

RYE CONSERVATION COMMISSION
RYE, NEW HAMPSHIRE 03870



TOWN OF RYE

FINAL REPORT
Grant Award # NA57OZ0320

1995 LOCKE ROAD CULVERT

REPLACEMENT PROJECT

LIBRARY

MAY 23 2005

National Oceanic &
Atmospheric Administration
U.S. Dept. of Commerce

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This project was funded in part by a grant from the Office of State Planning,
New Hampshire Coastal Program, as authorized by the National Oceanic and
Atmospheric Administration(NOAA), Grant Award Number NA57OZ0320.



Rye Conservation Commission Members:

Pat Anderson
Richard Baron
Richard Gustafson
Robin Hughes

Deborah Johnson
James Raynes, Chairman
Louise Tallman, Vice Chairman
Deborah Taylor

TE
213
.T69
1996

US Department of Commerce
NOAA Coastal Services Center Library
2234 South Hobson Avenue
Charleston, SC 29405-2413

RYE CONSERVATION COMMISSION
RYE, NEW HAMPSHIRE 03870

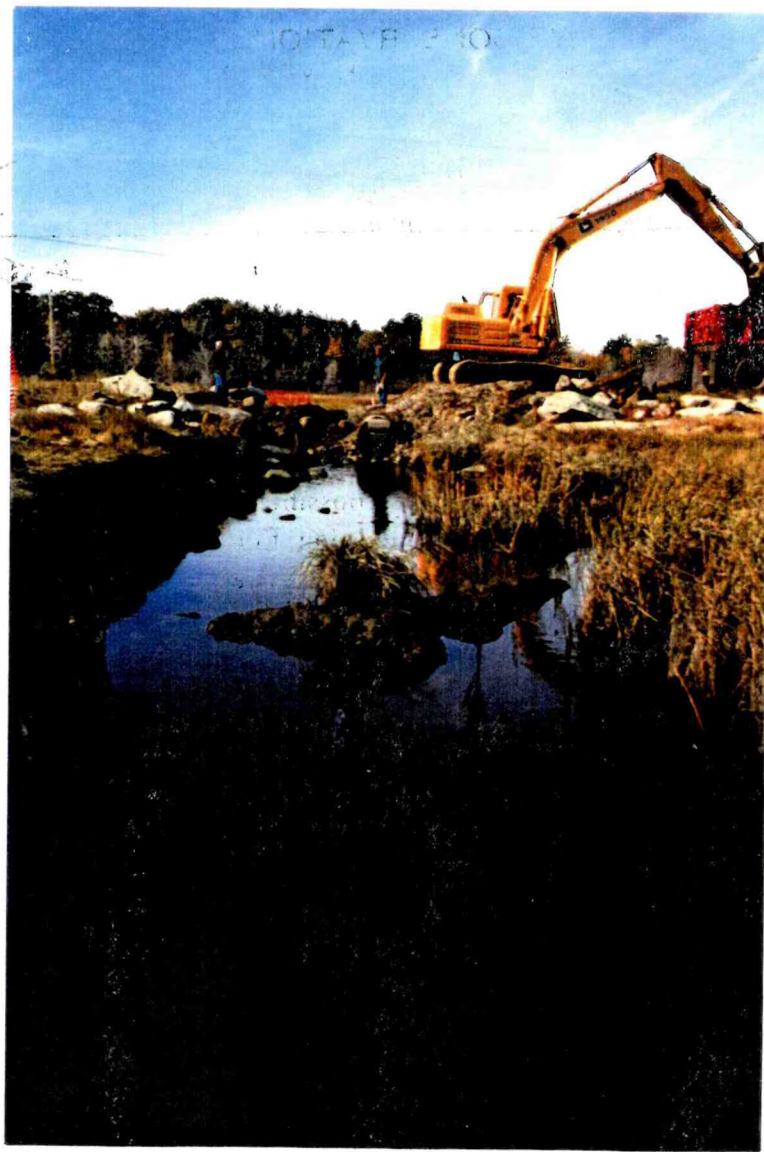


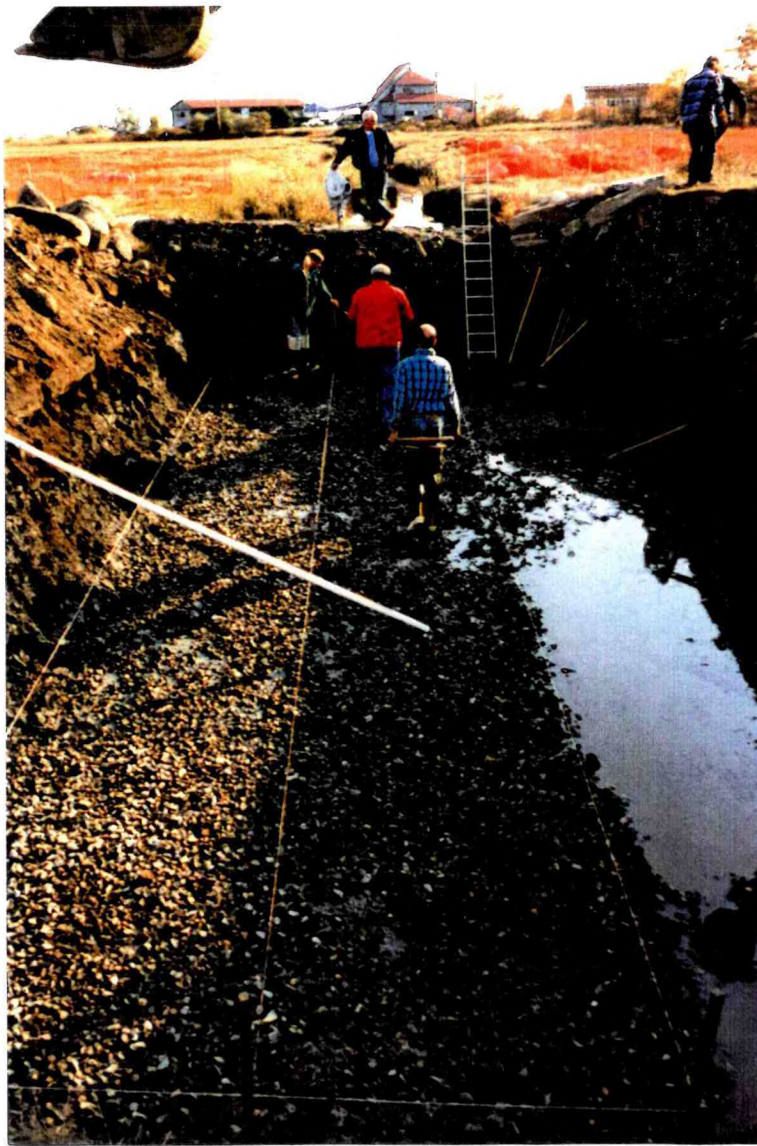
- I. On January 5, 1995 the Rye Conservation Commission held a public hearing to discuss the possibility of requesting Financial Assistance from the New Hampshire Coastal Program Matching Grants for the purpose of replacing an inadequate culvert on Locke Road. This was the fifth project that had been undertaken by the Rye Conservation Commission. This was selected from the Evaluation of Restorable Salt Marshes in New Hampshire publication dated October 1994 by the U.S. Department of Agriculture.
- II. The original grant request was for \$16,600.00 but after the award of the grant it was increased to \$22,925.00, grant award # NA57OZ0320.
- III. The result desired was the restoration of tidal flow that will start the process affecting 13.1 acres which is being invaded with phragmites. In the past few years the members of the Rye Conservation Commission have reviewed many studies on the cause and effect, and how to control the spread of phragmites. We have not contracted for the chemical spraying process because we felt that the proper approach would be to restore the proper level of salinity which in time will return the salt marsh plant community areas to a level of 18 parts per thousand salinity which will then be able to maintain themselves with the normal flooding at each high tide.
- IV. Benefits desired would include wildlife habitat, aesthetic quality of life, shoreline anchoring, importance to local near shore fisheries, because salt marshes export organic matter which may be an important microbial food source in estuarine and near shore marine ecosystems. Salt marshes harbor several species of "minnows" such as mummichogs and atlantic silversides which are food sources for larger fish. Salt marshes serve as nurseries and refuges for such important fish as winter flounder and alewife.
- V. The members of the Rye Conservation Commission feel that we should continue to restore as many acres of salt marsh as possible. Prior to this project we had removed four other restrictions. We have requested another Coastal Program Grant for 1996 and have to other wetland mitigation projects in progress at this time. With the current projects we will have started the restoration process for well over one hundred acres.

