

TOWN OF GOFFSTOWN
NEW HAMPSHIRE

**REQUEST FOR QUALIFICATIONS
FOR
ENGINEERING SERVICES RELATED TO UNCANOONUC LAKE DAM
(State Dam Reg: #093.04, Goffstown)
Compliance & Stability Study**

The Town of Goffstown, New Hampshire, is seeking Statement of Qualifications from New Hampshire licensed professional engineering firms to provide engineering and technical services to the Town of Goffstown in the areas of hydrology and dam safety to assist the Town in addressing concerns raised in a Letter of Deficiency. The Dam is located on Uncanoonuc Lake adjacent to Mountain Base Pond Road.

All statements must be received by, 2:00PM, prevailing time, on June 18, 2012. Interested parties must submit Three (3) copies of their statements in a sealed envelope marked with the company name, address, and "2012 Goffstown Uncanoonuc Dam - RFQ". Statements should be addressed to the Town Administrator, Town Hall, 16 Main Street, Goffstown, NH 03045. The Town of Goffstown reserves the right to reject any and all statements. Interviews may be scheduled the week of the June 25, 2012.

The Town hereby notifies all respondents that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit proposals in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age, or disability in consideration for an award.

Copies of the request for qualifications may be obtained, without charge, from the Department of Public Works, 404 Elm Street, Goffstown, NH 03045, and telephone number (603)-497-3617 or on the Town's web site at <http://www.goffstown.com>

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BACKGROUND

The Town of Goffstown received a Letter of Deficiency (LOD) dated July 12, 2011. The Town budgeted for a study in 2012. The Town took action to remedy the immediate concerns and communicated with the Dam Bureau explaining our budgetary constraints and plan of action. The purpose of this RFQ is to select a consultant to review the work completed to date and assist the Town in complying with the LOD.

SCOPE OF SERVICES

The Engineering firm shall provide engineering and technical services associated with the following:

Engineering Firms are to present qualifications and a rough outline of a scope and schedule to address what is required by the Town to comply with State/Federal rules and address the concerns raised in the LOD.

SUBMISSION REQUIREMENTS

Statement must contain the following:

- Evidence that the firm has performed or is performing similar work in the last three (3) years.
- Demonstrated experience and qualifications of the actual people who will undertake the work.
- Demonstrate that the firm and the principal staff who will be assigned the work have a thorough understanding of New Hampshire Department of Environmental Services (NHDES) Rules and the requirements for the program for all phases of work.

- Provide a listing of municipal or local government clients for whom hydrologic studies and dam engineering have been provided. Include client name, address, contact person, telephone number, number of years of service, and parameters covered.
- Identify any subcontractor or firm that may be used during the course of the contract.
- Brief discussion on methodology for project approach and management.
- Draft Schedule through construction.
- Three (3) copies of proposal, with tabs separating each section.

SELECTION PROCESS:

A review committee comprised of Town officials will review all statements and select a number of firms for formal presentation and interview. The selection will be based upon a combination of factors including, but not limited to:

- Understanding of Project Scope
- Experience of appointed staff
- Schedule and time to perform work
- Experience of supervisory personnel
- Experience and capabilities of the firm
- Management approach and capacity to perform the work
- Experience with NHDES Dam Bureau
- Successful completion of similar scope of work
- References

Statements, when received, shall be irrevocable for a period of ninety (90) calendar days following date received. The Board of Selectmen's judgment shall be final and the right is reserved by the Town to reject any or all statements as he/she may determine *incomplete*, and to waive defects in form or minor irregularities where the best interest of the Town would be served.

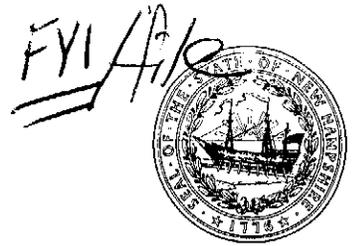
General questions regarding this RFQ may be addressed to:

Carl Quiram
Director of Public Works
404 Elm Street
Goffstown, NH 03045

(603) 497-3617 x210
cquiram@goffstownnh.gov



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

Ms. Evelyn Miller
Goffstown Conservation Commission
16 Main Street Town Hall
Goffstown, NH 03045

July 12, 2011
Letter of Deficiency
DSP #11-059

RE: Uncanoonuc Lake Dam #093.04, Goffstown

**NEW STATUTORY PENALTY PROVISIONS
PLEASE READ CAREFULLY**

Dear Ms. Miller:

The Department of Environmental Services, Dam Bureau (DES) is responsible for ensuring the safety of dams in New Hampshire through its dam safety program. One of the many tools that helps us to reach this goal is our dam inspection program.

