



The State of New Hampshire
Department of Environmental Services

Thomas S. Burack, Commissioner



May 25, 2016

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

REQUESTED ACTION

Authorize the Department of Environmental Services (DES) to amend an agreement with the Department of Transportation (DOT) relative to *The Development and Implementation of Total Maximum Daily Loads for Chloride and Other Activities for Water Quality Protection on Waterbodies in the Vicinity of the I-93 Corridor from Massachusetts to Manchester* project by changing the completion date to June 30, 2018 from June 30, 2016, effective upon Governor and Council approval through June 30, 2018. The original Agreement was approved by G&C on June 21, 2006, item #86 and amended on May 6, 2009, item # 95. No additional funding is requested in this amendment. 100% Federal Highway Funds.

EXPLANATION

DES is requesting approval of this amendment to allow additional time to use remaining funds to continue the work on the chloride mitigation project through June 30, 2018. Expenditures were less than anticipated due to changes in the focus of the project and vacancies in the Salt Reduction Coordinator position. Extension of the Agreement will allow for the continued implementation of the successful Certified Salt Applicator Program. Implementation of this program has resulted in the training and certification of 606 commercial salt applicators in salt use reduction strategies. The extension will also allow for the continued implementation of the Quality Assurance Project Plan for the I-93 chloride TMDLs which has been agreed upon by the DES, DOT, and EPA. This amendment has been approved by the Office of the Attorney General as to form, execution, and content.

We respectfully request your approval.


Thomas S. Burack, Commissioner
Department of Environmental Services

www.des.nh.gov

29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095
(603) 271-3503 • TDD Access: Relay NH 1-800-735-2964

MEMORANDUM OF AGREEMENT
between
New Hampshire Department of Transportation
and
New Hampshire Department of Environmental Services
relative to
The Development and Implementation of Total Maximum Daily Loads for Chloride and
Other Activities for Water Quality Protection on Waterbodies in the Vicinity of the I-93
Corridor from Massachusetts to Manchester

AMENDMENT No. 2

This Agreement, hereinafter called the “Amendment,” is by and between the Department of Transportation (DOT) and the Department of Environmental Services (DES).

WHEREAS, pursuant to a Memorandum of Agreement (MOA) approved by Governor and Council on June 21, 2006, DOT and DES agreed to perform certain services upon the terms and conditions specified in the MOA and in consideration of payment by DOT of certain sums as specified therein; and

WHEREAS, the DOT and DES have amended this MOA under Amendment #1 dated March 5, 2009; and

WHEREAS, the DOT and DES have agreed to amend the MOA in certain respects;

NOW THEREFORE, in consideration of the foregoing, and the covenants and conditions contained in the MOA and Amendment #1 and set forth herein, the parties hereto do hereby agree as follows:

1. Amendment and Modification of MOA: The MOA is hereby amended as follows:

(A) Add a new paragraph to read:

IX. MATTERS RELATING TO ACCOUNTING, MONITORING AND TRAINING


DOT will provide the remaining balances as specified in the March 5, 2009 Amendment #1 for Article VIII. Matters Related to Water Quality Monitoring and Article VI Matters Related to Salt use Accounting and Training in SFY2016-SFY2018 by June 30, 2018. Tasks outlined in the March 5, 2009 Articles are anticipated to be completed by DES personnel. DOT and DES will agree on the scope of services prior to DES entering into agreements with contractors to perform other work, if needed.

2. Effective Date of Amendment: This Amendment shall take effect upon the date of

approval of this Amendment by the Governor and Executive Council of the State of New Hampshire.

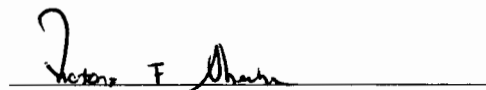
3. Continuance of Agreement: Except as specifically amended and modified by the terms and conditions of this Amendment, the Agreement, and the obligations of the parties there under, shall remain in full force and effect in accordance with the terms and conditions set forth therein.

For the Department of Environmental Services:


Thomas S. Burack, Commissioner


5/27/2016
date

For the Department of Transportation:


Victoria F. Sheehan, Commissioner

5/25/16
date

Reviewed and approved as to form, substance, and execution


Sr. Asst. Attorney General

6/1/16
date

I hereby certify that the foregoing contract was approved by the Governor and Executive Council of the State of New Hampshire at the meeting on _____.

Secretary of State

date



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

March 13, 2009

The Honorable Marjorie Smith, Chairman
 Fiscal Committee of the General Court
 State House
 Concord, NH 03301

**APPROVED
 FISCAL COMMITTEE**
 DATE 4/17/09
 ITEM # FIS 09-093

His Excellency, Governor John H. Lynch
 and The Honorable Council
 State House
 Concord, NH 03301

APPROVED G & C
 DATE 5/6/09
 ITEM # 65

REQUESTED ACTION

1. Pursuant to RSA 14:30-a, VI, authorize the Department of Environmental Services (DES) to accept and expend \$352,412 in funds from the Department of Transportation (DOT) to implement chloride reduction relative to the I-93 expansion, effective upon Governor and Council approval through June 30, 2009. (100% Interagency Transfer Funds – Highway Fund.)

Funding is to be budgeted as follows:

**I-93 Chloride TMDLs
 010-044-1522
 FY09**

Class	Description	Current Budget	Requested Action	Adjusted Budget
Income				
001	Transfer from DOT	(\$192,396)	(\$352,412)	(\$544,808)
Expenditures				
018	Overtime	\$2,654		\$2,654
020	Current Expense	\$4,933	\$1,328	\$6,261
030	Equipment New	\$30,050		\$30,050
040	Indirect Costs	\$1,313		\$1,313
042	Additional Fringe	\$2,826	\$1,358	\$4,184
049	Transfers to Others	\$4,361	\$221	\$4,582
050	Part Time Temp	\$0	\$39,747	\$39,747
059	Full Time Temp	\$33,842		\$33,842
060	Benefits	\$16,978	\$9,758	\$26,736
070	In-State Travel	\$746		\$746
102	Contracts	\$43,340	\$300,000	\$343,340
216	I-93 Chloride	\$51,353		\$51,353
Total		\$192,396	\$352,412	\$544,808

2. Authorize the DES and DOT to amend a Memorandum of Agreement by increasing the contract amount by \$705,000 from \$560,000 to \$1,265,000 to implement chloride reduction strategies in the I-93

corridor from Massachusetts to Manchester, NH, effective upon Governor and Council approval through June 30, 2016. (80% Federal funds, 20% Highway funds.)

Funding is available in account Consolidated Federal as follows:

015-096-3054-046-0464	Consolidated Federal Aid	<u>FY2009</u> \$705,000
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EXPLANATION

Under an existing memorandum of agreement, DES and DOT determined the Total Maximum Daily Load for chloride in four impaired watersheds in the I-93 corridor towns of Chester, Derry, Londonderry, Salem, and Windham. Based on intensive water quality monitoring and scientific studies, it was determined that chloride reductions from road parking lot salt applications will need to be reduced in the range for 20 to 45 percent in order for the impaired streams to meet water quality standards for chloride.

DES and DOT have been working with a Salt Reduction Work Group, comprised of representatives from the municipalities, UNH, regional planning commissions, and private parking lot maintainers, to develop implementation plans to achieve the desired chloride reductions. In order to reduce chloride loads, the following are needed: a salt accounting system to track salt application over time, training programs for winter road and parking lot maintainers, and social marketing programs to address behavior change relative to reduced salt use. Continued long-term water quality monitoring is required to measure progress toward the specified water quality goals as specified in Total Maximum Daily Load studies, which were required in conditions for permits issued by DES to expand I-93 from Salem to Manchester.

The Amendment to the Memorandum of Agreement between DES and DOT has been approved by the Office of the Attorney General as to form, execution, and content.

The total cost associated with Amendment to the MOA is \$705,000. The source of funding for the MOA is the Federal Highway Administration funds from the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for User (SAFETEA-LU). SAFETEA-LU authorizes the Federal surface transportation program for highways, highway safety, and transit for the 5-year period 2005-2009. The allocation of SAFETEA-LU funds for this project is part of a specifically designated fund for I-93 Water Quality Studies. No funds are being budgeted for class 040, Indirect, or class 041, Audit, because DOT pays the indirect and audit costs associated with this project. In the event that Federal funds become no longer available, General Funds will not be requested to support this program.

Specifically, the funds will be used as follows:

- Class 020 To cover the costs of supplies and maintenance for water quality monitoring equipment.
- Class 049 To cover the costs of laboratory analyses for water quality monitoring.
- Class 050 To cover the costs of a part-time temporary position to coordinate chloride reduction efforts among the state, local, and private sectors. In addition, Employee support from

Department of Environmental Services and
Department of Transportation MOA extension

The Honorable Marjorie Smith, Chairman
Fiscal Committee of the General Court

His Excellency, Governor John H. Lynch
and The Honorable Council

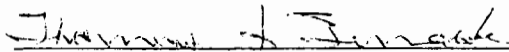
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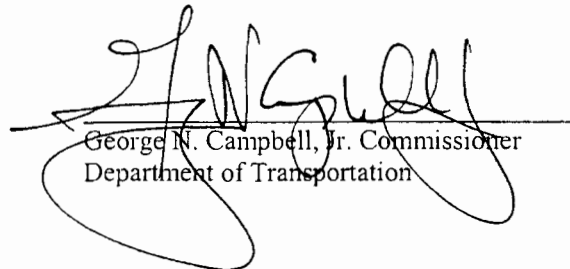
other Department of Environmental Services organizational units will be utilized to administer this program. These funds will be used to supplant funding of the following positions, which are currently budgeted:

Position #	Title	Budget	Funding Mix	Amount
18556	Administrator IV	100% Federal	010-7602-010	\$919
16797	Sanitary Engineer III	100% Federal	010-7602-010	\$919
19723	Environmentalist IV	100% Federal	010-7602-010	\$92
42162	Environmentalist III	100% Federal	010-7602-010	\$460
16798	Assistant Administrator	100% Federal	010-7602-010	\$7,068
16799	Principal Planner	100% Federal	010-7602-010	\$7,068

- Class 060 To cover the costs of benefits for the position listed above.
- Class 042 To cover the costs of additional fringe benefits for the position listed above.
- Class 102 To cover the costs of contractual expenses for salt reduction accounting systems, salt application training, and social marketing addressing behavior change associated with reduced salt application.

We respectfully request your approval.


Thomas S. Burack, Commissioner
Department of Environmental Services


George N. Campbell, Jr. Commissioner
Department of Transportation

State of New Hampshire Departments of Transportation / Environmental Services Fiscal Situation Worksheet	
010-044-4420(Actv)-1522 I-93 Chloride TMDLS	
Description	Amount
Original MOA	560,000.00
Expenditures	
FY 07	251,840.23
FY 08	150,672.99
Total	402,513.22
Budget FY 09	137,703.00
Original Grant over Amount Expended or Budgeted	19,783.78
MOA Amendment	705,000.00
Amount of Funds Over Budget	724,783.78
Reserve for Future Periods	372,371.78
Amount Requested to Budget	352,412.00

MEMORANDUM OF AGREEMENT
between
New Hampshire Department of Transportation
and
New Hampshire Department of Environmental Services
relative to
The Development and Implementation of Total Maximum Daily Loads for Chloride and
Other Activities for Water Quality Protection on Waterbodies in the Vicinity of the I-93
Corridor from Massachusetts to Manchester

AMENDMENT No. 1

This Agreement, hereinafter called the "Amendment," dated this th day of , 2009 is by and between the Department of Transportation (DOT) and the Department of Environmental Services (DES).

WHEREAS, pursuant to a Memorandum of Agreement (MOA) approved by Governor and Council on June 21, 2006, DOT and DES agreed to perform certain services upon the terms and conditions specified in the MOA and in consideration of payment by DOT of certain sums as specified therein; and

WHEREAS, the DOT and DES have agreed to amend the MOA in certain respects;

NOW THEREFORE, in consideration of the foregoing, and the covenants and conditions contained in the MOA and set forth herein, the parties hereto do hereby agree as follows:

1. Amendment and Modification of MOA: The MOA is hereby amended as follows:

(A) Add new paragraphs to read:

VI. MATTERS RELATED TO SALT USE ACCOUNTING AND TRAINING

DOT will provide \$390,000 for the purpose of developing software for a salt accounting system designed for salt applicators, which will provide storm event salt application data in an easy to use format. In addition, a training program for State, Municipal and private salt applicators will be designed and implemented. DOT and DES will agree on the scope of services prior to DES entering into agreements with contractors to perform this work, if needed.

VII. MATTERS RELATED TO PUBLIC EDUCATION AND OUTREACH

DOT will provide \$270,000 for the purpose of implementing a public education and outreach program to work with selected audiences to identify barriers to behavior change

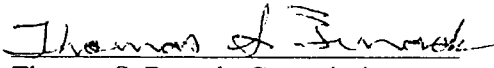
relative to salt reduction, develop programs to overcome barriers, and measure the effectiveness of behavior change. DOT and DES will agree on the scope of services prior to DES entering into agreements with contractors to perform this work, if needed.

VIII. MATTERS RELATED TO WATER QUALITY MONITORING

DOT will provide \$5,000 for the purpose of continuing TMDL Implementation Monitoring in the I-93 watersheds in SFY2010 through SFY2016 (July 1, 2009 to June 30, 2016). This is 11% of the cost of the monitoring program, which is equivalent to DOT's share of the chloride load in the impaired watersheds. DOT will also provide \$40,000 for the purpose of data reporting and quality assurance through 2016. In the Quality Assurance Project Plan for the I-93 chloride TMDLs, DES, DOT, and EPA agreed that TMDL Implementation Monitoring would occur between July 1, 2007 and June 30, 2016 (see QAPP, Table 3). DES personnel have completed the monitoring in SFY2008 and will complete monitoring in SFY2009 using funds from the original \$560,000 allocation. Monitoring in SFY2010-SFY2016 will also be completed by DES personnel using the additional funding. DES will also prepare a revised Quality Assurance Project Plan for the TMDL Implementation Monitoring in SFY2010-SFY2016 by June 30, 2009. DOT and DES will agree on the scope of services prior to DES entering into agreements with contractors to perform this work, if needed.

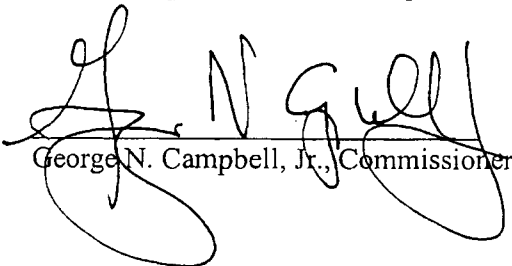
2. Effective Date of Amendment: This Amendment shall take effect upon the date of approval of this Amendment by the Governor and Executive Council of the State of New Hampshire.
3. Continuance of Agreement: Except as specifically amended and modified by the terms and conditions of this Amendment, the Agreement, and the obligations of the parties there under, shall remain in full force and effect in accordance with the terms and conditions set forth therein.

For the Department of Environmental Services:


Thomas S. Burack, Commissioner

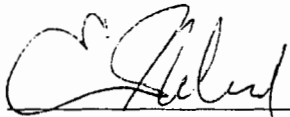
3/2/2009
date

For the Department of Transportation:


George N. Campbell, Jr., Commissioner

3/5/09
date

Reviewed and approved as to form, substance, and execution



Attorney General

3-11-09

date

I hereby certify that the foregoing contract was approved by the Governor and Executive Council
of the State of New Hampshire at the meeting on _____.

Secretary of State

date

Department of Environmental Services
I-93 Chloride TMDLs
010-044-1522

ACCOUNT	DESCRIPTION	Original Account Structure		New Account Structure			
		Current Budget	This Request	Revised Budget	New Class Number	New Class Description	Amount
010-044-1522-001	Transfer from DOT	\$192,396	\$352,412	\$544,808	010-044-1522-001	No Change	\$544,808
	Total Revenue	\$192,396	\$352,412	\$544,808		Total Revenue	\$544,808
010-044-1522-018	Overtime	\$2,654	\$0	\$2,654	010-044-1522-018	No Change	\$2,654
010-044-1522-020	Current Expense	\$4,933	\$1,328	\$6,261	010-044-1522-020	No Change	\$6,261
010-044-1522-030	Equipment	\$30,050	\$0	\$30,050	010-044-1522-030	No Change	\$30,050
010-044-1522-040	Indirect Costs	\$1,313	\$0	\$1,313	010-044-1522-040	No Change	\$1,313
010-044-1522-042	Additional Fringe Benefits	\$2,826	\$1,358	\$4,184	010-044-1522-042	No Change	\$4,184
010-044-1522-049	Transfers to Other State Agencies	\$4,361	\$221	\$4,582	010-044-1522-049	No Change	\$4,582
010-044-1522-050	Personal Services-Part Time	\$0	\$39,747	\$39,747	010-044-1522-050	No Change	\$39,747
010-044-1522-059	Personal Services-Temp	\$33,842	\$0	\$33,842	010-044-1522-059	No Change	\$33,842
010-044-1522-060	Benefits	\$16,978	\$9,758	\$26,736	010-044-1522-060	No Change	\$26,736
010-044-1522-070	In-State Travel	\$746	\$0	\$746	010-044-1522-070	No Change	\$746
010-044-1522-090	Contractual	\$43,340	\$300,000	\$343,340	010-044-1522-090	Contracts for Program Services	\$343,340
010-044-1522-001	I-93 Chloride Carryforward	\$51,353	\$0	\$51,353	010-044-1522-001	I-93 Chloride Carryforward	\$51,353
	Total Appropriations	\$192,396	\$352,412	\$544,808		Total Appropriations	\$544,808



The State of New Hampshire
Department of Environmental Services



Michael P. Nolin
 Commissioner

May 16, 2006

The Honorable Frederick W. King, Chairman
 Fiscal Committee of the General Court
 State House
 Concord, NH 03301

APPROVED G & C
 DATE 21 June 06
 ITEM # 9e

His Excellency, Governor John H. Lynch
 and The Honorable Council
 State House
 Concord, NH 03301

**APPROVED
 FISCAL COMMITTEE**
 DATE 7 June 06

REQUESTED ACTION ITEM # FIS 06-157

1. Pursuant to RSA 14:30-a, VI, authorize the Department of Environmental Services (DES) to accept and expend \$560,000 in funds from the Department of Transportation (DOT) to carry out water quality studies relative to the I-93 expansion, effective upon Governor and Council approval through June 30, 2007. (100% Other funds.)

Funding is to be budgeted as follows:

**I-93 Chloride TMDLs
 010-044-1522
 FY06**

Class	Description	Current Budget	Requested Action	Adjusted Budget
Income				
001	Transfer from DOT	\$0.00	(\$560,000.00)	(\$560,000.00)
Expenditures				
018	Overtime	\$0.00	\$10,000.00	\$10,000.00
020	Current Expenses	\$0.00	\$20,183.00	\$20,183.00
030	Equipment	\$0.00	\$133,050.00	\$133,050.00
042	Add'l Fringe Benefits	\$0.00	\$8,306.00	\$8,306.00
049	Transfers to State Agencies	\$0.00	\$17,445.00	\$17,445.00
050	Part-time Temp	\$0.00	\$127,523.00	\$127,523.00
060	Benefits	\$0.00	\$60,510.00	\$60,510.00
070	In-State Travel	\$0.00	\$2,983.00	\$2,983.00
090	Water Quality Studies	\$0.00	\$180,000.00	\$180,000.00
Total		\$0.00	\$560,000.00	\$560,000.00

The Honorable Frederick W. King, Chairman
Fiscal Committee of the General Court

His Excellency, Governor John H. Lynch
and The Honorable Council

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2. Authorize DES and DOT to enter into a Memorandum of Agreement for \$560,000 for water quality studies or the protection of water bodies in the vicinity of the I-93 corridor from Massachusetts to Manchester, NH, effective upon Governor and Council approval through June 30, 2016. (80% Federal funds, 20% Highway funds.)

Funding is available in account Consolidated Federal as follows:

015-096-3054-090-0415 Consolidated Federal Aid	<u>FY2006</u> \$560,000
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EXPLANATION

DES and DOT are working cooperatively to assess how deicing of the Interstate 93 between Salem and Manchester and other roads and infrastructure affect the water quality in streams in the area. The occurrence of chloride above acute and chronic water-quality criteria for the protection of aquatic life has been found in some streams in drainage areas through which I-93 passes. DES and DOT are determining the extent of these water quality issues in the region and developing potential actions to reduce chloride levels affecting local stream quality.

DES and DOT have developed a Memorandum of Agreement outlining the roles and responsibilities for completing water quality studies to determine the total maximum daily load (TMDL) of chlorides for the affected water bodies. The TMDL for a water body is the maximum chloride load that the water body can assimilate without violating water quality standards. DES and DOT will work cooperatively to conduct and implement TMDL studies for chlorides on Policy Brook and Unnamed Tributary to Policy Brook (NHRIV700061102-18), Unnamed Brook to Western Embayment of Canobie Lake (NHRIV700061102-23), Dinsmore Brook (NHRIV700061204-01), and Beaver Brook (NHRIV700061203-16). DES will be the lead agency for conducting TMDL studies. DES and DOT will work together on communicating TMDL issues and results to stakeholders. During the conduct of TMDLs and the implementation of chloride load allocations, DES and DOT will hold regular, staff-level coordination meetings on at least a quarterly basis.

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

The total cost associated with the Memorandum of Agreement between DES and DOT is \$560,000. The source of funding for the Memorandum of Agreement is the Federal Highway Administration funds from the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009. The allocation of SAFETEA-LU funds for this project (\$560,000) is part of specifically designated funds for I-93 Water Quality Studies. No funds are being budgeted for class 040, Indirect, or class 41, Audit, because DOT already pays the indirect and audit costs associated with this grant. In the event that Federal funds become no longer available, General Funds will not be requested to support this program.

Specifically, the monies will be used as follows:

1522, Class 050 The additional amount of \$127,523 in class 050, Personal Services-Temporary, will not be used for new positions. These funds are available in support of an expanded or new program beyond the original budget scope. Employee support from other Department of Environmental Services organizational units will be utilized to administer this program. These funds will be used to supplant funding of the following positions, which are currently budgeted:

Position #	Title	Budget	Funding Mix	Amount
18556	Administrator IV	100% Federal	010-7602-010	\$14,000
16797	Sanitary Engineer III	100% Federal	010-7602-010	26,000
19723	Environmentalist IV	100% Federal	010-2020-010	20,523
42163	Environmentalist IV	100% Federal	010-7602-010	20,800
42164	Environmentalist IV	100% Federal	010-7602-010	12,750
42162	Environmentalist III	100% Federal	010-7602-010	7,050
41638	Outdoor Ed Prog Coord	100% General	010-1000-010	3,000
42155	Environmentalist IV	100% Federal	010-7602-010	5,000
42160	Hydrogeologist III	100% Federal	010-7602-010	5,200
41643	Business Systems Analyst I	100% Federal	010-7602-010	5,200
42174	Planning Analyst	100% Federal	010-7602-010	4,000
42177	Environmentalist III	100% Federal	010-7602-010	4,000

1522, Class 018 To cover the costs of overtime pay for the positions listed above.

1522, Class 020 To cover the costs of current expenses such as supplies, printing and copying.

1522, Class 030 To cover the costs of equipment purchases for the project; specifically two personal computers, four communications cables, 19 data-loggers, four multi-parameter display systems, and three ISCO automated remote samplers.

1522, Class 042 To cover the cost of additional fringe benefits for the positions listed above.

1522, Class 049 To cover the costs of laboratory expenses for water quality sampling.

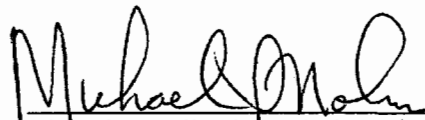
The Honorable Frederick W. King, Chairman
Fiscal Committee of the General Court

His Excellency, Governor John H. Lynch
and the Executive Council

Page 4 of 4

- 1522, Class 060 To cover the cost of benefits for the positions listed above.
- 1522, Class 070 To cover the cost of in-state travel for sampling and field monitoring activities.
- 1522, Class 090 To cover the cost of contractual expenses for stream flow monitoring, salt application rate research, and other water quality studies.

We respectfully request your approval.



Michael P. Nolin, Commissioner
Department of Environmental Services



Carol A. Murray, Commissioner
Department of Transportation

Memorandum of Agreement
between
New Hampshire Department of Transportation
and
New Hampshire Department of Environmental Services
relative to
The Development and Implementation of Total Maximum Daily Loads for Chloride
And Other Activities for Water Quality Protection on Waterbodies in the vicinity of the
I-93 Corridor from Massachusetts to Manchester

WHEREAS, The New Hampshire Department of Transportation (DOT) intends to construct and operate an expansion of Interstate 93 from the Massachusetts border to the intersection of I-93 and I-293 in Manchester (the Activity); and

WHEREAS, the Activity requires a federal Dredge and Fill permit under section 404 of the Clean Water Act (the Act), and also a certification by the New Hampshire Department of Environmental Services (DES) under Section 401 of the Act that neither construction nor operation of the activity will cause or contribute to violation of state water quality standards; and

WHEREAS, the Activity will discharge stormwater containing chloride from winter road maintenance to four waterbodies that are presently impaired for chronic chloride toxicity to aquatic life and listed on the list of waters requiring a Total Maximum Daily Load (TMDL) under Section 303(d) of the Act: Policy Brook and Unnamed Tributary to Policy Brook (NHRIV700061102-18); Unnamed Tributary to Western Embayment of Canobie Lake¹ (NHRIV700061102-23); Dinsmore Brook (NHRIV700061204-01); and Beaver Brook (NHRIV700061203-16); and

WHEREAS, DES has issued a water quality certification under Section 401 of the Act that requires DOT to discharge no additional chloride loads to impaired waterbodies from the date of issuance of the 401 certification until the TMDLs are completed and implemented and further requires DOT to implement the chloride load allocations of completed TMDLs for DOT-operated highways; and

WHEREAS, chloride loads to the impaired waterbodies originate from several sources, including winter maintenance of state and municipal highways, private roads and parking lots, as well as atmospheric deposition and domestic water softening brine discharges to groundwater; and

WHEREAS, DES and DOT have agreed in principle to share the effort to conduct and implement the required TMDLs and to expeditiously complete the TMDL studies and associated outreach to stakeholders so that solutions are explored during the design and construction of the Activity;

¹ Formerly referred to as: "North Tributary to Canobie Lake".

NOW, THEREFORE, DES and DOT agree as follows:

I. MATTERS RELATED TO CONDUCT OF TMDLs

- 1) DES and DOT will work cooperatively to conduct and implement TMDLs for chlorides on Policy Brook and Unnamed Tributary to Policy Brook (NHRIV700061102-18); Unnamed Brook to Western Embayment of Canobie Lake (NHRIV700061102-23); Dinsmore Brook (NHRIV700061204-01); and Beaver Brook (NHRIV700061203-16).
- 2) DES will be the lead agency for conducting TMDL studies.
- 3) DES and DOT will work together on communicating TMDL issues and results to stakeholders.
- 4) During the conduct of TMDLs and the implementation of chloride load allocations, DES and DOT will hold regular, staff-level coordination meetings, no less often than quarterly.
- 5) DOT will provide \$560,000 of high priority SAFETEA-LU funds to DES for conducting the TMDL studies. These funds have been specifically designated for I-93 Water Quality Studies.
 - a. Based on preliminary estimates in **Attachment 1**, the total cost is approximately \$560,000. This estimate does not include implementation.
 - b. Each agency will maintain a cost accounting system for the TMDLs.
 - c. DOT will retain responsibility for ensuring compliance with all applicable federal requirements regarding the use of these earmarked funds.
 - d. In-kind services from both agencies will be included in cost accounting.
 - e. The agreement will take effect upon approval by the Governor and Council.
 - f. DES will submit a quarterly report to DOT at least two weeks in advance of the meetings provided in 4) above. The reports will include an update on the progress of TMDL studies and will identify any project delays or other issues that might affect TMDL completion.
 - g. DES will submit to DOT a quarterly voucher of TMDL expenditures at least two weeks in advance of the meetings provided in 4) above. The vouchers will serve as the basis for the transfer of funds designated in d. above from DOT to DES.
- 6) If federal funds are not available under SAFTEA, DES will stop work on the TMDLs, and DOT will stop work on construction of the I-93 improvements until alternative funding is secured to complete the TMDLs and this agreement is modified accordingly.
- 7) DES will coordinate with EPA, keep the EPA regional TMDL coordinator apprised of TMDL progress, expeditiously submit the completed TMDLs to EPA for approval and execute other measures required by rule or law to obtain EPA approval of the TMDLs.

- 8) DES will be the lead agency for data management, and will maintain all environmental data related to the 401 water quality certification, the TMDL studies, and TMDL implementation in the statewide Environmental Monitoring Database administered by DES.
- 9) DES and DOT will collaborate on communication and outreach for implementation of TMDL load allocations.
- 10) The Commissioners of DOT and DES are mutually committed to completion and implementation of chloride TMDLs before operation of additional lanes of the Activity. To that end, both DES and DOT shall assign adequate staff to TMDL work to meet the milestones in **Attachment 2** in relation to construction and operation of the I-93 improvements. In the event that a milestone is not met, DES and DOT shall meet within two weeks to negotiate a revised schedule and a level of staffing and effort to meet the revised schedule. The Commissioners shall approve the revised schedule and level of staffing and effort, and shall modify this agreement accordingly.

II. MATTERS RELATED TO INTERIM CONTROL OF CHLORIDE LOADING ON I-93

- 1) DOT has supplied winter salt application rate data for I-93 in the vicinity of the improvements, and DES has conducted a statistical regression analysis of the data (**Attachment 3**). The analysis shows that there is a relationship between salt usage and the DOT winter severity index (WSI). This relationship can be used to determine the typical salt usage on I-93 during a winter based on records of temperature and snowfall.
- 2) DOT will apply deicers to State highways at rates that are at or below the application rates specified in the DOT Winter Maintenance Snow Removal and Ice Control Policy. Whenever possible, DOT will use new technologies to reduce the salt application rate while still maintaining public safety.
- 3) DOT will keep daily records of salt application amounts, salt application rates (in pounds per lane mile), the total number of spreader miles driven by salt spreaders, and the total mass of salt applied per lane mile for different roadway classes in the TMDL watersheds.
- 4) Cumulative salt application amounts for each winter shall not exceed the expected application amount based on the relationship between salt usage and the WSI. The method for determining compliance with this item is described in **Attachment 3**. DOT will provide to DES records of salt application for I-93 in the vicinity of the improvements by February 15 and April 15 of each year. DES will compare the salt application amounts to the predicted amounts. If application amounts exceed the expected application amounts, DOT shall evaluate the circumstances and confer with DES on salt application reductions for the remainder of the winter, and at the end of the winter DOT shall submit a salt management plan addressing application reduction strategies for future winters.
- 5) DOT will keep data records of weather conditions in the vicinity of the improvements during the winter road maintenance season, from November 1 to March 31. Weather data will be generated by the Road Weather Information System operated by DOT.

III. MATTERS RELATED TO INCREMENTAL IMPLEMENTATION OF I-93 IMPROVEMENTS IN RELATION TO TMDL STUDY COMPLETION AND IMPLEMENTATION OF CHLORIDE LOAD REDUCTIONS.

- 1) DOT agrees to incremental implementation of the project, as provided in the last paragraph of Section 1.3 of the Federal Highway Administration Record of Decision, in the event that TMDLs and TMDL implementation plans are not completed, approved by EPA, and established with full implementation of chloride load reductions for the I-93 improvements and other roads operated by the Applicant. Full implementation of chloride load reductions means load reductions have already been achieved. Incremental implementation of the project means paving and operating only three lanes of the improved I-93 roadway in each direction until all chloride load reductions specified in the TMDL implementation plans are achieved for roads operated by DOT in the TMDL watersheds.

IV. MATTERS RELATED TO COMMUNICATION WITH STAKEHOLDERS

- 1) Within three months of the date of this agreement, DES shall notify the towns of Salem, Windham, Derry, Londonderry, Auburn, and Chester of the requirement for no additional chloride loading in TMDL watersheds until TMDLs are completed and chloride load reductions in accordance with the TMDL implementation plan after TMDL completion.
- 2) DOT and DES will establish and assign co-chairpersons to an interagency Salt Reduction Work Group. The purpose of the work group will be to advise DES and DOT on the TMDL study and implementation plan until these are complete, and to advise and then to assist with implementation of required salt load reductions. In addition to the chairpersons, the work group may include a representative from:
 - a. DOT
 - b. EPA
 - c. The selectmen's office of each town with area in a TMDL watershed: Salem, Windham, Derry, Londonderry, Auburn, and Chester
 - d. The public works department of each town with area in a TMDL watershed: Salem, Windham, Derry, Londonderry, Auburn, and Chester
 - e. University of New Hampshire T2 Program
 - f. A private winter road and parking lot maintenance company doing business in Derry
 - g. A private winter road and parking lot maintenance company doing business in Salem.
 - h. Southern New Hampshire Regional Planning Commission
 - i. Nashua Regional Planning Commission
 - j. Rockingham Planning Commission

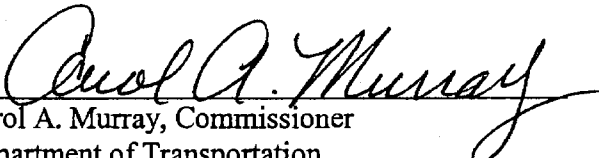
- 3) In calendar year 2007, DOT will work with DES, EPA, and the Salt Reduction Work Group to design and implement a comprehensive outreach, education, and hands-on technical assistance program to all corridor communities.
- 4) DES and DOT will convene the Winter Road Salt Reduction Work Group at least twice during the conduct of TMDL studies, and three times during preparation of the implementation plan.
- 5) Earmarked high priority funds remaining following completion of the TMDL studies will be used to facilitate the load allocation and implementation recommendations of the TMDL and to mitigate locally caused sodium chloride impacts.

V. MATTERS RELATED TO IMPLEMENTATION OF TMDL LOAD ALLOCATIONS

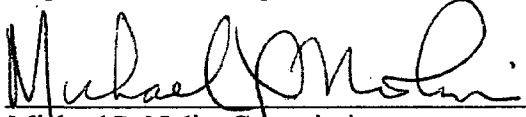
- 1) DES shall be the lead agency for tracking salt loadings and chloride concentrations in TMDL watersheds.
- 2) DES shall be the lead agency for tracking the success of TMDL implementation and for enforcement of TMDL load allocations.
- 3) DES and DOT shall cooperate on obtaining long-term funding, first from federal sources, and second from state sources, for staff and monitoring required for effective TMDL implementation.

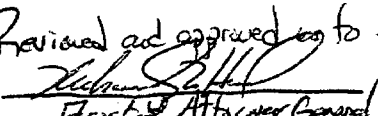
IN WITNESS WHEREOF, the respective parties have hereunto set their hands on the dates indicated.

Date 4/26/06


Carol A. Murray, Commissioner
Department of Transportation

Date 04 26 06


Michael P. Nolin, Commissioner
Department of Environmental Services

Reviewed and approved as to form, substance and Execution

5/10/06
Assistant Attorney General
SECRETARY OF STATE

I hereby certify that the foregoing contract was approved by the Governor and Executive Council of the State of New Hampshire at their meeting on _____

Signed