

TURKEY CREEK WETLAND CONSERVATION EASEMENT ADVISORY COMMITTEE

BACKGROUND: A proposal was presented to the Knox County Commission on Monday, December 15, 2003, to accept the Deed to the 58 acre Turkey Creek Wetland. It passed without opposition. This property is to be managed by the Knox County Park and Recreation Department as a Public Natural Area Park. The Tennessee Izaak Walton League will accept the Conservation Easement and conduct nature-centered recreation activities in the park, working with the Knox County Recreation Department. This cooperative effort will insure that the wetland will be and managed for the benefit of the citizens of Knox County and be protected for its recreational and natural resource value.

Since the Turkey Creek Wetland is now public property, the public should have the opportunity to help manage the Conservation Easement. Thus, the Tennessee Izaak Walton League has sought the guidance of citizens who have an interest in the wetland and is forming a Turkey Creek Wetland Conservation Easement Advisory Committee.

This group will establish an open process to be followed to insure public input into managing the Conservation Easement. Public meetings will be held quarterly, in the community, beginning the third week of January 2004. Committee membership is open to anyone who wishes to attend the meetings. A watershed management approach will be followed by the committee and all general meetings will be promoted through the media.

Following is a random list of the initial Turkey Creek Wetland Conservation Easement Advisory Committee Membership, including titles and associations:

1. **Rene Hoyos:** Executive Director, Tennessee Clean Water Network.
2. **Dr. Stephen Smith:** Executive Director, Foundation for Global Sustainability, TVA Natural Resource Stewardship Council. Nine Counties. One Vision. Water, Air and Sustainability Task Force.
3. **Beth Eason:** Environmental Chair, Knox County League of Women Voters, Nine Counties. One Vision. Water, Air and Sustainability Development Task Force.
4. **Dr. John Nolt:** University of Tennessee, Professor and Environmental Author and Lecturer, President and Board Member, Foundation for Global Sustainability.
5. **Dr. Michael MCKinney:** University of Tennessee, Professor and Author in Environmental Science, Foothills Land Conservancy Board.
6. **Will Skelton,** Chairman, Knoxville Greenways Commission , Knoxville Greenways Coalition Board, Tennessee Governor's Council on Greenways and Trails, Harvy Broome Sierra Club.
7. **Peg Beute:** Conservation Programs Director, Ijams Nature Center, Facilitator, Water Quality Forum.
8. **Tim Gangaware:** University of Tennessee, Director, Water Resource Center, Nine County. One Vision. Water, Air and Sustainability Task Force, Water Quality Forum.
9. **Janett Duffy:** TVA Fort Loudoun Watershed Team.

10. **Ruth Hawk:** Community Development Director, Town of Farragut
11. **Karen Nolt:** Greenway and Park Coordinator, Knox County Parks and Recreation Department
12. **Wolf Naegeli:** Chair, Sustainability Committee, Nine Counties. One Vision. Water, Air and Sustainability Task Force, Foundation for Global Sustainability.
13. **Travis Presley:** Town of Farragut Engineering, Stormwater Department.
14. **Billy Minser:** University of Tennessee, Professor of Forestry, Fisheries and Wildlife, Foothills Land Conservancy Board, Tennessee Conservation League Board.
15. **Axel Ringe:** Vice Chair, Harvey Broome Sierra Club.
16. **Jonathon Burr:** Tennessee Department of Environment and Conservation, Water Pollution Control Division.
17. **Woody Ferrell:** Tennessee Valley Authority, Manager, Fort Loudoun Lake Watershead Team.
18. **Wayne Watson:** Director of Finance and Public Relations, First Utility District.
19. **Troy Wedkind:** Director of Engineering, First Utility District.
20. **Tracy Muise:** Science Teacher, Episcopal School.
21. **Cindy Kendrick:** President, Tennessee Citizens for Wilderness Planning.
22. **Dr. Marshal Adams,** Senior Research Scientist, Ecotoxicology, Bioindicators, Environmental Sciences Division, Oak Ridge National Laboratory.
23. **Chris Granju, P.E.:** Stormwater Management Coordinator Knox County Public Works, Water Quality Forum.
24. **Cathy Elliott:** U.S. Army Corps of Engineers.
25. **Carl Williams:** Aquatic Biologist, Tennessee Wildlife Resource Agency
26. **Dr. Jack Ranney:** University of Tennessee, Research Scientist, Ecologist, Energy, Environment and Resources Center.
27. **Greg Johnson:** Hydrologist, U.S. Geological Survey.
28. **Bob Whetsel:** Director Public Services Department, City of Knoxville.
29. **Rick Noseworthy:** Tennessee Department of Transportation, Environmental Coordinator.
30. **Kim Pilarski:** Land and Water Conservancy
31. **Nelson Ross:** Executive Director, Tennessee Izaak Walton League.

