of brushy invasives. These were mowed in 2023 by the PA Game Commission. There is 2-3 acre area along the north edge which has been looked at as a possible wetland creation site by Mark Thomas of West Penn Universities. Continued management of invasive brush, establishment of pollinator plants, and potential creation of a net-gain wetland are anticipated for this field.

Forest Management

At the time of writing, the Conservancy is applying for a USDA Natural Resources Conservation Service (NRCS) grant to write an approved forestry management plan. Establishing an approved plan will allow the Conservancy to apply for future grants through NRCS to accomplish the following goals. There is considerable background information that is relevant to any management decisions that would impact the forests types found in the KRNA.

The first consideration that should be given to any management plan is the overall goal for the forests contained in KRNA. Unlike the vast majority of state and privately owned forest in Pennsylvania which is managed on a tree-cutting rotation for economic gain and encouragement of relatively young, healthy, marketable trees, the KRNA forests are primarily being maintained for biological diversity and to exhibit the qualities of older-growth forest. Pennsylvania has relatively small forest areas devoted to this concept with State and National Forest Wild Areas and some private areas being the exception. The KRNA has several forest types, differing age class forest, and some fairly unique restrictions. Timbering or other forest management practices would be limited to a few areas.

Forest pests and diseases are a concern for these forests as well as many PA forests. The wooly adelgid has been found in the KRNA hemlocks and limited, insecticide bark spraying has been employed on two occasions with some success. There is relatively little white ash in this forest so the recent widespread death of these trees due to emerald ash borer had little impact here. An attack of the fall cankerworm which completely defoliated nearby trees in spring 2024 barely touched the southern border of the KRNA. It is not known if this native pest will return and what impacts it will have on large mature trees. The need to monitor for pests will be ongoing and, where appropriate and affordable, management strategies including biological, chemical, or physical removal may need to be employed.

Removing fallen or unsafe trees near trails will be ongoing to provide safe and enjoyable hiking for KRNA visitors.

For convenience, the attached map (see Appendix C—Forestry Management Map) divides the forested areas into seven lettered areas which will be discussed.

Section A is the original Conservancy acquisition of the former Somerset State Hospital/ Somerset County Poor House property. It has varied forest types with the northwest portion of the property containing large areas of hemlock forest with interspersed large red oak, white oak, red maple, scarlet oak, gum, and even a few American chestnut sprouts. A peninsula of woods to the north is primarily oak, immediately south of this is a bog area with shrubs and a periphery of planted pines and spruces. Beyond a bog in the center of this parcel, the southern portion contains primarily oak with lesser amounts of beech, maple, and hickory. This entire parcel has apparently not been harvested since approximately 1900 and contains trees over 125 years old and is approaching old-growth characteristics. Some older trees have fallen leaving gaps that younger trees are filling. One area shows evidence of a windstorm from the west with holes and humps of dirt on their east side where trees fell and have since decomposed. The unique management detail about this parcel was the need to minimize the timber value of this previously state-owned property to turn it over to the Conservancy and thus keep it open for the public. This was done by leaving the ownership of the timber value with the state but giving the Conservancy the decision on whether the trees would be cut. The Conservancy by deed restriction can cut small numbers for trail development, damaged trees impacting trails, or a small clearing for a building. This results in, by design, no financial incentive to cut trees.

Section B— also known as the Florence Addition was purchased to provide access to the landlocked, original State Hospital acquisition. It contains a cabin used for Conservancy meetings and picnics, a garage converted to an outdoor classroom and storage area, and importantly, a stout, concrete bridge giving vehicle/tractor access to Section A. This section is predominately hemlock with emerging large oak, maple, and a few other species. There is no cutting restrictions on this area, and it appears to be in the same age class as the adjacent Section A. It is the main entrance with numerous trails and is enjoyed by the public for its scenic nature and contains a healthy population of interior-forest breeding birds. Any cutting in this area would need to consider the aesthetic and biological importance of the mature forest and is thus not likely to occur.

Section C—is part of the 2022 Menser property purchase. It was selectively logged in approximately 2010 and appears to have a healthy regrowth of oak, hickory, maple, and a few other species. To the northeast this section has younger hemlocks along a small, unnamed tributary to Kimberly Run. This is a section that could possibly be put into a timber-cutting rotation with any further harvesting being decades in the future.

Section D—was harvested at the same time as Section C above. It has some invasive undergrowth such as multiflora rose and autumn olive. It also does not appear to have as much regeneration of desirable tree species. This relatively small peninsula of trees could use some management.

Section E—is generally low-lying, early regrowth predominated by red maple with some areas along a small intermittent stream having alders. The area marked Woodcock Trail has a moist, forest floor which has been used by American Woodcock but as the maples are getting taller the forest floor is more open and reduced cover is not holding as many birds. There are areas along the western boundary of this section that have considerable multiflora rose. Possible management could include removal of invasives and establishment of more valuable wildlife or timber trees.

Section F—has a nearly pure stand of red maple on the northwest portion with a few oaks near the southern property line. There is a heavy growth of autumn olive along the north border of this section. Some of the invasive autumn olive was removed with a forestry head in the spring of 2024 but is expected to regrow. Possibly planting oak or conifers could be considered in this area.

Section G—is a more remote area of the KRNA without any trails. It generally slopes down to multiple small springs which come together to form the unnamed KRNA tributary and a large area of scrub/shrub swamp. There is no large timber in this area with tree species including maple, beech, and some hickory and oak on the upper slopes. At present, it is the intent to leave this area more remote without trails. Timber management plans could be explored for the future.

Annual Maintenance of KRNA Lands/Buildings

The KRNA lands and buildings need yearly maintenance to keep the woods, fields, and buildings in good repair, safe, and attractive for enjoyable use by KRNA visitors. The Land Committee currently oversees maintenance and work is performed by members, summer interns, and occasional work parties. If an Executive Director is hired, it would be their responsibility to oversee the land and equipment maintenance. To facilitate maintenance of the grounds, the Conservancy owns several pieces of equipment including a Steiner mowing tractor, a John Deere garden tractor, assorted weed whippers, blowers, chain saw, and numerous hand tools.

A partial listing of the annual maintenance requirements is:

1. KRNA trails are meant to be forest and field walking paths to give visitors access to various habitat types throughout the preserve. Trail maintenance includes mowing the trails in the field areas and removing fallen trees and brush after storms - this sometimes requires hiring a professional tree service when difficult trees hang up in the canopy. The new growth that hangs over trails is trimmed back as needed. Weed whipping where necessary in the wooded portions of the trail is performed. Seasonal wet spots have board walks laid on top of the ground and these are maintained—painted with non-slip paint as required and any bad boards replaced. Trail markers and signs are maintained to make visitor navigation easy. Trail maps are on kiosks at the parking lot entrances, paper maps are in boxes, and downloadable maps are available on our website or through QR codes. The "Red Dog Road" trail is a level, accessible trail and is kept in good, smooth repair.

2. Buildings presently in the KRNA include the garage/outdoor classroom and the cabin. Externally both structures need their roofs cleaned of fallen leaves and debris. The outside doors and walls are cleaned as needed. The cabin and its deck need to be periodically painted or stained. External inspections for any visible problems are performed annually.

3. Picnic tables and benches are cleaned and re-stained or waterproofed as needed. The grounds around the buildings and campfire area are kept free of debris.

4. The inside of the buildings need to be kept clean and windows washed. The cabin has an annual protocol to open in spring and winterize before prolonged cold weather. The propane tank needs to be checked and occasionally have a partial refill to allow heating in late spring and early fall.

Bridge Maintenance

In 2023, a PA State Bridge Inspector noticed the cement bridge on the Red Dog Road Trail was beginning to wash out underneath the bridge abutments. The Somerset County Conservancy Board took corrective steps to stop this process by placing small rocks underneath the washed out areas and placing larger rocks in the front to keep the smaller rocks in place. In 2024, the same bridge inspector found the repairs to be adequate. This will help the longevity of the bridge for years to come. The bridge will be inspected annually to ensure the rocks are staying in place and water is not able to wash under the its abutment.

Any weak or decaying boards on the wooden bridges and boardwalks will be replaced every three to five years, or as needed. They also need to be painted with nonslip, grip-paint every three to five years.

Appendices

Appendix A
Anticipated Executive Director Job Description/Responsibilities

Oversee Programming

This will entail helping decide on programs such as talks and walks, helping lead or finding leaders for these programs, advertising the programs through various methods and at appropriate times, communicating with those signed up for programs as needed and documenting through pictures and words the success of the program and ways to improve it.

Oversee Educational Programs

This would involve working with our Education Committee to help set up school-trip programs including communicating with teachers, school systems, helping set up and take down equipment, assisting with the actual programs, making sure needed supplies are available and finding ways to fund these educational efforts.

Oversee Property Maintenance/Interns

Property maintenance is currently done by Board members, summer intern(s), and with work parties. Organizing, prioritizing, training, participating in the work, and monitoring outcomes would be a job duty.

Develop an Annual Featured Event

Having an annual event identified to the Conservancy could help further our mission and can be used as a fund-raiser. This could be a banquet, an outdoor event, or festival, etc.

Membership Development

Will involve helping with membership-drive letters, brochures, using social media, and giving talks to community and service groups. Also attending related events such as Earth Day and environmental festivals will enhance membership. Promoting value for higher annual membership levels.

Fundraising

Some methods to explore include developing membership and business involvement, making ties with individuals who share the Conservancy mission and have means to donate, identifying and applying for grants, developing memorial programs, developing bequest programs, develop fee-speaking or other fee-based programs or travel, have businesses sponsor youth educational programs, use annual event to raise funds, sell related merchandise.

Assist Treasurer

Assist with bills and payments for Treasurer to sign, budget, and help organize papers for annual compilation/audit.

