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NINTH ANNUAL REPORT DALHOUSIE LIBRARY GOVERNMENT DOCUMENTS

ON ACTIVITIES UNDER THE MARITIME MARSHLAND REHABILITATION ACT FOR THE FISCAL YEAR ENDED MARCH 31, 1958

MARITIME MARSHLAND REHABILITATION ADMINISTRATION CANADA DEPARTMENT OF AGRICULTURE

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# NINTH ANNUAL REPORT ON ACTIVITIES UNDER THE MARITIME MARSHLAND REHABILITATION ACT 1957 - 58

#### INTRODUCTION

The Maritime Marshland Rehabilitation Act was passed by the Parliament of Canada on June 30, 1948. The passing of this Act permitted agreements with the Provinces of Nova Scotia, New Brunswick and Prince Edward Island for the joint reclamation and development of tidal marshland. It also provided for the establishment of an organization to carry out Canada's responsibilities as defined by the Act.

The terms of the agreements define the responsibilities of Canada and the Provinces, and are briefly as follows:-

Canada provides the necessary engineering services for all works and undertakes the construction of protective works required to prevent tidal flooding (dykes, aboiteau and breakwaters). Canada also maintains the protective works until such time as this responsibility may be assumed by the Province concerned.

The Provinces organize and negotiate agreements with groups of marshland owners before work is commenced. They undertake the construction and maintenance of fresh-water drainage ditches, arrange for the necessary rights-of-way and are responsible for the development and promotion of an effective land-use program.

The marshland areas of the Maritime Provinces are, for the most part, adjacent to rivers flowing into the Bay of Fundy, or lie along the banks of the upper reaches of the Bay itself. They are estimated to comprise upwards of 100,000 acres, not all of which will be ultimately reclaimed. These particular lands or soils, high in potential fertility, have contributed greatly to the agricultural production and economy of the areas in which they are located. Some were originally claimed from the sea over 320 years ago and as development progressed they formed essential parts of many Bay of Fundy farms, supplementing adjacent upland holdings. Various factors contributed to the need for national assistance in maintaining protection for these areas. Without assistance the farms concerned could not survive as productive enterprises because the upland fields alone would be inadequate.

### ORGANIZATION OF THE MARITIME MARSHLAND REHABILITATION ADMINISTRATION

The headquarters of the Administration was established at Amherst, Nova Scotia during 1949. Work performed under the terms of the Act is directly controlled by a Director responsible to the Deputy Minister of Agriculture at Ottawa.

Organization of the Administration is as follows:

- (a) Administration and Accounting Branch
- (b) Engineering Branch -
  - (1) Surveys and design
  - (2) Construction
  - (3) Workshop and Equipment

The Engineering Branch is directed by a Chief Engineer and is primarily composed of professional and technical personnel. District Offices are maintained at Moncton, New Brunswick and Windsor, Nova Scotia. Field construction offices, and sub-district offices are established and maintained according to the requirement of the work to be undertaken. A limited amount of construction equipment is maintained and operated to supplement that which is available from construction firms.

#### ADVISORY COMMITTEE

In accordance with Section 8 of the Maritime Marshland Rehabilitation Act an Advisory Committee was established in 1949. The Act states "No work shall be undertaken in any Province-------unless (a) the work has been recommended by an Advisory Committee-----".

The Committee convened on one occasion during the past year to consider matters placed before it and to make recommendations respecting works to be undertaken to protect marsh areas, or projects, from tidal flooding. To date the Committee has recommended no protective structures be erected on portions of eighteen areas in Nova Scotia and on five areas in New Brunswick. Further it has also recommended no work be undertaken on five complete areas in Nova Scotia and on seven in New Brunswick. All projects or areas which the Provinces have requested be considered have been studied by the Committee and recommendations have been made with respect to all but one in Nova Scotia.

#### ACTIVITIES AND ACCOMPLISHMENTS TO DATE

No project or area is considered for reclamation unless it has been appropriately recommended by the Province concerned. During the past year the Province of Nova Scotia requested consideration be given to three areas comprising 440 acres and portions of two other areas involving an additional 1800 acres. No requests were received from New Brunswick or Prince Edward Island. Appendix I lists those areas, Active and Non-Active Projects, with acreages, which have been or being considered as of March 31, 1958.

#### A summary of acreages is as follows:

Nova Scotia	52,616 acres
New Brunswick	41,092 acres
Prince Edward Island	275 acres
	93,983 acres

At the present time approximately 75,540 acres, some 2,150 acres more than a year ago, are protected. The degree of protection varies from adequate on areas where structures have been completed to poor where the reconstruction of protective works has not been finished or initiated. The areas concerned form portions of approximately 3,300 farms comprising an estimated 500,000 acres.

