Fox Creek Park

A Steward's Handbook

WHAT IS HABITAT RESTORATION?

"In many ways, habitat restoration is the opposite of traditional gardening/farming/landscaping. Restoration is a process of editing, selective removal, and only occasionally of re-introduction. We will literally be pulling up lawn grasses and ornamentals so the "weeds" can grow better.

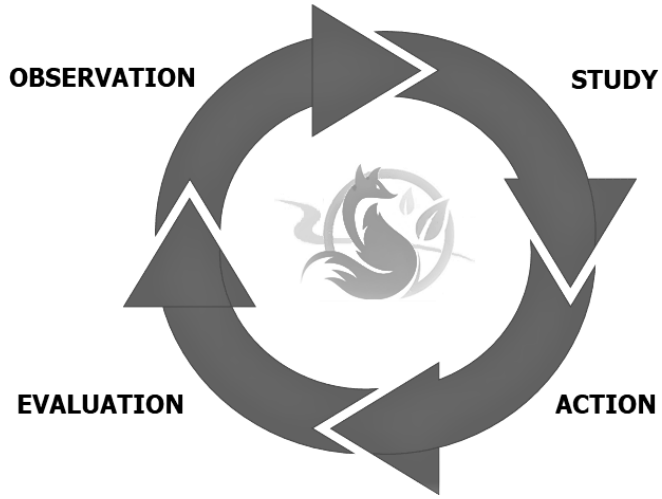
This is a complete paradigm shift for most people. The result is beautiful, but it is an ancient beauty, full of life and activity at all levels."

-Glen Peterson

PRIMARY GOALS OF THE FOX CREEK PARK STEWARD

These two goals, often in tension with one another, shall guide all of our decisions. Everything we do must be considered in relation to how our actions support or undermine these goals.

Key Tasks of Successful Stewardship



Observation

The task of the Steward begins with carefully noticing what is currently out there and how all of the pieces interact with one another.

Study

Educating ourselves about the science and history of our park and its inhabitants is essential to making good decisions for the future.

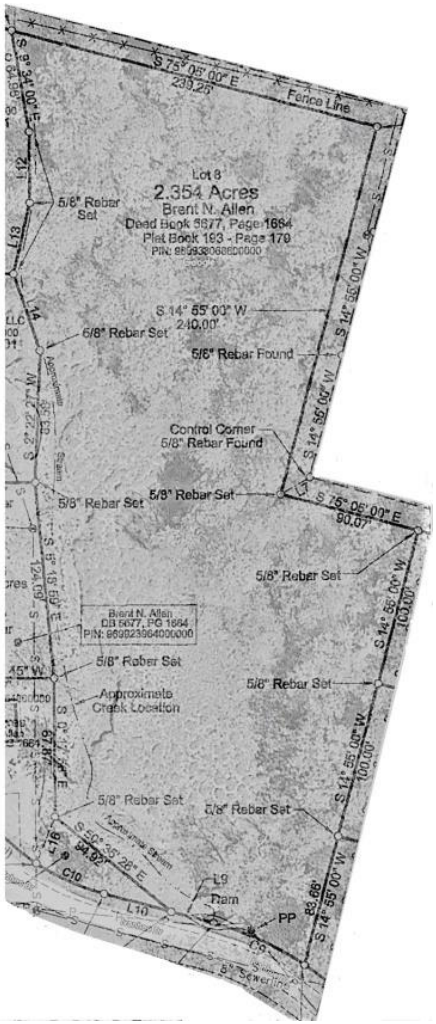
Action

Seeding, Weeding, Cultivating and always and forever Documenting are the ongoing tasks of a Steward.

Evaluation

At all times and at every stage a Steward must evaluate, re-evaluate and evaluate once again the consequences of our actions.

Site Overview



DESCRIPTION OF RESTORATION AREA:

Fox Creek Park is a 2.35 acre tract in the heart of the Grovemont neighborhood of Swannanoa, North Carolina.

The parcel is part of 275 acres of forest land sold to E.W. Grove in 1918 for the purpose of developing a planned community. This particular site was developed into a municipal lake and park known as “Lake June” in the early 1920’s.