Attend Board Meetings

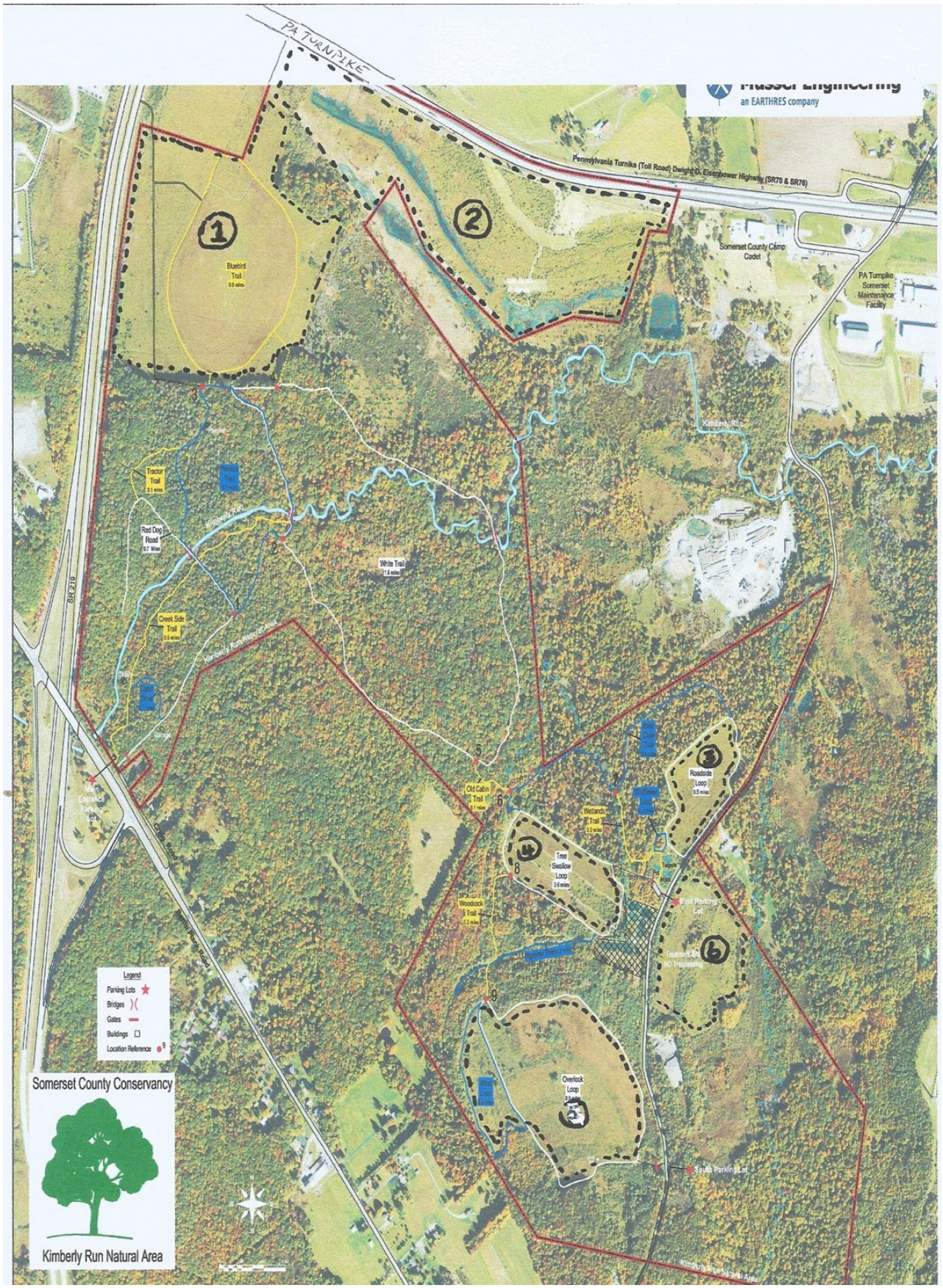
Have reports for Board and help with agendas

Social Media

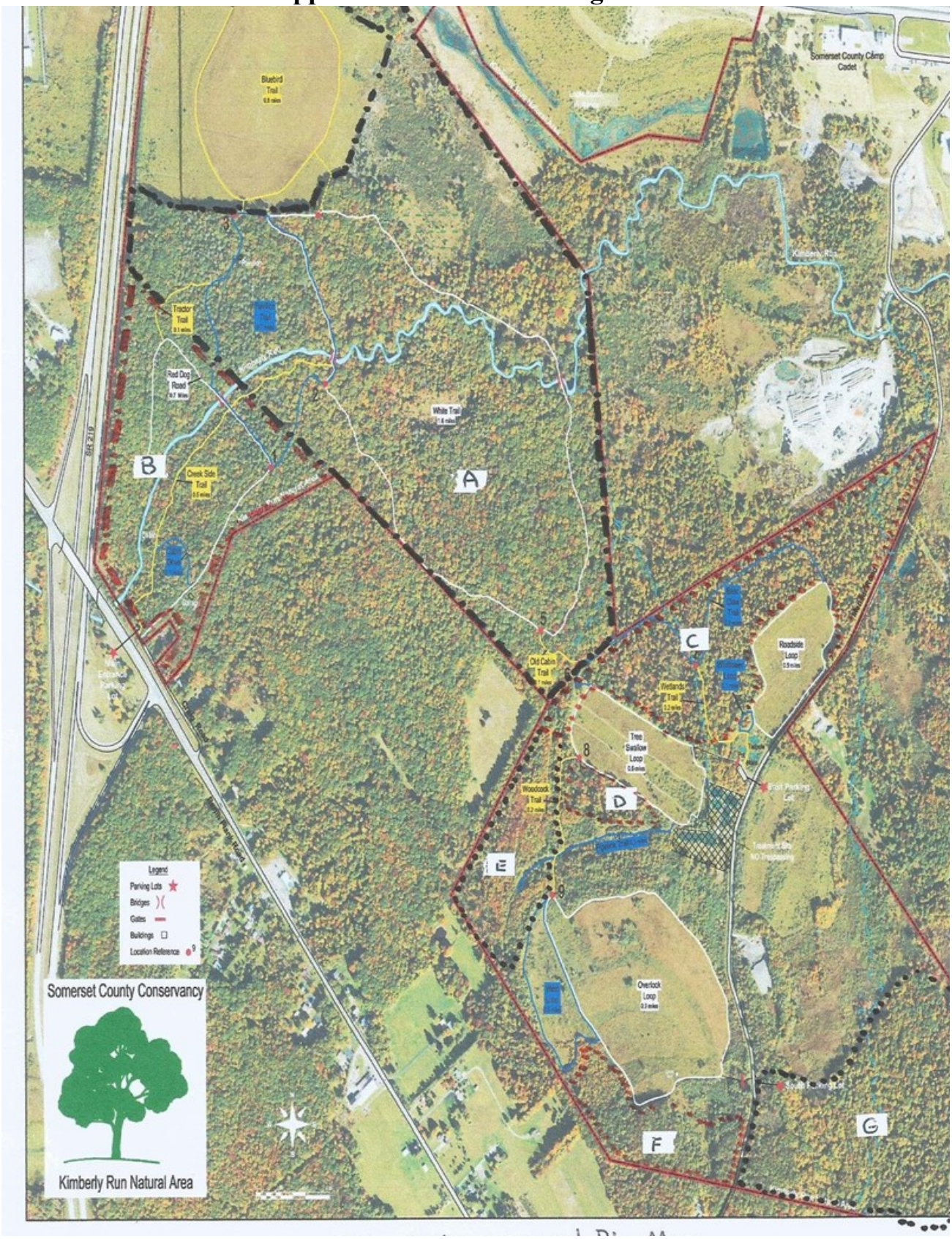
Develop and maintain a strong social media presence to promote Conservancy to younger generation.

Take on Board Directed Projects

Appendix B Field Management Map



Appendix C—Forest Management



Appendix D
Cooperative Partners with Conservancy Projects

The Conservancy has worked cooperatively with many local partners to advance compatible goals. These partnerships have greatly increased and enhanced the work that the Conservancy has been able to accomplish in its first 30 years. This is an alphabetical listing of these partnerships and a brief description of the accomplishments.

Boy Scouts—Troops have helped in work days to construct two of the hiking trails at the KRNA. Eagle Scout projects include: a wooden bridge over Kimberly Run, constructed several benches along the trails, placed picnic tables at the cabin, installed multiple signs to identify trees along the trails, and constructed portions of hiking trails including boardwalks over wet areas.

Conemaugh Valley Conservancy (CVC)—the Conservancy has collaborated with the CVC to design birding trails and has participated in teaching urban children about birding. These programs have sought to instill an appreciation for birding to urban youth, who otherwise would never develop an interest.

PA Department of Conservation and Natural Resources (DCNR)—has provided grants towards land acquisition through the Community Conservation Partnership Program (C2P2). Two grants were awarded, and the funds were used to help acquire the Florence Family and Menser Family properties. A new grant is being applied for to assist with the Schrock Property purchase.

Girl Scouts—the Scouts have placed many bluebird nesting boxes and maintained the bluebird house trails. They have also planted and maintained a wildflower garden at the newly created wetlands on the Menser family property.

Jenner Rod and Gun Club (JRGC)—donated monies to the land acquisition for the Mallard's Rest Acid Mine Drainage treatment complex, which the Conservancy currently owns and the Somerset Conservation District manages. This 45-acre property drains into the Quemahoning Watershed.

Appendix D
Cooperative Partners with Conservancy Projects, *continued*

Maryland/Delaware Search Dogs—the Conservancy has cooperated with this organization to provide a site for search dogs and their trainers to simulate search and rescue operations on the KRNA property.

Mountain Laurel Trout Unlimited (MLTU)—financed and built the interpretive trails and signage at the Oaks Trail and Mallard's Rest Abandoned Mine Drainage (AMD) site treatment systems.

USDA National Resource Conservation Service (NRCS)—provides the engineering design for all of the AMD treatment sites that the Conservancy currently owns. These six sites comprise more than 200 acres of land. Grant for a forestry management plan is currently being applied for through NRCS.

PA Dept. of Transportation (PennDOT) and PA Turnpike Commission (PTC)—these two entities collaborated to donate to the Conservancy the 70-acre Louie-Beech Property, which is a mitigation wetland site adjacent to the KRNA.