In addition to providing protection to agricultural land the structures protect numerous sections of highways, roads, railroad grades, some urban property and a variety of utilities.

The general program of works continued during the past year. Dyke and drainage contracts were awarded for structures on six projects. The major portion of the construction activities was confined to these and thirty-seven other projects. Structures on a number of projects were brought to a degree of completion where they now require only normal maintenance. The program included the installation of twenty-five new aboiteaux and the repair or reconstruction of several others; the construction of almost ten miles of dyke and the reconstruction of another four and three-quarter miles; the installation of three and one-half miles of special dyke facing and one mile of stream bank protection; the preparation for seeding of, and the seeding a portion of, over eleven miles of dyke and dyke right-of-way.

Technical assistance was provided to the Provincial Departments of Agriculture in the planning and carrying out of drainage programs on protected areas.

Special agreements with the Province of Nova Scotia and New Brunswick were completed as follows:

(1) Nova Scotia: for the purpose of jointly undertaking the construction of a dam across the Annapolis River, Annapolis County. The structure will protect 4,300 acres of marshland, eliminating the need for the reconstruction of miles of dyke and many aboiteaux, and will provide a desirable highway crossing to replace an existing and out-of-date bridge.

The design and construction of the main portion of the structure has been undertaken by the Department and a contract for the major works was awarded late in the current year. Canada and Nova Scotia are sharing the cost in the ratio of 1.75 to 1.0.

(2) New Brunswick:- for the purpose of jointly undertaking the construction of a dam across the Tantramar River, Westmorland County. The structure will form the final link in works required to protect approximately 17,500 acres of marshland. It will also serve as a river crossing for the Trans-Canada Highway system replacing a timber bridge. The Department is responsible for the design and construction of the main structure and the cost of works, excluding highway sub-grade and surface, is to be borne by Canada and New Brunswick in the ratio of 7.75 to 2.25.

Design has progressed to the point that a contract for the main works can be awarded early in the new fiscal year.

Expenditures totalling \$1,367,831.66 were made during the current year. Details are contained in Appendix II. Some projects on which works of a major nature were carried out are as follows:

### Nova Scotia:

Advocate Marsh, Cumberland Co.

Allan River Marsh, Annapolis Co.

Avonport Marsh, Kings Co.

Annapolis River Dam Marsh, Anna. Co.

Burlington Marsh, Hants Co.

Belcher Street Marsh, Kings Co.

Chignecto Marsh, Cumberland Co.

and by raising the road grade.

-Continuation of protective dyke facing and the raising of dyke because of general shrinkage of fill.

-Construction of dyke, an aboiteau, and some protective dyke facing to complete most of major works required.

-Construction of dyke and an aboiteau as the first step in providing protective works required.

-Commencement only of major dam.

-Construction of dyke and aboiteaux required to protect areas formerly out-to-sea.

-Clean-up of works carried on during the previous year.

-Construction of dyke to complete protection required.

Fort Belcher Marsh, Colchester Co. -Stream bank protection and dyke facing. Flemming Marsh, Colchester Co. -Construction of required dyke and aboiteau to protect an area formerly out-to-sea. Fort Lawrence-Amherst Marsh, Cumb. Co. -First stage in the construction of a large aboiteau on the LaPlanche River. Glenholme Marsh, Colchester Co. -Reconstruction of all dyke and aboiteaux required to protect area approved. Greenhill Marsh, Hants Co. -Reconstruction of all dyke and aboiteaux required to protect area approved. -General clean-up of works initiated Masstown Marsh, Colchester Co. during previous years and no protective dyke facing. -Some protective dyke facing and Martock Marsh, Hants Co. major repairs to an aboiteau. Noel Shore Marsh, Hants Co. -Clean-up of works initiated during previous year and completion of aboiteau by cement grouting. Old Barns Marsh, Colchester Co. -Construction of required dyke and aboiteaux to protect an area formerly out-to-sea. Pereaux Marsh, Kings Co. -Raising and strengthening of dyke. Seaman Marsh, Cumberland Co. -Repair of an old aboiteau by grouting corregated steel pipe in the sluice and by providing a spillway and rock facing. Stewiacke Marsh, Colchester Co. -Construction of dyke and aboiteaux required to protect area approved. -Clean-up of works initiated during Starr's Point Marsh, Kings Co. previous years and so protect dyke facing. Wellington Marsh, Kings Co. -Major repairs to a large aboiteau and clean-up of works previously initiated. Wentworth Marsh, Hants Co.