By the 1950’s the site had begun to deteriorate and the lake had begun to shrink, and by sometime around 1960 the lake had disappeared leaving a swampy wetland that was soon to be overgrown with kudzu where the lake once stood. North of the lake bed is roughly one acre of dry land that has become dense with trees.

Two streams move through the property. One on the west side (“Tributary 26 of the Swannanoa River”) rushes downhill through the ruins of the dam and onward to the Swannanoa River about a mile downstream. This stream functions as a storm drain for the residences and streets above the property and is the source of significant erosion and flooding during heavy rain events. On the east is a small spring fed stream (unnamed but called “Fox Creek” by residents) that emerges from marshy ground on the northeast corner near West Charleston Avenue and travels down the east side of the property, joining the western stream as it enters the dam ruins.

The site is divided into two distinct zones.

On the north is a small hardwood forest dominated by poplar, maple and beach trees with the ruins of a spring house of unknown origin and a pavilion that once stood on the north bank of Lake June.

On the south is the former lake bed which has become overgrown with kudzu and multiflora rose. Surrounding the lake bed are stone pillars, some still intact but many collapsed, that were placed there as decorative elements in the 1920’s. South of the lake bed at the property line is the remains of a concrete dam that held back the lake waters of Lake June. Anecdotally this dam was finally breached around 1960 and was never repaired.

Lying unused for over 75 years, in 2021 the tract was donated to The Swannanoa Community Council (SCC) for the purpose of restoring the land and creating a native species habitat and park. While privately owned by the SCC, it will be maintained as a recreational, educational and natural wildlife resource for the surrounding community.

Site Overview (page 2):

STEWARDSHIP GOALS:

1. Undertake a survey of the plant and animal species that currently live and pass through the park.
2. Seek out ways to compile as much scientific and historical data as is possible on the area.
3. Develop a plan to manage alien invasive species and to restore ecological health to the land. Take steps to implement that plan.
4. Provide safe access for visitors to the park and organize ongoing community support.
5. Develop educational resources, maintain a detailed record of the restoration process and continue to monitor the health of the ecosystem.

POSSIBLE CONSEQUENCES:

1. Increasing human activity in the park includes greater impact on wildlife, more litter brought to the park, as well as the possibility of injury to visitors.
2. Any changes to the water flow, vegetation and human activity in the park will have consequences for neighbors and property owners downstream.

PROPOSED STEPS TOWARDS RESTORATION:

1. Develop an overarching restoration plan that includes all aspects of the project, scientific data relating to species diversity, soil and water conditions, cost projections and time estimates.
2. Organize volunteers for periodic work days to begin the process of cleaning up and preparing the site for restoration.
3. Begin to amass data around all aspects of the ecosystem.
4. Seek out funding to achieve the larger goals of restoring the property

PROTOCOLS FOR EVALUATION:

Fox Creek Park Stewardship Zones

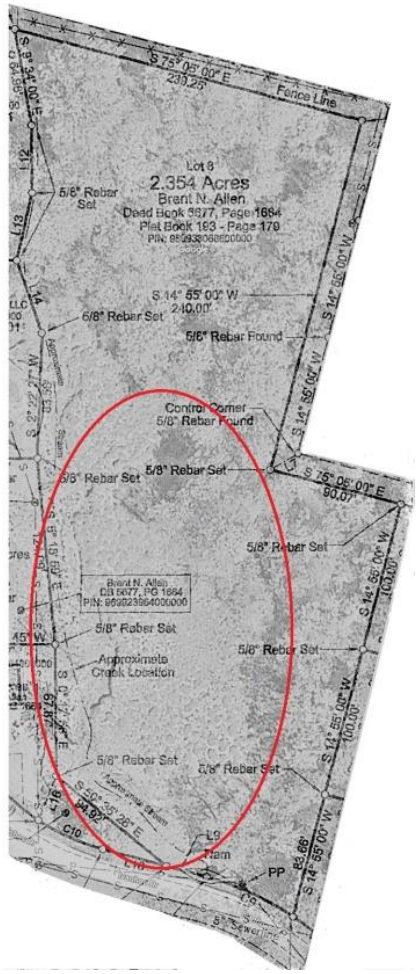
Fox Creek Park is an unusually diverse ecosystem with various distinct zones found within its borders.
In this relatively small space can be found the following areas, each with their own
Soil and water conditions, plant communities and fauna.
Since they are so different, each of these zones poses
Different challenges and opportunities for the Steward to consider.

