

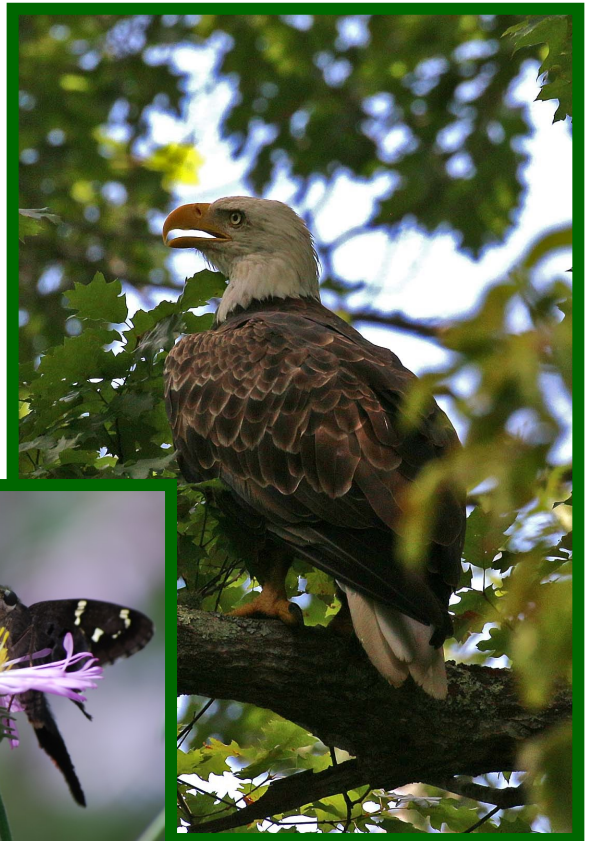


Trout Lake Nature Center Planning for the Future

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Trout Lake Nature Center

520 East CR 44
Eustis, FL 32736
352-357-7536

Planning for the Future

Trout Lake Nature Center (TLNC) has been serving the central Florida community through nature education, awareness and resource conservation for 33 years. In 1988, land purchased through the efforts of the Oklawaha Valley Audubon Society (OVAS) and the community was combined with additional lands from the City of Eustis (through a conservation easement) to become the Trout Lake Nature Center.

Based in Eustis, FL, TLNC is a non-profit 501 (c) (3) corporation supported through donations, program fees, fundraisers, grants and a loyal membership.

TLNC is governed by a board of directors with the able assistance of an executive director. A staff of 2.5, assisted by a strong volunteer force, maintains facilities, habitats and programs.

A 230-acre preserve, composed primarily of wetlands, mesic flatwoods and lake bottom, comprise TLNC's property. Walking trails are open to the public year-round. Many trails have foot bridges to provide access over wet areas but some trails are temporarily closed due to wet conditions. An ADA compliant boardwalk crosses the marsh area to provide access to Trout Lake and the Education Dock. Special considerations are made when using TLNC's wet habitats for learning experiences due to their fragile nature.

TLNC Education programs are designed to move visitors along an interpretive continuum that begins with simple curiosity about a resource, to beginning to care, to a place of stewardship and sense of community.

TLNC exists to deliver a message of considerate environmental awareness to the residents of and visitors to central Florida. We wish to bring about transformations in individuals and communities that result in better stewardship of the environment and better personal and community

TLNC Mission

Our mission is to conserve and protect the natural environment and educate the public about its importance.

TLNC incorporates the following core values into its programs:

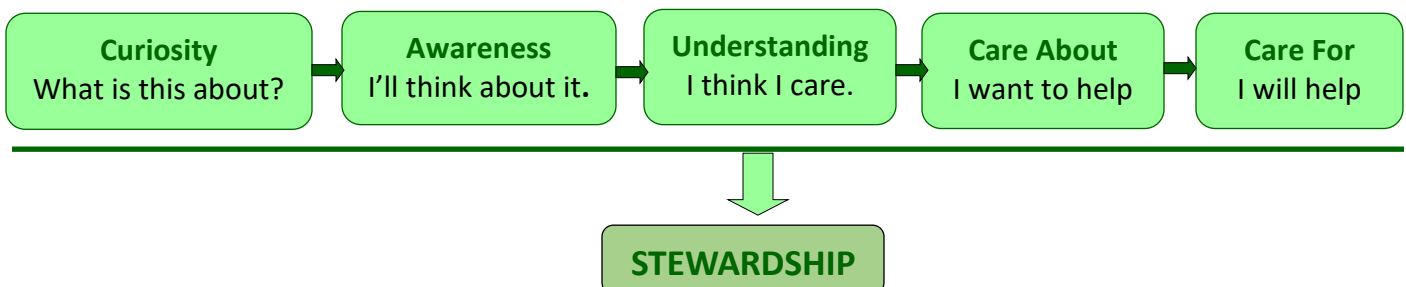
- A sense of wonder and awe for the environment
- Stewardship of the environment
- Connecting people to the environment
- Awareness and knowledge through high quality interpretation and education
- Awareness and knowledge for all ages
- Hands-on experiences (nature in your hands)
- Experiencing the environment everywhere (Right here, right now)
- Respect, camaraderie, diversity and honesty among those involved with TLNC

We aspire to serve as a model of sustainable stewardship of nature for generations to come.

health. This will happen through thoughtful communication and experiences that form emotional connections to our natural resources and just plain getting people outdoors.