#### New Brunswick:

Beaumont Marsh, Westmorland Co.

Black River Marsh, St. John Co.

- -Protective dyke facing.
- -A joint effort with the New Brunswin Dept. of Highways to replace a brid by the installation of an aboiteau and by raising the road grade.

-Construction of dyke and aboiteaux as required to protect the area.

Dorchester Marsh, Westmorland Co.

-Completion and clean-up of works previously initiated.

Dock Marsh, Westmorland Co.

-Major repairs to an aboiteau.

Gautreau Village Marsh, West. Co.

-Protective dyke facing.

New Horton Marsh, Albert Co. -Completion of works previously

initiated and repair of an aboiteau.

Pre d'en Haut Marsh, West. Co. -Protective dyke facing.

Shepody River Marsh, Albert Co. -Completion of works previously

initiated.

#### MARITIME MARSHLAND REHABILITATION PROJECTS

#### A. Active Projects - Nova Scotia

Note: Acreages are based on information available as at March 31, 1958.

In most cases the salt marsh acreage indicated lies outside existing dyke and can not be reclaimed;

- (x) indicates that a portion of the salt marsh may be reclaimed;
- (o) indicates the entire area is salt or unprotected marsh. Protected Marsh includes dyke right-of-way creeks and roads.

			Acreage	
Project No.	Name of Marsh	Location	Protected Marsh	Unprotected Marsh (Salt)
N.S. 2	Windsor Forks	Hants Co.	465	41
N.S. 3	Falmouth Great Dyke	Hants Co.	975	41
N.S. 4	Queen Anne	Anna. Co.	477	70
N.S. 5	Dugau	Anna. Co.	172	27
N.S. 6	Saulnierville	Digby Co.	73	- Holina
N.S. 8	Grand Pre (including Wickwire Marsh)	Kings Co. (x)	2534	709
N. S. 11	Truro Dykeland Park	Col. Co.	878	36
N.S.12	Victoria Diamond Jubilee	Col. Co.	527	75
N. S. 13	Dentiballis	Anna. Co.	348	62
N. S. 14	Elderkin	Hants Co.	223	53
N.S.15	Isgonish	Col. Co.	491	4
N.S.16	Castle Frederick	Hants Co.	142	22
N.S.17	Falmouth Village	Hants Co.	97	10
N.S.18	Ryerson	Anna. Co.	86	7
N.S.20	Advocate	Cumb. Co.	489	89
N.S.23	Masstown	Col. Co.	986	285
N. S. 24	Noel Shore	Hants Co.	223	396
N.S.27	Newport Town	Hants Co.	338	68
N.S. 30	Allan River	Anna. Co.	123	246
N.S.38	St. Croix	Hants Co.	248	16
N. S. 39	Round	Col. Co.	86	27
N. S. 40	Fort Belcher	Col. Co.	181	38

			Acreage		
Project No.	Name of Marsh	Location	Protected Marsh	Unprotected Marsh (Salt)	
N.S. 41	Habitant	Kings Co.	677	10. 2.0	
N.S. 42	Amherst Point	Cumb. Co.	2 249	302	
N.S.44	Converse	Cumb. Co.	811	26	
N. S. 45	Barronsfield	Cumb. Co.	234	26	
N.S.46	River Hebert	Cumb. Co.	1050	166	
N.S.47	Selmah	Hants Co.	171	12	
N. S. 48	Centre Burlington	Hants Co.	143	80	
N.S.49	Scotch Village	Hants Co.	87	3	
N.S. 50	Herbert River	Hants Co.	74	5	
N.S. 53	John Lusby	Cumb. Co.	818	1205	
N. S. 54	Minudie	Cumb. Co.	2528	452	
N. S. 55	Seaman (o)	Cumb. Co.	425	20	
N.S. 56	Wellington	Kings Co.	3105	23	
N.S.57	New Minas	Kings Co.	304	51	
N.S. 61	Kennetcook	Hants Co.	1 70	22	
N.S. 63	Maccan	Cumb. Co.	193	36	
N. S. 64	Glenholme	Col. Co.	290	109	
N.S. 65	Bishop Beckwith	Kings Co.	604	99	
N.S. 66	Flemming	Col. Co.	277	27	
N.S. 67	Onslow North River	Col. Co.	496	58	
N.S. 68	Tregothic	Hants Co.	576	20	
N.S. 69	Martock	Hants Co.	1478	42	
N.S. 70	Chegoggin	Yar. Co.	425	-	
N.S. 71	Goose Bay	Yar. Co.	230	5	
N.S. 72	Horton	Kings Co. (x)	237	229	
N.S. 75	Armstrong	Hants Co.	53	3	
N.S. 76	Farnham Dyke	Kings Co.	192	26	
N.S. 77	Princeport	Col. Co.	43	9	
N. S. 78	Athol	Cumb. Co.	99	49	
N.S. 79	Chambers	Hants Co.	61	1	

