# EUCLID CREEK STREAM MITIGATION BANK

Prospectus for a Stream Mitigation Bank in the Lake Erie/ Cuyahoga Watershed

### Great Lakes Improvement Trust

Land and Water Resources, Inc. 9575 W. Higgins Road, Suite 470 Rosemont, IL 60018 PH) 847-692-7170 FX) 847-318-9793 Environmental Banc and Exchange 10055 Red Run Blvd., Suite 130 Owings Mills, MD 21117 PH) 410-356-5159 FX) 410-375-6340

USACOE-Buffalo District Permit # Ohio Environmental Protection Agency Permit #

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### Euclid Creek Stream Mitigation Bank

## Prospectus for a Stream Mitigation Bank in the Lake Erie/ Cuyahoga Watershed in Cuyahoga County, Ohio.

The following prospectus is for the proposed Euclid Creek Stream Mitigation Bank (SMB) in Cuyahoga County, Ohio in the Lake Erie/ Cuyahoga watershed. The SMB sponsor and owner will be the Great Lakes Improvement Trust (GLIT) who proposes to restore and enhance Euclid Creek and maintain the SMB.

The SMB shall operate in accordance with the Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks: Notice published in the Tuesday, November 28, 1995 Federal Register, Volume 60, No. 228. The following information provided is in accordance with Paragraph II, C-2 of the above named Federal Guidance.

#### A. Bank Goals and Objectives

- 1. To restore a historic trout stream in the Lake Erie/ Cuyahoga River watershed to natural conditions that will sustain and improve native fish communities.
- 2. To make a positive contribution to the long-term ecological functioning of the watershed of Lake Erie and the Cuyahoga River.
- 3. To replace essential aquatic functions that are anticipated to be lost through authorized activities at other locations within the bank's service area.
- 4. To provide economically feasible and efficient mitigation opportunities.
- 5. To assist in the delisting of Euclid Creek on the USEPA 303d list. Euclid Creek is partially listed due to habitat impairments. Restoration of the stream will assist in the delisting process.
- 6. To assist in the delisting of the Cuyahoga Area of Concern through habitat restoration
- 7. To comply with the Remedial Action Plan

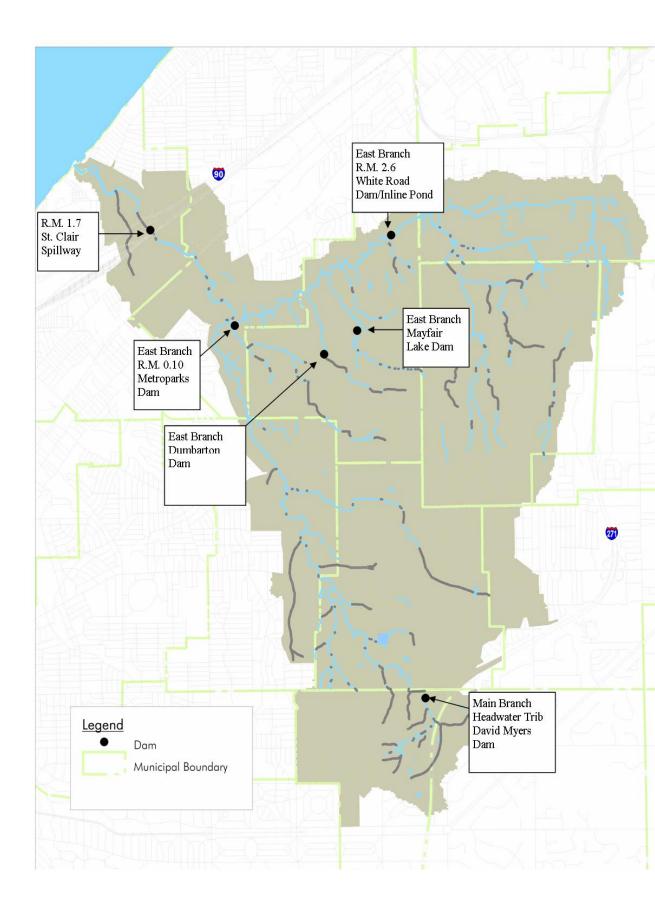
8. To implement the Euclid Creek Watershed Action Plan, specifically the 2 goals of 1) removing 2 dams by 2008 and 2)establishing a wetland and stream mitigation program.