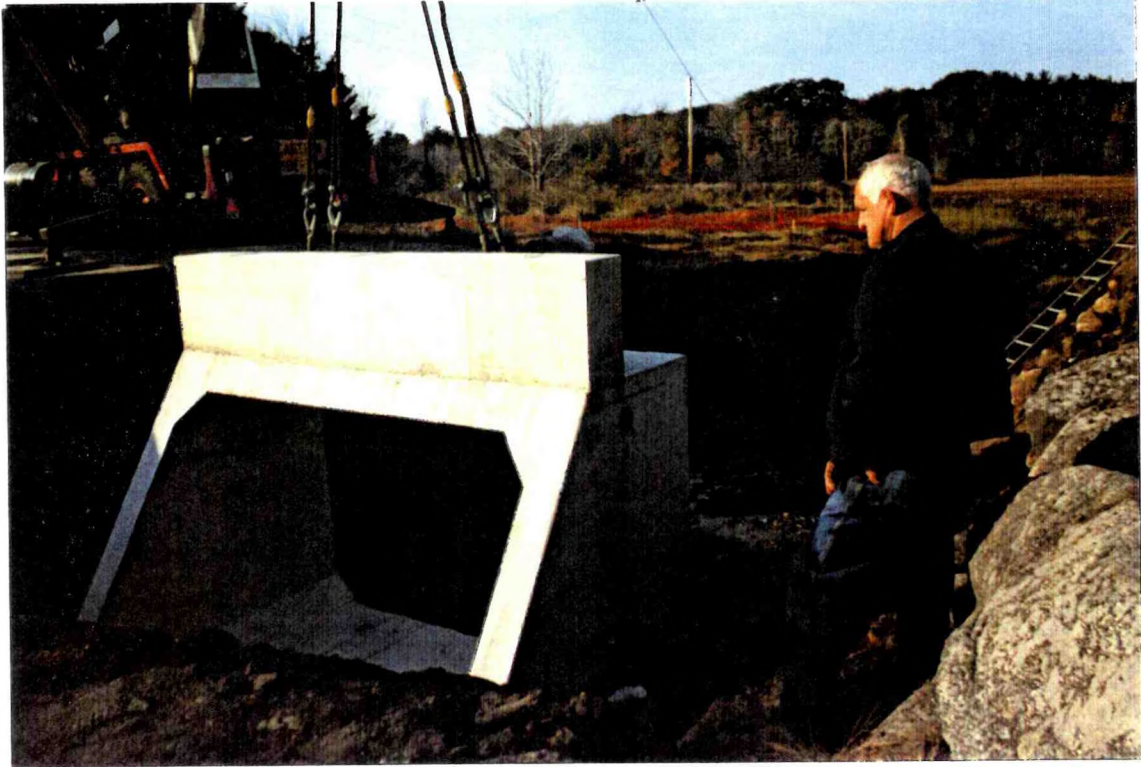
RYE CONSERVATION COMMISSION
RYE, NEW HAMPSHIRE 03870



- VI. Many residents of the town have been very supportive of the Rye Conservation Commission and feel that great strides are being made in the improvement of the salt marshes. They have requested that we continue with salt marsh restoration if possible. Some civic minded residents have assisted with the purchase and donation of nearly fifty acres of wetland which will be added to other town owned land and managed by the Conservation Commission.
- VII. The following pages include:
- A. Color photos showing the start of construction removing the 36" undersized culvert.
 - B. Site preparation, improved base with the first section being lowered.
 - C. The first section installed, completed installation of 6' high by 9' wide replacement culvert.
 - D. Final payment request.
 - E. Proposed sign to be placed for this contract and the 1996 Grant.
 - F. Town tax map of section of Locke road.
 - G. Portsmouth Herald culvert story.
 - H. Office of State Planning invitation to visit Locke Road project.
 - I. Letter of support from Rye Selectmen.
 - J. Letter of support from Fish and Wildlife.
 - K. Letter of support from US Dept. of Agriculture, State Conservationist.
 - L. Letter of support Rockingham Planning Commission.







RYE CONSERVATION COMMISSION
RYE, NEW HAMPSHIRE 03870



July 5, 1996

Jeffrey H. Taylor, Director
Office of State Planning
2 1/2 Beacon Street
Concord, NH 03301

Dear Sir:

This letter is the fourth and final quarterly report of the Town of Rye Locke Road Culvert Replacement Project. As you are aware the grant request was prepared with the information from the Evaluation of Restorable Salt Marshes in New Hampshire. The Grant was increased for interpretive signs and project education.

When Susan Hoey, District Conservationist, met with Mr. Moynahan, Highway Superintendent for the town of Rye, it was decided that this project should be modified to include using a precast concrete box culvert system which will last much longer and will have the best possible results. At this time we discussed the possibilities for increased funding. Steve Wallace and Chris Nash assured me that they would try for further funding and the town of Rye Conservation Commission decided that this project should be completed.