In accordance with RSA 482:12 and Env-Wr 302.02, an inspection of the subject dam was conducted on October 13, 2010. Based upon the results of that inspection, as well as upon additional investigation or analysis that may have been conducted, DES is issuing this Letter of Deficiency (LOD) to advise you that it believes the following deficiencies can be remedied in accordance with the deadlines indicated:

By December 1, 2011:

1. Remove the trees and brush over the entirety of the dam embankment, to 15 feet beyond the toe of slope at the base of the dam, and to 15 feet beyond the groins of the structure (See photos A-D, H, J, and M);
2. Once the brush has been cleared, stabilize the affected areas, and any other areas lacking vegetation by loaming and seeding the embankment as required to promote the growth of a hearty grassed embankment (See photos above);
3. Remove the vegetation from the spillway of the structure (See photos D, F, and K);
4. Repair the cracks and spalls over the entirety of the core wall (See photos D, E, F, G, N, O, and P);
5. Once the area of downstream seepage has been cleared, actively monitor and record the nature and amount of seepage through the dam. Keep a record of periodic observations and estimate flow quantities of this seepage while monitoring for signs of increasing turbidity or sand cones (See photos J, K, and L);
6. Remove the boats and recreation equipment from the dam embankment. They may be stored beyond the limits of the dam embankment (See photos I and P);
7. Prepare and submit an Operation, Maintenance and Response form (OMR). Enclosed is a blank OMR form for your submittal;

By December 1, 2012:

8. Engage the services of a qualified engineering consultant, qualified in dam design and related experience per Env-Wr 403.03 (a)(1) to perform the following activities:
 - a. Update the hydrology of the area for the sunny-day breach, 100-year and threshold storm with breach, if applicable, to the downstream reach. Based on the results of the study, recommendations to confirm or refute the hazard classification of the Dam(s) should be included. The Administrative Rules for breach modeling and Emergency Action Plan preparation, if required, are in Env-Wr 500;
 - b. Assure the dam's ability to safely pass the 100-year and 2.5 times the 100-year flows safely, depending on the results of item #7, above;
 - c. Investigate and report on the stability of the structure under worst-case loading conditions, and comment on the general structural condition of the dam. The ability of the dam to withstand erosion and overtopping flows should be assessed;

On a continuing basis:

9. The dam owner should also monitor the concrete deterioration (See photos listed above); and
10. Monitor the saturated soils at the toe of the dam. In the event of cloudy seepage flow or increasing seepage flow, contact the Dam Bureau immediately.

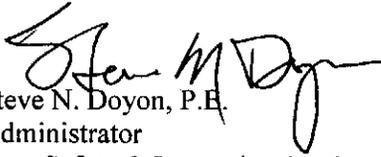
Our intent in issuing this LOD is to make you aware of items that require your attention to ensure the continued safe operation of your dam. It is our hope that, through the return of the attached form and correction of the identified deficiencies, you will develop and maintain a commitment to keeping a safe and well-maintained dam.

Please note that effective January 1, 2009, significant changes to the penalty provisions of New Hampshire's dam safety statute (RSA 482) became effective. These changes require DES to commence proceedings to levy fines of up to \$2,000 per violation per day against a dam owner who does not respond within 45 days of receipt of a written order, directive, or any notice of needed maintenance, repair, or reconstruction issued by DES. To avoid proceedings under this provision, you **must respond** to this LOD. We believe the easiest way to respond is to sign and return the attached "Intent to Complete Repairs" form, either agreeing to correct the identified deficiencies by the dates indicated OR by proposing amendments to the listed work items or dates, which you may do by writing directly on the form. DES will evaluate and respond to any reasonable requests for proposed amendments in a timely manner. We have enclosed a self addressed stamped envelope for you to return this form. You may also scan and e-mail the completed form to damsafety@des.nh.gov or fax it to (603) 271-6120. **If you fail to return this form within 45 days or fail to otherwise respond in writing within 45 days indicating your intent to remedy the identified deficiencies, you will not have the benefit of the compliance deadlines indicated on the form and DES will commence a proceeding under RSA 482:89 to seek administrative fines for the identified deficiencies.** Please note that responding as required does not preclude DES from pursuing other appropriate action for the identified deficiencies, in accordance with the DES Compliance Assurance Response Policy, available on-line at <http://des.nh.gov/organization/commissioner/legal/carp/index.htm>.

Letter of Deficiency
Dam #093.04/DSP #11-059
July 12, 2011
pg. 3

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406 or write to me at the address for the Water Division listed on the bottom of the cover page.