PA Fish and Boat Commission (PA F&BC)—initially leased the land on the west side of Somerset Lake to the Conservancy. We constructed a primitive, walking trail along the west shore and maintained it for four years until the County leased the entire property outside of the high-water mark to build the Somerset Lake Nature Park. The Conservancy created an ad-hoc committee, the Somerset Lake Action Committee (SLAC), to assist the PA Fish and Boat Commission to rehabilitate Somerset Lake. SLAC was instrumental in raising and securing funds to rehabilitate the dam at Somerset Lake and to convince the Somerset County Commissioners to design and build the Somerset Lake Nature Park, which includes a trail around the lake. The Conservancy, through SLAC, constructed a pavilion, a handicap accessible fishing platform, installed signage, financed trail building, and received grants that provided considerable funding for fish structure in the lake bed.

PA Game Commission (PGC)—the PGC provides expertise and controlled burns for the KRNA fields to maintain them as grasslands. They promote KRNA for youth pheasant hunting.

Pheasants Forever (PF)—provided funding for the Menser Family Property acquisition, since there is an implicit understanding that the KRNA will be open for pheasant hunting.

Somerset Chamber of Commerce (Chamber)—partnered and supported SLAC's fundraising efforts during the project to rehabilitate Somerset Lake and encouraged the Somerset County Commissioners to lease the land to develop a county park.

Appendix D
Cooperative Partners with Conservancy Projects, *continued*

Stonycreek Conemaugh River Improvement Project (SCRIP)—an important partner with all of the AMD treatment systems owned by the Conservancy that feed into the Stonycreek Watershed. They were particularly helpful and influential in motivating private landowners to permit the NRCS to build the AMD sites. Details available in the 2023 Somerset Conservation District's ***Restoration Time Line of the Stonycreek River and Upper Conemaugh River Basin (copies available from the Somerset Conservation District upon request)***

Somerset Conservation District (SCD)—provides supervision, operation, and maintenance for all of the AMD sites currently owned by the Conservancy. The SCD and the Conservancy enjoy a shared intern program and have an agreement for them to provide Professional Services for the Conservancy newsletter and other services.

Somerset County—the Somerset County Commissioners were very supportive of Somerset Lake Action Committee and agreed to lease the land around Somerset Lake to create Somerset Lake Nature Park.

Somerset County Sportsmen's League Club—the Sportsmen provided financial support for the Menser Family Property and Schrock Family Property acquisitions and SLAC's efforts to rehabilitate Somerset Lake.

Somerset Inc.—is an organization which promotes business in the uptown area of Somerset. The Conservancy provides a booth promoting environmental education during their annual Earth Day event.

Somerset Township—has provided materials for the construction of parking areas at the trailheads, winter snow removal, and material for trail maintenance.

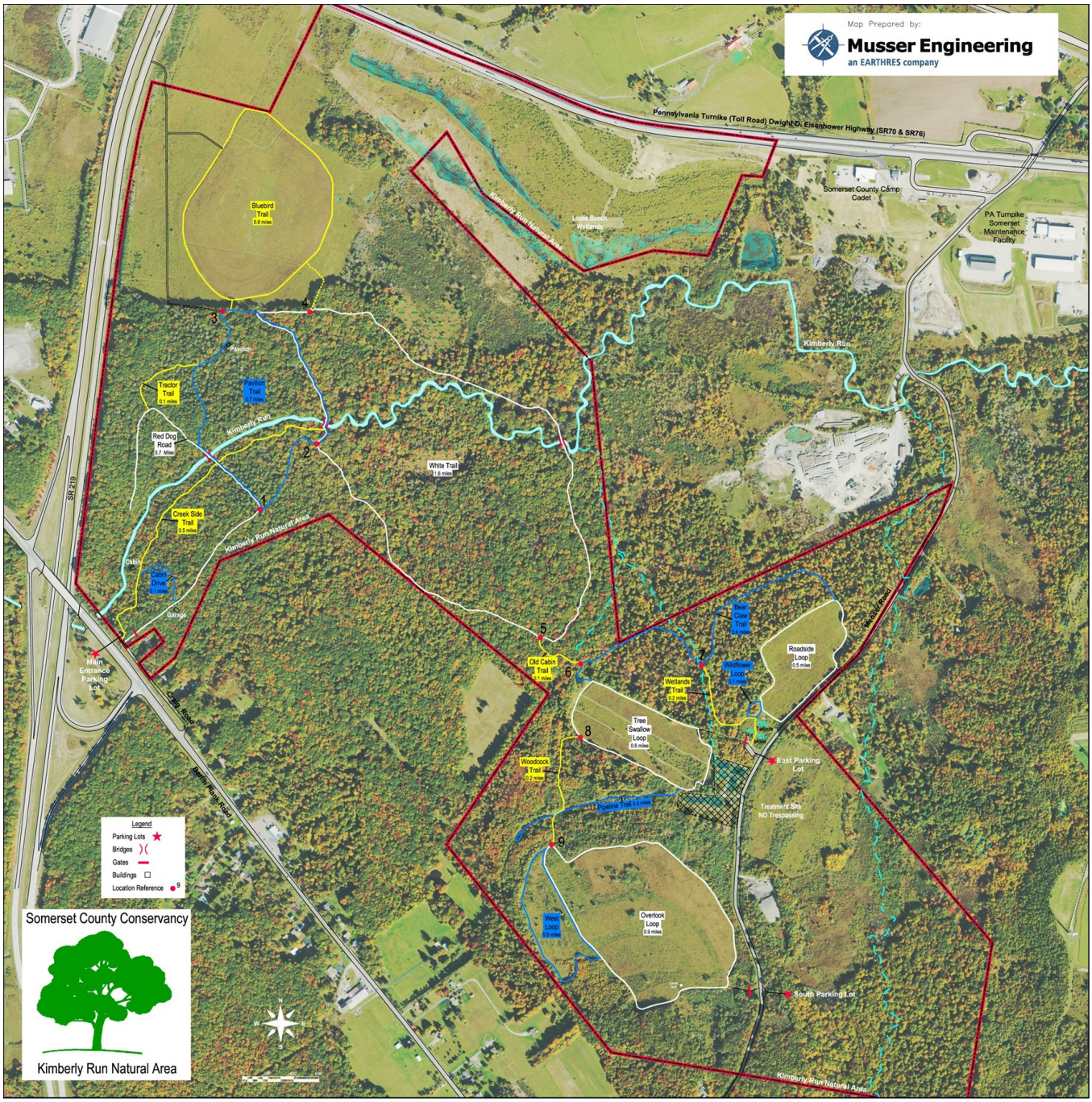
US Fish and Wildlife Service (USFWS)—has provided manpower and equipment to excavate potholes, design wetlands, and plug wetland drainage ditches at the original State Hospital Property reestablishing valuable wetland areas.

US Geological Survey (USGS)—the Conservancy has a monitoring well used by USGS to monitor water quality and quantity.

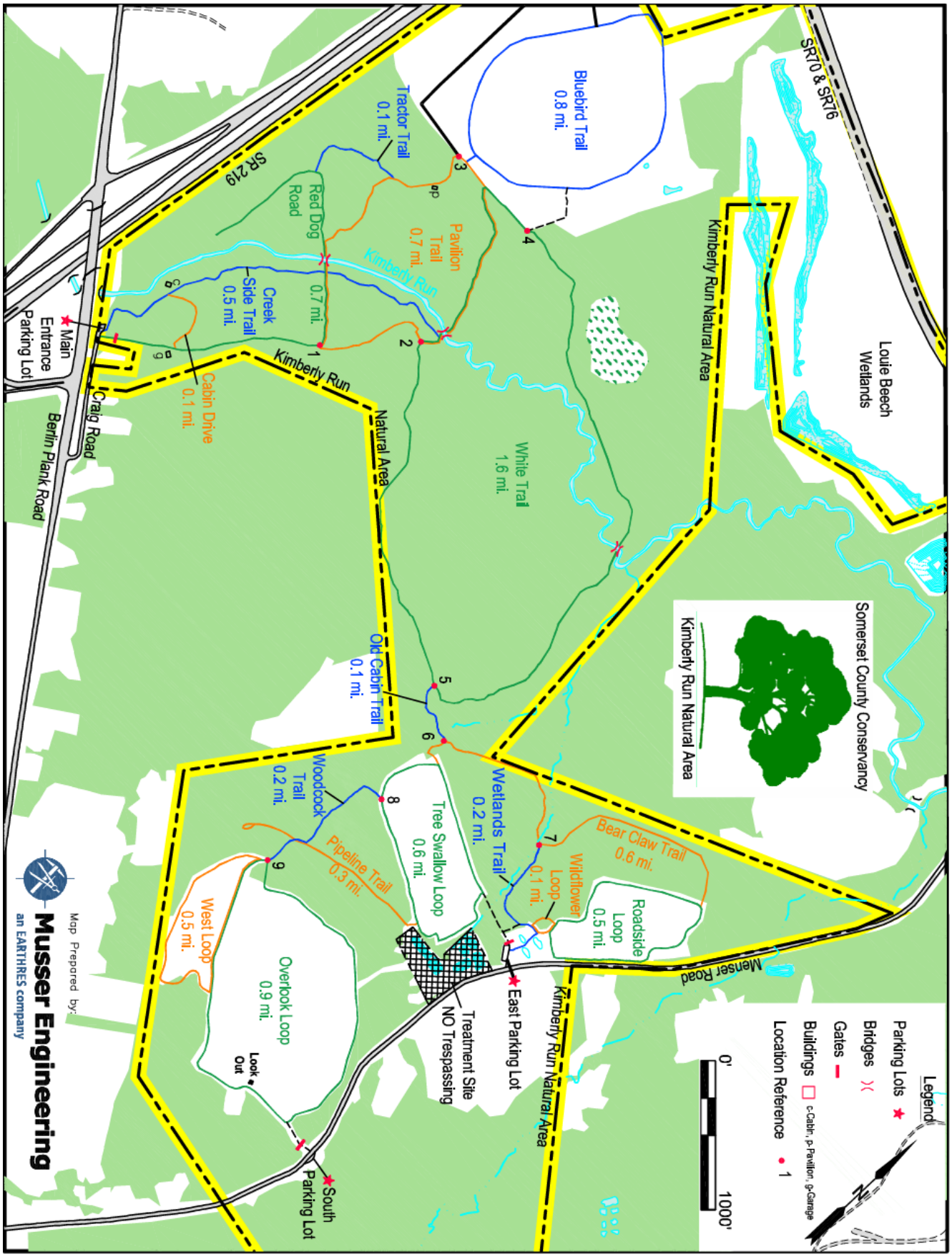
Western Pennsylvania Conservancy (WPC)—has assisted the Conservancy with grant writing support, a Colcom Bridge Loan, strategic property evaluation, and land Conservancy direction.