N.S. 80 Starr's Point

Kings Co. 303 281

			Acre	eage
Project No.	Name of Marsh	Location	Protected Marsh	Unprotect Marsh (Sa
N.S. 81	Lower Truro	Col. Co.	399	25
N.S. 82	Kentville	Kings Co.	71	7
N.S. 85	Mantua Poplar Grove	Hants Co.	361	51
N.S. 86	Central Onslow	Col. Co.	291	14
N.S. 87	Chignecto	Cumb. Co.	512	8
N.S. 88	Burlington	Hants Co.	106	34
N.S. 90	Old Barns	Col. Co.	160	18
N.S. 91	Belcher Street	Kings Co.	346	75
N.S. 92	Avonport	Kings Co. (x)	221	51
N.S. 93	Greenhill	Hants Co.	53	36
N.S. 95	Fort Lawrence - Amherst	Cumb. Co.	3,400	MERN
N.S. 97	Highland Village	Col. Co. (o)		246
N.S. 98	Stewiacke	Col. Co.	134	44
N.S. 100	Wentworth	Hants Co.	144	13
N.S. 101	Pereaux	Kings Co.	109	32
N.S.102	C hebogue River	Yar. Co. (o)		1600
N.S. 103	Annapolis River Dam	Anna. Co.	2583	1717
N.S.104	Sunny Slope	Hants Co.	10	8
N.S.105	Belmont	Hants Co. (o)		147
N.S.106	Fort Ellis	Col. Co.	62	158
N.S.108	Argyle	Yar. Co. (o)		47
N.S.109	Nappan River Dam	Cumb. Co. (x)	996	130
N. S. 111	Burntcoat	Hants Co. (x)		37
N. S. 112	Rhynds Creek	Hants Co. (o)		256
N. S. 113	Southside	Col. Co. (o)		148
		Total 39	9,504	10,777

#### MARITIME MARSHLAND REHABILITATION PROJECTS

#### B. Non-Active Projects - Nova Scotia

Note: These projects are those which:

- (a) have been incorporated into larger projects.
  - (b) were established for purposes of investigation.
  - (c) were established for purposes of investigation at the request of the Provinces.
  - (d) were incorporated by the Provinces who have since requested they be dropped.
- (e) the Advisory Committee have recommended be dropped.

Acreages are indicated only for those projects included in (c) or (d) or (e) above.

Project No.	Name of Marsh	Location	-played	Acreage
N.S. 1	Comeau	Anna. Co.	(a)	19.34
N.S. 7	Annapolis River Survey	Anna. Co.	(b)	
N.S. 9	Woodworth	Anna. Co.	(a)	
N.S.10	Upper Belleisle	Anna. Co.	(a)	
N.S.19	Bridgetown	Anna. Co.	(d) & (a)	
N.S.21	Upper Nappan	Cumb. Co.	(a)	
N.S.22	Gaspereau River Survey	Kings Co.	(b)	
N.S. 25	Maitland	Hants Co.	(d)	34
N.S.26	Stirling Brook	Hants Co.	(e)	99
N.S.28	Scott's Bay	Kings Co.	(e)	71
N.S.29	Pre Rond	Anna. Co.	(a)	
N.S. 31	Fox Bow	Anna, Co.	(a)	
N.S. 32	Mount Anne	Anna. Co.	(a)	
N.S. 33	Windermere	Anna. Co.	(a)	
N.S. 34	Moschelle	Anna. Co.	(a)	
N.S. 35	Ricketson	Anna. Co.	(a)	
N.S.36	Rossette	Anna. Co.	(a)	
N.S. 37	Walker	Anna. Co.	(a)	
N.S. 43	Annapolis Royal Town	Anna. Co.	(a)	
N.S. 51	Morse	Anna. Co.	(a)	