NOTE: Since establishing committee membership is an open process, other names will be added from time to time.

For information or to join the Advisory Committee, please contact:

Nelson Ross
Executive Director
Tennessee Izaak Walton League
956 Volunteer Landing Lane. Box 12
Knoxville, Tennessee 37915
Phone: (865) 523-3800
FAX: (865) 523-3838
Web: www.tnike.com

MANAGEMENT PLAN

TURKEY CREEK NATURAL AREA PARK

History

On January 13, 1997, the city of Knoxville was issued a Section 401 certification for the extension of Parkside Drive / Turkey Creek Development Project in west Knox County. Subsequently, the city was issued a Section 404 permit by the U.S. Army Corps of Engineers (February 24, 1997) and a Section 26a permit by the Tennessee Valley Authority (February 25, 1997).

Environmental impacts incurred during the extension of Parkside Drive / Turkey Creek Land Development project included filling approximately 0.76 acre of wetland as a result of the construction of a bridge crossing over Turkey Creek; 0.36 acre of the transitional fringe of a wetland for commercial frontage along Lovell Road; and the placement of a culvert across a spring-fed ditch and the filling of approximately 2,400 feet of manmade ditches. To compensate for these environmental impacts, a mitigation plan was developed that included enhancement of the remaining 19.23± acres of jurisdictional wetlands (at a minimum of 4:1 ratio), the placement of 34± acres (upland and wetland) in a perpetual conservation easement/restrictive covenant (the "Conservation Easement"), and creation of 3.81 acres of wetlands. The wetlands were created as per permit specifications along the upland fringe area surrounding portions of the existing wetlands. Approximately 1,500 feet of meandering spring-fed streams were constructed to compensate for the filled ditches.

Additional enhancements that were not required to meet permit specifications include the creation of an additional 7.13± acres of wetlands and the placement of an additional 19± acres in a perpetual Conservation Easement. These enhancements located on what is referred to as the Duncan Tract may be used for future mitigation purposes at the discretion of The Tennessee Izaak Walton League. The establishment of a conservation easement ensures preservation of existing wetland, spring, and riparian habitats along Turkey Creek.

Special Conditions Nos. 12 and 13 of the 401 certification required that the mitigation measures be monitored for five years, and a report submitted annually to the Tennessee Department of Environment and Conservation, Division of Water Pollution Control. This is the final year of required monitoring by Breedlove, Dennis, Young & Associates, INC (BDY). The results from this year and the previous four years will be summarized and submitted in the form of a final report by December 2003. The future management of this site will be the responsibility of The Tennessee Izaak Walton League, with the obligation to not only protect the biological resources of the mitigation lands, but also to

cultivate public involvement through educational and recreational programs, volunteer assistance, and general visitation to the site.

Site Overview

A conservation easement protects the mitigation lands and is situated in a north-south orientation and includes 58± acres on the periphery of the Turkey Creek Development. Lovell Road borders the area to the east and Interstate 40/75 borders the site to the north. Turkey Creek traverses the eastern half of the conservation easement, flowing from north to south. An east-west oriented greenway and the east-west Parkside Drive extension divide the conservation easement into three sections, nearly equal in size. The three sections of the easement have characteristics different from one another. The northernmost section (Site 1) is dominated by American beaver (*Castor canadensis*) activity with dammed pools. The middle section (Site 2) consists of a large emergent marsh, and the southern section (Site 3) consists of natural and constructed wetlands traversed by a constructed spring-fed stream.

The boundaries of the individual sites are outlined in Figure 1.