#### B. Ownership and Legal Description

The proposed Euclid Creek SMB will be under the ownership of GLIT. Pending approval of the SMB each portion of work will be protected with a conservation easement recorded with the Cuyahoga County Auditor before the construction is begun.

The proposed Euclid Creek SMB is located at 2 sites. Site 1 (St. Clair Spillway) is located south of US 90, east of 185<sup>th</sup> Street in Cleveland Cuyahoga County, Ohio. The work will occur on parcel number 11425006 and 11426002. The land is owned by the New York Central Lines, LLC, and the Ohio Department of Transportation holds a drainage easement on the property. All the work will occur within the drainage easement.

Site 2 (Metroparks dam site) is located in the Cleveland Euclid Creek Metropark underneath Highland Avenue in Euclid, Cuyhaoga County, Ohio. The work will occur on parcel number XXXXX. The land is owned by the Cleveland Metroparks.



#### C. Bank size and Classes of Aquatic Resources Proposed for Inclusion

Stream impacts of various types shall be suitable for compensation. The Buffalo District Corps of Engineers (USACOE) and Ohio Environmental Protection Agency (OEPA) will be responsible for determining the aquatic resource impacts which are suitable for compensation at the bank.

The bank size will be XXX equivalent linear feet of stream impacts as described in Section G.

The restoration consists of construction of a rock fishway in the ODOT drainage easement at the St. Clair Spillway to allow fish passage between the lower Euclid Creek channel and the upper Euclid Creek channel. This will open fish spawning areas for native trout and other species which live in Lake Erie. We anticipate that this will positively impact over XX miles of stream.

The second part of the restoration consists of the dismantlement of the Metroparks dam on the East Branch of Euclid Creek, just upstream of the confluence with the main stem, underneath Highland Ave. We anticipate this will positively impact over 8.5 miles of stream.

Conceptual plans are shown in Appendix XXX. Permits will be required from ODOT, ODNR-Division of Water, USACOE and OEPA.

#### D. Description of Baseline Conditions

Euclid Creek is a tributary of Lake Erie, situated between the Cuyahoga and Chagrin watersheds. The 43 miles of creek drains 24 square miles of urban and suburban lands in Cuyahoga and Lake Counties, Ohio. A more complete description of the watershed is contained in the Euclid Creek Watershed Action Plan (Euclid Creek Watershed Council, Draft June 2005)

The aquatic life use designations that apply to various segments of Euclid Creek are Warmwater Habitat (WWH) and Limited Resource Water (LRW). The recreational use for the majority of the Euclid Creek watershed is Primary Contact Recreation (PCR). There are currently zero (0) miles within Euclid Creek that are in full attainment of the State's water quality standards. The East Branch is in partial attainment.

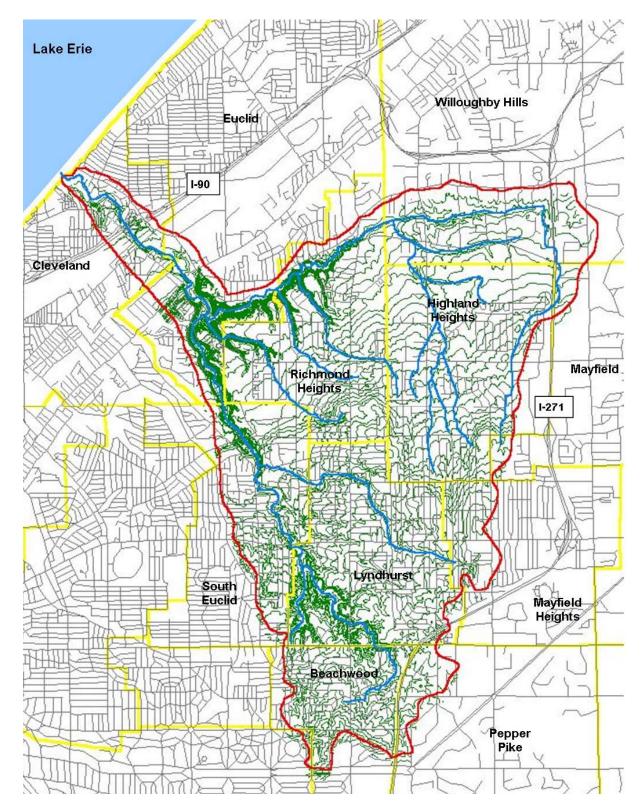
Fish communities exhibit low diversity and a high percent composition of tolerant species. Top carnivores are also generally absent from sampling sites, a sign of disturbed systems. Darters and sculpins are also absent in Euclid Creek, they can be normally found in healthy streams. Fish IBI scores range from 24 to 32 within the basin, all are below the applicable biocriteria standard. The modified index of well being (Miwb), used to evaluate functional stability of the fish community, also show scores below applicable standards. Euclid Creek is considered a headwater stream ( $<20 \text{ mi}^2$  drainage area) for most of its watershed. The MIwb is not utilized for headwater streams.