West Penn Universities (WPU)—has recently provided valuable assistance with design and permitting of a wetland on the Menser Family Property. They also donated appropriate seed for wildflowers and grasses for a pollinator wetland habitat. The Conservancy is presently applying for a PA Priority Grasslands grant administered by WPU.

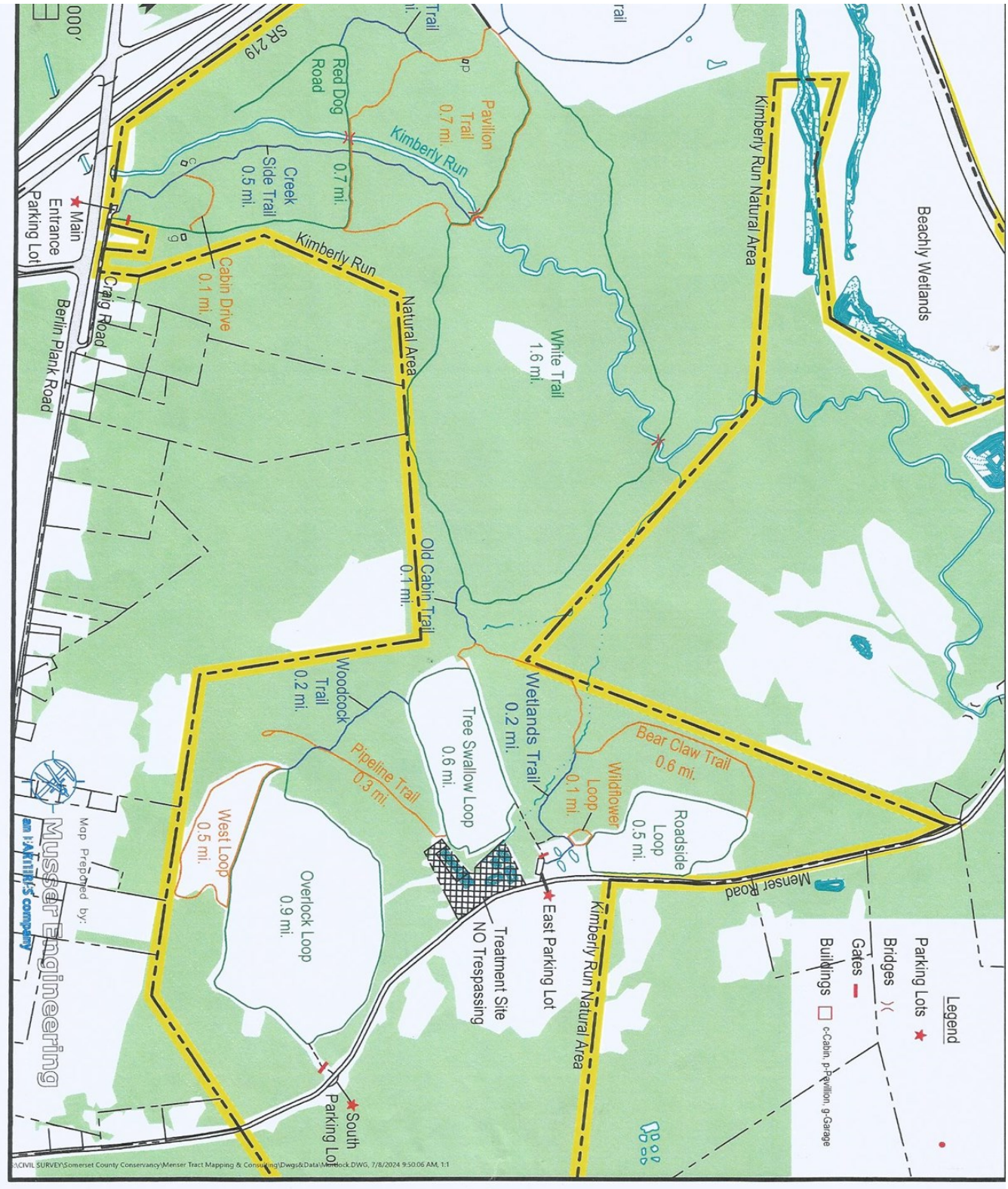
Appendix E—Google Map KRNA Overview



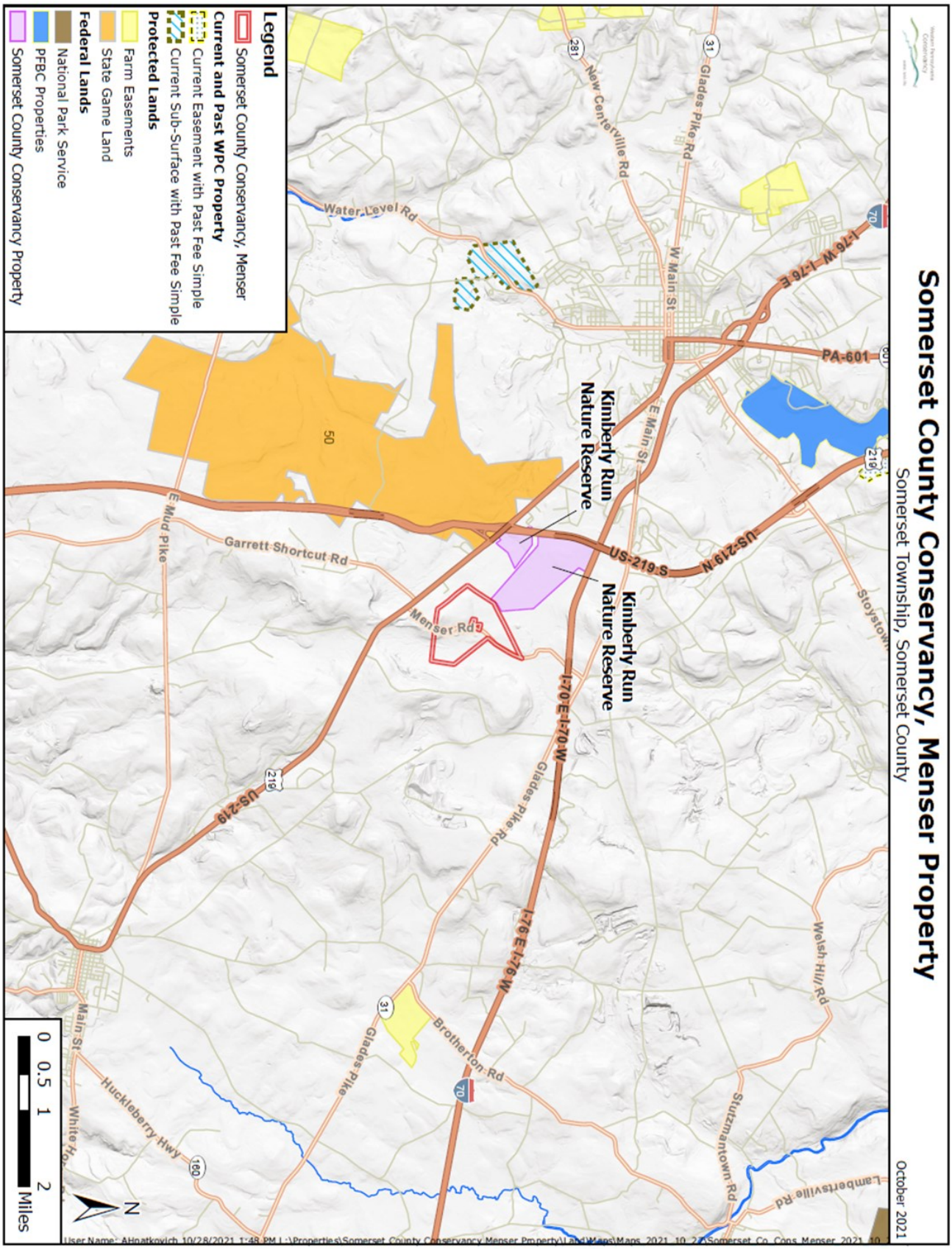
Appendix F—KRNA Trail Map



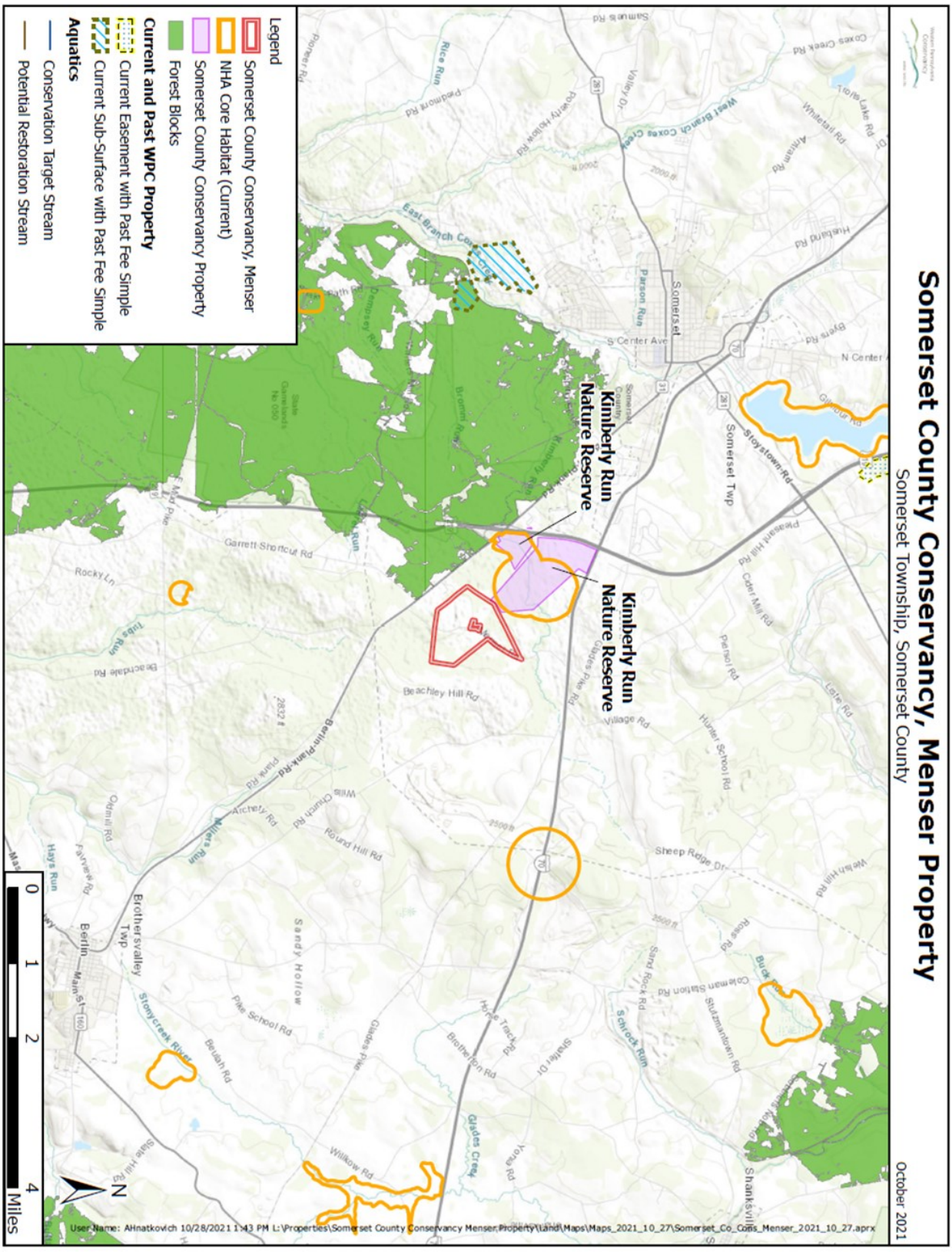
Appendix G—KRNA Map Showing adjoining properties



Appendix H—Map detailing connectivity with nearby protected lands



Appendix I—Map detailing connectivity with nearby protected lands



		S	Su	F	W
	WATERFOWL				
	Snow Goose	U	R	U	U
	Ross's Goose	R	-	R	R
	Gr. White-fronted Goose	R	-	R	R
	Brant	-	-	R	-
	Cackling Goose	R	-	R	R
R(B)	Canada Goose*	A	A	A	A
	Mute Swan*	U	U	U	U
	Trumpeter Swan	U	-	O	O
	Tundra Swan	C	-	C	U
M(B)	Wood Duck*	C	C	C	O
	Blue-winged Teal*	C	O	U	-
	Northern Shoveler	U	-	U	O
	Gadwall	C	-	U	U
	Eurasian Wigeon	R	-	R	-
	American Wigeon	C	-	U	U
R(B)	Mallard*	C	C	C	C
	American Black Duck*	C	O	U	U
	Mallard x Am. Black Duck	R	R	R	R
	Northern Pintail	C	-	U	U
	Green-winged Teal	C	-	U	U
	Canvasback	U	-	U	O
	Redhead	C	-	U	U
	Ring-necked Duck	C	-	C	U
	Greater Scaup	C	-	U	U
	Lesser Scaup	C	-	U	U
	Surf Scoter	O	-	O	-
	White-winged Scoter	O	-	O	R
	Black Scoter	O	-	O	R
	Long-tailed Duck	U	-	U	U
	Bufflehead	C	-	C	U
	Common Goldeneye	U	-	R	U
M(B)	Hooded Merganser*	C	U	U	C
	Common Merganser*	U	U	U	U
	Red-breasted Merganser	C	-	U	R
	Ruddy Duck	C	-	C	U
	GAMEBIRDS, GREBES, DOVES				
	Northern Bobwhite*	R-S	R-S	R-S	R-S
R(B)	Wild Turkey*	C	C	C	C
R(B)	Ruffed Grouse*	U	U	U	U
(B)	Ring-necked Pheasant*	U-S	U-S	C-S	C-S
	Pied-billed Grebe*	C	U	C	U
	Horned Grebe	C	-	U	U
	Red-necked Grebe	R	-	R	-
R	Rock Pigeon*	A	A	A	A
R(B)	Mourning Dove*	A	A	A	C

		S	Su	F	W
	CUCKOOS, NIGHTJARS, HUMMERS				
M(B)	Yellow-billed Cuckoo*	U	U	U	-
M(B)	Black-billed Cuckoo*	U	U	U	-
	Common Nighthawk*	U	R	U	-
	Eastern Whip-poor-will*	U	U	O	-
M	Chimney Swift*	C	C	C	-
M(B)	Ruby-thr. Hummingbird*	C	C	C	-
	Rufous Hummingbird	-	R	O	R
	RAILS, CRANES				
	Virginia Rail*	U	O	O	-
	Sora*	U	O	O	-
	Common Gallinule*	R	R	R	-
	American Coot*	C	O	U	O
	Sandhill Crane*	O	R	O	-
	SHOREBIRDS				
	American Avocet	-	R	R	-
	Black-bellied Plover	O	-	O	-
	American Golden-Plover	R	-	O	-
M	Killdeer*	C	C	C	R
	Semipalmated Plover	U	O	U	-
	Upland Sandpiper*	U	U	O	-
	Whimbrel	R	R	R	-
	Short-billed Dowitcher	O	O	O	-
	Long-billed Dowitcher	-	-	R	-
M(B)	American Woodcock*	C	U	U	-
	Wilson's Snipe*	C	O	O	-
	Red-necked Phalarope	O	R	-	-
M	Spotted Sandpiper*	C	U	C	-
M	Solitary Sandpiper	C	U	C	-
	Lesser Yellowlegs	C	U	C	-
	Willet	O	-	R	-
	Greater Yellowlegs	C	U	C	-
	Ruddy Turnstone	R	R	R	-
	Stilt Sandpiper	R	R	U	-
	Sanderling	O	-	O	-
	Dunlin	U	O	U	-
	Baird's Sandpiper	R	O	O	-
	White-rumped Sandpiper	U	O	O	-
	Least Sandpiper	U	U	C	-
	Pectoral Sandpiper	U	R	U	-
	Western Sandpiper	-	O	O	-
	Semipalmated Sandpiper	U	O	U	-
	GULLS, TERNS				
	Bonaparte's Gull	U	-	U	O
	Franklin's Gull	R	-	-	-
	Ring-billed Gull	C	O	C	O
	Herring Gull	O	-	O	O

		S	Su	F	W
	Great Black-backed Gull	O	-	R	R
	Lesser Black-backed Gull	O	-	-	-
	Caspian Tern	U	O	O	-
	Black Tern	U	R	U	-
	Forster's Tern	U	-	U	-
	Common Tern	O	-	O	-
	LOONS, HERONS				
	Red-throated Loon	O	-	O	O
	Common Loon	C	O	C	U
	Double-crested Cormorant	C	U	C	O
	American Bittern	U	R	O	-
	Least Bittern	R	-	-	-
	Black-crowned Night Heron	R	R	-	-
M	Green Heron*	C	C	C	-
	Great Egret	U	O	U	-
M	Great Blue Heron*	C	C	C	U
	Glossy Ibis	R	-	-	-
	VULTURES, RAPTORS				
	Black Vulture*	U	U	U	-
M	Turkey Vulture*	C	C	C	O
M	Osprey*	U	U	U	-
	Golden Eagle	U	-	U	O
M(B)	Northern Harrier*	U	U	U	U
R	Sharp-shinned Hawk*	C	U	C	U
R	Cooper's Hawk*	C	U	C	U
	American Goshawk*	R	R	R	R
	Bald Eagle*	U	U	U	U
	Red-shouldered Hawk*	U	U	U	O
M(B)	Broad-winged Hawk*	C	U	C	-
R(B)	Red-tailed Hawk*	C	C	C	C
	Rough-legged Hawk	R	-	O	U
	OWLS, WOODPECKERS				
	Barn Owl*	O	O	O	O
	Eastern Screech-Owl*	U	U	U	U
	Snowy Owl	-	-	-	R
	Great Horned Owl*	U	U	U	U
R(B	Barred Owl*	C	C	C	C
	Long-eared Owl	R	-	R	R
R(B)	Short-eared Owl*	O	-	O	U
	Northern Saw-whet Owl*	U	U	U	R
M	Belted Kingfisher*	U	U	U	O
M	Yellow-bellied Sapsucker*	C	U	C	U
	Red-headed Woodpecker*	U	U	U	R
R(B)	Red-bellied Woodpecker*	C	C	C	C
R(B)	Downy Woodpecker*	C	C	C	C
R(B)	Hairy Woodpecker*	C	C	C	C
R(B)	Pileated Woodpecker*	U	U	U	U
M(B)	Northern Flicker*	C	C	C	O

R = Resident > 112 as of 2024
M = Migrant
(B) = Known to have bred KRNA - 69 as of 2024

Appendix J—Birds

		S	Su	F	W
	FALCONS, FLYCATHERS, VIREOS				
R	American Kestrel*	C	C	C	C
	Merlin*?	U	U	U	O
	Peregrine Falcon	U	-	U	R
	Olive-sided Flycatcher	U	-	U	-
W(B)	Eastern Wood-Pewee*	C	C	C	-
	Yellow-bellied Flycatcher	R	-	U	-
	Acadian Flycatcher*	C	C	U	-
M(B)	Alder Flycatcher*	U	U	O	-
	Willow Flycatcher*	C	C	U	-
	Least Flycatcher*	U	U	U	-
M(B)	Eastern Phoebe*	C	C	C	R
M	Great Crested Flycatcher*	C	U	U	-
M	Eastern Kingbird*	C	C	C	-
	White-eyed Vireo*	U	U	U	-
	Yellow-throated Vireo*	U	U	U	-
M(B)	Blue-headed Vireo*	C	C	C	-
	Philadelphia Vireo	R	-	U	-
	Warbling Vireo*	U	U	U	-
M(B)	Red-eyed Vireo*	C	A	C	-
	Northern Shrike	-	-	R	O
	CORVIDS, CHICKADEE, SWALLOW				
R(B)	Blue Jay*	C	C	C	C
R(B)	American Crow*	A	A	A	A
	Fish Crow	R	-	R	-
R	Common Raven*	C	C	C	C
R(B)	Black-capped Chickadee*	A	A	A	A
	Carolina Chickadee	R	R	-	-
R(B)	Tufted Titmouse*	C	C	C	C
	Horned Lark*	C	U	C	A
	Bank Swallow*	U	U	U	-
M(B)	Tree Swallow*	C	C	C	-
	Purple Martin*	U	U	U	-
	N. Rough-winged Swallow*	C	U	U	-
M	Barn Swallow*	C	C	C	-
	Cliff Swallow*	U	U	U	-
	KINGLETS, NUTHATCHES, WRENS				
M	Ruby-crowned Kinglet	C	-	C	R
M(B)	Golden-crowned Kinglet*	C	U	C	U
R(B)	White-breasted Nuthatch*	C	C	C	C
M	Red-breasted Nuthatch*	U	O	U	U
R(B)	Brown Creeper*	U	U	U	O
M	Blue-gray Gnatcatcher*	U	U	U	-
M(B)	Northern House Wren*	C	C	C	-
M	Winter Wren*	U	U	U	O
	Sedge Wren*	-	O	O	-
M	Marsh Wren	O	R	O	-
R	Carolina Wren*	C	C	C	C

		S	Su	F	W
	MIMICS, THRUSHES				
R	European Starling*	A	A	A	A
M(B)	Gray Catbird*	C	C	C	R
M(B)	Brown Thrasher*	C	C	C	R
	Northern Mockingbird*	U	U	U	U
R(B)	Eastern Bluebird*	C	C	C	U
M(B)	Veery*	U	U	U	-
M	Gray-cheeked Thrush	O	-	U	-
M	Swainson's Thrush	U	-	C	-
M(B)	Hermit Thrush*	U	U	U	O
M(B)	Wood Thrush*	C	C	C	-
R(B)	American Robin*	A	A	A	U
	WAXWING, MISC. FINCHES				
M	Cedar Waxwing*	C	C	A	U
R	House Sparrow*	A	A	A	A
	American Pipit	U	-	U	O
	Evening Grosbeak	R	-	O	O
R(B)	House Finch*	C	C	C	C
M	Purple Finch*	U	U	U	U
	Common Redpoll	R	-	R	O
	Red Crossbill	R	R	R	O
	White-winged Crossbill	-	-	R	R
	Pine Siskin*	U	O	U	U
R(B)	American Goldfinch*	C	C	C	C
	Lapland Longspur	R	-	R	U
	Snow Bunting	R	-	R	O
	SPARROWS				
M(B)	Grasshopper Sparrow*	U	U	O	-
R	Chipping Sparrow*	C	C	C	O
	Clay-colored Sparrow	R	-	R	-
M(B)	Field Sparrow*	C	C	C	O
M	American Tree Sparrow	U	-	U	C
M	Fox Sparrow	U	-	U	O
M	Dark-eyed Junco*	C	U	C	A
M	White-crowned Sparrow	C	R	U	U
M	White-throated Sparrow	C	-	C	U
	Vesper Sparrow*	U	U	U	-
	Nelson's Sparrow	-	-	R	-
M(B)	Savannah Sparrow*	U	U	U	O
	Henslow's Sparrow*	U	U	U	-
R(B)	Song Sparrow*	A	A	A	C
	Lincoln's Sparrow	U	-	U	-
M(B)	Swamp Sparrow*	C	C	C	U
M(B)	Eastern Towhee*	C	C	C	O
	CHAT, ICTERIDS				
	Yellow-breasted Chat*	U	U	U	-
	Bobolink*	C	C	U	-
M(B)	Eastern Meadowlark*	C	C	U	O
	Orchard Oriole*	U	U	U	-
M(B)	Baltimore Oriole*	C	C	U	R
M(B)	Red-winged Blackbird*	A	A	A	U

		S	Su	F	W
R(B)	Brown-headed Cowbird*	A	A	A	U
	Rusty Blackbird	U	-	U	U
M(B)	Common Grackle*	A	A	A	O
	WARBLERS				
M(B)	Ovenbird*	C	C	C	-
	Worm-eating Warbler*	U	U	U	-
M(B)	Louisiana Waterthrush*	C	C	O	-
M(B)	Northern Waterthrush*	U	U	O	-
	Golden-winged Warbler*	U	U	U	-
	Blue-winged Warbler*	U	U	U	-
M(B)	Black-and-white Warbler*	C	C	C	-
	Prothonotary Warbler	R	-	-	-
	Tennessee Warbler	U	-	C	-
	Orange-crowned Warbler	O	-	U	-
	Nashville Warbler*	U	R	C	-
	Connecticut Warbler	-	-	O	-
	Mourning Warbler	O	-	U	-
	Kentucky Warbler*	U	U	O	-
M(B)	Common Yellowthroat*	C	C	C	R
M	Hooded Warbler*	C	C	U	-
M	American Redstart*	C	C	C	-
	Cape May Warbler	U	-	C	-
	Cerulean Warbler*	U	U	O	-
M	Northern Parula*	U	U	U	-
M(B)	Magnolia Warbler*	C	U	C	-
M	Bay-breasted Warbler	U	-	C	-
M(B)	Blackburnian Warbler*	C	U	C	-
M(B)	Yellow Warbler*	C	C	U	-
M	Chestnut-sided Warbler*	C	C	C	-
	Blackpoll Warbler	U	R	C	-
M	Black-thr. Blue Warbler*	U	U	C	-
	Palm Warbler	U	-	U	-
	Pine Warbler*	U	O	U	O
M	Yellow-rumped Warbler*	C	O	C	O
	Yellow-throated Warbler*	U	U	O	-
	Prairie Warbler*	R	R	R	-
M(B)	Black-thr. Green Warbler*	C	C	C	-
	Canada Warbler*	C	U	U	-
	Wilson's Warbler	U	-	U	-
	TANAGER, CARDINALS				
M(B)	Scarlet Tanager*	C	C	C	-
R(B)	Northern Cardinal*	A	A	A	A
M(B)	Rose-breasted Grosbeak*	C	C	C	-
	Blue Grosbeak	O	O	R	-
M(B)	Indigo Bunting*	C	C	C	-
	Dickcissel*	R	R	R	-

SEASON CODES
S = Spring March - May
SU = Summer June - July
F = Fall August - November
W = Winter December - February

Appendix K—KRNA Flora & Fauna Presently Identified

MUSHROOMS / FUNGI (49)

Class Discomycetes – Disc Fungi

____Stalked Scarlet Cup — *Sarcoscypha occidentalis*

Class Pyrenomycetes
____Amanita Mold — *Hypomyces hyalinus*

____Dead Man's Fingers — *Xylaria polymorpha*

____no common name — *Tilachlidium brachiatum*

Class Teliomycetes
____Goldenrod Rust — *Coleosporium asterum*

Class Hymenomycetes – Exposed Hymenium Fungi
____Witches' Butter — *Tremella mesenterica (lutescens)*
____Black Trumpet — *Craterellus fallax*

____Crown-tipped Coral — *Clavicorona pyxidata*
____Mossy Maize Polypore — *Cerenna unicolor*

____Thick-maze Oak Polypore — *Daedalea quercina*

____Tinder Polypore — *Fomes fomentarius*

____Artist's Conk — *Ganoderma applanatum*
____Hemlock Varnish Shelf — *Ganoderma tsugae*

____Chicken Mushroom — *Laetiporus sulphureus*
____Turkeytail — *Trametes versicolor*
____Violet-toothed Polypore — *Trichaptum biformis*
____Crowded Parchment — *Stereum complicatum*
____False Turkeytail — *Stereum ostrea*
____Caesar's Mushroom — *Amanita caesarea*
____Snakeskin Grisette — *Amanita ceciliae*

____False Death Cap — *Amanita citrina (lavendula)*

____Yellow Patches — *Amanita flavoconia*
____Tawny Grisette — *Amanita fulva*

____Fly Agaric — *Amanita muscaria* var. *formosa*
____Destroying Angel — *Amanita virosa*
____Cracked Earthscale / Hard Agrocybe — *Agrocybe dura*
____Two-colored Bolete — *Boletus bicolor*

____Yellow-cracked Bolete — *Boletus subtomentosus*
____Bay Bolete — *Imleria badia*

____Aborted Entoloma — *Entoloma abortivum*
____Asian Beauty — *Radulodon copelandii*

____Tacky Green Russula — *Russula aeruginea*
____Woodland Red Russula — *Russula silvicola*
____Honey Mushroom — *Armillaria (Armillariella) mellea*
____Blewit — *Clitocybe nuda*
____Common Laccaria — *Laccaria laccata*

____Pinwheel Marasmius — *Marasmius rotula*
____Jack O'Lantern — *Omphalotus olearius*
____Platterful Mushroom — *Megacollybia* (*Tricholomopsis) platyphylla*
____Orange Mycena — *Mycena leaiana*
____Poison Pie — *Hebaloma* sp.

____False Chanterelle — *Hygrophoropsis aurantiaca*

____Angel Wings — *Pleurocybella porrigens*

____Brick Caps / Cinnamon Caps — *Hyphaloma lateritium*

Class Gasteromycetes – Stomach Fungi
____Tumbling Puffball — *Bovista pila*
____Gem-studded Puffball — *Lycoperdon perlatum*
____Bird's Nest — *Crucibilum laeve*
____Dog Stinkhorn — *Mutinus caninus*
____Pigskin Poison Puffball — *Scleroderma citrinum*

Appendix K—KRNA Flora & Fauna Presently Identified, *continued*

SLIME MOLDS (1)

____Wolf's Milk	*Lycogala epidendrum*	

FERNS & ALLIES (20)

____Northern Lady Fern	*Athyrium filix-femina*	uncommon
____Upland Fragile Fern	*Cystopteris tenuis*	uncommon
____Hay-Scented Fern	*Dennstaedtia punctilobula*	abundant
____Northern Bracken Fern	*Pteridium aquilinum*	abundant
____Spinulose Wood Fern	*Dryopteris carthusiana*	uncommon
____Crested Wood Fern	*Dryopteris cristatata*	uncommon
____Evergreen Wood Fern	*Dryopteris intermedia*	abundant
____Christmas Fern	*Polystichum acrostichoides*	uncommon
____Sensitive Fern	*Onoclea sensibilis*	common
____Rattlesnake Fern	*Botrypus virginianus*	common
____Cinnamon Fern	*Osmunda cinnamomea*	abundant
____Interrupted Fern	*Osmunda claytoniana*	uncommon
____Rock Polypody	*Polypodium virginianum*	uncommon
____New York Fern	*Parathelypteris noveboracensis*	abundant
____Eastern Marsh Fern	*Thelypteris palustris*	uncommon
____Field Horsetail	*Equisetum arvense*	uncommon
____Fan Clubmoss	*Diphasiastrum digitatum*	common
____Princess-Pine/ Flat-Branch	*Dendrolycopodium obscurum*	abundant
____Shining Fir-Moss	*Huperzia lucidula*	common
____Staghorn Clubmoss	*Lycopodium clavatum*	common

GRASSES / SEDGES / RUSHES (24)

GRASS FAMILY - Graminae

____Big Bluestem	*Andropogon gerardii*
____Broomsedge	*Andropogon virginicum*
____Sweet Vernal Grass	*Anthoxanthum odoratum*
____Small Reed Grass	*Calamagrostis cinnoides*
____Barnyard Grass	*Echinochloa crusgalli*
____Tawny Cottongrass	*Eriophorum virginicum*
____Fowl Mannagrass	*Glyceria striata*
____Deertongue	*Panicum clandestinum*
____Switch Grass	*Panicum virgatum*
____Timothy	*Phleum pratense*
____Indian Grass	*Sorghastrum nutans*

SEDGE FAMILY – Cyperaceae

____Brownish Beaksedge	*Rhynchospora capitellata*
____Brownish Sedge	*Carex brunnescens*
____Northern Long Sedge	*Carex folliculata*
____Nodding Sedge	*Carex gynandra*
____Inflated Sedge	*Carex intumescens* B
____Eastern Rough Sedge	*Carex scabrata*

Appendix K—KRNA Flora & Fauna Presently Identified, *continued*

____Tussock Sedge	*Carex stricta*
____Three-seeded Sedge	*Carex trisperma*
____Kill Cow	*Eleocharis tenuis* B
____Tawny Cottongrass	*Eriophorum virginica* B

RUSH FAMILY – Juncaceae

____Short-tailed Rush	*Juncus brevicaudatus* B
____Canada Rush	*Juncus canadensis* B
____ Soft Rush	*Juncus effusus*

WILDFLOWERS (145)

____Wood Anemone	*Anemone quinquefolia*	Buttercup Family
____Marsh Marigold	*Caltha palustris*	Buttercup Family
____Three-leaved Goldthread	*Coptis groenlandica*	Buttercup Family
____Kidneyleaf Buttercup	*Ranunculus abortivus*	Buttercup Family
____Hispid Buttercup	*Ranaunculus hispidus*	Buttercup Family
____Swamp Buttercup	*Ranaunculus septentrionalis*	Buttercup Family
____Early Meadow-Rue	*Thallictrum dioicum*	Buttercup Family
____Blue Cohosh	*Caulophyllum thalictroides*	Barberry Family
____May Apple	*Podophyllum peltatum*	Barberry Family
____Wood Nettle / Itchweed	*Laportea canadensis*	Nettle Family
____Pokeweed	*Phytolacca americana*	Pokeweed Family
____*Lamb's Quarters	*Chenopodium album*	Goosefoot Family
____Carolina Spring Beauty	*Claytonia caroliniana*	Purslane Family
____Spring Beauty	*Claytonia virginica*	Purslane Family
____*Mouse Ear Chickweed	*Cerastium fontanum*	Pink Family
____*Deptford Pink	*Dianthus armeria*	Pink Family
____Virginia Knotweed	*Persicaria virginiana*	Buckwheat Family
____Arrow-leaved Tearthumb	*Polygonum sagittatum*	Buckwheat Family
____Fraser's Marsh St. Johnswort	*Hypericum fraseri*	St. Johnswort Family
____*Common St. Johnswort	*Hypericum perforatum*	St. Johnswort Family
____Spotted St. Johnswort	*Hypericum punctatum*	St. Johnswort Family
____Musk Mallow	*Malva moschata*	Mallow Family
____Pitcher-Plant	*Sarracenia purpurea*	Pitcher-Plant Family
____Round-leaved Sundew	*Drosera rotundifolia*	Sundew Family
____Appalachian Violet	*Viola appalachiensis*	Violet Family
____Sweet White Violet	*Viola blanda*	Violet Family
____Marsh Blue Violet	*Viola cucullata*	Violet Family
____Halberd-leaved Violet	*Viola hastata*	Violet Family
____Small White Violet	*Viola macloskeyi*	Violet Family
____Kidney-leaved Violet	*Viola renifolia*	Violet Family
____*Wild Garlic	*Alliaria officinalis*	Mustard Family
____*Winter Cress	*Barbarea vulgaris*	Mustard Family
____*Dame's Rocket	*Hesperis matronhalis*	Mustard Family
____*Field Peppergrass	*Lepidium campestre*	Mustard Family
____Teaberry / Wintergreen	*Gaultheria procumbens*	Heath Family
____Spotted Wintergreen	*Chimaphila maculata*	Wintergreen Family

Appendix K—KRNA Flora & Fauna Presently Identified, *continued*

____Shinleaf	*Pyrola elliptica*	Wintergreen Family
____Indian-Pipe	*Monotropa uniflora*	Indian-Pipe Family
____Starflower	*Lysimachia borealis*	Primrose Family
____Dew-drop	*Dalibarda repens*	Rose Family
____Common Wild Strawberry	*Fragaria virginiana*	Rose Family
____Cinquefoil	*Potentilla spp.*	Rose Family
____Dewberry	*Rubus hispidus*	Rose Family
____Partridge Pea	*Chamaecrista fasciculata*	Legume Family
____Crown-Vetch	*Coronilla Varia*	Legume Family
____*Birdfoot Trefoil	*Lotus corniculatus*	Legume Family
____*White Sweet Clover	*Melilotus alba*	Legume Family
____*Alsike Clover	*Trifolium hybridum*	Legume Family
____*Red Clover	*Trifolium pratense*	Legume Family
____*White Clover	*Trifolium repens*	Legume Family
____Common Evening Primrose	*Oenothera biennis*	Evening-Primrose Family
____Fringed Polygala	*Polygala paucifolia*	Milkwort Family
____Mountain Wood Sorrel	*Oxalis montana*	Wood-Sorrel Family
____Yellow Wood-Sorrel	*Oxalis stricta*	Wood-Sorrel Family
____Wild Geranium	*Geranium maculatum*	Geranium Family
____Spotted Touch-Me-Not	*Impatiens capensis*	Touch-Me-Not Family
____Wild Sarsaparilla	*Aralia nudicaulis*	Ginseng Family
____Dwarf Ginseng	*Panax trifolius*	Ginseng Family
____*Queen Anne's Lace	*Daucus carota*	Carrot Family
____Hairy Sweet Cicely	*Osmorhiza claytonii*	Carrot Family
____Yellow Screwstem	*Bartonia virginica*	Gentian Family
____Twining Screwstem	*Bartonia paniculata*	Gentian Family
____Indian Hemp	*Apocynum cannabinum*	Dogbane Family
____*Periwinkle / Myrtle	*Vinca minor*	Dogbane Family
____Common Milkweed	*Asclepias syriaca*	Milkweed Family
____Butterfly-Weed	*Asclepias tuberosa*	Milkweed Family
____Horse-Nettle	*Solanum carolinense*	Nightshade Family
____*Bittersweet Nightshade	*Solanum dulcamara*	Nightshade Family
____Blue Vervain	*Verbena hastata*	Vervain Family
____White Vervain	*Verbena urticifolia*	Vervain Family
____*Basil	*Clinopodium vulgare*	Mint Family
____*Ground Ivy	*Glechoma hederacea*	Mint Family
____Cut-leaved Water-Horehound	*Lycopus americanus*	Mint Family
____*Apple Mint	*Mentha suaveolens*	Mint Family
____*Heal-All	*Prunella vulgaris*	Mint Family
____*English Plantain	*Plantago lanceolata*	Plantain Family
____*Common Plantain	*Plantago major*	Plantain Family
____Square-stemmed Monkey Flwr	*Mimulus ringens*	Snapdragon Family
____*Butter-and-Eggs	*Linaria vulgaris*	Snapdragon Family
____*Woolly Mullein	*Verbascum thapsus*	Snapdragon Family
____*Corn Speedwell	*Veronica arvensis*	Snapdragon Family
____*Thyme-leaved Speedwell	*Veronica serpyllifolia*	Snapdragon Family

Appendix K—KRNA Flora & Fauna Presently Identified, *continued*

____Beechdrops	*Epifagus virginiana*	Broomrape Family
____Indian-Tobacco	*Lobelia inflata*	Bellflower Family
____Hedge Bedstraw	*Galium mollugo*	Bedstraw Family
____Fragrant Bedstraw	*Galium triflorum*	Bedstraw Family
____Bluets	*Houstonia caerulea*	Bedstraw Family
____Partridge Berry	*Mitchella repens*	Bedstraw Family
____*Japanese Honeysuckle	*Lonicera japonica*	Honeysuckle Family
____*Teasel	*Dipsacus fullonum*	Teasel Family
____*Yarrow	*Achillea millefolium*	Daisy Family
____Common Ragweed	*Ambrosia artemisiifolia*	Daisy Family
____Smaller Pussytoes	*Antennaria neodioica*	Daisy Family
____Flat-topped White Aster	*Doellingeria umbellata*	Daisy Family
____Whorled Wood Aster	*Oclemena acuminata*	Daisy Family
____Panicled Aster	*Symphyotrichum lanceolatum*	Daisy Family
____Calico (or Starved) Aster	*Symphyotrichum lateriflorum*	Daisy Family
____New England Aster	*Symphyotrichum novae-angliae*	Daisy Family
____Crooked-stemmed Aster	*Symphyotrichum prenanthoides*	Daisy Family
____Sticktights	*Bidens connata*	Daisy Family
____*Brown Knapweed	*Centaurea jacea*	Daisy Family
____*Spotted Knapweed	*Centaurea maculosa*	Daisy Family
____*Chicory	*Cichorium intybus*	Daisy Family
____*Canada Thistle	*Cirsium arvense*	Daisy Family
____*Bull Thistle	*Cirsium vulgare*	Daisy Family
____Horseweed	*Conyza (Erigeron) canadensis*	Daisy Family
____Daisy Fleabane	*Erigeron annuus*	Daisy Family
____Philadelphia Fleabane	*Erigeron philadelphicus*	Daisy Family
____Daisy Fleabane	*Erigeron strigosus*	Daisy Family
____*Ox-Eye Daisy	*Leucanthemum vulgare*	Daisy Family
____Tall Rattlesnake Root	*Nabalus altissimus*	Daisy Family
____Golden Ragwort	*Senecio aureus*	Daisy Family
____Grass-leaved Goldenrod	*Euthamia graminifolia*	Daisy Family
____Tall Goldenrod	*Solidago altissima*	Daisy Family
____Blue-Stemmed Goldenrod	*Solidago caesia*	Daisy Family
____Canada Goldenrod	*Solidago canadensis*	Daisy Family
____Late Goldenrod	*Solidago gigantea*	Daisy Family
____Early Goldenrod	*Solidago juncea*	Daisy Family
____Swamp Goldenrod	*Solidag patula*	Daisy Family
____Wrinkleleaf Goldenrod	*Solidago rugosa*	Daisy Family
____Bog Goldenrod	*Solidago uliginosa*	Daisy Family
____*Common Dandelion	*Taraxacum officinale*	Daisy Family
____*Coltsfoot	*Tussilago farfara*	Daisy Family
____New York Ironweed	*Vernonia noveboracensis*	Daisy Family
____Hollow Joe-Pye-Weed	*Eupatorium fistulosum*	Daisy Family
____White Snakeroot	*Eupatorium rugosum*	Daisy Family
____Black-eyed Susan	*Rudbeckia hirta*	Daisy Family
____Wingstem	*Verbesina alternifolia*	Daisy Family

Appendix K—KRNA Flora & Fauna Presently Identified, *continued*

____Cutleaf Coneflower	*Rudbeckia laciniata*	Daisy Family
____Skunk Cabbage	*Simplocarpus foetidus*	Arum Family
____Jack-in-the-Pulpit	*Arisaema triphyllum*	Arum Family
____Broadleaf Cattail	*Typha latifolia*	Cattail Family
____Narrow-leaved Cattail	*Typha angustifolia*	Cattail Family
____Trout Lily	*Erythronium americanum*	Lily Family
____Canada Mayflower	*Mainanthemum canadense*	Lily Family
____Indian Cucumber Root	*Medeola virginiana*	Lily Family
____Solomon's Seal	*Polygonatum biflorum*	Lily Family
____Painted Trillium	*Trillium undulatum*	Lily Family
____Wild Oats	*Uvularia sessilifolia*	Lily Family
____False Hellebore	*Veratrum viride*	Lily Family
____*Yellow Flag	*Iris pseudacorus*	Iris Family
____Greenbrier	*Smilax rotundifolia*	Catbrier Family
____Wild Yam	*Dioscorea villosa*	Yam Family
____Pink Lady's-Slipper	*Cypripedium acaule*	Orchid Family
____Appalachian Ladie's-Tresses	*Spiranthes arcisepalas*	Orchid Family

TREES / SHRUBS / VINES (33)

____ White Pine	*Pinus strobus*	Pine Family
____ Eastern Hemlock	*Tsuga canadensis*	Pine Family
____Cucumber Magnolia	*Magnolia acuminata*	Magnolia Family
____Sassafras	*Sassafras albidum*	Laurel Family
____Shagbark Hickory	*Carya ovata*	Walnut Family
____American Chestnut	*Castanea dentata*	Beech Family
____American Beech	*Fagus grandifolia*	Beech Family
____White Oak	*Quercus alba*	Beech Family
____Northern Red Oak	*Quercus rubra*	Beech Family
____Black Oak	*Quercus velutina*	Beech Family
____Yellow Birch	*Betula allegheniensis*	Birch Family
____Sweet Birch	*Betula lenta*	Birch Family
____Hazelnut	*Corylus americana*	Birch Family
____Blue Beech	*Carpinus caroliniana*	Birch Family
____Mountain Laurel	*Kalmia latifolia*	Heath Family
____Great Rhododendron	*Rhododendron maximum*	Heath Family
____Lowbush Blueberry	*Vaccinium angustifolium*	Heath Family
____Blue Ridge Blueberry	*Vaccinium pallidum* ?	Heath Family
____Common Serviceberry	*Amelanchier arborea*	Rose Family
____Hawthorn	*Crataegus spp*	Rose Family
____Black Cherry	*Prunus serotina*	Rose Family
____*Japanese Barberry	*Berberis thunbergia*	Barberry Family
____Winterberry	*Ilex verticillata*	Holly Family
____Virginia Creeper	*Parthenocissus quinquefolia*	Grape Family
____Summer Grape	*Vitis aestivalis*	Grape Family
____Red Maple	*Acer rubrum*	Maple Family
____Silver Maple	*Acer saccharinum*	Maple Family
____Sugar Maple	*Acer saccharum*	Maple Family

Appendix K—KRNA Flora & Fauna Presently Identified, *continued*

____*Autumn Olive	*Elaeagnus umbellata*	Oleaster Family
____Wild Raisin	*Viburnum cassinoides*	Honeysuckle Family
____Roughish Arrowwood	*Viburnum dentatum*	Honeysuckle Family
____Black Gum	*Nyssa sylvatica*	Sour-Gum Family
____Dogwood	*Cornus* spp.	Dogwood Family

ARACHNIDS (6)

____Cross Spider	*Neoscona crucifera*
____Marbled Orbweaver	*Araneus marmoreus*
____Black and Yellow Argiope	*Argiope aurantia*
____House Spider	*Parasteatoda tepidariorum*
____Goldenrod Spider	*Misumena vatia*
____Brown Daddy-Long-Legs	*Phalangium opilio*

ODONATES (2)

____White Tail	*Libellula lydia*
____Widow Skimmer	*Libellula luctuosa*

MOTHS (11)

____Rotund Idia Moth	*Idia rotundalis*
____Double-striped Scoparia Moth	*Scoparia biplagialis*
____Lesser Grapevine looper Moth	*Eulithis diversilineata*
____Sooty Snout	*Hypena minualis*
____North American Common Gray	*Anavitrinella pampinaria*
____American Copper Underwing	*Amphipyra pyramidoides*
____One-spotted Variant	*Hypagyrtis unipunctata*
____Large Maple Spanworm Moth	*Prochoerodes lineola*
____Comon Eupithecia Moth	*Eupithecia miserulata*
____Exasperating Platynota Moth	*Platynota exasperatana*
____American Angle Shades	*Euplexia benesimilis*

AMPHIBIANS (9)

____Spotted Salamander	*Ambystoma maculatum*
____Red-spotted Newt	*Notophthalmus v. viridescens*
____Red-backed Salamander	*Plethodon cinereus*
____Northern Slimy Salamander	*Plethodon g. glutinosus*
____American Toad	*Anaxyrus americanus*
____Spring Peeper	*Pseudacris crucifer*
____Green Frog	*Lithobates clamitans*
____Pickerel Frog	*Lithobates palustris*
____Wood Frog	*Lithobates sylvaticus*

Appendix K—KRNA Flora & Fauna Presently Identified, *continued*

REPTILES (4)

____Eastern Garter Snake	*Thamnophis s. sirtalis*
____Northern Water Snake	*Nerodia s. sipedon*
____Smooth Green Snake	*Opheodrys v. vernalis*
____Eastern Rat Snake	*Pantherophis alleghaniensis*
____*Northern Brown Snake*	*Storeria dekayi*

MAMMALS (17)

____Virginia Opossum	*Didelphis virginiana*	Order Didelphimorphia
____Big Brown Bat	*Eptesicus fuscus*	Order Chiroptera
____Eastern Cottontail	*Sylvilagus floridanus*	Order Lagomorpha
____Groundhog	*Marmota monax*	Order Rodentia
____Gray Squirrel	*Sciurus carolinensis*	Order Rodentia
____Eastern Fox Squirrel	*Sciurus niger vulpinus*	Order Rodentia
____Red Squirrel	*Tamiasciurus hudsonicus*	Order Rodentia
____Meadow Vole	*Microtus pennsylvanicus*	Order Rodentia
____White-footed Mouse	*Peromyscus leucopus*	Order Rodentia
____Deer Mouse	*Peromyscus maniculatus*	Order Rodentia
____Coyote	*Canis latrans*	Order Carnivora
____Red Fox	*Vulpes vulpes*	Order Carnivora
____Black Bear	*Ursus americanus*	Order Carnivora
____Raccoon	*Procyon lotor*	Order Carnivora
____Striped Skunk	*Mephitis mephitis*	Order Carnivora
____Fisher	*Martes pennanti*	Order Carnivora
____White-tailed Deer	*Odocoileus virginianus*	Order Artiodactyla