Using the contract agreement work tasks the following projection is submitted:

	TASK	DATE	COST
1.	Soil Conservation preliminary design	1/95	\$ 00.00
2.	Design SCS/Rye Highway	6/22/95	\$ 00.00
3.	Wetland Permit Amended	7/18/95	\$ 00.00
4.	Install Culvert:		
	Precast concrete box culvert	10/18/95	\$15,200.00
	Excavator	10/18/95	\$ 1,800.00
	Crane	10/18/95	\$ 1,200.00
	Materials, fencing, dam etc.	10/18/95	\$ 1,975.00
	Labor, Rye Highway	10/18,19/95	\$ 1,000.00
	Repaving, Rye Highway	10/19/95	\$ 750.00
5.	Install signs and plaque	Not Completed	\$ 1,000.00
			<u>\$22,925.00</u>

RYE CONSERVATION COMMISSION
RYE, NEW HAMPSHIRE 03870



As you can see the major cost items in this matching grant project was completed in the month of October.

The attached copies of checks was forwarded to you with the December Payment Request.

Excavator	Gove Construction	\$ 2,380.00
Crane	Badger Rand	600.00
Culvert	Concrete Systems, Inc.	15,199.95
Bedding Stone	Newmarket Sand & Gravel	266.44
Crushed Gravel	Pike Industries, Inc.	266.35
Fencing	A.H. Harris & Sons	151.69
Guard Rail	Rye Highway Department	366.54
Grout	Grossman's	27.92
Pump Rental	Marshall Rental Center	90.00
Paving	Town of Rye, Highway	700.00
Labor	Town of Rye, Highway (3 days 4 men)	<u>1,900.89</u>

TOTAL THIS REQUEST

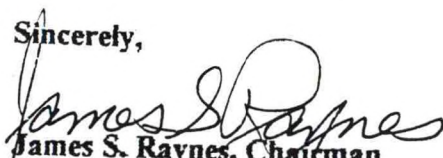
\$21,949.78

This request is only for the amount not included in the previous payment and the instalation of the Guardrail which was fabricated by the Rye Highway Department.

As discussed with Steve Wallace the sign for this project and this years Grant will be combined. The joint cost will be included in the 1996 summary. The sign has been designed and we are presently requesting cost estimates. Copy of wording of sign attached.

Thank you for any assistance you can give.

Sincerely,


James S. Raynes, Chairman
Rye Conservation Commission

Attached: Payment Request

PAYMENT REQUEST

NH Office of State Planning/NH Coastal Program

2-1/2 Beacon Street, Concord, NH 03301 • (603) 271-2155

Project Title Lock Road Culvert Replacement
 Contracting Agency/Organization Rye Conservation Commission
 Address Town Hall 10 Central Road, Rye, NH 03870
 Reporting Period: From 1-1-96 To 6-30-96 Payment Request No. Final
 Grant Period July 1, 1995 - June 30, 1996 Total Grant Award \$ 11,412.50

REIMBURSABLE PLUS MATCHED COSTS	CUMULATIVE EXPENSES FROM PREVIOUS PAYMENT REQUESTS	+	EXPENSES THIS PERIOD	=	CUMULATIVE EXPENSES TO DATE
PERSONNEL	<u>1,728.00</u>		<u>172.89</u>		<u>1,900.89</u>
EQUIPMENT	<u>3,070.00</u>		-		<u>3,070.00</u>
CURRENT EXPENSE					
CONTRACTUAL <i>Materials</i>	<u>11,612.35</u>		<u>366.54</u>		<u>11,978.89</u>
OTHER COST (Please Explain) <i>Incurred last Period</i>			<u>(705.17)</u>		
TOTAL COSTS	<u>21,410.35</u>				<u>21,949.78</u>
REQUESTED REIMBURSEMENT	<u>10,000.00</u> <small>PREVIOUS TOTAL</small>		<u>974.89</u> <small>REIMBURSABLE FOR THIS PERIOD</small>		<u>10,974.89</u> <small>TOTAL</small>
MATCH AMOUNT	<u>10,705.18</u> <small>PREVIOUS TOTAL</small>		<u>269.72</u> <small>MATCH THIS PERIOD</small>		<u>10,974.90</u> <small>TOTAL</small>

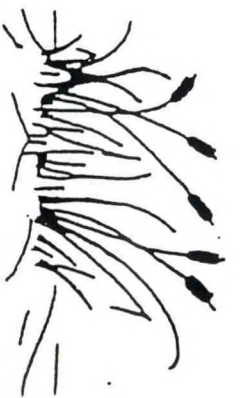
PLEASE NOTE: Agency must keep on file detailed documentation of supervisor approved employee time records.