For our purposes we break these areas down into;

The Marsh-Meadow
The Wetlands
The Forest
The Streams
The Entrance
The Historical Ruins

What follows is a brief description of each of these zones and an
outline of the goals, challenges and
expected consequences of the restoration process.

The Marsh-Meadow:



DESCRIPTION OF RESTORATION AREA:
The area between the two streams, north of the dam and south of the tree line. Roughly 1 acre that comprises the former site of Lake June. Area currently covered in kudzu with a large growth of multiflora rose and Amur Honeysuckle. Some native species persist such as blood root and elderberry. Several groundhog warrens, a healthy raccoon population and many insect species make this area home. Periodic flooding in the southern third of this area is not uncommon.

STEWARDSHIP GOALS:

1. Eradicate and control invasive Kudzu, Amur Honeysuckle and Multiflora Rose.
2. Discover and protect desirable endemic species growing within the space.
3. Stimulate the return of healthy endemic populations of plants.
4. Create access pathways for visitors to enter and enjoy the space..

POSSIBLE CONSEQUENCES:

1. Eradication of invasive species may cause harm to existent native species.
2. Removal of kudzu will expose bare ground to harsh sun and erosion.
3. Insect populations dependent on the current vegetation would be heavily impacted.
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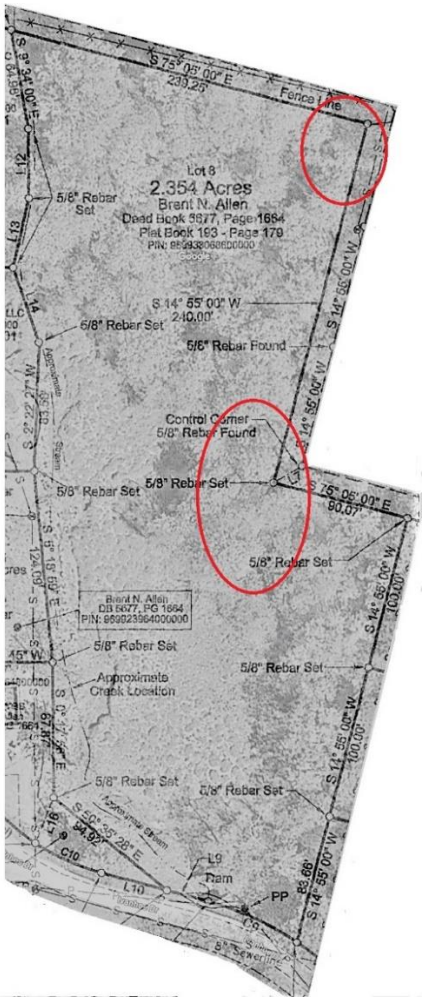
PROPOSED STEPS TOWARDS RESTORATION:

1. Conduct a thorough study of the ecosystem
2. Subdivide area and begin removing invasive species one section at a time. Take steps to preserve native species in the process.
3. After invasive are removed in each section take steps to restore the area of removal. Reevaluate before progressing to the next section.

PROTOCOLS FOR EVALUATION:
Periodically pause the restoration in order to survey the health of the ecosystem. Monitor and evaluate insect populations, soil erosion and plant species before moving to the next step.

The Wetlands:



DESCRIPTION OF RESTORATION AREA:

Two main wetland areas exist within the park boundaries. One is in the northeast corner of the property where the smaller stream ("Fox Creek") comes to the surface. This area is overgrown with brush and largely inaccessible. The second area is larger and more open and is found midway down the property just west of Fox Creek. Swampy through much of the year, this area is bordered by willow and beech trees and has many water tolerant species such as Arum, Yellow Pond Lilly, Fox Grapes, Jewel Weed and various grasses proliferating. Approximately 40' x 80', this wetland abuts Janet Littleton's property to the east, the forest to the north and the Marsh-Meadow to the south and west.