Project No.	Name of Marsh	Location		Acreage
N.S. 52	Rossway	Digby Co.	(c)	718
N.S. 58	Granville Centre	Anna. Co.	(a)	
N.S. 59	Brown Salt Pond	Yar. Co.	(d)	277
N.S. 60	Morse Bishop	Anna. Co.	(a)	
N.S. 62	M cKay	Cumb. Co.	(a)	
N.S. 73	Mill	Anna. Co.	(a)	
N.S. 74	Tupperville	Anna. Co.	(a)	
N.S. 83	Messenger	Anna. Co.	(a)	
N.S. 84	Bartlett's Beach	Digby Co.	(d)	284
N.S. 89	Cogmagun	Hants Co.	(e)	637
N.S. 94	Mosherville	Hants Co.	(d)	102
N.S. 96	Shipley	Cumb. Co.	(a)	
N.S. 99	Upper Burlington	Hants Co.	(e)	66
N.S.107	Hicks	Cumb. Co.	(e)	47
N.S.110	Ripley	Cumb. Co.	(a)	
			Total	2,335

#### APPENDIX I

#### MARITIME MARSHLAND REHABILITATION PROJECTS

#### A. Active Projects - New Brunswick

Note: Acreages are based on information available as at March 31, 1958.

In most cases the salt marsh acreage indicated lies outside existing dyke and can not be reclaimed;

- (x) indicates a portion of which may be reclaimed;
- (o) indicates the entire area is salt or unprotected Marsh. Protected Marsh includes dyke right-of-way creeks and roads.

		Acreage	
Name of Marsh	Location	Protected Marsh	Unprotected Marsh (Salt)
Allison	West Co.	197	15
Westcock	West Co.	800	225
Taylor Village	West Co.	444	105
Coyle Landry	West Co.	305	37
Belliveau Village	West Co.	185	15
Pre d'en Haut	West Co.	113	28
Dorchester	West Co.	1716	61
Lower Coverdale -	Albert Co.	149	15
Middle Coverdale	Albert Co.	31	21
Dixon Island	West Co.	330	70
New Horton	Albert Co.	789	107
Fox Creek	West Co.	96	13
Beaumont	West Co.	207	33
Gautreau Village	West Co.	209	21
Memramcook West	West Co.	1019	95
Aulac	West Co.	1957	534
Dock	West Co.	52	4
Dover	West Co.	43	9
College Bridge	West Co.	931	142
Upper Coverdale	Albert Co.	45	6
Calkins	Albert Co.	227	23
West Coverdale	Albert Co.	260	42
Boundary Creek	West Co.	51	1
	Allison Westcock Taylor Village Coyle Landry Belliveau Village Pre d'en Haut Dorchester Lower Coverdale Middle Coverdale Dixon Island New Horton Fox Creek Beaumont Gautreau Village Memramcook West Aulac Dock Dover College Bridge Upper Coverdale Calkins West Coverdale	Allison West Co. Westcock West Co. Taylor Village West Co. Coyle Landry West Co. Belliveau Village West Co. Pre d'en Haut West Co. Dorchester West Co. Lower Coverdale Albert Co. Middle Coverdale Albert Co. Dixon Island West Co. New Horton Albert Co. Fox Creek West Co. Beaumont West Co. Gautreau Village West Co. Memramcook West West Co. Dock West Co. Dover West Co. College Bridge West Co. Upper Coverdale Albert Co. West Co. Calkins Albert Co. West Co.	Allison West Co. 197 Westcock West Co. 800 Taylor Village West Co. 444 Coyle Landry West Co. 305 Belliveau Village West Co. 185 Pre d'en Haut West Co. 1716 Lower Coverdale Albert Co. 31 Dixon Island West Co. 330 New Horton Albert Co. 96 Beaumont West Co. 207 Gautreau Village West Co. 1957 Dock West Co. 1957 Dock West Co. 1957 College Bridge West Co. 45 Calkins Albert Co. 227 West Co. 260 Boundary Creek West Co. 51

			Acrea	ge
Project No.	Name of Marsh	Location	Protected Marsh	Unprotected Marsh (Salt
N. B. 37	Sackville	West Co.	473	590
N.B.40	Woodpoint	West Co.	43	194
N. B. 41	Turtle Creek	Albert Co.	103	
N. B. 43	Creek's	Albert Co.	99	-
N. B. 45	Chartersville	West Co.	349	31
N. B. 46	Wilson	West Co.	157	23
N. B. 47	Hillsboro	Albert Co.	955	82
N.B.50	Black River	St. John Co.	41	F #0.01
N.B. 51	Shepody River Dam	Albert Co.	5552	323
N. B. 54	Jones Creek	West Co.	45	21
N.B. 55	Missaguash	West Co.	231	1.77.38
N. B. 56	Tantramar River Dam	West Co. (x)	17,557 <sup>x</sup>	443
		^i	includes	stallar.
			197 of Class & Peat	11,10
		Total	35,761	3,444

#### B. Non-Active Projects - New Brunswick

Note: These projects are those which:

- (a) have been incorporated into larger projects.
- (b) were established for purposes of investigations.
- (c) were established for purposes of investigation at the request of the Provinces.
- (d) were incorporated by the Provinces who have since requested they be dropped.
- (e) the Advisory Committee have recommended be dropped.