Certified by: *James S. Payne* Title *Chairman Rye Conservation Commission* Date *7-5-96*

FOR OFFICE OF STATE PLANNING USE ONLY	NOTES
OSP ACCOUNT NO. _____	
FEDERAL GRANT NO. _____	
PROJECT CONTRACT NO. _____	
PAYMENT APPROVED BY: _____ DATE _____	

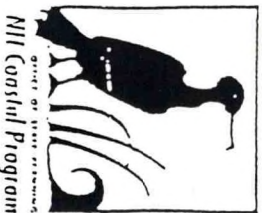


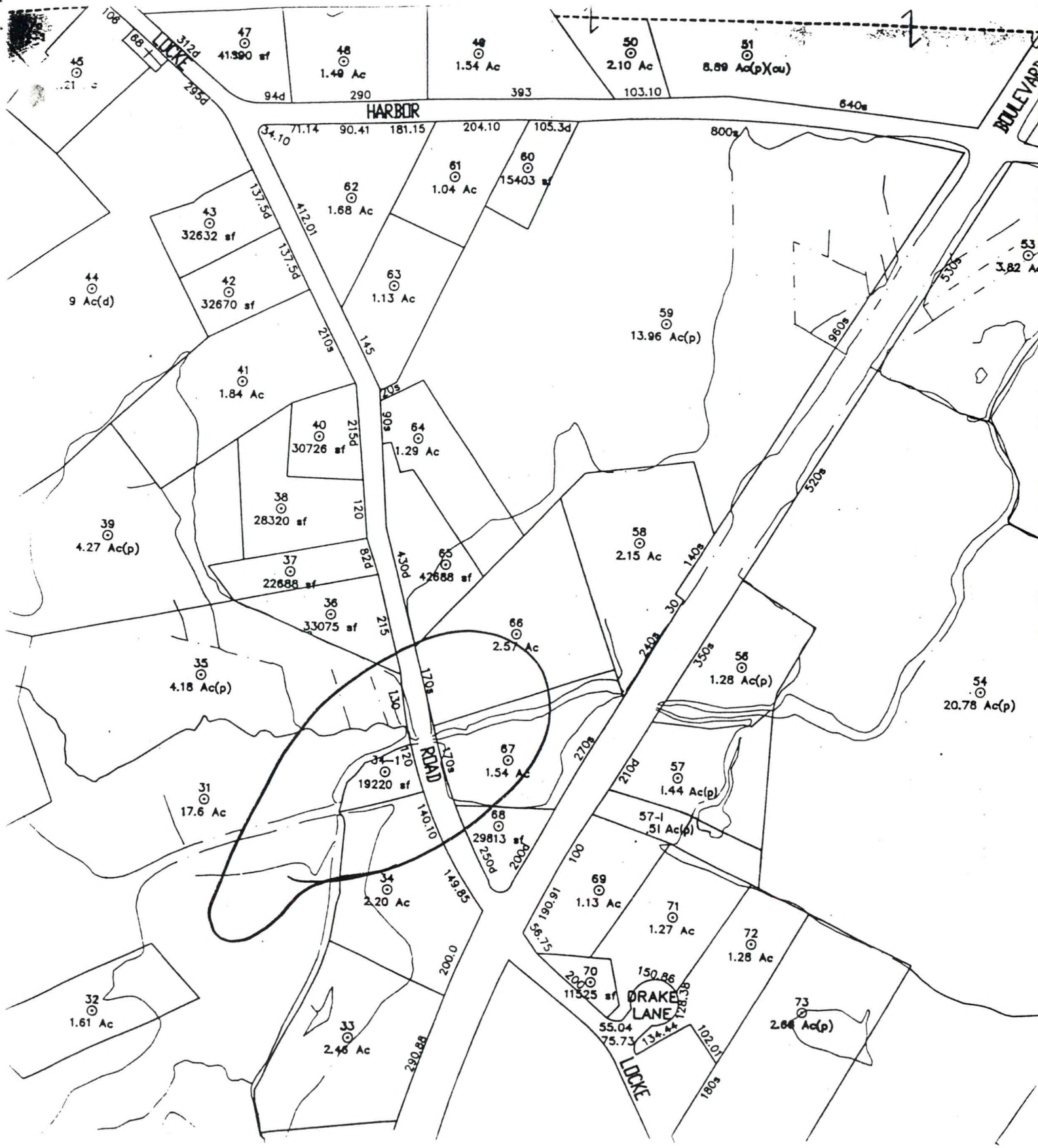
SALT MARSH RESTORATION



The Rye Conservation Commission, with assistance from the NH Coastal Program and the USDA Natural Resource Conservation Service, has replaced the culverts under this road and the near by Locke Road, to restore tidal flushing to the salt marshes. Increased tidal exchange will:

- Reverse the degradation of the marshes.
- Re-establish wildlife habitats; especially shore birds.
- Facilitate fish predation on mosquito larvae; natural mosquito control.
- Eliminate the use of pesticides on the marshes.
- Stop the spread of invasive freshwater plants such as Phragmites, narrow leaf cattails, purple loosestrife, poison ivy and poison sumac.
- Provide nurseries and refuges for important commercial fish such as winter flounder and alewife.
- Restore approximately 53 acres of salt marsh.





LOCKE
312d
352
395d

BOULEVARD

HARBOR

DRAKE
LANE
LOCKE

47 41,390 sf
48 1.49 Ac
49 1.54 Ac
50 2.10 Ac
51 8.89 Ac(p)(ou)

94d 290 393 103.10 640s

34.10 71.14 90.41 181.15 204.10 105.3d 800s

43 32,632 sf
42 32,670 sf
41 1.84 Ac
40 30,726 sf
39 4.27 Ac(p)
38 28,320 sf
37 22,688 sf
36 33,075 sf
35 4.18 Ac(p)
34 19,220 sf
33 2.20 Ac
32 1.61 Ac

137.5d 412.01 137.5d 270s 145 145 90s 215d 120 82d 430d 215 130 170s 170s 170s 140.10 149.85 200.0 290.88

62 1.68 Ac
61 1.04 Ac
60 15,403 sf
63 1.13 Ac
64 1.29 Ac
65 4,268 sf
66 2.57 Ac
67 1.54 Ac
68 2,981 sf
69 1.13 Ac
70 115,25 sf
71 1.27 Ac
72 1.28 Ac
73 2.64 Ac(p)

59 13.96 Ac(p)
58 2.15 Ac
57 1.44 Ac(p)
57-1 51 Ac(p)
56 1.28 Ac(p)
55 55.04 75.73 154.44 102.01 180s

53 3.82 Ac
54 20.78 Ac(p)

150.86 178.38 154.44 102.01 180s

SEACOAST

Herald Sunday • October 29, 1995

Culvert change renews Rye marsh

By Barbara Metzler
Herald Staff

RYE — Most motorists will only notice a rough spot in the road where the pavement has been torn up, but those who love natural wetlands will see a lot more along Locke Road.

They will see the salt marsh that the road bisects returning to life — the result of a restoration project that was as simple as replacing a small culvert with a large concrete one, allowing saltwater to flood the marsh again.

"It really makes you feel good to see the flooding like this," said Jim Raynes, chairman of the Rye Conservation Commission.

On Thursday, about a dozen people toured the Locke Road project and another planned for Wallis Road to learn how the New Hampshire Coastal Program and the federal Natural Resource Conservation Service can help communities reclaim dying marshes with matching grants and expertise.

Two culverts

Rye received \$9,000 from the Coastal Program this July to replace two culverts at Locke Road — one of them across the road and another under a dirt road that cuts across the marsh to a nearby home.

A 9-by-6 concrete box culvert replaced a 36-inch culvert under

See Marsh, Page B5

Rye saves salt marsh

Marsh from Page B1

Locke Road. The 20-inch diameter pipe under the private road had rotted and was replaced with a 48-inch diameter culvert.

The total cost of the program was about \$23,000, Raynes said. The commission needed to match the state's \$9,000, and the remainder may come from the federal government, he said.

USDA help

The USDA's Natural Resource Conservation Service, formerly the Soil Conservation Service, contributed design and survey work. The concrete culvert was constructed by the town's highway crew, proving that most towns can get the work done "without putting it out to a contract and costing a whole lot of money," said Bud Moynahan, Rye's director of public works.

The USDA mapped manmade restrictions to tidal flow in a 1994 report that has been used as a Bible by communities interested in saving their marshes. Most of those restrictions are culverts that are improperly placed or are the wrong size.

"What we have is a number of salt marshes now which are degraded and can't perform their natural functions," said Stephen Wallace, principal planner with the Coastal Program, a division of the Office of State Planning.

When salt marshes are not flushed with salt water, invasive species such as phragmites, a common reed, take over.