Site 1

The boundaries of this site are marked by permanent signs installed adjacent to Lovell Road, the greenway, and Interstate 40 (Figure 2). This site contains a significant portion of Turkey Creek from where it flows under the interstate to an old man-made, fish farm, control structure along the greenway. Topographically, this area is shaped somewhat like a basin with an upland buffer that extends along the margins. Many segments of Turkey Creek and an unnamed creek have become channelized in this area due to beaver activity and increased development upstream of the Conservation Easement. Another result of the beaver activity has been the development of a consistently wet marsh habitat that is adjacent to and sometimes includes Turkey Creek (Figure 2). Dominant species existing in the marsh are rice cut grass (*Leersia oryzoides*), swamp smartweed (*Polygonum hydropiperoides*), and green ash (*Fraxinus pennsylvanica*). As a consequence of frequent floods and standing water, numerous green ash trees have died creating persistent snags.

There are a number of site impacts and management actions that will be addressed in the overall management plan for this site. Siltation from the upper watershed is apparent in the channelized creek and in Turkey Creek. Trash and debris are common along the interstate, areas bordered by businesses along Lovell Road, and near stormwater outfalls. Non-native, invasive species like privet (*Ligustrum sinense*) and honeysuckle (*Lonicera maackii*.) are beginning to become dominant along the margins of the “woodchip” nature trail and are slowly migrating into the boundaries of the Conservation Easement. A nature trail including boardwalks is planned in order to facilitate wildlife viewing and access for educational activities. This nature trail will be designed to allow access to remote areas of the site without significant disturbance to the wetland (Figure 3). A hands-off management strategy will be maintained for the beavers allowing them to

naturally flood and drain the site. A proposed nature trail system within this site that utilizes the existing greenway is illustrated in Figure 4.

Site 2

This triangular site is located between Parkside Drive, the existing greenway, and a well-marked boundary west of Lovell Road. There is a channelized creek running through the upper third of the site, a springhead in the southwest corner (Figure 5), and a large marshy area dominated by cattail (*Typha latifolia*) and rice cut grass (*Leersia oryzoides*) in the center (Figure 6). The channelized creek from Site 1 flows beneath the greenway into a constructed weir allowing the channelized creek to spread out and supply water to the marsh.

There is an established buffer of green ash (*Fraxinus pennsylvanica*) and willow (*Salix nigra*) along the eastern margin of the site. The green ash and willow buffer is both aesthetic and functional in nature, since it also helps to protect(s) the wetland from stormwater runoff. The springhead supplies water for both the marsh habitat in this site and for Site 3, through a stream channel that extends beneath Parkside Drive. The cattail and cutgrass marsh located in the center is the largest habitat within this site and maintains saturated soils throughout the year.

The monitoring and eradication of invasive plants such as privet, english ivy (*Hedera helix*), honeysuckle, and an over abundant colony of green ash is a significant part of the management plan for this site. The initial steps for the control of invasive plants include the removal of non-native species encroaching on the springhead and keeping the green ash and willow from growing into a monoculture in the buffer along the eastern boundary. Stormwater runoff from neighboring businesses and adjacent roads must be managed to filter trash and to guard against increased sedimentation due to the low gradient of the site. Periodic maintenance may be required on the instream weir at the end of the channelized creek to ensure continued performance.

Construction of two nature trails will be designed and implemented to allow further access in to the site linking the trail system created in Site 1 (Figure 7). The constructed trails will be primitive, allowing only foot traffic, in order to provide non-intrusive viewing of the interior marsh, springhead, and the surrounding habitats.

Site 3

This area is located south of Parkside Dr. and bordered by Baptist Hospital to the west and Lovell Road to the east. A significant amount of wetland creation occurred within this site with the goals of enhancing flame chub (*Hemitremia flammea*) habitat and developing functional wetlands. A hardwood forest, which dominates the northern portion of the site, is dissected by Turkey Creek and a braided stream system. A large wetland was constructed in the center of the central and southern portion of the site utilizing an area of low elevation and the construction of a weir and earthen berms. This

wetland is supplied with water from Turkey Creek, natural springs and the flow from the constructed stream. The constructed wetlands occur on both the east and west side of Turkey Creek. Bordering this site to the west is a large lateral detention pond that collects the stormwater from Baptist Hospital.

The area will be monitored for invasive plant species, however their impact is not as evident in the wetlands at this site as compared to sites 1 and 2. Wood duck boxes will be installed and maintained throughout the site due to the presence of larger nesting trees and the observation of breeding pairs in the area. The berms and the weir will be monitored during flood events to ensure proper function and maintained as needed.