It should be noted that the number of species collected downstream of the St. Clair Spillway, was consistently greater than the number of species located above the dam.

While the fish communities remain impaired, macroinvertebrate communities show signs of potential attainment. The lower two sites on Euclid Creek (RM 0.7 and RM 1.8) (the St. Clair Spillway is at RM 1.7) are meeting the water quality standard of 34 (Invertebrate Community Index, ICI).

The current QHEI in Euclid Creek meets the target score of 60 in two locations in the Ohio EPA 2000 sampling survey. These locations are located along the main stem in the lower reaches and at the mouth of the East Branch. The areas not meeting attainment are located in the southern portions of the main stem. These scores have not improved from previous sampling conducted by the Northeast Ohio Regional Sewer District in 1998.

Euclid Creek 14 digit watershed (Exhibit taken from Euclid Creek Watershed Action Plan



The existing St. Clair Spillway consists of a channelized stream and a 8-10 foot high dam. The channel and dam were placed in the creek in the late 1960's during the construction of US 90. Trout have been seen at the foot of the dam, but the dam prevents movement of trout to the upper 80% of the

watershed. Just upstream of the dam is a CSX (Formerly New York Central) railroad structure bridging Euclid Creek. The dam does not impound water; rather it was designed to provide elevation change in the creek after a large meander was cut during the construction of the highway. The creek upstream of the dam is in its normal bed, and appears to consist of bedrock.

Currently the dam restricts fish migration from Lake Erie to make its way upstream within Euclid Creek and prohibits habitat enhancement of the biology within and adjacent to the stream.

The site is in the 100-year floodplain of Euclid Creek.

The Cuyhoga County Brownfield GIS database <u>http://cpc.cuyahogacounty.us/cpc/map.asp</u> shows that there are leaky underground storage tanks (some in compliance, some out of compliance) immediately adjacent to this site. In addition immediately adjacent site is also listed as a RCRA site.

St. Clair Spillway.



The Metroparks Dam consists of a concrete dam approximately 8 feet high, which blocks fish passage on the East Branch of Euclid Creek. It was installed during the construction of Highland Avenue. The dam is in bad condition, and it appears that the creek is starting to cut around the northern abutment. It is located in the 100-year floodplain. There are no known hazardous material issues at this dam.

Metroparks Dam



#### E. Geographic Service Area

The Euclid Creek SMB primary service area is anticipated to be the Lake Erie tributary eleven digit hydrologic unit code 04110003010 as defined by the U.S. Geological Survey: East of the Cuyahoga and West of the Grand Rivers excluding Chagrin River. Euclid Creek itself is a subset of this defined drainage area and considered a 14-digit hydrologic unit within (XXXX). The other associated streams for this hydrologic unit include the Lake Erie tributaries in eastern Cuyahoga County that include Doan Brook, Nine Mile Creek and Dugway Brook as well Lake Erie tributaries in eastern Lake County.