"You have increased mosquitoes and increased odors," said Sue Hoey, district conservationist with the Conservation Service.

"I feel that doing this is more important than the mosquito spraying, because doing this will get rid of the mosquitoes," Raynes said.

“

What we have is a number of salt marshes now which are degraded and can't perform their natural functions."

— Stephen Wallace
Planner

Rye a leader

Rye has done more than any other Seacoast community to correct tidal restrictions, largely because its conservation commission has taken the initiative, Wallace said.

"You need somebody on the local level to be somewhat of a spark plug and Jim Raynes has done a good job of doing that in Rye," he said.

The Coastal Program sent out grant applications this week to every community on the Seacoast. Raynes said the application can be a daunting, but the Rye commission found that by parceling out pieces of the application to various members, the process was easier.



**OFFICE OF STATE PLANNING
STATE OF NEW HAMPSHIRE**



**WE INVITE YOU TO VISIT
A CULVERT REPLACEMENT PROJECT
IN THE TOWN OF RYE, NEW HAMPSHIRE**

In New Hampshire, salt marshes are found along the state's 18-mile coastline, the Piscataqua and Cocheco Rivers, and around the Great Bay/Little Bay. There are roughly 6,200 acres of salt marsh in New Hampshire. These marshes provide a number of benefits including: flood water storage, wildlife habitat, shoreline anchoring, and acting as natural pollution filters.

However, many salt marshes have seen their effectiveness, and their size, reduced due to man-made restrictions to tidal flow. Many salt marshes cannot be properly flushed by the tidal cycle due to improperly installed and/or undersized road culverts. There are over fifty such restrictions in the seacoast, affecting over 1,300 acres of salt marsh.

The Town of Rye is systematically attacking its tidal restriction problems through several culvert replacement projects. With engineering assistance from the USDA Natural Resources Conservation Service, Rye has begun to correct its tidal restrictions through replacing and enlarging road culverts at several spots throughout Town. These projects have been funded through town funds and a variety of grant sources, including assistance from the New Hampshire Coastal Program.

We at the New Hampshire Coastal Program invite you to come and review Rye's efforts at removing its tidal restrictions. We will be sponsoring a site visit on the afternoon of October 26, 1995. We will meet at the Rye Town Hall (see attached map) at 1:00 PM to travel to several culvert replacement sites. We will have two vans ready to transport attendees to the sites and back.

Speakers will include Jim Raynes (Rye Conservation Commission Chairman), Bud Monahan (Rye Road Agent), Sue Hoy (Rockingham County Natural Resources Conservation Service), and Stephen Wallace from the New Hampshire Coastal Program.

We invite all interested municipal officials to attend. This visit may be helpful to other communities who are thinking about how to deal with their tidal restriction problems.

There is no charge for this workshop, however, we do request that you RSVP to the Coastal Program by Monday, October 23, if you plan on attending. If you would like to attend, just fill out the sheet below, or call us at: 271-2155, or 431-9366.

NAME: _____

DAYTIME PHONE: _____

TOWN REPRESENTING OR AFFILIATION: _____

ADDRESS: _____

Return to: New Hampshire Coastal Program
c/o Office of State Planning
2 1/2 Beacon Street
Concord, NH 03301



TOWN OF RYE • OFFICE OF SELECTMEN
10 Central Road
Rye, N.H. 03870-2522
603-964-5523 • Fax 603-964-1516

January 10, 1996

NH Office of State Planning
NH Coastal Program, Matching Grants
2 1/2 Beacon Street
Concord, NH 03301

Dear Sir:


The Board of Selectmen of the Town of Rye would like to express its support of the Rye Conservation Commission's efforts in restoring the salt marshes of the Town of Rye.

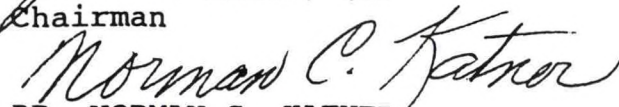
During the past year the Rye Conservation Commission has made a great deal of progress in this area including projects similar to the one they are now seeking funds to complete. Replacing the failed culvert on Route 1A, and open channel salt marsh restoration will enhance the flow of salt water into the marsh and thus improve the quality of the marsh life. The Rye Mosquito Control Commission is excited about this project, and believe it will assist in the Town's new 1996 approach to mosquito control.

It is with the support of the Board of Selectmen that the Rye Conservation Commission submits this application.

Sincerely,

BOARD OF SELECTMEN


JOSEPH G. MILLS, JR.
Chairman


DR. NORMAN C. KATNER
Vice Chairman


EDWARD H. HERLIHY

/jct

cc: Rye Conservation Commission



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
22 Bridge Street, Unit #1
Concord, New Hampshire 03301-4986

January 9, 1996

Mr. Jim Raynes, Chairman
Rye Conservation Commission
Town Hall
Rye, New Hampshire 03870

Dear Mr. Raynes:

I am pleased to write in support of the culvert replacement project under Route 1A in Rye Harbor, NH.

The U.S. Fish and Wildlife Service, through our Partners For Wildlife program, has worked with the Town of Rye, the Rockingham County Conservation District, NH Coastal Program, and the Natural Resources Conservation Service, on several saltmarsh restoration projects in Rye. The culvert replacement under Route 1A will increase tidal flushing and salinity and restore many acres of valuable saltmarsh habitat.

The Rye Conservation Commission has been a leader in habitat and wetland restoration efforts in your town, which will provide many public benefits for years to come. The Service is happy to be a part of this voluntary, cooperative effort to conserve, protect, and restore fish and wildlife habitat.

We look forward to providing continued technical support, encouragement, and financial resources for these efforts. Don't hesitate to contact me at (603) 225-1411 with any questions.

Sincerely yours,

Robert S. Scheirer
Private Lands Coordinator
New England Field Office



United States
Department of
Agriculture

Soil
Conservation
Service

Now: Natural
Resources
Conservation
Service

Federal Building
2 Madbury Road
Durham, NH 03824
(603-868-7581)

January 10, 1996

Mr. Jim Raney
Rye Conservation Commission
Town Hall 10 Central Road
Rye, New Hampshire 03870

Dear Jim,

This letter is in support of your grant application to the New Hampshire Coastal Program for correcting tidal flow restriction #36 (Route 1A culvert) as described in our publication "Evaluation of Restorable Salt Marshes in New Hampshire." Correcting this restriction, in addition to the work already done on restrictions #32, #33, and #34, will allow adequate tidal flow to approximately 38 acres of salt marsh. This will be one of the largest salt marsh restorations in New England. The cooperative effort to restore these vital ecosystems cannot proceed without the participation of local citizens. It is with great pleasure that I add the endorsement of the Natural Resources Conservation Service to your proposed project.

As with this year's project to correct the restriction at Locke Road (restriction #34), NRCS will help you in every way we can to complete this project. One important task is to complete a flood study of the area to insure that a larger culvert will not induce flooding to houses built after the present restriction was in place. We offer you our technical assistance through our district conservationist, Sue Hoey, and the Rockingham County Conservation District in completing the flood study and final culvert design.

Sincerely,

DAWN W. GENES
State Conservationist

cc:

Susan J. Hoey, District Conservationist, NRCS, Epping, NH
Gerald J. Lang, Technology Leader, NRCS, Durham, NH
Alan P. Ammann, Biologist, NRCS, Durham, NH



The Soil Conservation Service
is an agency of the
Department of Agriculture

AN EQUAL OPPORTUNITY EMPLOYER



Rockingham Planning Commission

121 Water Street, Exeter, N.H. 03833
603-778-0885 Fax 603-778-9183

January 19, 1996

Mr. David Hartman, Coastal Program Manager
NH Office of State Planning
2 ½ Beacon Street
Concord, NH 03301

RE: Letter of Support -- Town of Rye Coastal Program Application for Wetlands Restoration,
FY-97

Dear Mr. Hartman: *Dave,*

Please accept this letter as an indication of the Rockingham Planning Commission's support for the aboved referenced Coastal Program Application submitted by the Rye Conservation Commission. The proposal is to replace a failed culvert on under Route 1A at Restoration Site # 36 as identified in the NRCS report Evaluation of Restoration of Salt Marshes.

As you are aware, the the loss of salt marsh due to tidal flow restrictions is a serious and well documented problem in New Hampshire's coastal area. The RPC considers the restoration of these salt marshes to be a high priority and an excellent use of Coastal Program funds. By restoring tidal flow to the wetland, this project will protect and preserve these high priority coastal resources. We commend the Town for their initiative and financial commitment to wetlands restoration.

I would hope that you consider this application favorably in your selection of projects for the FY 97 program year.

Sincerely,

Cliff Sinnott
Executive Director

cc: David Holden, Chairman, Rockingham Planning Commission
Deborah Taylor, Rye Conservation Commission
James Raynes, Chairman, Rye Conservation Commission
Martin Quirk, Chairman, Rye Board of Selectmen

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