The lower constructed creek, which is the preferred flame chub habitat, will be periodically checked for siltation and stream bank degradation in order to maintain the viability of the habitat.

An elevated walkway will be constructed within the upland hardwood forest to allow viewing access to the canopy and to the wetland below. Baptist Hospital will be contacted to coordinate connection of the walkway to the upper parking lot of Baptist Hospital and join two nature trails (Figure 8). The nature trails will meander along both the eastern and western edge of the site. Both of the trails will be primitive in nature, designated for foot traffic only, and constructed in accordance with the conservation easement and approved by all agencies. A footbridge is proposed to be built over the creek channel to connect the two nature trails (Figure 9).

Management Plan

A number of actions must take place in order to maintain the value of the wetlands in their present state and to promote public participation. The Tennessee Izaak Walton League understands this responsibility and has the organization, budget, equipment, staff and technical ability to insure success (see Appendix A). The following plan of action is set forth to implement this management plan:

- A monitoring program for proper erosion control and Best Management Practices (BMPs) at all upstream developments will be initiated and maintained to protect the water quality of the wetland. A sedimentation increase has been documented and this will continue to degrade viable habitat unless managed to maximize good water quality.
- Trash and debris will be removed and efforts will be made to involve local businesses to educate citizens about the impacts of stormwater runoff.
- The constructed berms and weirs will be monitored to ensure continued function and repaired if necessary.

- Monitoring of invasive plant migration and impact will continually occur and removal actions will be undertaken as deemed necessary.
- Creation of a community volunteer work schedule will be established to assist with litter control, stormwater impacts and invasive plant removal. These two projects are labor intensive. Securing external assistance is imperative to do the work and teach proper watershed management.
- Wood duck management will continue with the construction of more nesting boxes and maintenance of snags for roosting and habitat.
- A cooperative working relationship with Knox County Parks and Recreation will be maintained during the construction and promotion of nature trails.
- Numerous educational and recreational programs will be developed for a variety of audiences. These audiences will include: elementary schools, middle/high schools, university/college programs, nature groups and the general public. These programs will utilize the existing and proposed trail systems in order to gain better access to the site.
- The promotion of this area in the form of pamphlets, special events, promotions, media releases, presentations and an Internet presence at www.tnike.com will be used to inform the public about the Turkey Creek Natural Area Park.

NOTE: An Advisory Committee, consisting of interested parties, will be formed and meet each quarter to advise in the management of the Conservation Easement. The meetings of this committee will be announced and open to the public. Since the Tennessee Izaak Walton League holds the Conservation Easement and is responsible for enforcing the requirements outlined in the document, the organization is not legally bound to follow advice given by members of the Advisory Committee.

CONSERVATION EASEMENT MANAGEMENT AGREEMENT

This Conservation Easement Management Agreement ("Agreement") is entered into this ____ day of _____, 2003, by and between **KNOX COUNTY, TENNESSEE** ("the County"), a government unit and instrumentality created and duly-constituted under Tennessee law, and the **TENNESSEE IZAAK WALTON LEAGUE** ("the League"), a Tennessee-chartered non-profit organization which is a qualified tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended.

RECITALS

WHEREAS, pursuant to that certain Conservation Easement Supplementing And/Or Superceding Declaration Of Restrictions ("CESAOSDOR") entered into on the ____ day of _____, 2003 between Turkey Creek Land Partners, LLC ("TCLP") and the League, said CESAOSDOR having been recorded with the Knox County Register of Deeds on the ____ day of _____, 2003 (see Deed Book ____, Page ____), TCLP granted a conservation easement to the League as Grantee of same, encumbering approximately 38 acres of property in the vicinity of Turkey Creek and Lovell Road in Knox County; and

WHEREAS, pursuant to that certain Conservation Easement Supplementing And/Or Superceding Conservation Easement ("CESAOSCE") entered into on the ____ day of _____, 2003 between TCLP and the League, said CESAOSCE having been recorded with the Knox County Register of Deeds on the ____ day of _____, 2003 (see Deed Book ____, Page ____), TCLP granted a conservation easement to the League as Grantee of same, encumbering approximately 19 acres of property in the vicinity of Turkey Creek and Lovell Road in Knox County; and