Acreages are indicated only for those projects included in (c) or (d) or (e) above.

Project No.	Name of Marsh	Location	Fall gallos	Acreage
N.B.1	Upper Dyke	Albert Co.	(a)	
N.B.2	Germantown	Albert Co.	(a)	
N.B.3	Tantramar West	West Co.	(a)	
N.B.7	Hopewell Hill	Albert Co.	(a)	

Project No.	Name of Marsh	Location		Acreage
N.B. 9	Harvey	Albert Co.	(a)	
N. B. 10	Shepody River Survey	Albert Co.	(b)	
N.B.22	Tantramar River Survey	West Co.	(b)	
N. B. 23	Memramcook River Survey	West Co.	(b)	
N. B. 29	Log Lake	West Co.	(a)	
N. B. 31	Baie Verte	West Co.	(e)	488
N. B. 32	Salem	Albert Co.	(d)	65
N. B. 34	Coverdale	Albert Co.	(e)	59
N. B. 35	Waterside	Albert Co.	(e)	684
N. B. 38	Rockland	West Co.	(e)	234
N. B. 39	Chance Harbour	St. John Co.	(c)	25
N. B. 42	Jones	West Co.	(d)	135
N. B. 44	Coles Island	West Co.	(a)	
N. B. 48	McAlmon	Albert Co.	(e)	67
N. B. 49	La Coupe	West Co.	(a)	
N. B. 52	Little River	St. John Co.	\ /	130
N.B.53	Great Marsh	West Co.	(a)	
			Total	
A. Active	Projects - Prince Edward Isl	and	Protected M	arsh
P. E. I. 1	Johnston's River	Queen's Co.	275	

#### TOTALS BY PROVINCES

Active Pr	ojects	Non-Active	Projects
Protected	Unprotected		Total
N.S. 39,504 N.B. 35,761 P.E.I. 275	10,777 3,444	2,335 1,887	52,616 41,092 275
75,540	14,221	4,222	93,983

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## APPENDIX II. EXPENDITURES UNDER THE MARITIME MARSHLAND REHABILITATION ACT

		1949-1957	1957-1958
Administration	o mena	362,316.77	39, 784. 80
Surveys and Engineering		1,289,821.30	129,489.34
Workshop and Construction Super	vision	1,865,761.04	346, 964. 99
workshop and Construction Super	VISION	1,005,701.04	340, /04. //
Construction and Maintenance of	Projects, ar	nd	
	special Surv		
	1333		
Advocate Marsh	Nova Scotia	115,758.70	8,438.46
Allan River Marsh	11 11	12,412.85	37, 279. 48
Amherst Point Marsh		138,110.44	3,338.52
Annapolis Royal Town Marsh	11 11	27,497.06	market and an in-
Annapolis River Survey	11 11	27,049.60	- , ,
Annapolis River Dam	11 11	CALL MARKET	22,282.40 <sup>(1)</sup>
Armstrong Marsh	11 11	13,659.62	112.20
Argyle Marsh	11 11	The state of	1000 - 24/0/2
Athol Marsh	11 - 11	17,213.64	1,186.32
Avonport Marsh	11 11	5,680.70	28,150.54
Barronsfield Marsh	11 11	69,443.48	2,561.02
Bartlett's Beach Marsh	11 11	2,644.17	mento branch
Belmont Marsh		-	
Belcher Street Marsh	11 11	103,350.15	6, 355. 82
Bishop Beckwith Marsh	11 11	161,491.46	4,937.94
Burlington Marsh	11 11	341.65	39,586.65
Burntcoat Marsh	11 11	-	
Castle Frederick Marsh	11 11	44,541.39	1,063.93
Central Onslow Marsh	11 11	36,348.27	3,123.05
Centre Burlington Marsh	11 11	32,085.20	455.41
Chambers Marsh	11 11	15,208.43	64.82
Chegoggin Marsh	11 11	30,626.03	40.50
Chignecto Marsh	11 11	37,275.35	6,665.13
Comeau Marsh	11 11	37,965.40	50.62
Converse Marsh	11 11	126,915.22	4,780.40
Dentiballis Marsh	11 11	92,100.79	6,074.82
Dugau Marsh	11 11	24,368.47	280.45
Elderkin Marsh	11 11	59,453.21	5, 795. 63
Falmouth Great Dyke Marsh	11 11	111,569.30	4,640.25
Falmouth Village Marsh	11 11	32,739.32	5,919.86
Farnham Dyke Marsh	11 11	32,678.04	98.95
Flemming Marsh	11 11	Training Street, or other	35, 757. 43
Fort Belcher Marsh	11 11	40,793.17	11,479.13
Fort Ellis Marsh	11 11	-	
Fox Bow Marsh	11 11	16,829.08	2,593.41
Fort Lawrence-Amherst Marsh	11 11	735.55	60,360.05
Glenholme Marsh	11 11	2,430.72	50,641.49
Grand Pre Marsh	11 11	163,241.79	10,430.23
Goose Bay Marsh	11 11	27,985.33	83.67
Granville Centre Marsh		24,524.50	926.42
Greenhill Marsh	11 11	911.91	23,594.88
Habitant Marsh	11 11	12,855.17	4,044.93
Herbert River Marsh	11 11	22,087.08	1,454.71
Horton Marsh	11 11	2,370.68	4,941.54

<sup>(1)</sup> Total expenditures were \$35,013.20. In accordance with the agreement with the Province of Nova Scotia the Nova Scotia Department of Highways refunded \$12,730.80.

Construction and Maintenance of Projects, and Special Surveys: (Cont'd).

		0.00			1000 days mill and the second
				1949-1957	1957-1958
Hicks Marsh		Nova	Scoti	a _	
Isgonish Marsh		11	11	171,667.52	2640.41
John Lusby Marsh		11	11	- 112,527.60	4052.52
Kennetcook Marsh		11	11	45,683.31	830.85
Kentville Marsh		11	11	14,232.69	1078. 92
Lower Truro Marsh		11	11	49,815.99	3054. 50
Maccan Marsh		11	11	30.016.18	7588. 38
Mantua Poplar Grove M	arsh	11	11	71,627.62	1836.03
Martock Marsh	ar sir	11	11	133,633.32	19,844.97
McKay Marsh		11	11	17,003.62	159.28
Masstown Marsh		11	11	147,564.86	21,922.97
Messenger Marsh		11	11	2,236.11	434.00
Mill Marsh		11	11	5,997.15	200.00
Minudie Marsh		11	11	124,776.69	3,372.36
Morse Marsh		11	11	2,623.67	460.80
Morse Bishop Marsh		11	11	1,129.09	174.34
Moschelle Marsh		11	11	28,643.68	76.00
Mount Anne Marsh		11	11		70.00
		11	11	58,255.05	
Nappan River Marsh		11	11	01 075 53	772 52
New Minas Marsh		11	11	91,975.53	772. 52
Newport Town Marsh		11	11	54,547.66	7, 553. 98
Noel Shore Marsh		"	19:33	108,271.50	13,311.98
Old Barns Marsh		11	11	(H) 19	29,762.29
Onslow North River Ma	rsh	11		59.643. !!	1,790.21
Pre Rond Marsh		11	11	7,409.36	41 9. 90
Princeport Marsh			11	9,924.03	
Pereaux Marsh		11	11	2,450.25	13, 985. 62
Queen Anne Marsh		11	11	1.62,774.94	3,341.66
Ripley Marsh		11	11	3,000	TREW HISCH - ILL HIS
Ricketson Marsh		11	11	1,026.70	154.10
River Hebert Marsh		11	11	224,061.91	5,801.96
Rosette Marsh			11	1,638.75	28.04
Round Marsh		11	11	31,948.48	2,617.59
Ryerson Marsh		11	11	36,618.65	8,939.10
Rhynds Creek Marsh		11	11	-	
Saulnierville Marsh		11	11	6,917.39	194.59
Scotch Village Marsh		11	11	13,554.86	3,263.99
Seaman Marsh		11	11	25, 797. 13	17,152.37
Selmah Marsh		11	11	25, 766. 44	21.25
Shipley Marsh		11	11	1,280.30	315.30
Southside Marsh		11	11		M. Sell Deliver Town V.
St. Croix Marsh		11	11	78,533.85	7,382.56
Starr's Point Marsh		11	11	88,414.92	11,986.25
Stewiacke Marsh		11	11	100	25,065.88
Sunny Slope Marsh		11	11		1,276.09
Tregothic Marsh		11	11	46,366.02	496.84
Truro Dykeland Park M	arsh	11	11	100,741.67	5,457.09
Tupperville Marsh		11	11	12,965.60	3,645.25
Upper Belleisle Marsh		11	11	31,519.83	50.00
Upper Nappan Marsh		11	11	52,422.48	812.45
Victoria Diamond Jubile	ee Marsh	11	11	77,886.79	1,641.11
Walker Marsh		11	11	2,952.11	687. 20
Wellington Marsh		11	11	52,453.35	37,808.86
Windermere Marsh		11	11	48,604.50	236. 98
Windsor Forks Marsh		11	11	61,819.78	3,146.20
Woodworth Marsh	Prince per	11	11 8	21,473.09	514.35
Wentworth Marsh		.11	11.	508.75	16,390.57
Sub-Total for No	va Scotia F	Projec	ts	4,283,002.80	693,341.52
(2) This was a joint pro		-			Of the above amoun

