



The State of New Hampshire
Department of Environmental Services

Thomas S. Burack, Commissioner



February 25, 2015

Her Excellency, Governor Margaret Wood Hassan
 and The Honorable Council
 State House
 Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the Department of Environmental Services (DES) to enter into a Contract with Gannett Fleming, Inc., (Vendor Code #167251-B001), Camp Hill, PA, in an amount not to exceed \$765,156.53 to complete engineering analyses for 13 state-owned dams (nine Baker River Flood Control sites and four dams in Harrisville) and to complete National Resource Conservation Service (NRCS) Dam Assessments for 18 state-owned dams, effective upon Governor & Council approval through October 31, 2016. (58.8% Capital General Funds, 41.2% Federal Funds)

Funds are available in the account as follows:

	<u>FY 2015</u>
03-44-44-442030-1294-034-500161	\$450,156.53
Dept of Environmental Services, 13, 195:1-VI-A Dam Repairs and Reconstruction, Capital Projects	
03-44-44-442010-5421-102-500731	\$315,000.00
Dept of Environmental Services, Dam Assessment and Rehabilitation, Contracts for Program Services	

EXPLANATION

DES is responsible for the maintenance, repair and reconstruction of all state owned dams per NH RSA 482:55-57. There are nine Baker River Flood Control dams and four dams in series in Harrisville. These dams are high and significant hazard dams (with the exception of Baker Site 5 Dike which is classified as a low hazard structure) that have been identified through dam safety inspections to require engineering analysis of the hydrologic and hydraulic conditions to support design and construction decisions and to help meet dam safety requirements for emergency planning and hazard response. Dams to be analyzed include:

- Baker Site 1 (Oliverian Dam), Benton, Dam No. 023.06 (High Hazard)
- Baker Site 8 (South Branch Dam), Dorchester, Dam No. 066.08 (High Hazard)
- Baker Site 2 (Hildreth Dam, Warren), Dam No. 244.10 (High Hazard)
- Baker Site 6 (Lower Baker Pond Dam), Wentworth, Dam No. 249.01 (Significant Hazard)
- Baker Site 5 (Swain Brook Dam) Wentworth, Dam No. 249.11 (High Hazard)
- Baker Site 11 Wentworth, Dam No. 249.13 (Significant Hazard)
- Baker Site 11-A Wentworth, Dam No. 249.14 (Significant Hazard)
- Baker Site 6-A Wentworth, Dam No. 249.15 (High Hazard)
- Baker Site 5 Dike (Swain Brook Dike) Wentworth, Dam No. 249.20 (Low Hazard)
- Chesham Pond Dam, Harrisville, Dam No. 109.02 (High Hazard)
- Childs Bog Dam, Harrisville, Dam No. 109.13 (High Hazard)
- Howe Reservoir Dam, Harrisville, Dam No. 109.12 (High Hazard)
- Seaver Reservoir Dam, Harrisville, Dam No. 109.11 (High Hazard)

In addition, DES seeks to utilize a grant received from the NRCS to conduct assessments on 18 state-owned dams. The NRCS (formerly the Soil Conservation Service) constructed 23 flood retarding dams in New Hampshire in the 1960s and early 1970s. Immediately following construction, the New Hampshire Water Resources Board (now DES) took ownership of these structures, and is responsible for operations and maintenance. In 2000, Congress passed legislation that authorized the NRCS to provide technical and cost-share assistance for rehabilitation of these and other dams throughout the United States that were originally constructed under U.S. Department of Agriculture water resource programs. DES applied for and received grant funding this year to conduct dam assessments on 18 flood retarding dams in New Hampshire, the conditions of which are such that remedial action may be necessary to ensure that these dams can continue to safely provide flood control for the communities. The conditions of these dams do not pose any immediate threat, but detailed inspections and structural analyses are necessary to assess whether the dams meet current dam safety standards. NRCS hydrologic and geotechnical criteria have become more stringent, and advancements in technology since the 1960s (when these dams were designed) have provided improved methods for hydrologic analyses, which result in a more realistic estimate of the flood flows at these structures.

The funding from the NRCS will be used to complete the assessments of each of these 18 dams, including hydrologic analyses; safety inspections; and seepage, stability and seismic evaluations. These assessments will allow the NRCS to prioritize the need for rehabilitation at these dams for possible future funding assistance of the actual construction work. Twelve of these eighteen dams were classified as high hazard dams pursuant to NRCS guidelines when they were constructed. Six of the dams were classified as significant hazard dams pursuant to NRCS guidelines, but some of these may now be high hazard dams. The hazard classification indicates the threat to public safety downstream if the dam were to fail. It is not based upon the condition of the dam.

The dams to be assessed are:

- Jericho Lake, Berlin, Dam No. 024.14 (High Hazard)
- Gunnerson Lake (Sugar Site D2), Goshen, Dam No. 095.25 (High Hazard)
- Souhegan Site 8 (James AG Putnam), Lyndeborough, Dam No. 147.28 (High Hazard)
- Souhegan River Site 33, Wilton, Dam No. 254.34 (High Hazard)
- Souhegan Site 13, New Ipswich, Dam No. 175.20 (Low Hazard)
- Baker River Site 11, Wentworth, Dam No. 249.13 (Significant Hazard)
- Baker Site 11A, Wentworth, Dam No. 249.14 (Significant Hazard)
- Baker Site 6, Wentworth, Dam No. 249.01 (Significant Hazard)
- Souhegan Site 10A, Wilton, Dam No. 254.33 (High Hazard)
- Souhegan Site 15, Wilton, Dam No. 254.30 (Significant Hazard)
- Souhegan Site 19, New Ipswich, Dam No. 175.19 (High Hazard)
- Souhegan Site 25B, Wilton, Dam No. 234.12 (High Hazard)
- Souhegan Site 26, Wilton, Dam No. 234.08 (High Hazard)
- Souhegan Site 35, New Ipswich, Dam No. 175.21 (High Hazard)
- Souhegan Site 12-A South, Temple, Dam No. 234.11 (High Hazard)
- Souhegan Site 12-A North, Temple, Dam No. 234.16 (High Hazard)
- Souhegan Site 28, Lyndeborough, Dam No. 147.26 (Significant Hazard)
- Cold River Site 1 (Basin Brook Dam), Chatham, Dam No. 043.04 (High Hazard)

The procurement process for this Agreement, further detailed in Attachment A, was conducted in accordance with NH RSA 21-I:22 by issuing a Request For Qualifications (RFQ) for engineering analyses, internal review and approval of

Her Excellency, Governor Margaret Wood Hassan
and The Honorable Council

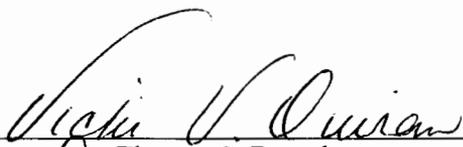
Page 3 of 3

qualifications, and assessment of proposals and interviews from approved firms. DES requested proposals from four of the twelve firms that responded to the RFQ. The criteria for rating proposals included firm experience, technical approach, staff experience, scope of services, proposed schedule, and references.

Based on an analysis of proposals received and firm interviews, Gannett Fleming, Inc., was selected as the first choice to negotiate an Agreement. DES has negotiated terms and conditions for the services to be provided, authorization to conduct work, billing rates and conditions, and a not-to-exceed cost for this Agreement with Gannett Fleming, Inc.

