

WOULD YOU LIKE TO BE ADDED TO THE GREAT LAKES BASIN FISH HABITAT PARTNERSHIP E-MAIL LIST?

Yes E-mail: moorer@rochesterhills.org No

ADDITIONAL INFORMATION YOU WOULD LIKE TO PROVIDE:

Background

The parcels of property owned by the City of Rochester Hills at their municipal offices and Environmental Education Center (EEC) contain 1,850 ft of Avon Creek, including 500 ft of a headwater tributary from the north. Phase I of the Avon Creek Restoration Project includes installing grade controls (natural riffles) to raise the bed of the creek to create a bank height ratio of 1, construct off-line wetlands, stormwater quality swales, removal and selective herbicide spraying of invasive plants along the Phase I and II reaches, and dredge the in-line pond in front of the entranceway to the municipal offices. This first phase was designed and permitted in 2009 at a cost of over \$31,955 and will be constructed in July-December, 2010 at an estimated cost of over \$178,000. Phase II of the project will include restoration of a meandering creek for 600 feet downstream of the pond outlet to a stable reach near the EEC footbridge. Future work will include: riparian vegetation maintenance and implementing recommendations of a habitat assessment of the rest of the creek on city property.

The city also owns over a mile of a high gradient section of the main Clinton River upstream of Livernois Road that is being managed as a brown trout fishery as part of the Clinton River Coldwater Conservation Project. The City intends to restore much of this section to reduce sediment loadings, control invasive riparian plant species, and improve fish habitat. A Natural Channel Design Approach will be used to restore habitat through the use of innovative river restoration techniques that mimic natural river forms and processes. The City requested funding for this project under the USFWS GLFWR Act in 2010.

Project Design Approach References Cited:

Rosgen Geomorphic Channel Design Approach (NRCS, 2007, Ch. 11):
http://www.wildlandhydrology.com/assets/Rosgen_Geomorphic_Channel_Design.pdf

Rosgen Priority 1 restoration of incised creek in Rosgen:
http://www.wildlandhydrology.com/assets/A_Geomorphological_Approach_to_Restoration_of_Incised_Rivers.pdf

Robert Newbury – natural stone weir design:
<http://www.newbury-hydraulics.com/StreamAnalysisandFishHabitat%20Design1994.pdf>

Project Maintenance

The City of Rochester Hills is committed to implementing a long-term vegetation management plan along their portion of Avon Creek. A Vegetation Maintenance Plan will be developed during the post-construction monitoring phase.

<u>Parameter</u>	<u>Existing Channel</u>	<u>Proposed Channel</u>
Drainage Area (ac.)	350	350
Stream Type	G4c	E4
Bank Height Ratio	4.0-5.0	1.0
Width (ft)	12	8
Mean Depth (ft)	3-4	0.8
Max. Pool Depth (ft)	0.6	2.0-2.5
Sinuosity	1.0-1.1	1.5
Entrenchment Ratio	1.2	>8

Outcomes from Avon Creek Restoration Phase II Project Only (Downstream of Pond)

- 600 ft incised creek restored to meandering channel
- 30 tons/yr sediment reduction based on Rosgen BANCS Method (BEHI/NBS).
- 0.1 ac. vernal pools and 0.8 ac. riparian wetlands created
- 1,920 sft pools, pool depth ratio increased
- 2,880 sft riffles
- 24 pcs. woody material
- 12 volunteers monitor benthics, Target - ratings improve from poor to good
- 2-3°F stream temperatures reduction
- Improved water clarity
- 1 demonstration project at Environmental Education Center
- 2 Clinton River AOC BUIs, project contributes to removal

Links to Planning Objectives

The Avon Creek Restoration Project will:

- Directly address all five of the Tier 1 threats to small tributaries and contribute towards achieving objectives 4 and 5 of the Great Lakes Basin Fish Habitat Partnership's GREAT LAKES BASIN FISH HABITAT PARTNERSHIP: A Strategic Conservation Framework (Draft, 2009).
<http://www.fws.gov/midwest/GLBFHP/documents/GLBFHP-DRAFT-Strategic-Framework8-19-09.pdf>
- Contribute to the removal of the Clinton River AOC habitat impairment and degraded benthos BUIs.
<http://www.epa.gov/grtlakes/aoc/clintriv.html>
- Improve trout fisheries per the MDNRE Clinton River Fisheries Assessment (TR 39, 2006).
http://www.michigan.gov/dnr/0,1607,7-153-10364_52259_10951_19056-46270--,00.html
- The Clinton River Main in Rochester Hills is a part of a high gradient reach which is being managed by the MDNR, CRWC, and TU as a trout fishery under the Clinton River Coldwater Conservation Project (CRCCP). Managing the stream temperatures and sediment loadings from tributaries is important for the fishery and quality headwater streams are important for fish rearing habitat.
<http://www.crowc.org/programs/crccp/index.html>

Letter of Support:

Mr. Roger Moore P.S.
City of Rochester Hills
1000 Rochester Hills Drive
Rochester Hills, MI 48309-3033

February 10, 2010

**Re: Support for Great Lakes Basin Fish Habitat Partnership
Avon Creek Restoration Phases I and II**

Dear Mr. Moore;

I am writing this letter to express the Clinton River Watershed Council's (CRWC) support, and to commit our willingness to partner in the proposal submitted by the City of Rochester Hills entitled, *Avon Creek Restoration Phases I and II*.