Sincerely,


Steve N. Doyon, P.E.
Administrator
Dam Safety & Inspection Section

Attachments: Dam Report, Photos, Drawing,, OMR form, DB8, DB13
cc: DES Legal Unit
Town of Goffstown

Certified # 7002 315D 0004 7245 4778
SND/BAD/was/h:/damfiles/09304/20110712 09304

	<ul style="list-style-type: none"> • There are trees and brush located within 15 feet of the toe of the embankment. This area could not be properly inspected (See above photos). • The downstream right toe is saturated possibly due to seepage (See photos J and L). • There was historic seepage with orange bacteria observed under the enclosed porch of the cottage at the downstream left toe adjacent to the building foundation. Historic seepage was also observed at the downstream end of the covered porch. • The deck of the downstream house is built onto the downstream slope of the dam. • There was brush located between the spillway and deck. This area could not be properly inspected. • There is a foot path worn at the left abutment on the crest of the dam. 	M S S N/A M M
Spillway	<ul style="list-style-type: none"> • The spillway is cracked, spalled, and rotated in many locations. • There was grass growing at the left end of the spillway. • The concrete crest is uneven • The concrete is in poor condition with aggregate exposed. 	S M M M
Notes	<ul style="list-style-type: none"> • The Concrete Core Wall cracked and rotated in the 1970's or earlier. • Vegetation and seepage has been noted and requested to be addressed since 1993 	

*Type of Deficiency: M-Maintenance; S-Structural; NA-Not Applicable

Downstream Hazard Review. (1991 Breach Analysis)

Feature	Observation
House d/s of left embankment	25 lf. downstream
Mountain Base Road	100 lf. downstream, Verify at next inspection and collect detailed cross-section information
Worthley Hill Road	450 lf. downstream, Verify at next inspection and collect detailed cross-section information
Mountain Base Road	3170 lf. downstream, Verify at next inspection and collect detailed cross-section information
Wallace Road	3805 lf. downstream, Verify at next inspection and collect detailed cross-section information

Hazard Classification/Justification, Dam Breach Analysis: Significant Hazard

Date of last breach analysis	1992
Requires updated analysis	Yes

In 1992 the dam classification was upgraded from Low to Significant. The classification change was due to the possible loss of life in the residence located on the downstream left embankment as well as the damage to two town roads. Considering current regulations, the hazard class should be reviewed in the future in conjunction with the companion dike. The dam may qualify as a "High Hazard" structure per Env-Wr 101.09 depending upon the results of the future hazard classification review.

Hydrologic/Hydraulic Analysis:

Design event	100 YR
Date of last analysis	2004
Meets current discharge requirement with required freeboard	N
Requires updated analysis	Y

The discharge capacity of the dam is 97 cfs to the top of the dam and 22 cfs with 1 foot of freeboard. The routed 100 year storm outflow is 36 cfs, with 0.7 2' of freeboard.

Operations, Maintenance, and Response Form:

Plan on file, updated, and meets current requirements	N
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The Operations, Maintenance, and Response form (OMR) was not returned.

Emergency Action Plan:

EAP on file, up to date, meets current requirements	No
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The EAP that is currently on file with DES was submitted March 30, 2001. It was last tested 4/30/2001. It was due for updating and testing in 2005. The EAP is now out of date, and needs to be reviewed and revised. Once it has been revised, the new EAP will have to be tested.

Access and Security:

There is free access to the dam site.

Directions:

Route 114 to Mountain Base Road. Follow 0.9 miles to "T" intersection. Turn left to continue onto Mountain Road. Follow another 0.9 miles to a dirt road on the left. Gated access to dam site – dams on the right side.

Recommendations: LOD

I recommend issuing an LOD to the dam owner requesting the following items be addressed by the schedule indicated:

By December 1, 2011:

1. Remove the trees and brush over the entirety of the dam embankment, to 15 feet beyond the toe of slope at the base of the dam, and to 15 feet beyond the groins of the structure (See photos A-D, H, J, and M).
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By December 1, 2012:

7. Engage the services of a qualified engineering consultant, qualified in dam design and related experience per Env-Wr 403.03 (a)(1) to perform the following activities:
 - a. Update the hydrology of the area for the sunny-day breach, 100-year and threshold storm with breach, if applicable, to the downstream reach. Based on the results of the study, recommendations to confirm or refute the hazard classification of the Dam(s) should be included. The Administrative Rules for breach modeling and Emergency Action Plan preparation, if required, are in Env-Wr 500.
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On a continuing basis:

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