Over the years, TLNC has accomplished much with limited resources. As an donation-based non-profit, there is no consistent source of income. Resources can become scarce in times of economic fluctuations. TLNC plans to grow strategically to direct efforts efficiently so they have the maximum impact.

With the pandemic, it has become obvious that TLNC needs to be able to offer virtual , online and technology integrated lessons, programs and exhibits/trails. We are working to use technology to



provide education using a variety of methods.

TLNC is planning to meet increased demand, maintain quality of programming and to continue to protect, conserve and restore the ecosystems within its property.

Rationale

Research demonstrates if people are raised with little or no direct connection with nature, they begin to see themselves as separate from the natural world. This can lead to fear, apathy, lack of empathy for others and disregard for nature.

Nature deficit, or a lack of sufficient time outdoors in a natural setting, contributes to poor outcomes of chronic diseases, including obesity, diabetes, hypertension, depression, anxiety, attention deficit hyperactivity disorder (ADHD), vitamin D deficiency, decreased happiness and well-being, and cardiovascular and respiratory illness. The exact causative mechanism between nature deficit and chronic disease has not yet been identified; however, correlational research has shown time spent in natural areas can provide measurable health benefits such as improved cardiovascular health, decreased levels of stress, improved self-esteem, and elevated mood. Spending time in nature is linked with decreased anxiety, rumination, and negative affect, as well as an increase in happiness and overall well-being.

The lack of nature connections has led to a health crisis. Childhood obesity rates have risen fourfold since 1971 (American Obesity Association, 2002.) Type 2 diabetes has skyrocketed. The number of children on prescription medications for ADHD increased six fold from 1990 to 2003 (Gretchen LeFever, et. Al. 2003)

“Outdoor experiences create opportunities to generate human attachment to nature, which leads to a sense of place and belonging, which ultimately fosters environmental stewardship. Trees and other nature-based elements increase aesthetic beauty and provide mental, physical, and emotional health benefits. Nature-based interventions are important tools that can help to improve both human and environmental health.” (Robert Zarr, What about Trees?, American Public Health Association, 2017)

FUTURE CHALLENGES/NEEDS

TLNC has evolved from a small environmental center with presentations taking place on chairs in a field to organized programs for children, adults, families and the community. As it evolved a double-wide trailer was brought in to serve as a Natural History Museum and a community meeting place. Then, a boardwalk and dock were built to enable teaching about aquatic systems and Trout Lake’s hydrology and biology. This was followed by a picnic shelter and work area. Finally, the Education Building was constructed to provide more meeting, teaching and exhibit space.

Facilities: TLNC’s programs have grown and the demand for programs has increased. Building adequate facilities to replace the aging museum, and providing indoor and outdoor teaching spaces, and offices and smaller meeting areas is essential to meet the needs of the community (especially as Lake County’s population continues to grow) and expand programs.

Started in 2018, a capital building campaign is ongoing with Phase One completed.

Staffing: As TLNC grows, the need for additional qualified staff will be essential. Future staff needs include:

- ◆ Facilities and maintenance worker
- ◆ Resource development coordinator
- ◆ Education coordinators/Instructors
- ◆ Volunteer coordinator
- ◆ Habitat/land manager

It is also important that staff be supported by continuing professional development in their fields of expertise.

Currently, staff holds certifications as Certified Interpretive Guide, and Project WILD, WET and PLT facilitator/trainer, and Volunteer Manager.

Trails Accessibility and Expansions: As use of the trail system increases, it will become important to provide wheelchair accessible boardwalks to replace existing foot bridges and allow wetter trails to be used year-round. This will increase costs and maintenance of the trails. We aspire to develop an Eco-Health Trails that would include both physical and mental health features on the trails using the environment.

Interpretive Signage and Exhibits (indoor and outdoor): Interpretive signs and exhibits have been developed to interest visitors while teaching about the environment. These exhibits and signs provide passive education opportunities.

Interactive elements have been added to some trail programs including finding stone critters, self-guided trail walk, and soon a story walk. (Story walks allow young visitors to read a story as they walk a trail.)