The Agreement has been approved by the Office of the Attorney General as to form, execution, and content.

We respectfully request your approval.



for Thomas S. Burack
Commissioner

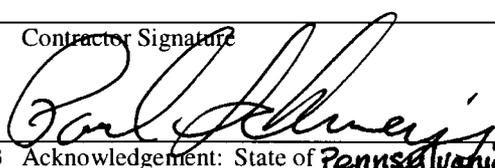
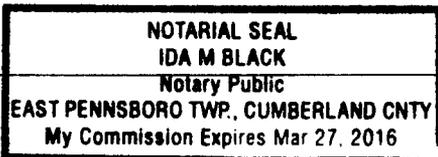
Subject: Hydrologic and Hydraulic Analysis and Dam Assessments of NH DES Dams

AGREEMENT

The State of New Hampshire and the Contractor hereby mutually agree as follows:

GENERAL PROVISIONS

1. IDENTIFICATION.

1.1 State Agency Name New Hampshire Department of Environmental Services		1.2 State Agency Address P.O. Box 95 29 Hazen Drive Concord, NH 03302-0095	
1.3 Contractor Name Gannett Fleming, Inc.		1.4 Contractor Address 207 7 Senate Avenue Camp Hill, PA 17011	
1.5 Contractor Phone Number 717-763-7211	1.6 Account Number 442010-5421-102 442020-1294-034	1.7 Completion Date 10/31/2016	1.8 Price Limitation \$765,156.53
1.9 Contracting Officer for State Agency		1.10 State Agency Telephone Number (603) 271-1961	
1.11 Contractor Signature 		1.12 Name and Title of Contractor Signatory Paul G. Schweiger, P.E., CFM Vice President	
1.13 Acknowledgement: State of <u>Pennsylvania</u> County of <u>Cumberland</u> On <u>10/29/14</u> , before the undersigned officer, personally appeared the person identified in block 1.12, or satisfactorily proven to be the person whose name is signed in block 1.11, and acknowledged that s/he executed this document in the capacity indicated in block 1.12.			
1.13.1 Signature of Notary Public or Justice of the Peace <u>Ida M Black</u>			
[Seal]			
1.13.2 Name and Title of Notary or Justice of the Peace <u>Ida M. Black</u>			
1.14 State Agency Signature <u>Vicki D. Duran</u>		1.15 Name and Title of State Agency Signatory <u>Vicki D. Duran</u> <u>Assistant Commissioner</u>	
1.16 Approval by the N.H. Department of Administration, Division of Personnel (if applicable) By: _____ Director, On: _____			
1.17 Approval by the Attorney General (Form, Substance and Execution) By: <u>[Signature]</u> On: <u>4/28/2015</u>			
1.18 Approval by the Governor and Executive Council By: _____ On: _____			

2. EMPLOYMENT OF CONTRACTOR/SERVICES TO BE PERFORMED. The State of New Hampshire, acting through the agency identified in block 1.1 ("State"), engages contractor identified in block 1.3 ("Contractor") to perform, and the Contractor shall perform, the work or sale of goods, or both, identified and more particularly described in the attached EXHIBIT A which is incorporated herein by reference ("Services").

3. EFFECTIVE DATE/COMPLETION OF SERVICES.

3.1 Notwithstanding any provision of this Agreement to the contrary, and subject to the approval of the Governor and Executive Council of the State of New Hampshire, this Agreement, and all obligations of the parties hereunder, shall not become effective until the date the Governor and Executive Council approve this Agreement ("Effective Date").

3.2 If the Contractor commences the Services prior to the Effective Date, all Services performed by the Contractor prior to the Effective Date shall be performed at the sole risk of the Contractor, and in the event that this Agreement does not become effective, the State shall have no liability to the Contractor, including without limitation, any obligation to pay the Contractor for any costs incurred or Services performed. Contractor must complete all Services by the Completion Date specified in block 1.7.

4. CONDITIONAL NATURE OF AGREEMENT.

Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including, without limitation, the continuance of payments hereunder, are contingent upon the availability and continued appropriation of funds, and in no event shall the State be liable for any payments hereunder in excess of such available appropriated funds. In the event of a reduction or termination of appropriated funds, the State shall have the right to withhold payment until such funds become available, if ever, and shall have the right to terminate this Agreement immediately upon giving the Contractor notice of such termination. The State shall not be required to transfer funds from any other account to the Account identified in block 1.6 in the event funds in that Account are reduced or unavailable.

5. CONTRACT PRICE/PRICE LIMITATION/PAYMENT.

5.1 The contract price, method of payment, and terms of payment are identified and more particularly described in EXHIBIT B which is incorporated herein by reference.

5.2 The payment by the State of the contract price shall be the only and the complete reimbursement to the Contractor for all expenses, of whatever nature incurred by the Contractor in the performance hereof, and shall be the only and the complete compensation to the Contractor for the Services. The State shall have no liability to the Contractor other than the contract price.

5.3 The State reserves the right to offset from any amounts otherwise payable to the Contractor under this Agreement those liquidated amounts required or permitted by N.H. RSA 80:7 through RSA 80:7-c or any other provision of law.

5.4 Notwithstanding any provision in this Agreement to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments authorized, or actually made hereunder, exceed the Price Limitation set forth in block 1.8.

6. COMPLIANCE BY CONTRACTOR WITH LAWS AND REGULATIONS/ EQUAL EMPLOYMENT OPPORTUNITY.

6.1 In connection with the performance of the Services, the Contractor shall comply with all statutes, laws, regulations, and orders of federal, state, county or municipal authorities which impose any obligation or duty upon the Contractor, including, but not limited to, civil rights and equal opportunity laws. In addition, the Contractor shall comply with all applicable copyright laws.

6.2 During the term of this Agreement, the Contractor shall not discriminate against employees or applicants for employment because of race, color, religion, creed, age, sex, handicap, sexual orientation, or national origin and will take affirmative action to prevent such discrimination.

6.3 If this Agreement is funded in any part by monies of the United States, the Contractor shall comply with all the provisions of Executive Order No. 11246 ("Equal Employment Opportunity"), as supplemented by the regulations of the United States Department of Labor (41

C.F.R. Part 60), and with any rules, regulations and guidelines as the State of New Hampshire or the United States issue to implement these regulations. The Contractor further agrees to permit the State or United States access to any of the Contractor's books, records and accounts for the purpose of ascertaining compliance with all rules, regulations and orders, and the covenants, terms and conditions of this Agreement.

7. PERSONNEL.

7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.

7.2 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.

7.3 The Contracting Officer specified in block 1.9, or his or her successor, shall be the State's representative. In the event of any dispute concerning the interpretation of this Agreement, the Contracting Officer's decision shall be final for the State.

8. EVENT OF DEFAULT/REMEDIES.

8.1 Any one or more of the following acts or omissions of the Contractor shall constitute an event of default hereunder (“Event of Default”):

- 8.1.1 failure to perform the Services satisfactorily or on schedule;
- 8.1.2 failure to submit any report required hereunder; and/or
- 8.1.3 failure to perform any other covenant, term or condition of this Agreement.