As stated in the proposal, the quality of water and forage from headwater tributaries is critical to the restoration of the Clinton River Main as a brown trout fishery. The project will restore floodplain connectivity and raise groundwater levels, as well as restore natural channel form and ecological functions. Upstream of Rochester Hills Drive and Avon Road, the creek is a small headwater tributary within low density residential land use. The City and the CRWC are committed to the comprehensive restoration of the lower Avon Creek watershed. CRWC's partnership in the project will involve providing micro invertebrate monitoring and public education assistance

The *Avon Creek Restoration Phases I and II* will also support the CRWC's efforts in the watershed by:

- Improving the water quality of the surface water runoff.
- Reducing sediment from bank erosion.
- Restoring the pre-developed groundwater table.
- Providing an excellent location for environmental education.
- The project is compatible with the Clinton River Remedial Action Plan.
- The project is compatible with the 2006 Michigan Department of Natural Resources and Environment's Clinton River Assessment Special Report 39.

The project is consistent with the Clinton Main Subwatershed Management Plan.

The Clinton River Watershed Council encourages a favorable review of this application, and looks forward to providing our partner in this project, the City of Rochester Hills, with assistance in the monitoring and public education components of the project.

Sincerely,



Anne M. Vaara
Executive Director

Application for Federal Assistance SF-424 Version 02

*1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application	*2. Type of Application * If Revision, select appropriate letter(s) <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision *Other (Specify) _____
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3. Date Received:	4. Applicant Identifier: City of Rochester Hills
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5a. Federal Entity Identifier:	*5b. Federal Award Identifier:
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State Use Only:

6. Date Received by State:	7. State Application Identifier:
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8. APPLICANT INFORMATION:

*a. Legal Name: City of Rochester Hills

*b. Employer/Taxpayer Identification Number (EIN/TIN): 386006880	*c. Organizational DUNS: 088758396
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d. Address:

*Street 1: 1000 Rochester Hills Drive
 Street 2: _____
 *City: Rochester Hills
 County: Oakland
 *State: MI
 Province: _____
 *Country: USA
 *Zip / Postal Code: 48309

e. Organizational Unit:

Department Name: Department of Public Services	Division Name: Engineering Services
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f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Mr. *First Name: Roger
 Middle Name: P.
 *Last Name: Moore
 Suffix: P.S.
 Title: Professional Surveyor
 Organizational Affiliation:
 N/A
 *Telephone Number: 248-656-4640 Fax Number: 248-656-4758
 *Email: Moorer@RochesterHills.org

Application for Federal Assistance SF-424

Version 02

***9. Type of Applicant 1: Select Applicant Type:**

C. City or Township Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

*Other (Specify)

***10. Name of Federal Agency:**

U.S. Fish and Wildlife Service

11. Catalog of Federal Domestic Assistance Number:

15.608

CFDA Title:

Fish and Wildlife Management Assistance

***12 Funding Opportunity Number:**

FWS-GRANTS-GLBEHP-001

*Title:

Great Lakes Basin Fish Habitat Partnership

13. Competition Identification Number:

n/a

Title:

n/a

14. Areas Affected by Project (Cities, Counties, States, etc.):

City of Rochester Hills

***15. Descriptive Title of Applicant's Project:**

Avon Creek Restoration Phases I & II

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

*a. Applicant: MI-009

*b. Program/Project:

17. Proposed Project:

*a. Start Date: Phase I September 1, 2010
project completion

*b. End Date: 6/30/2012 final report/ total

18. Estimated Funding (\$):

*a. Federal	_____	\$135,000
*b. Applicant	_____	\$178,000
*c. State	_____	N/A
*d. Local	_____	
*e. Other	Applicant above	
*f. Program Income	_____	
*g. TOTAL	_____	\$313,000

*19. Is Application Subject to Review By State Under Executive Order 12372 Process?

- a. This application was made available to the State under the Executive Order 12372 Process for review on _____
- b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- c. Program is not covered by E. O. 12372

*20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)

- Yes
- No

21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U. S. Code, Title 218, Section 1001)

** I AGREE.

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions

Authorized Representative:

Prefix: Mr. _____ *First Name: Bryan _____
Middle Name: K _____
*Last Name: Barnett _____
Suffix: Mayor _____

*Title: Mayor, City of Rochester Hills

*Telephone Number: 248-656-4664

Fax Number: 248-656-4603

* Email: Mayors Office@rochesterhills.org

*Signature of Authorized Representative:

*Date Signed: 7-26-10

Application for Federal Assistance SF-424

Version 02

***Applicant Federal Debt Delinquency Explanation**

The following should contain an explanation if the Applicant organization is delinquent of any Federal Debt.