WHEREAS, pursuant to that certain Quitclaim Deed dated the ____ day of _____, 2003, said Quitclaim Deed having been recorded with the Knox County Register of Deeds on the ____ day of _____, 2003 (see Deed Book ____, Page ____), TCLP donated and conveyed to the County the fee title to that property encumbered by and subject to the CESAOSDOR and the CESAOSCE (collectively, "the Conservation Easement Property"); and

WHEREAS, the County desires to use and maintain the Conservation Easement Property as a passive park under the jurisdiction of the County's Recreation Department; and

WHEREAS, the County desires that the use and maintenance of the Conservation Easement Property as a passive park shall be consistent with the provisions of the CESAOSDOR and the CESAOSCE, including the wetland mitigation plan approved by section 404 Permit #960035200 issued by the U. S. Army Corps of Engineers; and

WHEREAS, the League, as Grantee of the CESAOSDOR and the CESAOSCE has accepted certain obligations and responsibilities with respect to the Conservation Easement Property and is agreeable to undertake the management of the Conservation Easement Property to fulfill those obligations and responsibilities and to assist the County with its desire to use and maintain the Conservation Easement Property as a passive park; and

WHEREAS, the League intends that its management of the Conservation Easement Property shall include environmental monitoring, recreational and educational programs, protection of the Conservation Easement Property (including removal of invasive plants and watershed monitoring), and obtaining funding from private and public sources to ensure the success of its management efforts.

NOW THEREFORE, the County and the League do hereby agree to the following provisions:

AGREEMENT

1. The League shall manage the Conservation Easement Property on behalf of the County's Recreation Department as a passive park, which shall be available for use by the public according to the rules and regulations of the County's Recreation Department and the provisions and covenants of the CESAOSDOR and the CESAOSCE.

2. The League shall further manage the Conservation Easement Property according to the provisions of the Conservation Easement Management Plan dated _____, 2003 (attached as Exhibit A hereto and incorporated by reference herein) and the County's execution of this Agreement shall constitute its approval of said Conservation Easement Management Plan.

3. In the event of any conflict between this Agreement (including the Conservation Easement Management Plan attached as Exhibit A hereto and incorporated by reference herein), the County Recreation Department's rules and regulations, and the CESAOSDOR and/or the CESAOSCE, the provisions and covenants of the CESAOSDOR and/or the CESAOSCE shall govern.

4. Any notices required by this Agreement shall be sent by registered or certified mail, postage pre-paid, to the following address or such address as may be hereafter specified by notice in writing:

TO THE COUNTY:

[INFORMATION TO BE INSERTED]

TO THE LEAGUE:

Tennessee Izaak Walton League
956 Volunteer Landing Lane
Box 12
Knoxville, TN 37915

5. The term of this Agreement shall be *[INSERT DESIRED TERM]*, except that it may be terminated sooner as provided in Paragraphs 8, 9, and 10.

6. This Agreement is complete and contains the entire understanding between the parties relating to the subject matter contained herein, including all the terms and conditions of the parties' agreement. This Agreement may only be modified by a written amendment executed by all the parties.

7. Either party to this Agreement may terminate the Agreement by giving the other party at least sixty (60) days written notice. In the event of such termination, the League shall be paid for all monies due and owing pursuant to this Agreement at the time such termination becomes effective.

8. In the event that the League fails to fulfill its obligations under this Agreement in a timely manner, the County shall have the right to immediately terminate this Agreement by giving written notice thereof, which written notice shall state and specify the grounds for termination.

9. The League shall comply with all applicable local, State, and Federal laws in the performance of this Agreement.

10. This Agreement shall be governed by and construed in accordance with the laws of the State of Tennessee.

11. The County Mayor of Knox County has been authorized to execute this Agreement by the Knox County Commission.

12. The Executive Director of the Tennessee Izaak Walton League has been authorized to execute this Agreement by the League's Board of Directors.

13. ***[PLACEHOLDER FOR ANY OTHER PROVISIONS THE COUNTY OR THE LEAGUE MAY WISH TO ADD IN ADDITIONAL PARAGRAPHS]***

IN WITNESS WHEREOF, the County and the League have caused these presents to be signed on the day and year first written above.

KNOX COUNTY, TENNESSEE

BY: _____

ITS: _____

TENNESSEE IZAAK WALTON LEAGUE

BY: _____

ITS: _____

My Commission Expires:
