



**US Army Corps
of Engineers ®
New England District
696 Virginia Road
Concord, Massachusetts 01742-2751**

**Real Estate Plan
Wiswall Dam Aquatic Restoration
Durham, New Hampshire**

PREPARED BY:

A handwritten signature in blue ink, appearing to read "A. Mary Dunn", written over a horizontal line.

A. Mary Dunn
Staff Appraiser

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REAL ESTATE PLAN
WISWALL DAM AQUATIC ECOSYSTEM RESTORATION PROJECT

1. PURPOSE: The Wiswall Dam Aquatic Ecosystem Restoration Project study is being done under Section 206 of the Water Resources Development Act of 1996 (as amended). There are two dams on the Lamprey River, the MaCallen Dam that has a Denil fish ladder, and the Wiswall Dam. The Wiswall Dam prevents the fish from accessing their upstream river habitat due to the blockage posed by the dam's presence. In a March 2000, the New Hampshire Fish & Game Department (NH F&GD) requested that the Corps do a study to examine alternatives to enable the fish to again migrate to their freshwater spawning area.

2.a. PROJECT AREA DESCRIPTION: The proposed project is located off Wiswall Road in Durham, New Hampshire, a residential community and college community.

The dam, located on the Lamprey River in Durham, New Hampshire, is owned by the town. Due to the Lamprey River's valued wildlife resources and importance as a tributary to the Great Bay National Estuarine Reserve, it was designated a Wild and Scenic River in November 1996. The portion of the river located in Durham and Lee also enjoys protected status as a Rural River under the state of New Hampshire's River Management and Protection Program. Wiswall Dam forms an impoundment that is approximately 1.5 miles long and holds about 1.5 million gallons of water and the impoundment serves as an emergency water supply for the town. Historically, the Lamprey River supported significant populations of river herring, American Shad, American eel, and Atlantic Salmon. However, in past decades, dams built for industrial and residential development have obstructed fish migrations on the river. The first dam, the McCallen Dam, is located at tidewater in the town of Newmarket (just south of Durham), which has a "Denil" type of fish ladder. About 20,000 to 60,000 alewives, blueback herring and other fish species swim through a Denil fish ladder at MaCallen Dam. These fish are prevented from accessing an additional forty-five miles of river habitat upstream from Wiswall Dam due to the blockage posed by the dam. This study examines alternatives to enable the fish to again migrate to their freshwater spawning area.

The study initially examined two alternatives, dam removal or construction of a fish passage facility. In 2002, the State of New Hampshire contracted for a study to assess options to replace the water supply and storage that would be impacted by dam removal. In November 2002, the town of Durham indicated that dam removal would necessitate a replacement water storage system. Given this additional cost of dam removal, a By-Pass Channel is being examined as another alternative in the study. As a result, three alternatives are being examined: (1) Dam Removal, (2) a "Denil" Fish Ladder, and (3) a By-Pass Channel.

2.b. RECOMMENDED PLAN: The following alternatives were considered for this project:

Dam Removal: This alternative involves removal of the Wiswall Dam and any lands required for the relocation of the impoundment, which is considered to be a public utility. This would involve the removal of the dam and the acquisition of the fee simple interest in the land upon which the dam rests and the land required for the replacement of the impoundment created by Wiswall Dam (estimated to be about 1.5 million (M) gallons of water). It is estimated that about 6 acres of land will be needed. According to a study prepared for the Maine Coastal Program by Dufresne-Henry in February 2003, there are six potential replacement schemes that range from \$3.3M to \$13.5M (this cost is only for engineering, construction, overhead and profit and an allowance for contingencies). The lands required for this alternative are owned by the City of Durham. The estimated costs for this alternative are as follows:

Relocation of utilities (from Dufresne-Henry report)	\$3,300,000
Fee interest in dam site and alternative site, 6± acres	\$ 120,000
Permanent Easement	\$ 0
Temporary easement during construction	\$ 20,000
Contingency, 25%	<u>\$ 35,000</u>
Total	\$3,475,000

“Denil” Fish Ladder: This alternative involves the fabrication, installation, and maintenance of a concrete structure along the easterly face of the Wiswall Dam. For the “Denil” Fish Ladder alternative, there will be a need to acquire in fee 5,000 square feet (SF) of land, a permanent easement over 207,500 SF of land (the entire parcel the town of Durham owns, less the area to be acquired in fee) to be co-used for access and for future maintenance, and a temporary easement over 207,500 SF to be used during the construction phase, anticipated to be one year. All the land required for this alternative is owned by the City of Durham. The estimated costs for this alternative are as follows:

Fee acquisition, 5,000 SF of land	\$ 2,250
Permanent easement, co-use, over 207,500 SF	\$46,688
Temporary easement over 207,500 SF during construction	\$ 9,338
Contingency, 25%	<u>\$14,568</u>
Total, rounded	\$75,000

By-Pass Channel: This alternative involves the construction and maintenance of a 60-foot wide channel approximately 1,000 lineal feet long near the easterly shore of the Lamprey River. Some of the land required for this alternative is under private ownership and some is owned by the City of Durham. This alternative will require the fee acquisition of 93,911 SF of land needed for the channel.

A permanent easement will also be required over 208,500 SF of land, to be co-used, for access and future maintenance. In addition, a temporary easement over 208,500 SF of land will be needed during the construction phase which is anticipated to be two years. Following are the estimated costs for this alternative:

Fee acquisition, 93,911 SF of land	\$42,260
Permanent easement, co-use, over 208,500 SF	\$46,913
Temporary easement over 208,500 during construction, 2 years	\$18,765
Contingency, 25%	<u>\$26,985</u>
Total, rounded	\$135,000

The recommended alternative is the By-Pass Channel.

2.c. OWNERSHIPS: Some of the area needed for the by-pass channel is owned in fee by the town of Durham and some is under private ownership. The land proposed for access and for the construction phase is owned in fee by the town of Durham. The local sponsor is responsible for acquiring all the lands, easements, rights of way, relocations and dredged or excavated material disposal area (LERRD's) needed for the project.

3. DESCRIPTION OF NON-FEDERAL SPONSOR'S EXISTING OWNERSHIP: The non-Federal sponsor does not own any of the lands needed for this project.

4. RECOMMENDED ESTATES: Standard Estates No. 11, Road Easement, and No. 15, Temporary Work Area Easement, will be needed for this project. In addition, a Non-Standard Estate for the "Denil" Fish Ladder Alternative would be needed, if required. This estate is as follows:

"A perpetual and assignable right and easement to construct, maintain, repair, rehabilitate, operate, patrol, replace and remove a fishway and ladder, including all appurtenances thereto, in connection with the Wiswall Dam Fish Passage Project; reserving, however, to the owners, their heirs and assigns, all such rights and privileges in the land as may be used without interfering with or abridging the rights and easements hereby acquired."

5. EXISTING FEDERAL PROJECTS: There are no current Federal projects in the subject project area.

6. EXISTING FEDERAL OWNERSHIP: There are no federally owned lands in the subject area.

7. NAVIGATION SERVITUDE: Navigation servitude does not apply.

8. REAL ESTATE MAPPING: Preliminary maps are provided at this time that show the project areas, however, detailed maps will be prepared at a later date.

9. INDUCED FLOODING: The project will not cause any flooding of other non-project lands.

10. BASELINE COST ESTIMATE FOR REAL ESTATE: The value estimates are for all the real estate identified as needed for the project for the By-Pass Channel alternative. Credit for the real estate will be determined through the cost-sharing agreement.

Fee acquisition, 93,911 SF of land	\$42,260
Permanent easement, co-use, over 208,500 SF	\$46,913
Temporary easement over 208,500 SF for construction, 2 years	\$18,765
Contingency, 25%	<u>\$26,985</u>
Total, rounded	\$135,000
Acquisition Costs, 2 ownerships \$7,000 each	<u>\$ 14,000</u>

Total Estimated Real Estate Costs, \$149,000, rounded \$150,000

11. PUBLIC LAW 91-646 RELOCATIONS: There are no potential Public Law 91-646 relocations required in connection with this project. There are no residences or businesses which would be relocated under P.L. 91-646. The sponsor has been advised of P.L. 91-646 and the requirement to document expenses.

12. MINERAL AND/OR TIMBER ACTIVITY: There is no present or anticipated mineral or timber harvesting activity in the vicinity of the project that may affect the operation thereof.

13. ASSESSMENT OF NON-FEDERAL SPONSOR'S REAL ESTATE ACQUISITION CAPABILITIES: The Non-Federal sponsor is the State of New Hampshire (the New Hampshire Fish and Game Department). The sponsor must provide all lands, easements, rights of way, relocations and dredged or excavated material disposal area (LERRD's) required for construction and maintenance of the project at no cost to the Federal Government.

The Assessment of Non-Federal Sponsor's Real Estate Acquisition Capability checklist is included.

14. ZONING CHANGES: No zoning changes are proposed in lieu of, or to facilitate, real estate acquisitions.

15. ACQUISITION SCHEDULE: The following is the estimated acquisition schedule:

- a. Forward maps to sponsor – July 2005
- b. Survey – June 2005
- c. Title – June 2005
- d. PCA Execution – July 2005
- e. Appraisals – July 2005
- f. Closings – August 2005
- g. Possession – August 2005
- h. LER Certification – September 2005

16. FACILITIES AND UTILITIES RELOCATIONS: The proposed project will not require any utility and/or facility relocations.

17. HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE: An Environmental Assessment and a Finding of No Significant Impact has been completed on this project. The proposed project will not result in an adverse impact on the environment. Further assessment is not required.

18. LANDOWNER SENTIMENT: The State of New Hampshire, Department of Fish and Game, and the town of Durham strongly support this project. In addition, here is a broad base of support for this project from the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the U.S. Environmental Protection Agency, Fish America Foundation, the and National Fish and Wildlife Foundation.

19. OTHER REAL ESTATE ISSUES: An historic site is located on land owned by the town of Durham as well as on privately owned land near the proposed location of the By-Pass Channel. None of the options considered will affect the historic site. The design of the By-Pass Channel will provide a substantial buffer zone around the historic site.

APPENDIX 12-E

ASSESSMENT OF NON-FEDERAL SPONSOR'S
REAL ESTATE ACQUISITION CAPABILITY

I. Legal Authority:

- a. Does the sponsor have legal authority to acquire and hold title to real property for project purposes?
(yes/no)
- b. Does the sponsor have the power of eminent domain for this project?
(yes/no)
- c. Does the sponsor have "quick-take" authority for this project? (yes/no) *N.A.*
- d. Are any of the lands/interests in land required for the project located outside the sponsor's political boundary? (yes/no)
- e. Are any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn? (yes/no)

II. Human Resource Requirements:

- a. Will the sponsor's in-house staff require training to become familiar with the real estate requirements of Federal projects including P.L. 91-646, as amended? (yes/no)
- b. If the answer to II.a. is "yes," has a reasonable plan been developed to provide such training? (yes/no)
- c. Does the sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project?
(yes/no)
- d. Is the sponsor's projected in-house staffing level sufficient considering its other work load, if any, and the project schedule?
(yes/no)
- e. Can the sponsor obtain contractor support, if required in a timely fashion? (yes/no)
- f. Will the sponsor likely request USACE assistance in acquiring real estate? (yes/no) (If "yes," provide description)

III. Other Project Variables:

- a. Will the sponsor's staff be located within reasonable proximity to the project site? (yes/no)
- b. Has the sponsor approved the project/real estate schedule/milestones?
(yes/no)

IV. Overall Assessment:

- a. Has the sponsor performed satisfactorily on other USACE projects?
(yes/no/not applicable)
- b. With regard to this project, the sponsor is anticipated to be: highly capable/fully capable/moderately capable/marginally capable/insufficiently capable. (If sponsor is believed to be "insufficiently capable," provide explanation)

WISWALL DAM AQUATIC RESTORATION PROJECT

V. Coordination:

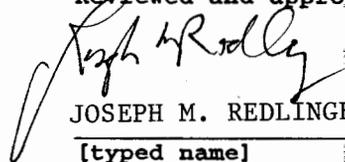
- a. Has this assessment been coordinated with the sponsor? (yes/no)
b. Does the sponsor concur with this assessment? (yes/no) (If "no," provide explanation)

Prepared by:



A. MARY DUNN, STAFF APPRAISER
[typed name]
[title]

Reviewed and approved by:

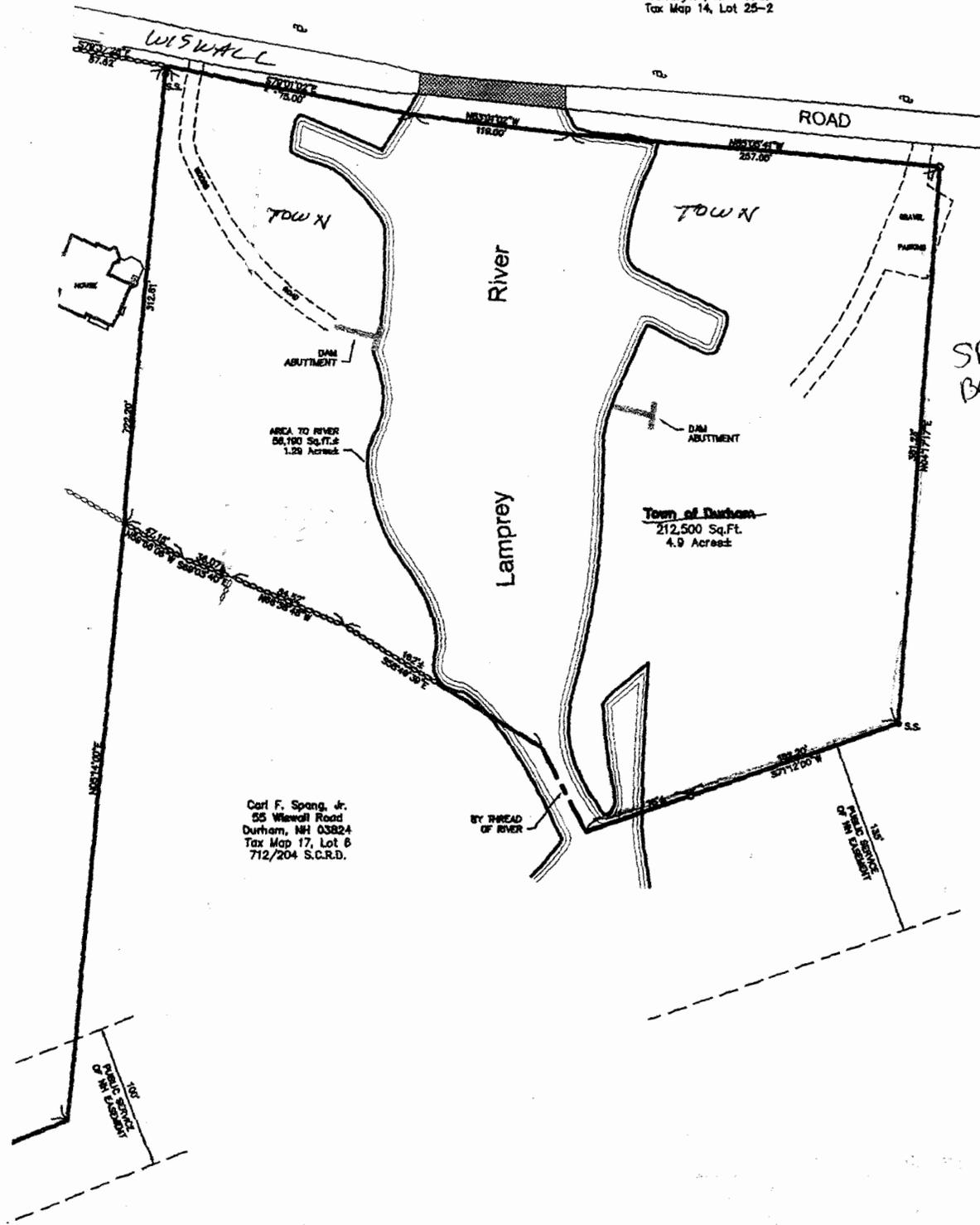


JOSEPH M. REDLINGER
[typed name]
Chief, Real Estate Division

WISWALL DAM AQUATIC RESTORATION

n/f
 Christopher & Diana Jones Johnson
 60 Wiswall Road
 Durham, NH 03824
 Tax Map 14, Lot 25-1

n/f
 Sharon & Michael Crockett
 51A Hill Road
 Barrington, NH 03825
 Tax Map 14, Lot 25-2



*SPANG/
 Bar-Gadda
 Land*

Carl F. Spang
 55 Wiswall R.
 Durham, NH 0
 Tax Map 17, 1

Carl F. Spang, Jr.
 55 Wiswall Road
 Durham, NH 03824
 Tax Map 17, Lot 6
 712/204 S.C.R.D.

Carl F. Spang, Jr.
 55 Wiswall Road
 Durham, NH 03824
 Tax Map 17, Lot 6
 712/204 S.C.R.D.



Wiswall Dam Facing West (photo taken by G. Billings on August 15, 2002)



Lamprey River Facing Southeast (photo taken by G. Billings on August 15, 2002)



Lamprey River Facing Northwest (photo taken by G. Billings on August 15, 2002)



Existing "Mill Race" Facing North (photo taken by G. Billings on August 15, 2002)