8.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

8.2.1 give the Contractor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely remedied, terminate this Agreement, effective two (2) days after giving the Contractor notice of termination;

8.2.2 give the Contractor a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the contract price which would otherwise accrue to the Contractor during the period from the date of such notice until such time as the State determines that the Contractor has cured the Event of Default shall never be paid to the Contractor;

8.2.3 set off against any other obligations the State may owe to the Contractor any damages the State suffers by reason of any Event of Default; and/or

8.2.4 treat the Agreement as breached and pursue any of its remedies at law or in equity, or both.

9. DATA/ACCESS/CONFIDENTIALITY/PRESERVATION.

9.1 As used in this Agreement, the word “data” shall mean all information and things developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

9.2 All data and any property which has been received from the State or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason.

9.3 Confidentiality of data shall be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data requires prior written approval of the State.

10. TERMINATION. In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall deliver to the Contracting Officer, not later than fifteen (15) days after the date of termination, a report (“Termination Report”) describing in detail all Services performed, and the contract price earned, to and including the date of termination. The form, subject matter, content, and number of copies of the Termination

Report shall be identical to those of any Final Report described in the attached EXHIBIT A.

11. CONTRACTOR’S RELATION TO THE STATE. In the performance of this Agreement the Contractor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Contractor nor any of its officers, employees, agents or members shall have authority to bind the State or receive any benefits, workers’ compensation or other emoluments provided by the State to its employees.

12. ASSIGNMENT/DELEGATION/SUBCONTRACTS. The Contractor shall not assign, or otherwise transfer any interest in this Agreement without the prior written consent of the N.H. Department of Administrative Services. None of the Services shall be subcontracted by the Contractor without the prior written consent of the State.

13. INDEMNIFICATION. The Contractor shall defend, indemnify and hold harmless the State, its officers and employees, from and against any and all losses suffered by the State, its officers and employees, and any and all claims, liabilities or penalties asserted against the State, its officers and employees, by or on behalf of any person, on account of, based or resulting from, arising out of (or which may be claimed to arise out of) the acts or omissions of the Contractor. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

14. INSURANCE.

14.1 The Contractor shall, at its sole expense, obtain and maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:

14.1.1 comprehensive general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than \$250,000 per claim and \$2,000,000 per occurrence; and

14.1.2 fire and extended coverage insurance covering all property subject to subparagraph 9.2 herein, in an amount not less than 80% of the whole replacement value of the property.

14.2 The policies described in subparagraph 14.1 herein shall be on policy forms and endorsements approved for use in the State of New Hampshire by the N.H. Department of Insurance, and issued by insurers licensed in the State of New Hampshire.

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than fifteen (15) days prior to the expiration date of each of the insurance policies. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference. Each certificate(s) of

Contractor Initials
Date 10/29/2014

insurance shall contain a clause requiring the insurer to endeavor to provide the Contracting Officer identified in block 1.9, or his or her successor, no less than ten (10) days prior written notice of cancellation or modification of the policy.

15. WORKERS' COMPENSATION.

15.1 By signing this agreement, the Contractor agrees, certifies and warrants that the Contractor is in compliance with or exempt from, the requirements of N.H. RSA chapter 281-A ("Workers' Compensation").

15.2 To the extent the Contractor is subject to the requirements of N.H. RSA chapter 281-A, Contractor shall maintain, and require any subcontractor or assignee to secure and maintain, payment of Workers' Compensation in connection with activities which the person proposes to undertake pursuant to this Agreement. Contractor shall furnish the Contracting Officer identified in block 1.9, or his or her successor, proof of Workers' Compensation in the manner described in N.H. RSA chapter 281-A and any applicable renewal(s) thereof, which shall be attached and are incorporated herein by reference. The State shall not be responsible for payment of any Workers' Compensation premiums or for any other claim or benefit for Contractor, or any subcontractor or employee of Contractor, which might arise under applicable State of New Hampshire Workers' Compensation laws in connection with the performance of the Services under this Agreement.

16. WAIVER OF BREACH. No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event of Default, or any subsequent Event of Default. No express failure to enforce any Event of Default shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other Event of Default on the part of the Contractor.

17. NOTICE. Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given in blocks 1.2 and 1.4, herein.

18. AMENDMENT. This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Executive Council of the State of New Hampshire.

19. CONSTRUCTION OF AGREEMENT AND TERMS.

This Agreement shall be construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns. The wording used in this Agreement is the wording chosen by the parties to express their mutual intent, and no rule of construction shall be applied against or in favor of any party.

20. THIRD PARTIES. The parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit.

21. HEADINGS. The headings throughout the Agreement are for reference purposes only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

22. SPECIAL PROVISIONS. Additional provisions set forth in the attached EXHIBIT C are incorporated herein by reference.

23. SEVERABILITY. In the event any of the provisions of this Agreement are held by a court of competent jurisdiction to be contrary to any state or federal law, the remaining provisions of this Agreement will remain in full force and effect.

24. ENTIRE AGREEMENT. This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire Agreement and understanding between the parties, and supersedes all prior Agreements and understandings relating hereto.

Exhibit A

Scope of Services

Gannett Fleming, Inc. shall perform the tasks as described in the attached detailed proposals titled:

1. "*Professional Engineering Services Associated with the Hydrologic and Hydraulic (H&H) Analyses and Inundation Mapping of Certain Dams Owned and Operated by the Department of Environmental Services (DES) on Behalf of the State of New Hampshire*", submitted by Gannett Fleming, Inc., dated October 29, 2014.
2. "*Professional Engineering Services Associated with the Dam Assessments of Certain Dams Owned and Operated by the Department of Environmental Services (DES) on Behalf of the State of New Hampshire*" submitted by Gannett Fleming, Inc., dated October 29, 2014.



Gannett Fleming

Excellence Delivered As Promised

GANNETT FLEMING, INC.
P.O. Box 67100
Harrisburg, PA 17106-7100

Location:
207 Senate Avenue
Camp Hill, PA 17011

Office: (717) 763-7211
Fax: (717) 763-1140
www.gannettfleming.com

October 29, 2014

Mr. Kent R. Finemore, P.E.
Assistant Chief Engineer
New Hampshire Department of Environmental Services
Water Division-Dam Bureau
29 Hazen Drive; P.O. Box 95
Concord, NH 03302-0095

Re: Professional Engineering Services Associated with the Hydrologic and Hydraulic (H&H) Analyses and Inundation Mapping of Certain Dams Owned and Operated by the Department of Environmental Services (DES) on Behalf of the State of New Hampshire

Dear Mr. Finemore:

We understand that the State of New Hampshire's Department of Environmental Services (NH DES) Dam Bureau's mission and guiding principles are to ensure their dams and dams under NH DES jurisdiction are constructed, maintained, and operated to enhance public safety and flood protection, while balancing financial resources, environmental, social, and ecological water needs. The goal of this project is to analyze the hydrologic and hydraulic conditions at 13 dam sites in two areas of the state and evaluate the potential hazards associated with the sudden dam failure of each. Inundation mapping for each dam will be performed and the integrity and stability of key dam features at select dams will be investigated to determine if the structures are in compliance with current NRCS criteria and NH Code. Our understanding of the project is based on your Request for Proposal dated January 10, 2014, our preliminary review of select files, our experience with similar projects, and subsequent discussions with NH DES.

SCOPE OF SERVICES

We have developed a scope of services based on our knowledge of the project, previous investigations and analyses of similar projects, and scope requirements in the Request for Proposal (RFP). Our goal will be to provide NH DES with the engineering evaluation services and expertise required to perform the hydrologic and hydraulic (H&H) analyses and inundation mapping for the 13 dams identified in the RFP, as summarized in Table 1-1. Our scope of work and deliverables will be completed in accordance with the applicable New Hampshire Code Administrative Rules Env-Wr 100-900.