STEWARDSHIP GOALS:

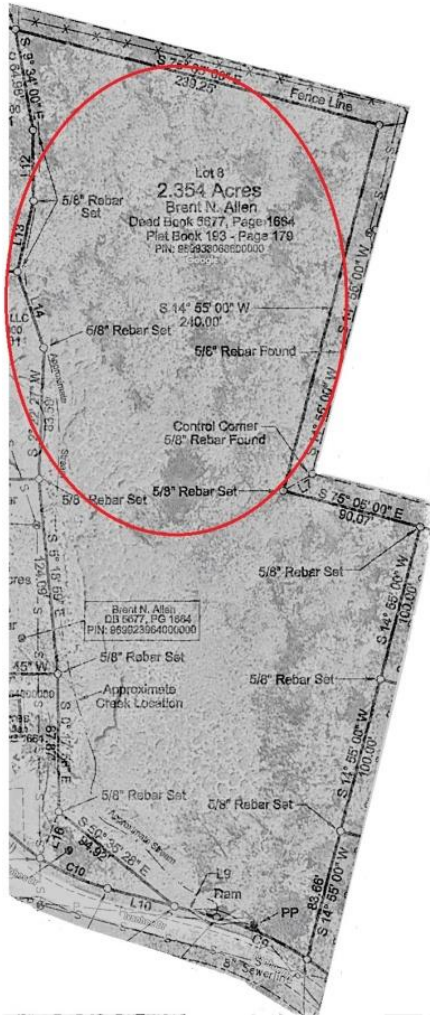
1. Protect the wetland from human encroachment.
2. Survey the species that exist in the wetland.
3. To explore regulatory requirements and permitting to restore the area.
4. Identify tasks that bring the trees back to health.
5. Create protected walkways that visitors can enjoy the wetland without injuring it.

POSSIBLE CONSEQUENCES:

PROPOSED STEPS TOWARDS RESTORATION:

PROTOCOLS FOR EVALUATION:

The Forest:



DESCRIPTION OF RESTORATION AREA:

Bounded by the Fox Creek Stream to the east, Tributary #26 of the Swannanoa River on the west, the Marsh-Meadow to the south and the property border to the north lies approximately 1 acre of hardwood forest that has been growing largely untouched for nearly 100 years. Much of this land lies below the 100 year flood plain with the exception of about .2 acres in the center north of the property. Dominated by Poplar and Beach with some White Oak in the northeaster portion, this forest is home to dozens of plant and animal species with visits from other animals such as bear, coyote and feral cats. In the center of this wood is a dense thicket of Japanese Holly that seems to have been planted as an ornamental decoration surrounding the pavilion near the southern transition zone some 100 years ago. Home to at least three species of woodpecker, a buteo hawk, bats, rabbits, squirrels and various reptiles and amphibians along with orchids, Japanese maples, mountain laurels, ironwood and American holly, this space is dense with down trees and other forage that attracts bears, foxes and other wildlife.

STEWARDSHIP GOALS:

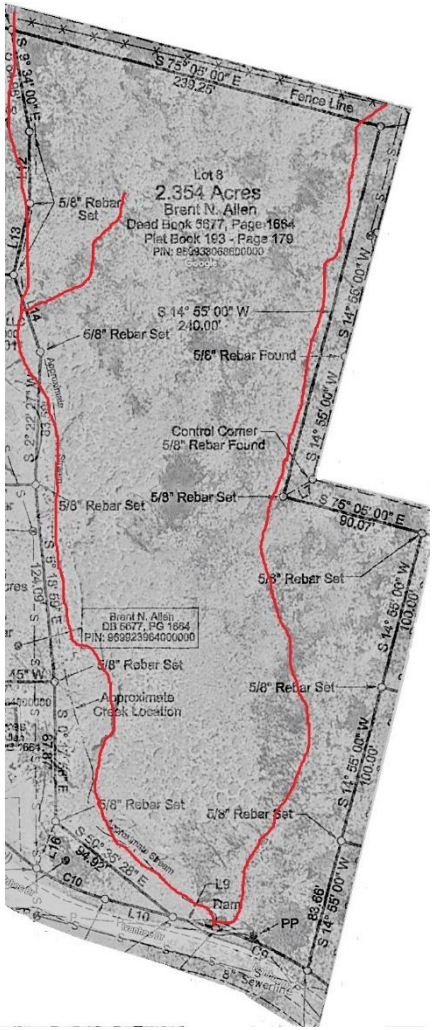
1. Conduct a thorough survey of plant and animal species within the woodland.
2. Develop a plan to control the Alien Invasive Species.
3. Create protected paths for visitors to access the woodland.

POSSIBLE CONSEQUENCES:

PROPOSED STEPS TOWARDS RESTORATION:

PROTOCOLS FOR EVALUATION:

The Streams:



DESCRIPTION OF RESTORATION AREA:

Three small streams move through the property from north to south.

"Tributary 26 of the Swannanoa River" begins in the hillside above the park and travels through the neighborhood both above and below ground, enters the property on the northwest corner and traverses the western property line until passing through the spillway to the south and on to the Swannanoa Rover. This stream functions as a storm drain for the streets north of the park and is by far the largest stream on the property.

Another stream dubbed "Fox Creek" by neighbors emerges from a swampy wetland on the northeast corner of the property and follows a largely straight line down the eastern border where it joins the other stream as they both enter the spillway.

There is a third small rivulet that emerges at the springhouse ruin in the forest zone and travels no more than 45' until it joins with Tributary 26 at the northern edge of the Marsh -Meadow.

None of these streams have any obvious aquatic animals in them.

STEWARDSHIP GOALS:

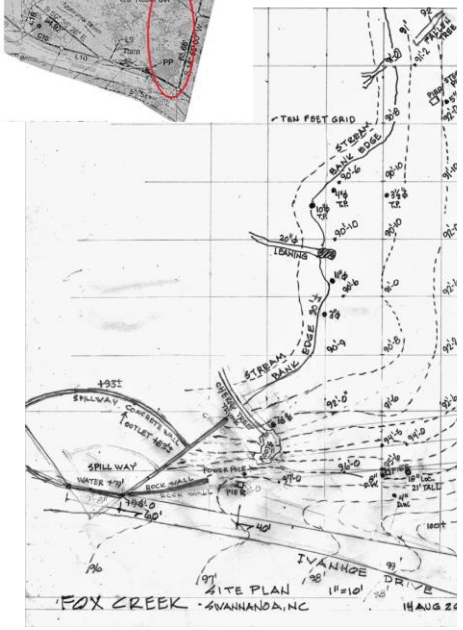
1. Conduct a thorough survey of plant and animal species within the stream and stream banks.
2. Develop a plan that restores the slope of the banks to a healthy grade.
3. Encourage colonization of plant species to stabilize the bank and provide cover for animals that live there.

POSSIBLE CONSEQUENCES:

PROPOSED STEPS TOWARDS RESTORATION:

PROTOCOLS FOR EVALUATION:

The Entrance:



DESCRIPTION OF RESTORATION AREA:
Immediately east of the dam and bordering Ivanhoe drive is the proposed entrance to Fox Creek Park. Approximately 20' of gently sloping ground proceeds to drop down about 8 feet to a largely level space about 500 feet square that will comprise the trail head into the park. Two mature dogwood trees, probably from the original landscaping in the 1920's, still dominate the up slope area. Below that the vegetation, with a few notable exceptions, is largely non-native, invasive and undesirable from a restoration viewpoint. Fox Creek borders this area on the west and the property of Whitney and Cameron Donnell borders it to the east.

STEWARDSHIP GOALS:

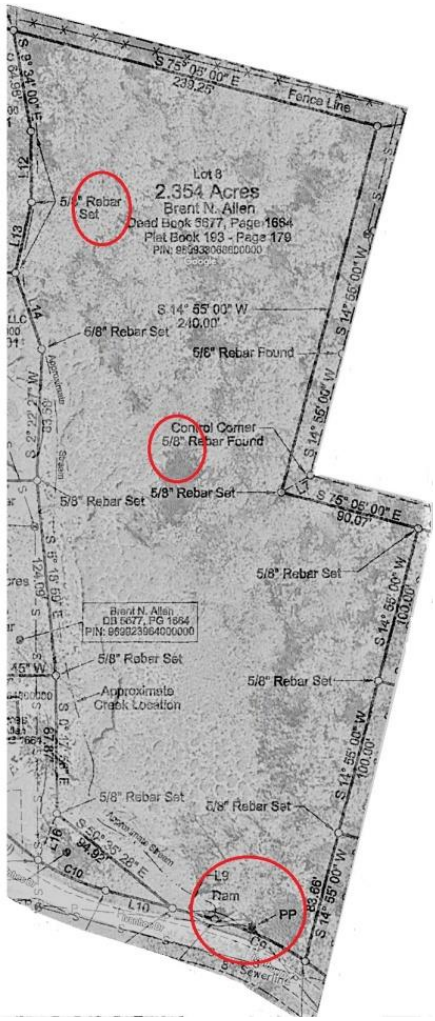
1. Survey the plant species that currently live in the area.
2. Identify species that a) need to be preserved and b) May be eradicated.
3. Create a footpath to safely bring visitors down into the park.
4. Install appropriate signage, barriers and information systems for visitors.
5. Develop a plan to cultivate the space for beauty, stability and long term health.

POSSIBLE CONSEQUENCES:

1. Since this area is to be the entrance to the park, it is likely to experience the greatest impact from human activity. Erosion, litter, encroachment onto neighboring property and petty vandalism can be expected.
2. Vehicles parking beside the road may cause impacts on the slope below as well as obstruct traffic passing on Ivanhoe drive.
3. The extreme slope of Fox Creek and the proximity to the dam may increase the likelihood of injury to visitors.

PROPOSED STEPS TOWARDS RESTORATION:

The Historical Ruins:



DESCRIPTION OF RESTORATION AREA:
There are several areas where the remains of past human intervention in the property can be found.

The ruins of a small spring house exist in the west-central part of the forest zone. Constructed of native stone and filled with watercress, this seems to be a remnant of a homestead that pre dates the Grove development in the 1920's. Nothing is currently known of the age or origin of this construction.

At the border between the Marsh-Meadow and the forest zone to the north is the overgrown remnant of the foundation of a small structure dubbed "The Pavilion" that was part of the Grove development. Constructed of concrete and river rock, only the front foundation wall and the remains of two stone pillars exist. There are a number of contemporary photos of this structure in existence from the 1920's.

The dam that was constructed by E.W. Grove still exists, but has been nonfunctional since (anecdotally) around 1960. Constructed of Concrete and River Rock it marks the southern border of the property.

Finally, spaced along the perimeter of the former lake bed are dozens of river rock pillars that were design elements of the 1920's construction. Some still intact, many collapsed, these are a regular sight as one moves through the property. There are a number of contemporary photos of these structures in existence in the 1920's

STEWARDSHIP GOALS:

1. Measure, photograph and examine the structures as completely as possible. Undertake research to learn what can be discovered about them.
2. Carefully remove any alien invasive plant species from the area.
3. Develop a plan to preserve these spaces into the future while allowing visitors to view them at close proximity.

POSSIBLE CONSEQUENCES:

PROPOSED STEPS TOWARDS RESTORATION:

Terms:

- **Alien Invasive Species** – Any species that did not evolve in the environment where it lives, and furthermore either does not contribute to that environment or out-competes other organisms, putting the ecosystem out of balance.
- **Diversity** –In this context "Diversity" is the number of different species that are present in a given community. A greater number of species is an indication of greater health and resilience of an ecosystem.
- **Ecosystem** – A complex system of interacting organisms, geological conditions, nutrients and all other elements of a landscape. Touch one piece of an ecosystem and all others react.
- **Endemic Species** – A species of plant or animal that exists in only one geographic location. That location might be large or small. That species might be cute or prickly. That species always tells a story that exists nowhere else in the world and as such is of higher concern for protection and for education.
- **Habitat** – The sum of all elements of an ecosystem that an organism has evolved to survive within.
- **Interdependence** – This is the key to understanding any ecosystem. Once one realizes that all elements are necessarily connected to one another, then the process of understanding must include every element in the surrounding area. In such a system, acting on one element inevitably has unforeseen effects on every other element in the system.
- **Native Species** – Any species that evolved within a particular ecosystem, and as such has a positive interaction with other organisms around it.
- **Park** – A parcel or area of land set aside and maintained for the benefit of a community.
- **Resource** – Any structure, person, landscape element, idea or money that can be used as a tool to achieve a goal.
- **Restoration** – The act (or art) of restoring an ecosystem to a condition that it once held. In our context it is the act of restoring Fox Creek Park to health and sustainability. This can be achieved through many different ways, but research suggests that the most effective way is to create conditions whereby the ecosystem can heal itself and find its own balance over time.

FoxCreekPark.Org

A Swannanoa Community Council Joint