The Euclid Creeek SMB secondary service area is anticipated to be the Cuyahoga and Astabula-Chagrin eight digit hydrologic unit code (04110002 for Cuyahoga) and (04110003 for Astabula-Chagrin)

The USACOE may at their discretion, authorize sales of credits for impacts outside the primary geographic service area, at a credit ratio deemed appropriate for the wetland impact.

#### F. Aquatic Resources Impacts Suitable for Compensation

Stream impacts of various types shall be suitable for compensation. The Buffalo District Corps of Engineers and Ohio Environmental Protection Agency (OEPA) will be responsible for determining the aquatic resource impacts which are suitable for compensation at the bank.

#### G. Methods for Determining Credits and Debits

The Euclid Creek SMB shall be a privately owned bank that is market oriented for clients requiring wetland credits for mitigation purposes. The work will be done in two phases. Credit production will be developed in phases also. These clients will range from private individuals or corporations to public MBRT.

Bank credits are calculated using the OEPA "Compensatory Mitigation Requirements for Stream Impacts in the State of Ohio" Revision 4.0, OEPA, Division of Surface Water, April 2004. Calculations are shown in Appendix A

#### Bank Credits will be available for debit as follows:

1. Upon approval of the charter, receipt of permit and the recording of the deed restriction per dam, no more than 30% of the total potential credits will be available for sale per dam. Restoration shall commence within one year of the first credit sale.

2. Upon written acceptance by the USACOE and OEPA that the fish passage construction or dam dismantlement process has been completed per dam, an additional 20% of the potential credits per phase for an aggregate total of no more than 50% of the total potential credits per dam will be available for sale.

3. Upon written acceptance by the USACOE and OEPA that the appropriate escrow funds or letter of credit for maintenance and monitoring has been established per dam, an additional 20% of the potential credits for each phase for an aggregate total of no more than 70% of the total potential credits per dam will be available for sale.

4. Upon written acceptance by the USACOE and OEPA that all the performance standards have been met per dam, as defined in this document and the long term management entity has been identified and agrees to the terms of this charter, the remaining 30% of the dam, and 100% of the total available dam credits will be available for sale.

#### H Accounting Procedures

GLIT shall keep a ledger of all credits and of all debits. With each debit proposal GLIT shall provide a written accounting to the USACOE and OEPA of credits available at the date of the proposal along with all debits to date from the Euclid Creek SMB.

#### I. Performance Standards

The stream restoration shall:

1) improve the Fish Index of Biotic Integrety (FIBI) score throughout the creek system. Currently the FIBI scores range from 24 to 32

2) Improve the QHEI at XX locations upstream of the dam. Currently the QHEI ranges from XXX to XXX

3) Improve the Invertebrate Community Index (ICI) from 34 to XXX at XXX locations on the Creek

4) Demonstrated Trout migration at 1 location upstream of each of the existing dams.

#### J. Reporting and Monitoring Plan

GLIT proposes to have a joint meeting with MBRT on the site upon completion of construction and annually thereafter until performance standards as described in this document are achieved. After each annual meeting, GLIT shall prepare a letter stating the observations of the site in relation to the performance standards and send to each of the regulatory agencies for concurrence. Any deficiencies shall be documented and a remedy for remediation proposed.

GLIT shall prepare a mid year letter report on the status of Euclid Creek SMB. The letter shall notify the USACOE of any changes to the plan, ie., sediment erosion control and/or any remedial/management measures to be taken at the site.

GLIT shall prepare an annual report for the Euclid Creek SMB at the end of each growing season until all credits have been sold. The report shall detail the monitoring results, maintenance activities accomplished during the growing season, and any actions taken or as required for remedial action.

Once all credits have been sold, GLIT will make a report to the Mitigation Banking Review Team (MBRT) as to the status of the bank. GLIT, in its report, will provide a letter in which the entity who will take over long-term management of the site acknowledges the receipt of the site and long- term management responsibilities.