Table 1-1: Summary of Study Dams and Associated Analyses to be Completed for Each

NH Dam #	Baker River Flood Control Dam	Alternate Dam Name	NH Town	Hazard Class	SITES Model	HEC-HMS Model	HEC-RAS Model	Inundation Mapping
023.06	Site 1	Oliverian Dam	Benton	High	x	x	x	x
066.08	Site 8	South Branch Dam	Dorchester	High	x	x	x	x
244.10	Site 2	Hildreth Dam	Warren	High	x	x	x	x
249.01	Site 6	Lower Baker Pond Dam	Wentworth	Significant	x	x	x	x
249.11	Site 5	Swain Brook Dam	Wentworth	High	x	x	x	x
249.13	Site 11	n/a	Wentworth	Significant	x	x	x	x
249.14	Site 11-A	n/a	Wentworth	Significant	x	x	x	x
249.15	Site 6-A	n/a	Wentworth	High	x	x	x	x
249.20	Site 5 Dike	Swain Brook Dike	Wentworth	Low	x	x	x	x
109.02	n/a	Chesham Pond Dam	Harrisville	High		x	x	x
109.11	n/a	Seaver Reservoir Dam	Harrisville	High		x	x	x
109.12	n/a	Howe Reservoir Dam	Harrisville	High		x	x	x
109.13	n/a	Child's Bog Dam	Harrisville	High		x	x	x

The proposed scope of services for this project will be performed in a single task. It is anticipated that the deliverables for a single dam will be completed prior to completing the deliverables for the remaining dams. The services include the following:

Task - 1 Dam Break Inundation Studies

1.1 Project Management

Gannett Fleming will track progress, monitor budget, and provide NH DES with status reports and project updates over the course of the project.

1.2 Data Collection

Gannett Fleming, with the assistance of NH DES, will gather available data that would be beneficial to the study. The data may include existing reports and analyses provided by NH

DES, geospatial data, FEMA studies, design reports, as-built drawings and information on downstream structures and bridges.

1.3 Site Visits

Gannett Fleming will conduct site visits to each of the dams, their associated watersheds, and potential downstream hazard areas in close proximity to the dam. These visits will assist the project team in analyzing watershed and stream channel characteristics, defining the limits and location of the hypothetical dam breach, identifying downstream structures (bridges, dams) and their potential to impact flood extents, and locating potential consequences in the anticipated inundation area. It is assumed that the site visits will be able to be accomplished in a single trip.

1.4 Hydrologic Modeling

In general, analysis of the watershed upstream of each dam (as a single basin) will be performed in a GIS environment. This includes the delineation of watersheds and estimation of watershed parameters (e.g. curve number, time of concentration) using NRCS methodology. In coordination with NH DES, for watersheds where NH DES has performed prior analysis of watersheds using multiple sub-basins, Gannett Fleming will supplement the analysis with the data or results as appropriate. These watershed parameters will be applied in both the SITES and HEC-HMS modeling efforts described below.

Stage-storage relationships for each reservoir will be verified or updated using a combination of topographic data in GIS and stage-storage data from previous engineering studies. This data will be supplemented with bathymetric survey data, where available.

For dams that were initially designed by the NRCS (Baker River flood control dams 1, 2, 5 (dam and dike), 6, 6-A, 8, 11, and 11-A), the Water Resources Site Analysis Program (SITES) will be used to evaluate compliance with NRCS spillway capacity and auxiliary spillway activation criteria. Appropriate 100-year and probable maximum precipitation input will be obtained from the Northeast Regional Climate Center's (NRCC) Research Publication RR 93-5 (1995) or NOAA's updated Atlas 14 (if available) and NOAA's Hydrometeorological Report No. 51 (1978), respectively. Using the SITES model, existing discharge rating curves will be verified or updated for each NRCS dam.

For all dams listed in the RFP, HEC-HMS software will be used to analyze both the 100-year storm and 2.5 times the 100-year storm and evaluate compliance with spillway capacity criteria specified in NH code. For dams that are not analyzed using SITES, existing discharge rating curves will be verified or updated using commonly accepted engineering methodology.

Reservoir routing will be performed using level pool routing techniques making simplifying assumptions for the effects of submergence on the spillway discharge rating curves.

All hydrologic analyses will be performed in compliance with NH Code of Administrative Rules (Chapters Env-Wr 300, 400, and 500) as well as NRCS policies and procedures when applicable. Gannett Fleming will summarize the hydrologic modeling results, including the hydraulic capacity of each dam, as they relate to NRCS design criteria (if applicable) and requirements in NH Code.

1.5 Hydraulic Modeling

Geo-referenced HEC-RAS models will be developed for each dam using HEC-GeoRAS tools in conjunction with ArcGIS tools. These models will be used to simulate the dam breach for each dam and the propagation of the associated failure flood waves downstream. The dams and their associated reservoirs will be modeled as inline structures and storage areas. The models will extend through the main branch of the inundation. Tributaries will be modeled with extended cross-sections or with storage areas, as selected by the modeler. The models will include downstream bridges that may significantly affect the flood wave inundation zone and will exclude crossings where the estimated bridge opening does not appear to present a significant hydraulic constriction. If as-built drawings of the bridges are not readily available, the bridges will be modeled based on estimates of the hydraulic openings.

Breach parameters will be estimated based on NH code and TR-60. NH DES input on breach parameters will be sought in situations where such engineering judgment is necessary. NH DES interim review of breach parameters will be sought prior to performing hydraulic modeling and mapping.

For each dam, the following scenarios will be modeled within HEC-RAS:

- Sunny day non-failure
- Sunny day failure
- 100-year flood non-failure
- 100-year flood failure

Non-failure scenarios will be run in order to estimate flood wave time of arrival at critical downstream locations. In addition to time of arrival, other important information such as time to peak stage and maximum velocity will be estimated at critical locations (such as road crossings and populated areas) downstream of the dam.

In accordance with NH Code, it will be assumed that any downstream dams that overtop as a result of an upstream failure event will also fail. This assumption would result in conservative inundation mapping for the upstream dam.

For each dam break analysis, the flood routing will continue downstream to a point at which the water surface elevation due to dam failure is no more than 2 feet above the non-failure conditions or it can be shown that there is no additional threat to public safety in the downstream reaches.

All hydraulic analyses will be performed in compliance with NH Code of Administrative Rules (Chapters Env-Wr 300, 400, and 500) as well as NRCS policies and procedures when applicable. Gannett Fleming will summarize the hydraulic modeling results as they relate to NRCS design criteria (if applicable) and requirements in NH Code.

1.6 Inundation Mapping

Both the 100-year failure and the sunny day failure maximum extents floodplains will be delineated using HEC-GeoRAS tools within ArcGIS and, as required by NH code, and will be submitted to NH DES for final determination of which failure scenario to use in the mapping.