Many of the TLNC exhibits have been reconstructed to increase audience appeal and provide more educational points. Much of TLNC's exhibits are based on donated taxidermy mounts of native Florida "critters". These mounts provide visitors with an opportunity to see Florida wildlife which may not be visible as you stroll the wooded trails. Exhibits specimens provide a "real-time" experience for educational purposes while enhancing visitor appreciation of our native species.

To improve self-guided educational opportunities, an interpretive theme is being used. This theme is titled "Watersheds, Wetlands and Wildlife". Over time all exhibits will be evaluated and restructured using this theme and sub-themes such as the value of birds, use of feathers, or types of vision of wildlife.

Evaluation and restructuring of exhibits and signs is an ongoing process at any nature center. They are evaluated for condition, use patterns, addressing TLNC's mission and supporting education programs.

Adequate storage of museum specimens, exhibit materials and signage is needed. Due to the delicacy of museum specimens this storage must be air conditioned.

Habitat: It is very important that resources be devoted to habitat restoration and keeping existing habitat healthy. Throughout Lake County and Florida invasive exotics are becoming an increasingly larger problem. TLNC will experience an increase in the types and number of exotics found in its habitat. Control and removal of invasive species in TLNC's wetland systems is difficult and expensive but very important if ecosystems are to support native wildlife and plants. Maintaining fire

protection areas, open "meadow" areas, pine flatwoods, cypress swamps and other habitats requires constant attention.

Diversifying Audiences/Visitors: The primary visitor/client of most nature centers and cultural centers consists of senior citizens and families with young children (elementary age and below). As children reach middle school age, their families seldom frequent centers. Because of the many school and recreational activities middle and high school aged children become involved with, their families reduce their visits to nature centers, cultural venues and museums.

Likewise, few people of color are involved with environmental issues even though many are affected by environmental justice matters. This is important as the ethnic and cultural composition of Florida changes with an influx of groups from outside the United States and outside of Florida.

PROGRESS SUMMARY

TLNC's last strategic plan identified the following strategies or actions and the TLNC Board committed to working on these areas.



Strategy 1: Maximize TLNC's capacity for connecting our community to the natural environment and provide a safe natural area for communities to develop connections to the natural world.

Educating children and families about the natural world has always been an integral part of

TLNC's mission and goals. TLNC has worked to expand its capacity to provide education and engage visitors, students and the community in a variety of programs and nature experiences.

The following key strategies were included:

- Expand adult programs
- Develop cooperative programs with other educational institutions
- Provide outreach to children through out-of-school programs
- Promote cultural diversity in members and visitors
- Appropriately develop new trails and wildlife observation areas
- Enhance access to property for vehicles and pedestrians
- Develop canoe/kayak launch area on Trout Lake.

Progress: Since this strategic plan was developed, adult programs have been expanded through special events and programming. This programming includes yoga classes, photography workshops, bird watching, hiking, and more. The purpose of adult programs is to engage the mind, inspire the heart and provide opportunities to improve health.

TLNC partners with educational institutions such as the University of Florida, University of Central Florida, Stetson University, and many private and charter schools. Although TLNC has wonderful school programs, it remains important to work with youths and their families through boy and girl scout programs, Christian scouting groups, 4H, home school groups, autistic groups and

TLNC believes environmental education should:

- ◆ Be part of every child and person's overall education.
- ◆ Develop values, attitudes, knowledge and skills as part of a life-long process.
- ◆ Be innovative. Being innovative reaches out to new constituencies, addresses new concerns and creates learning.
- ◆ Instill the values and attitudes which lead to environmentally sound behavior and actions.
- ◆ Promote the understanding of ecological concepts and processes.
- ◆ Be grounded in current environmental education research and sound educational theory.
- ◆ Provide interactive experiences which include time for enjoying and feeling comfortable in the natural world.
- ◆ Consider the interrelationships between the natural world and the social, economic, political, technological, cultural, historical, moral and aesthetic aspects of human societies.
- ◆ Promote the understanding of and respect for differing viewpoints.

various youth organizations and clubs. By working with these different audiences, TLNC can engage more family members and make sure "other" groups have access to TLNC's programs and nature experiences.

As many other nature or environmental groups are struggling to reach diverse groups, TLNC is having success in diversifying its audiences and visitors. To have healthy ecosystems, you must have diversity. To have healthy functioning human systems you must have diversity too.

Strategy 2: Restore and maintain TLNC's habitat to the point where it is well-regarded as an exemplar historic ecosystem.

From 1918 to 1968 the land where TLNC is located was a dairy farm with wide open spaces and grassy marsh along the borders of Trout Lake. Before the dairy farm, TLNC property was a Florida



wetland and mesic flatwoods community. Since the dairy and TLNC purchased the land, forest fires were suppressed.