GLRI PROGRESS REPORT NARRATIVE

Recipient Name:

Assistance Agreement Number:

Project Description:

Report Type: (Semi-Annually, Annual or Final)

Period Covered:

Project Narrative: (documents progress made in achieving the objectives of project work plan(s) approved in application)

Provide the following information:

1. Comparison of actual accomplishments (outputs, outcomes) with the anticipated outputs/outcomes.
2. Reasons why anticipated outcomes were exceeded or not met.
3. If applicable, problems encountered during the performance period, which may interfere with meeting program/project objectives. (List N/A if no problem exists.)
4. List proposed remedies if problem(s) exist (s) as indicated in item 3. [List N/A if not applicable]
5. Information on the rate of expenditure versus progress on project.
6. If applicable, information on equipment purchased during the reporting period. [List N/A if no equipment purchased during reporting period]
7. Any additional pertinent information, including, when appropriate, analysis and information of cost overruns or high unit costs or unanticipated economics. [List N/A if not applicable]

GENERAL PROVISIONS FOR FINANCIAL ASSISTANCE

The Following Office of Management and Budget (OMB) "A" Circulars and Codes of Federal Regulation (CFR) apply to classes of Recipients as indicated below:

Table 1 on page two is a quick reference guide to see which CFR's apply, by type of Recipient.

OMB: Circular A-133: Audits of States, Local Governments and Non-Profit Organizations

CFR's:

Title 2--Grants and Agreements

Part 175: Trafficking Victims Protection Act of 2000. (All recipients)

Part 220: Cost Principles for Education Institutions. (OMB Circular A-21)

Part 215: Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and other Non-Profit Organizations. (OMB Circular A-110)

Part 225: Cost Principles for State, Local, and Indian Tribal Governments. (OMB Circular A-87)

Part 230: Cost Principles for Non-Profit Organizations. (OMB Circular A-122)

Part 1400: Governmentwide Debarment and Suspension. (Nonprocurement), (All recipients)

Title 43--Public Lands: Interior

Part 12: Administrative and Audit Requirements and Cost Principles for Assistance Programs

- i. Subpart A - Administrative and Audit Requirements and Cost Principles for Assistance Programs. (All recipients)
- ii. Subpart C - Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments and (Federally-Recognized Indian Tribes).
- iii. Subpart E - Buy American Requirements for Assistance Programs. (All recipients)
- iv. Subpart F - Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and other Non-Profit Organizations.

Part 18: New Restrictions on Lobbying. (All recipients)

Part 43: Governmentwide Requirements for a Drug-Free Workplace. (All recipients)

Title 45--Public Welfare

Part 74 Appendix E (R. & D): Principles for Determining Costs Applicable to Research and Development under Grants and Contracts with Hospitals.

Title 48--Federal Acquisition Regulations System

Part 1: Federal Acquisition Regulation (FAR).

Subpart 31: Contracts with Commercial Organizations.

Table 1

Requirement	Governments, including Tribes	Other Non-profits...	Colleges...	Hospitals...	For-Profit Businesses and Individuals...
Admin Requirements	43 CFR 12 (A.C)	43 CFR 12 (A.F)	43 CFR 12 (A.F)	43 CFR 12 (A.F)	48 CFR 1
Cost Principles	2 CFR 225	2 CFR 230	2 CFR 220	45 CFR 74 Appendix E (R & D)	48 CFR 31
Audit	A-133	A-133	A-133	A-133	See Agency Implementation of 2 CFR 215, i.e. 43 CFR 12 (F)
Miscellaneous	2 CFR Part 175 2 CFR Part 1400 43 CFR 12 (E) 43 CFR Part 18 43 CFR Part 43	2 CFR Part 175 2 CFR Part 1400 43 CFR 12 (E) 43 CFR Part 18 43 CFR Part 43	2 CFR Part 175 2 CFR Part 1400 43 CFR 12 (E) 43 CER Part 18 43 CFR Part 43	2 CFR Part 175 2 CFR Part 1400 43 CFR 12 (E) 43 CER Part 18 43 CFR Part 43	2 CFR Part 175 2 CFR Part 1400 43 CFR 12 (E) 43 CFR Part 18 43 CFR Part 43

For information on OMB Circulars: <http://www.whitehouse.gov/omb/circulars/index.html>

For information on the CFR: <http://www.gpoaccess.gov/cfr/index.html>

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards of merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

Previous Edition Usable

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Standard Form 424D (Rev. 7-97)
Prescribed by OMB Circular A-102

- Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
 13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.
 14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
 15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the 1969 and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
 16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
 17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
 18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
 19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

<p>* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL</p> <p><i>[Handwritten Signature]</i></p> <p><small>Completed on submission to Grants.gov</small></p>	<p>* TITLE</p> <p>Bryan K. Barnett, Mayor</p>
<p>* APPLICANT ORGANIZATION</p> <p>City of Rochester Hills</p>	<p>* DATE SUBMITTED</p> <p>Completed on submission to Grants.gov 7/24/10</p>

SF-424D (Rev. 7-97) Back