In accordance with NH Code, the inundation maps will:

- Identify residences, commercial and industrial structures, clusters of structures, and other significant landmarks within the inundation zones
- Identify roads within the inundation zones and within at least 0.5 miles from the exterior boundary of the inundation zones
- Summarize key breach and failure flood wave results at critical downstream locations (e.g. time of arrival, time to peak stage, maximum velocity, maximum flood depths)
- Identify political boundaries

The maps will be prepared at a scale of 1:2,000 or of greater detail. They will be presented on 11"x17" panels, and will include the latest publicly available orthophoto and geographical data. Additionally, as requested by NH DES, ArcGIS shapefiles of the inundation areas will be provided.

1.7 SITES Analysis

For each of the 9 dams in the Baker River flood control system, the SITES program will be used to evaluate the integrity and stability of the auxiliary spillway and to evaluate compliance of the auxiliary spillway with NRCS criteria. To obtain soil and rock erodibility parameters for use in these auxiliary spillway evaluations, Gannett Fleming will review both regional and site-specific data, including geologic maps, soil surveys, test pit and boring log

data from as-built/design drawings, and rock outcrops and cut slopes visible during the field inspections. A sensitivity analysis will be performed to investigate the sensitivity of the erodibility analysis to variations in the erodibility parameters of the geologic profile. The documentation of the analysis will comment on the adequacy of the subsurface information.

1.8 Dam Break Analysis and Spillway Evaluation Reports

Gannett Fleming will produce a Dam Break Analysis and Spillway Evaluation Report for each dam studied. The report will document data sources, discuss important analysis assumptions, and present analysis findings. As required by NH Code, the report will include an explanation of structural and hydraulic breach assumptions and base flow criteria, methods for determining base flows, structural stability analyses of downstream dams (if applicable), and a summary of the results of the breach analysis.

For each dam in the Baker River flood control system, the Report will also contain a summary and discussion of the SITES analyses performed to evaluate the integrity/erodibility of the auxiliary spillway.

1.9 Results Delivery Meeting

Gannett Fleming will conduct a final meeting at NH DES's office or by web conference to present the overall analysis findings and distribute the final project deliverables.

DELIVERABLES

No hard copy deliverables will be prepared. For each dam, Gannett Fleming will provide electronic versions of the Draft Dam Break Analysis and Spillway Evaluation Report and the Draft Inundation Maps. NH DES will provide review comments. Gannett Fleming will address the review comments and prepare final electronic deliverables for submission, including:

- Final Dam Break Analysis and Spillway Evaluation Report
- Final Inundation Maps
- Working Models (SITES, HEC-HMS, HEC-RAS)
- ArcGIS shapefiles of inundation areas and other pertinent data

BASIS FOR BILLINGS

Billings for professional services as outlined herein will be based on a percent complete. The basis for the percent complete will be documented in a Progress Report submitted with the invoice. Total budget for the above Scope is \$450,157.53. Change orders and/or additional work

at the request of NH DES will be addressed as amendments to the contract as a lump sum or at individual direct salary multiplied by a factor of 3.00 to account for overhead, fringe benefits, and profit. Table 1-2 provides a breakdown of the man-hours and rates associated with each Gannett Fleming labor category as budgeted for this project. It also includes a breakdown of direct expenses. The estimated budget will not be exceeded without written authorization from NH DES.

Thank you for selecting Gannett Fleming to complete this important project. Should you have any questions or concerns regarding this Scope of Services or about any of the other information that has been provided, please do not hesitate to contact Amanda Hess at 717-763-7212, extension 2707 or at ahess@gfnet.com, or Paul Schweiger at extension 2504.

Very truly yours,

GANNETT FLEMING, INC.



PAUL G. SCHWEIGER, P.E., CFM
Vice President
Dams and Hydraulics Manager

Enclosures

**NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES (DES)
 HYDROLOGIC AND HYDRAULIC (H&H) ANALYSES AND INUNDATION MAPPING FOR CERTAIN DAMS OWNED AND
 OPERATED BY DES ON BEHALF OF THE STATE OF NEW HAMPSHIRE**

TABLE 1-2 - STAFF-HOURS AND RATES SUMMARIZED BY LABOR CATEGORY

October 29, 2014

LABOR	Units	Multiplier 3.00	Task Title and Deliverable:	Task 1	
				Qty.	Fee
				Dam Break Inundation Studies	
Project Principal	hr.	\$70.00	\$210.00	117	\$24,570.00
Project Manager	hr.	\$50.00	\$150.00	400	\$60,000.00
Water Resources - Senior Project Engineer	hr.	\$40.00	\$120.00	306	\$36,720.00
Water Resources - Project Engineer	hr.	\$35.00	\$105.00	1712	\$179,760.00
Geotechnical - Senior Project Engineer	hr.	\$50.00	\$150.00	382	\$57,300.00
GIS Technician	hr.	\$35.00	\$105.00	810	\$85,050.00
Clerical	hr.	\$30.00	\$90.00	24	\$2,160.00
			LABOR PRICE TOTAL	3751	\$445,560.00

Total Staff-hours	Total Fees
Qty.	Fee
117	\$24,570.00
400	\$60,000.00
306	\$36,720.00
1712	\$179,760.00
382	\$57,300.00
810	\$85,050.00
24	\$2,160.00
3751	\$445,560.00

REIMBURSABLE EXPENSES	Units	Unit Rate	Qty.	Fee
Airfare				\$1,800.00
2-Wheel Drive Mileage	mi.	\$0.56	0	\$0.00
4-Wheel Drive Mileage	mi.	\$0.62	0	\$0.00
Daily Car Rental	days	\$103.79	7	\$726.53
Lodging	rooms*nights	\$115.00	12	\$1,380.00
Meals	days	\$46.00	15	\$690.00
Postage	l.s.	\$0.00	0	\$0.00
GIS/CAD Computer Charge	hr.	\$10.00		\$0.00
Reproduction				\$0.00
Cadd Bond Paper	sq. ft.	\$0.00		\$0.00
Other Costs				\$0.00
EXPENSES TOTAL				\$4,596.53
EXPENSES TOTAL (with mark-up)				\$4,596.53
TOTAL				\$450,156.53

Qty.	Fee
	\$1,800.00
0	\$0.00
0	\$0.00
7	\$726.53
12	\$1,380.00
15	\$690.00
0	\$0.00
	\$0.00
	\$0.00
	\$0.00
	\$0.00
	\$4,596.53
	\$4,596.53
	\$450,156.53



Excellence Delivered As Promised

October 29, 2014

GANNETT FLEMING, INC.
P.O. Box 67100
Harrisburg, PA 17106-7100

Location:
207 Senate Avenue
Camp Hill, PA 17011

Office: (717) 763-7211
Fax: (717) 763-1140
www.gannettfleming.com

Mr. Kent R. Finemore, P.E.
Assistant Chief Engineer
New Hampshire Department of Environmental Services
Water Division-Dam Bureau
29 Hazen Drive; P.O. Box 95
Concord, NH 03302-0095

Re: Professional Engineering Services Associated with the Dam Assessments of Certain Dams Owned and Operated by the Department of Environmental Services (DES) on Behalf of the State of New Hampshire

Dear Mr. Finemore:

We are pleased to submit this proposal to perform Dam Assessments of Certain Dams Owned and Operated by the Department of Environmental Services (NH DES) on Behalf of the State of New Hampshire. Our understanding of the project is based on the information contained in the Notice of Grant and Agreement Award transmitted from the NRCS to NH DES on August 8, 2014, as well as subsequent discussion with NH DES. The work consists of performing rehabilitation assessments for eighteen (18) flood control dams constructed under the authority for USDA's PL-566 Small Watershed Program. The dams were constructed with a 100-year design life and all are considered to be significant or high hazard dams.