Monitoring will include conducting a Fish IBI analysis, a ICI and a QHEI at 3 locations upstream of each dam site and 1 location downstream of the dam sites each year. Sites will be chosen in the field with regulatory personnel and will be used throughout the monitoring period. The analysis will comply with the Biological Criteria for the Protection of Aquatic Life methodologies found at <a href="http://www.epa.state.oh.us/dsw/bioasses/BioCriteriaProtAqLife.html">http://www.epa.state.oh.us/dsw/bioasses/BioCriteriaProtAqLife.html</a>

#### K. Contingency and Remedial Actions and Responsibilities

If the SMB is not performing as described in this prospectus, the USACOE shall notify GLIT in writing of the deficiencies in meeting the performance standards.

GLIT shall then develop and implement a remedial action plan to meet the performance standards. The plan shall be transmitted to the MBRT. The implementation of the remedial action plan shall take place immediately upon approval and/or agreement by the agencies of the plan.

GLIT shall notify the MBRT the results of the remedial action in the annual report.

If the fish habitat fails to improve, the affected linear feet of stream credit shall be withdrawn from the pool of credits available for sale.

If GLIT fails to remediate the site to meet the performance standards the USACOE and OEPA may upon written notice to GLIT, draw on the performance bond and/or letter of credit to conduct remedial action.

#### L. Financial Plan

GLIT shall be responsible for financial assurances to cover the bank through the restoration phase, management phase, and monitoring phase.

#### Table 3: Estimated Costs of the Euclid Creek SMB – Phase 1

Cost Item	St. Clair Spillway	MetroParks Dam	Total Estimated Cost
Construction	<mark>\$X</mark>	<mark>\$X</mark>	<mark>\$X</mark>
Maintenance (5 year)	<mark>\$</mark> X	x <mark>\$X</mark>	<mark>\$X</mark>
Monitoring (5 year)	\$X	x <mark>\$X</mark>	<mark>\$X</mark>

Upon approval of the SMB, GLIT will provide a letter of credit or establish an escrow account for Phase 1 with Chicago Title and Trust Company as escrowee for the Great Lakes Improvement Trust, LLC for the estimated cost of restoration of the site. The amount of the letter of credit or escrow account shall be for 100% /+ 20% of the agreed upon cost for restoration. The letter of credit or escrow account shall be released upon verification provided by GLIT to the MBRT that construction and planting have been completed in substantial compliance with the plans and specifications.

GLIT shall provide the qualified third party to be designated on the letter of credit or escrow account to act as the "default" contractor in the name of Christopher B. Burke Engineering Limited (CBBEL) to complete the project work should GLIT not be able to satisfy the standards set forth in the permit or as described in Section L. The responsible party shall be designated and submitted to the MBRT for approval prior to issuance of the permit.

GLIT shall provide a letter of credit or escrow account to cover the agreed upon cost of maintenance and monitoring of each dam when the work on each dam is initiated. The amount of this letter of credit or escrow account shall be reduced by 20% per year upon receipt of the annual report by the MBRT and their concurrence that the site is making reasonable progress toward meeting the performance specifications.

#### M. Compensation Ratios

The USACOE shall be solely responsible for determining the amount of credit a purchaser will be required to buy from the bank for an impact.

#### N. Permanent/ Long Term Protection

A conservation easement will be placed on the St. Clair Spillway site and will be recorded at the Cuyahoga County Auditor once the permit to construct the bank is obtained. The Cleveland Metroporks is the owner of the Cleveland Metroparks dam and by mission will protect the site in perpetuity.

(How handle long term maintenance of the ODOT site?

#### Q. Schedule of Completion

The following is an anticipated schedule of completion Phase 1 of the Euclid Creek SMB:

February 2005 - Permit Application, Bank Prospectus with Plans submitted

Spring 2005- Review of Prospectus by MBRT

Summer/Fall 2005-Public Notice goes out public input

- Summer/Fall 2005- Bank Prospectus/Plans Approved and Permit Project Agreement finalized
- Summer/Fall 2005 -Record conservation easement with Cuyahoga County Auditor and establishment of escrow account or letter of credit
- Fall 2005/Spring 2006- Initiate construction of fish passage for St. Clair Spillway

Spring/Fall 2006- Initiate dismantlement of Metroparks Dam

Spring 2006-2009- Management/monitoring of (on-going)

R. Management Plan