SUGGESTIONS FOR A NATURAL RESOURCES MANAGEMENT PLAN

HORIZONS PARK, FORSYTH COUNTY, NC

Forsyth Audubon

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Executive summary and goals:

Horizons Park located in northern Forsyth County spans 429 acres with a unique history and astounding natural beauty. Set in a rural landscape with homes and farms, fields and pastures, it offers a serene atmosphere. The abundant natural resources of Horizons Park include extensive woodlands, three branching streams, five meadows and the animals and plants that enrich and enable our lives. There is topographic variation with steep slopes rising to ridges and stream bottoms in small coves. These resources provide a variety of habitat that supports a diversity of animal and plant life. Walking trail systems wind through woods, fields and along streams allowing visitors to enjoy the beauty and peacefulness of nature. Our parks are our outdoor educational classrooms, serving the vital function of bringing people and nature together for mutual benefit.
This plan is intended to direct the management of Horizons Park land to meet these goals: Protect and enhance the natural resources of Horizons Park; Enhance the experience in nature for visitors to the park; Protect and enhance habitat for beneficial animals and plants that reside and grow in the park

In order to meet these goals we propose the following objectives:
1. identify and target critical habitat areas such as meadow, stream, lowland woods, upland woods, slopes, buffers and the plants and animals inhabiting these sites.
2. restore and enhance native plant communities
3. protect the water quality of streams in the Dan River basin that course through the park
4. lower county maintenance costs

5. encourage public engagement and education.

The natural resources of Horizons Park have been altered from their original condition by prior use and development. The Park has been visualized as a combined active recreation and passive recreation green space, this balance should be protected going forward. By enhancing the natural resources of the park, the various habitats, the flora and fauna, the land can be returned to its original nature. This can be achieved in a sustainable and cost effective manner by a small alteration in current land management practices and fostering the growth of native plants.
It is important to acknowledge not only the physical components of natural resources management but cultural components that influence it as well. These change over time, for example un-mowed meadows, once seen as waste land, are now recognized as beautiful and beneficial, vistas and viewsheds are valued, and quiet places in nature are treasured.
Given this cultural component of natural resources management, involvement of the public through programming, signage, education, and volunteer opportunities is critical for the success of any shift in the management of public spaces.

System Management Objectives:

Forsyth Audubon will identify and map natural resources sites by biological survey within the park and make specific recommendations. Three primary existing sites are woodlands, streams, and meadows.

Existing native plant communities will be enhanced and added to by additional plantings.

Native plant communities will attract, nourish, protect beneficial wildlife such as birds and pollinators.

Efforts to identify, control, and remove invasive plants will be executed

Grassland will be managed for wildlife as a priority.

Park maintenance costs will decrease as mowing is reduced and invasive plants are identified and treated in a timely manner.

Visitors to the park will be engaged through interpretive signage, presentations, and guided nature walks allowing them to appreciate the beneficial changes taking place.

Site Management Inventory Data:

Horizons Park will have an inventory completed indicating existing plants and animals, invasive plant species, land types, streams, pools, stormwater drainage, human impact, rare and endangered species, threats to natural resources. Detailed reports will be presented.

Site action Plan:

Herbicide and pesticide use should be carefully limited. Insecticide spraying should be avoided. When necessary, care should be taken that sprayed insecticide does not drift into meadows and pollinator

gardens. (pesticide and insecticide applications are controlled by the Forsyth County Health Department, Environmental Health)

STREAMS: Three streams branch and flow through the park and are within the Dan River basin, all sections appear to have good riparian buffers and little erosion problems at this time. The presence of non-native invasive plants needs to be determined now and monitored going forward. A plan for removal and/or control of invasive plants will be established. The primary objectives will be to not disturb these streams and their buffers, control stormwater runoff, prevent erosion, maintain water quality and health of the plants and animals inhabiting the stream ecosystem.

WOODLANDS: Preservation and enhancement of existing woodlands on highlands and ridges, steep slopes, and in stream coves should be prioritized. Thinning of planted loblolly pine stands to allow growth of hardwoods such as oak is advised. Pine planting for pulp and timber harvesting is discouraged.
Healthy forest layers with ground cover, diverse understory and canopy is desired. Leave dead standing trees, snags and down trees when safe to do so as they are shelter, nesting sites and food sources for wildlife. Monitoring for invasive species with prompt removal and control is a cost saving measure as well as forest protection.

MEADOWS: Here the greatest benefit can be achieved with an alteration in management practice. Grass, forb and legume meadows are critical habitat for wildlife especially endangered birds that nest in grassland such as the Eastern Meadowlark, now present at Horizons Park, as well as edge birds such as Indigo Bunting.
The important principles are :
(1) Do not burn or mow the entire field at one time
(2). Burn or mow on a rotational schedule, a third or half field every 2 to 3 years
(3). Do not mow right up to the tree line
(4.) Refrain from burning or mowing from May to August to allow birds to nest and fledge
(5) Refrain from cutting walking trails through the center of fields as this is where birds prefer to nest.

There are 5 meadows at Horizons Park ranging in size from about 10 to 20 acres (23,12,7, 9, and 14 acres), total acreage of about 65 acres. All can be managed in a similar fashion with the goal being to create a beautiful landscape, support wildlife, decrease management costs, and enhance the visitors park experience.
Burning is the most desirable method as it satisfies all these goals to the greatest extent. A prescribed burn in February or March on a portion, one-third or one-fourth, of each field every two to three years is advised. It is important to leave sections of fields un-mowed as this gives wildlife forage and protection as well as enriching the winter landscape with beautiful color and structural beauty.
When burning is not an option then bush-hog mowing with a blade height of 8 to 10 inches followed by light disking on a portion of each field every two to three years is the next best option. County Parks procurement of a suitable disk harrow is encouraged. Strip mowing on larger fields with sufficient width leaving strips of un-mowed grass 100 feet wide is preferred when managing for wildlife otherwise block mowing on smaller fields. Mow after August if possible and mow starting from the inside of field with a flushing bar on the front of the tractor to give birds a chance to escape the mower. Light disking after mowing is very helpful as it removes built up thatch and thins the grass to allow better nesting and fledging as birds need space between clumps of grass to move about and escape predators and find food. Disking also allows growth of beneficial warm season native grass and forb species. Mowing is best done in September. Mowing alone is the least desirable method.
Careful use of highly selective herbicides can be considered when necessary to manage invasive

species or when transitioning to warm season native grasses from cool season non-native grass. Over-seeding with a selective native grass and forb seed mix can be considered.

EDGING: Edging refers to the management of the transition zone between grass and trees, a critical habitat for wildlife. Currently each meadow has a perimeter walking trail mowed regularly, these trails are up against the tree line leaving no room for transition edging. The walking trails are now 16 feet wide. It would be better to move these perimeter trails away from the trees 30 feet to create a transition zone of 30 feet or more. A regularly mowed perimeter walking trail 8 foot wide would then be adequate in that position as it would be in the open. This could be enlarged to form a fire break when preparing for burning. The transition zone should encompass grass, forbs, small shrubs and saplings of varying height . This zone can be mowed every two to three years to prevent woody plant growth.

HEDGEROWS: Establishing native plant hedgerows would add to the beauty of fields as well as be great habitat for wildlife. Four hedgerows composed of native shrubs and small trees could be planted. One at the border of the frisbee golf course and the nearby meadow, another extending from the tree and brush in the center of the field near the cemetery, and one each at the border between the ball fields and associated meadows. See referenced articles in supplementary material.

Performance measures:

Biologic surveys should be conducted periodically to see that the restoration and management practices are succeeding in enhancing the habitat for people, plants and wildlife, and the stated goals are being met. Visitor surveys may be conducted to see that the park is performing as a delightful, nurturing, educational natural resource for the community.

Cost estimate and funding:

Maintenance cost reductions should be achieved by decreased mowing, control of invasive plants, decreased use of chemical treatments such as pesticides, herbicides and fertilizers.
Interpretive signage estimated at $700 per sign for approximately 5 signs for $3500 total cost.
Native plant installation estimation $20,000 to $40,000
Funding sources to offset these expenses can be sought.

Supplemental information: associated maps, inventory details, supportive articles:

Horizons Park, Conceptual Master Plan, 2012, map of existing conditions and topographic map forsyth.cc
“Managing Forest Edges for Wildlife”, NC State Extension, content.ces.ncsu.edu/managing-edges-for-wildlife
“Transforming Fields Into Grassland Bird Habitat” , Cornell University Cooperative Extension cals.cornell.edu
“Best Management Practices for Grassland Birds”. Virginia Bird Initiative. vagrasslandbirds.org
“Plan a Hedgerow With Native Shrubs” prairenursery.com
“Mowing” Habitat Improvement Program, Kentucky Fish and Wildlife Habitat How-To's fw.ky.gov
“Light Disking to Improve Wildlife Habitat in Grasslands and Old Fields” U of A Division of Agriculture, University of Alabama. uaex.uada.edu

"Conservation Recommendations for Priority Terrestrial Wildlife Species and Habitats in North Carolina" digital.ncdcr.gov
"Managing Land in the Piedmont of Virginia for the Benefit of Birds and Other Wildlife" VDGIF
choosenatives.org
Forward 2045 city/county plan, Sustainable and Healthy Environment
"Using Fire to Improve Wildlife Habitat" , NCSU Extension, content.ces.ncsu.edu
Audubon North Carolina, Curtis Smalling, Executive Director, personal communications
"Hedgerow Planting for Wildlife", Natural Resources Conservation Service, efotg.sc.egov.usda.gov
Hedgerows, Duke Garden, Blomquest.pdf
Hedgerow, Planting, USDA.pdf