SCOPE OF SERVICES

We have developed a scope of services based on our knowledge of the project and our experience with similar dam assessments for NRCS dams. The scope of services described in this proposal will be performed for the dams identified in Table 2-1.

Table 2-1: Summary of Study Dams and Associated Analyses to be Completed for Each

NH Dam #	Dam Name	Town	County
NH00473	Jericho Lake	Berlin	Coos
NH01000	Gunnerson Lake	Goshen	Sullivan
NH00474	James A G Putnam Dam	South Lyndeborough	Hillsborough
NH00265	Site 33 Souhegan	Wilton	Hillsborough
HN00432	Site 13 Souhegan	Greenville	Hillsborough
NH00478	Site 11 Baker	Wentworth	Grafton
NH00247	Site 11a Baker	West Rumney	Grafton
NH00243	Site 6 Baker	Wentworth	Grafton
NH00264	Bennington Battle Tr	Davisville	Hillsborough
NH00263	Site 15 Souhegan	Wilton	Hillsborough
NH00475	Site 19 Souhegan	High Bridge	Hillsborough
NH00476	Gen James Miller Dam	West Wilton	Hillsborough
NH00207	Site 26 Souhegan	West Wilton	Hillsborough
NH00435	Site 35 Souhegan	Smithville	Hillsborough
NH00878	Site 12a Dike	Greenville	Hillsborough
NH00210	Senator C Tobey Res	Greenville	Hillsborough
NH00429	Site 28 Souhegan	South Lyndeborough	Hillsborough
NH00479	Site 1 Basin Br Dam	Chatham	Carroll

The proposed scope of services for this project will be performed in a single task. For each dam, the following services will be performed:

Task - 1 Dam Assessments

Gannett Fleming will:

- Review the status concerning O&M of the structures (reports, drawings and other literature provided by NH DES and NRCS).
- Review the original design criteria (reports, drawings and other literature provided by NH DES and NRCS).
- Delineate the watershed and validate or update watershed characteristics used in hydrologic analysis including time of concentration, curve number, land use and precipitation data. Compare with the original design parameters.
- Review the structure on site and complete the dam inspection checklist. Visually examine the dam and all appurtenant structures that are accessible without performing confined space entry. Document the existing site conditions and site specific restraints for conceptual rehabilitation alternatives with photos.
- Review videotapes of outlet structure inspections (where available).

- Perform a hydrologic analysis of the watershed and determine the adequacy of the structure in meeting current NRCS and NH DES dam safety design criteria. The hydrologic analysis shall include evaluation of the 6-hour and 24-hour Probable Maximum Precipitation (PMP), using the NRCS distributions. Areal corrections based on the Climate Area Zone will be applied to precipitation depths from HMR 51. The hydrologic analysis shall also include an evaluation of frequency rainfall and runoff to determine the adequacy of the existing structure in meeting current NRCS design criteria (100-year flood design criteria) as defined in TR-60 and NH DES dam safety criteria (2.5 x 100-year flood).
- Perform a hazard classification evaluation based on best available aerial photographs, terrain data and field reconnaissance. This will include a map outlining the breach inundation limits and identifying any other dams within the influence of the breach downstream of the subject dam. The inundation area will be mapped downstream of the dams to the distance where the breach wave returns to bank flow or to a point at which the water surface elevation due to dam failure is no more than 2 feet above the non-failure conditions. The breach model will be from the top of dam elevation utilizing the breach parameters and equations in NRCS TR-60. It is assumed that the seismic dam hazard classification will be based on a sunny day failure.
- Complete a Priority Ranking Risk and PAR spreadsheet for each dam. The analysis includes risk and failure indices, as well as indices for static failure, hydrologic failure, seismic failure and consequences of dam failure.
- Provide proposed alternatives for repairs and modifications required to bring the structure into compliance with NRCS and NH DES Dam Safety criteria and regulations. A conceptual cost estimate shall be included for each combination of repairs and modification alternatives.
- Provide a report addressing each of the scope of work items. Include photos, charts, graphs, tables, and other digital representations documenting current conditions and findings.

The criteria, methods and procedures contained in applicable NRCS publications shall be used, and all assessments shall meet NRCS criteria, procedures and standards as well as NH DES dam safety design criteria and regulations. Any criteria, methods, or standards not covered by NRCS publications and proposed for use in the assessment analysis or findings shall be listed in the assessment reports.

The following services are excluded from this scope of work:

- Other topographic, ground or bathymetric surveys
- Analysis of subwatershed storm direction orientation using HMR 52.
- Completion of the Operation & Maintenance Plan and Agreement. It is assumed the NH DES will complete the Operation & Maintenance Plan and Agreement.

- Inspection of appurtenant structures requiring confined space entry.
- Video inspections of principal spillway, riser, outlet pipes, and drainage pipes.

DELIVERABLES

For each dam, Gannett Fleming will prepare a Draft Assessment Report. NH DES/NRCS will provide review comments. Gannett Fleming will address comments and prepare final deliverables for submission. The Assessment Report will include:

1. Introduction
2. Background
3. Scope of Study
4. Original Design and As-Built Summary
5. Site Inspection Summary and Operation & Maintenance
6. Hydrology and Hydraulics Analysis
7. Hazard Classification Summary
8. Failure and Risk Indices
9. NRCS and NH DES Design Criteria
10. Environmental Considerations
11. Dam Safety Design Criteria Alternatives and Cost Estimates
12. Conclusions and Recommendations
13. Appendices
 - a. Hydrology and Hydraulics Models and Summary Data
 - b. Breach Inundation Map
 - c. Site Inspection Checklist
 - d. Photos of Deficiencies and Dam Components
 - e. Supporting Data Folder

The Supporting Data Folder will contain dam inspection notes, hydrologic and hydraulic data, GIS maps, computer model input and output files, correspondence, notes and other written communications pertaining to assessment projects, and computations.

The Assessment Report will be provided in electronic format. Electronic data will be delivered to NH DES via ftp file transfer.

BASIS FOR BILLINGS

Billings for professional services as outlined herein will be based on a percent complete basis. The basis for the percent complete will be documented in a Progress Report submitted with the invoice. Total budget for the above Scope is \$315,000.00. Change orders and/or additional work at the request of NH DES will be addressed as amendments to the contract as a lump sum or at individual direct salary multiplied by a factor of 3.00 to account for overhead, fringe benefits,

October 29, 2014

and profit. Table 2-2 provides a breakdown of the man-hours and rates associated with each Gannett Fleming labor category as budgeted for this project. It also includes a breakdown of direct expenses. We will not exceed the estimated budget without written authorization from NH DES.

Thank you for allowing us to assist NH DES with this important project. Should you have any questions or concerns regarding this Scope of Services or about any of the other information that has been provided, please do not hesitate to contact Amanda Hess at 717-763-7212, extension 2707 or at ahess@gfnet.com, or Paul Schweiger at extension 2504.

Very truly yours,

GANNETT FLEMING, INC.



PAUL G. SCHWEIGER, P.E., CFM
Vice President
Dams and Hydraulics Manager

**NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES (DES)
DAM ASSESSMENTS FOR CERTAIN DAMS OWNED AND OPERATED BY DES ON BEHALF OF THE STATE OF NEW
HAMPSHIRE**

TABLE 2-2- STAFF-HOURS AND RATES SUMMARIZED BY LABOR CATEGORY

October 29, 2014

LABOR	Units	Multiplier 3.00	Task Title and Deliverable:	Task 1 Dam Break Inundation Studies	
				Qty.	Fee
			Unit Rate		
Project Principal	hr.	\$70.00	\$210.00	18	\$3,780.00
Project Manager	hr.	\$50.00	\$150.00	162	\$24,300.00
Water Resources - Senior Project Engineer	hr.	\$40.00	\$120.00	432	\$51,840.00
Water Resources - Project Engineer	hr.	\$35.00	\$105.00	1188	\$124,740.00
Geotechnical - Senior Project Engineer	hr.	\$50.00	\$150.00	432	\$64,800.00
GIS Technician	hr.	\$35.00	\$105.00	288	\$30,240.00
Clerical	hr.	\$30.00	\$90.00	108	\$9,720.00
LABOR PRICE TOTAL				2628	\$309,420.00

Total Staff-hours	Total Fees
Qty.	Fee
18	\$3,780.00
162	\$24,300.00
432	\$51,840.00
1188	\$124,740.00
432	\$64,800.00
288	\$30,240.00
108	\$9,720.00
2628	\$309,420.00

REIMBURSABLE EXPENSES	Units	Unit Rate	Qty.	Fee
Airfare				\$0.00
2-Wheel Drive Mileage	mi.	\$0.56	4789	\$2,682.00
4-Wheel Drive Mileage	mi.	\$0.62	0	\$0.00
Daily Car Rental	days	\$103.79	0	\$0.00
Lodging	rooms*nights	\$115.00	18	\$2,070.00
Meals	days	\$46.00	18	\$828.00
Postage	l.s.	\$0.00		\$0.00
GIS/CAD Computer Charge	hr.	\$10.00		\$0.00
Reproduction				\$0.00
Cadd Bond Paper	sq. ft.	\$0.00		\$0.00
Other Costs				\$0.00
EXPENSES TOTAL				\$5,580.00
EXPENSES TOTAL (with mark-up)				\$5,580.00
TOTAL				\$315,000.00

Qty.	Fee
	\$0.00
4789	\$2,682.00
0	\$0.00
0	\$0.00
18	\$2,070.00
18	\$828.00
0	\$0.00
	\$0.00
	\$0.00
	\$0.00
	\$0.00
	\$5,580.00
	\$5,580.00
	\$315,000.00

Exhibit B

Contract Price and Method of Payment

All services shall be performed to the satisfaction of NH DES before payment is made. All payments shall be made upon receipt and approval of stated outputs and upon receipt of an associated invoice. The billing is to be done on a monthly basis as a percent complete of the project as per the detailed proposals (attached to Exhibit A) entitled:

- Proposal 1: "*Professional Engineering Services Associated with the Hydrologic and Hydraulic (H&H) Analyses and Inundation Mapping of Certain Dams Owned and Operated by the Department of Environmental Services (DES) on Behalf of the State of New Hampshire*", submitted by Gannett Fleming, Inc., dated October 29, 2014.
- Proposal 2: "*Professional Engineering Services Associated with the Dam Assessments of Certain Dams Owned and Operated by the Department of Environmental Services (DES) on Behalf of the State of New Hampshire*" submitted by Gannett Fleming, Inc., dated October 29, 2014.

The attached proposal includes a table that provides a detailed breakdown of costs for the project. Tables B-1 and B-2 provides cost summaries for the project. The total cost of the contract for Proposal 1 is for a not-to-exceed, lump sum price of \$450,156.53. The total cost of the contract for Proposal 2 is for a not-to-exceed, lump sum price of \$315,000.00.

NH DES agrees to pay the invoices as submitted by the Contractor. Invoices are subject to the approval of the Contract Officer before payment is processed.

TABLE B-1**Hydrologic and Hydraulic Analyses and Inundation Mapping for Certain NH State-Owned Dams**

Unit rate is established at individual hourly rate multiplied by a factor of 3.00 to account for overhead, fringe benefits, and an 11.57% profit multiplier. See page 6 of "Professional Engineering Services Associated with the Hydrologic and Hydraulic (H&H) Analyses and Inundation Mapping of Certain Dams Owned and Operated by the Department of Environmental Services (DES) on Behalf of the State of New Hampshire", submitted by Gannett Fleming, Inc., dated October 29, 2014.

LABOR	Units	Direct Labor Rate	Burdened Labor Rate	Total Labor Hours	Total Burdened Labor
Gannett Fleming, Inc. Labor Categories					
Project Principal	hr.	\$70.00	\$210.00	117	\$24,570.00
Project Manager	hr.	\$50.00	\$150.00	400	\$60,000.00
Water Resources - Senior Project Engineer	hr.	\$40.00	\$120.00	306	\$36,720.00
Water Resources - Project Engineer	hr.	\$35.00	\$105.00	1712	\$179,760.00
Geotechnical - Senior Project Engineer	hr.	\$50.00	\$150.00	382	\$57,300.00
GIS Technician	hr.	\$35.00	\$105.00	810	\$85,050.00
Clerical	hr.	\$30.00	\$90.00	24	\$2,160.00
			Total Labor	3751	\$445,560.00
REIMBURSABLE EXPENSES					
		Units	Unit Rate	Qty.	Fee
Airfare				2 flights	\$1,800.00
Daily Car Rental		days	\$103.79	7	\$726.53
Lodging		rooms*nights	\$115.00	12	\$1,380.00
Meals		days	\$46.00	15	\$690.00
EXPENSES TOTAL					\$4,596.53
			Project Total		\$450,156.53

TABLE B-2
Dam Assessments for Certain NH State-Owned Dams

Unit rate is established at individual hourly rate multiplied by a factor of 3.00 to account for overhead, fringe benefits, and an 11.57% profit multiplier. See page 4 of "Professional Engineering Services Associated with the Hydrologic and Hydraulic (H&H) Analyses and Inundation Mapping of Certain Dams Owned and Operated by the Department of Environmental Services (DES) on Behalf of the State of New Hampshire", submitted by Gannett Fleming, Inc., dated October 29, 2014.

LABOR	Units	Direct Labor Rate	Burdened Labor Rate	Total Labor Hours	Total Burdened Labor
Gannett Fleming, Inc. Labor Categories					
Project Principal	hr.	\$70.00	\$210.00	18	\$3,780.00
Project Manager	hr.	\$50.00	\$150.00	162	\$24,300.00
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GIS Technician	hr.	\$35.00	\$105.00	288	\$30,240.00
Clerical	hr.	\$30.00	\$90.00	108	\$9,720.00
			Total Labor	2628	\$309,420.00
 REIMBURSABLE EXPENSES					
	Units	Unit Rate	Qty.	Fee	
2-Wheel Drive Mileage	mi.	\$0.56	4789	\$2,682.00	
Lodging	rooms*nights	\$115.00	18	\$2,070.00	
Meals	days	\$46.00	18	\$828.00	
EXPENSES TOTAL					\$5,580.00
			Project Total		\$315,000.00

Exhibit C

Special Provisions

Modified Contract Section 13, Indemnification.

13. INDEMNIFICATION. The Contractor shall indemnify and hold harmless the State, its officers and employees, from and against any and all losses suffered by the State, its officers and employees, and any and all claims, liabilities or penalties asserted against the State, its officers and employees, by or on behalf of any person to the extent caused by the negligent acts or omissions of the Contractor. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

Modified Contract Section 14, Insurance.

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Should any of the above described policies be cancelled or modified before the expiration date thereof, notice will be delivered in accordance with the policy provisions. Contractor shall also furnish to the Contracting Office identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than fifteen (15) days prior to the expiration date of each of the insurance policies. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference.

Approved: 
Paul G. Schweiger, P.E.

Date: April 3, 2015



Excellence Delivered As Promised

October 28, 2014

Certification

I, RUBY L. ILE, Assistant Secretary of Gannett Fleming, Inc., a corporation duly organized and existing under the laws of the State of Delaware, do hereby certify as follows:

1. The Gannett Fleming, Inc. Board of Directors elected PAUL G. SCHWEIGER as a Vice President of Gannett Fleming, Inc. (the Corporation) effective June 19, 2014 by resolution June 19, 2014; and
2. In accordance with the Bylaws of the Corporation, a Vice President is authorized to, among other things, execute bids, contracts, bonds and other documents in the name and behalf of said Corporation and to represent said Corporation in official matters for work and services as may be requested, and such execution of any bid, contract, bonds and other documents in the Corporation's name on its behalf, shall be valid and binding upon the Corporation,
3. Said resolution has not been amended or rescinded and remains in full force and effect as of this date.

A handwritten signature in black ink, appearing to read 'Ruby L. Ile', written over a horizontal line.

RUBY L. ILE, Assistant Secretary

Gannett Fleming, Inc.

P.O. Box 67100 • Harrisburg, PA 17106-7100 | 207 Senate Avenue • Camp Hill, PA 17011
t 717.763.7211 • f 717.763.8150

www.gannettfleming.com

State of New Hampshire Department of State

CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that GANNETT FLEMING, INC. a(n) Delaware corporation, is authorized to transact business in New Hampshire and qualified on November 9, 1992. I further certify that all fees and annual reports required by the Secretary of State's office have been received.



In TESTIMONY WHEREOF, I hereto set my hand and cause to be affixed the Seal of the State of New Hampshire, this 22nd day of April, A.D. 2015

A handwritten signature in black ink, appearing to read "William M. Gardner".

William M. Gardner
Secretary of State



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

4/2/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Gunn-Mowery P.O. Box 900 Camp Hill PA 17001-0900	CONTACT NAME: PHONE (A/C, No, Ext): 717-761-4600 FAX (A/C, No): 717-761-6159 E-MAIL ADDRESS: Email: info@GunnMowery.com	
	INSURER(S) AFFORDING COVERAGE INSURER A : PA Manufacturers' Assoc Ins Co. NAIC # 12262 INSURER B : Merchants Mutual Insurance Co. 23329 INSURER C : PA Manufacturers Indemnity Co. 41424 INSURER D : INSURER E : INSURER F :	INSURED 6895 Gannett Fleming, Inc. P.O. Box 67100 Harrisburg, PA 17106-7100

COVERAGES

CERTIFICATE NUMBER: 1528618367

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liab GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	Y	Y	3015012907384	2/1/2015	2/1/2016	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS <input checked="" type="checkbox"/> COMP. \$1,000 <input checked="" type="checkbox"/> COLL. \$1,000	Y	Y	1515012907384	2/1/2015	2/1/2016	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$0	Y	Y	CUP0000069	2/1/2015	2/1/2016	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000 \$
C A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY <input type="checkbox"/> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	2015012907384A 2015012907384B	2/1/2015 2/1/2015	2/1/2016 2/1/2016	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$500,000 E.L. DISEASE - EA EMPLOYEE \$500,000 E.L. DISEASE - POLICY LIMIT \$500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

When required by Signed Contract in Advance of Loss Blanket Additional Insured, Waiver of Subrogation applies, Primacy applies. 1004-0 0; Hydrologic and Hydraulic Analysis and Dam Assessments of NH DES Dams. The following are considered as Additional Insureds for General Liability as per written contract. New Hampshire Department of Environmental Services. [X - Environmental Resources]

CERTIFICATE HOLDER**CANCELLATION 90**

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES P.O. BOX 95 29 HAZEN DRIVE CONCORD NH 03302-0095	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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Attachment A

Procurement Process

The procurement process for this contract was conducted in accordance with RSA 21-I:22. A Request For Qualifications (RFQ) was advertised in the Union Leader and on the DES website. In the RFQ DES committed to requesting proposals from 3 to 5 firms that responded to the RFQ. The following twelve firms responded:

AMEC Environment and Infrastructure, Inc. – Westford, MA
Clough, Harbour and Associates, Inc. – Keene, NH
Gannett Fleming, Inc. – Camp Hill, PA
GEI Consultants, Inc. – Portland, ME
Gomez & Sullivan Engineers, PC – Weare, NH
GZA GeoEnvironmental, Inc. – Manchester, NH
Princeton Hydro, LLC – Ringoes, NJ
Provan & Lorber, Inc. – Contoocook, NH
Tighe & Bond, Inc. – Portsmouth, NH
Vannesse Hangen Brustlin, Inc. – Bedford, NH
Weston & Sampson – Portsmouth, NH
Wright-Pierce – Portsmouth, NH

An internal DES selection committee (the “selection committee”) reviewed and ranked the responses to the RFQ. The selection committee consisted of James W. Gallagher, Jr., P.E., the Chief Engineer for the Dam Bureau with 40 years of experience with dam design, contracting, construction and safety; Daniel M. Mattaini, P.E., who has over 20 years of experience as an engineer for hydrologic and dam related projects and has served as a lead design engineer for the Dam Bureau; Steve N. Doyon, P.E., Administrator of the Dam Safety Section of the Dam Bureau who has more than 25 years of experience as a dam safety engineer and has been responsible for the operation and maintenance of some of the state’s largest dams; James R. Weber, P.E., Dam Safety Engineer for the Dam Bureau with over 18 years of experience in geotechnical engineering and dam safety; Brian A. Desfosses, P.E., Administrator of the Engineering & Construction Section of the Dam Bureau, who has over 15 years of experience as a civil engineer; and Kent R. Finemore, P.E., Assistant Chief Engineer of the Dam Bureau, who has over 25 years of experience as an engineer for civil design and construction. The selection committee established a short-list of firms to receive a Request For Proposal (RFP) based on criteria provided in the RFQ. The short list of firms who received RFPs included:

AMEC Environment & Infrastructure, Inc.	Westford, MA
Gannett Fleming	Harrisburg, PA
Gomez & Sullivan Engineers, PC	Weare, NH
Vannesse Hangen & Brustlin, Inc.	Bedford, NH

Members of the selection committee reviewed the proposals, conducted the interviews, and ranked the firms. Rankings were based on firm experience, technical approach, staff experience, scope of services, proposed schedule, and references. The firm ranked first by the majority of the members of the Selection Committee would be the selected firm with whom DES would negotiate a final scope of work and price.

A scoring summary is provided in attached Table AT-1. As shown in the summary, five of the six members of the selection committee ranked Gannett Fleming the most qualified. Gannett Fleming also scored the highest total score and best overall rankings (lowest total rank represents best score for rankings). Following the selection DES commenced negotiations with Gannett Fleming to establish a scope of work and fee schedule. The negotiated contract price limitation is fair and reasonable for the scope of work.