Progress: Due to lack of funding, equipment and staff skills, no controlled or prescribed burns have been possible but TLNC is working the Alachua Conservancy to conduct control burns on its property when weather conditions permit. In the meantime, we have used forestry mulching to reduce and open up some forested areas.

TLNC is a participating member of the Big Scrub CISMA and works with local experts to help control invasive species on our property.

Strategy 3: Distinguish TLNC as an active center for central Florida's natural history.

The first building opened at TLNC was a Natural History Museum with further expansion of natural history displays into the later built Education Building. The Natural History Museum has native fauna on display with constant improvements being made.

Progress: Recent improvements are a Discovery Chest, 3-D Wingspan Display, nesting and egg display and interactive games.

The Education Building contains additional native fauna including a diorama, Augmented Reality Watershed Display, Butterfly and Moth Displays. This building also houses photo exhibits that change quarterly and focus on Florida's natural resources.

Strategy 4: Expand TLNC and its ability to support regional ecotourism efforts.

Progress: Enrichments of programs, habitat, trails and community involvement have enhanced TLNC's support of local ecotourism efforts

Strategy 5: Promote awareness and knowledge of the natural world through quality interpretive media.

Interpretation is used to take the visitor on a self-guided walk through exhibits, trails and special natural areas. It helps the visitor understand the importance of ecosystems, natural areas and a

human's role as part of nature. Every nature center depends on interpretive media (signs, exhibits, games) to help interpret the site and make emotional connections to the natural world.

Progress: Although on a limited budget, TLNC has been providing interpretation since its inception. Using standards and practices developed by the Association of Nature Center Administrators (ANCA) and the National Association for Interpreters (NAI), TLNC continually strives to improve its offerings. TLNC has developed a Turtle Education area, augmented-reality watershed exhibit along with puzzle boxes, 3-D wingspan display and more.

Strategy 6: Work with school district, Department



of Education and other teaching professionals to provide quality education programs and support materials.

All TLNC school programs are correlated to Florida Education Standards and often correlate to National Education Standards. TLNC regularly updates programs to stay current with the ever-changing state standards keeping our programs relevant to classroom teachers.

Progress: TLNC provides regular professional development workshops for educators annually. Professional development workshops are often full, sometimes with a waiting list. TLNC strives to bring the newest programs to area educators, both formal and non-formal.

TLNC has partnered with the League of Environmental Educators in Florida to sponsor the national Project WET (Water Education for Today) into Florida. We are training facilitators and

educators throughout the state to use the water education program.

Strategy 7: Increase accessibility to property, buildings and trails.

Progress: A golf cart was donated to provide access to the boardwalk for people with limited mobility. Several shorter trails were developed for the very young and people with limited mobility.

Administrative or governance strategies included:

Strategy 8: Develop plans, policies and procedures for board governance.

Staff and Board have updated many policies and procedures such as records retention, facilities use/rental, and conflict of interest. Additional policies remain to be completed.

Strategy 9: Raise a \$3 million endowment for operational stability.

Although vital to the economic stability of the organization, progress has been slow. Due to the necessity to raise funds to support infrastructure improvements, efforts have been diverted from the endowment to a capital building campaign.

Strategy 10: Develop adequate staff and volunteers.

Progress: Recruitment of volunteers is an ongoing process. Many of TLNC's volunteers have served for many years, even though, based on Independent Volunteer Management reports, the typical volunteer stays for approximately two years before moving to a new organization.-Volunteer retention is vital to the functioning of TLNC.

The Board hired its first Executive Director in 2014 and an additional full-time Program Coordinator quickly followed. A part-time maintenance person works two days a week with the help of volunteers to maintain facilities..

The Board realizes additional staff will be needed in the future and funding is being sought to support additional staff.

Strategy 10: Develop virtual materials and programs to reach wider audiences.

Progress: During the pandemic it became obvious that virtual or web-based programs needed to become part of TLNC's repertoire. Staff and

volunteers have developed a Bernie the Bear Puppet Show, online videos to be used for virtual STEM nights, and other programs.

Because of limited bandwidth or internet connections available on the property, TLNC has partnered with other agencies to use their technology resources. This has limited the speed at which TLNC has been able to obtain the skills and develop online programming.

SUMMARY

It is essential to help people learn and understand how Florida's systems work and their role and impact on natural systems which also affects human systems. The disconnect is becoming obvious and may have lasting consequences to our environment and health, both environmental and human.

Even though our youth make environmental connections in their younger years, it is critical to foster these connections as they become young adults, begin careers, start families and grow older living with decisions that negatively or positively influence the world. They will be the stewards of our natural world.

Nature will achieve a balance. Nature constantly changes—from season to season, habitat to habitat and over time. It is important to understand the natural process and rhythm of changes. TLNC strives to help develop environmentally literate citizens who will live in harmony with nature starting in childhood, extending to adulthood making good decisions to improve and create a sustainable world.