(2) This was a joint project with the Province of Nova Scotia. Of the above amount \$56,821.10 was refunded by the Province and in addition to it expenditures of \$46,745.42 were made, which amount was also refunded. Total Provincial

Construction and Maintenance of Projects, and Special Surveys: (Cont'd).

					1949-1957	1957-1958
Allison Marsh (S)	New		unswi		18,759.24	4,998.3
Aulac Marsh	tt .	11			240,805.23	981.24
Baie Verte Marsh	n'	11			923.03	h Lusby Marsh
Beaumont Marsh	II.	11			50,309.54	13,108.0
Belliveau Marsh	H	-11			21, 756. 25	128.10
Black River Marsh	Harris	11			21, 130.23	7,481.6
Boundary Creek Marsh	U.	11			4,268.10	datsh Marsh
THE RESERVE TO SERVE THE PROPERTY OF THE PROPE	H	11			98,821.18	4,323.42
	133,	-11				704. 80
1000	11.	11			49,096.25	104.00
110 - D-11	147,	11			46,142.68	detal 2 024 E
College Bridge Coverdale Marsh	2.	11			10 21	2,026.5
10 20010 100	. C	11			43 055 55	/ 011 /
Coyle Landry Marsh	124,					6,011.6
Creeks Marsh	. 2 .	11				105.18
Dixon Island Marsh 00.081		11				3,512.42
Oock Marsh	28,	11				6,663.6
Oorchester Marsh 20.88	58,	11				21,484.14
Oover Marsh	11	11 11				113.3
Fox Creek Marsh	91.	11.				1,315.4
reat Marsh	54.	11			5,571.34	190.0
Gautreau Village Marsh	108,	11			71,134.79	4,014.79
ermantown Marsh	1.1	11		2.1	11,909.61	danal 3155 84
Hillsboro Marsh	11	11()			134,182.08	1,972.5
Hopewell Hill Marsh	THE	11			72,406.13	VIN AFTON WOLE
ones Marsh	pH	11			11,619.66	719.50
Log Lake Marsh	.11	11,5			41,078.49	3,324.9
ower Coverdale Marsh	SH	$H_{(j)}$			32,127.99	6,939.71
Memramcook West Marsh	11	H			167,799.16	6,086.5
Middle Coverdale Marsh	-11	11,0			14,713.24	147.20
Missaguash Marsh	, u.	11			10,821.00	692.5
New Horton Marsh	, II	11			80,587.44	11,390.19
Pre d'en Haut Marsh	î u		Hall	- 11	31,099.05	6,954.32
ackville Marsh	M			115	56,594.93	258.5
hepody River Dam	11				1,510,396.38	21,495.5
hepody River Survey	. 11				26,334.47	hynds Creek M
Cantramar River Survey	0 11		and the		23,201.48	470.13
The second secon	13				30,150.68	2,651.61
Cantramar West Marsh	25		11 17			
Caylor Village Marsh	25				79,548.99	2,364.19
Curtle Creek Marsh 08 08 5	T.				22,650.78	1,755.74
Jpper Coverdale Marsh	11				16,809.82	64.80
Jpper Dyke Marsh	87				11,149.33	danal 47943
Vestcock Marsh	8.8"	11			144,512.41	6,216.7.
Vest Coverdale Marsh	11	11	H 11		53,692.34	6,997.48
Vilson Marsh	e 111	11			27,720.71	399. 80
Woodpoint Marsh	46	11			676.01	135.8
Sub-Total for New Br	unsw	ick	Proje	ects		handla 430 23
					\$3,715,345.14	\$158,200.9
,519.83 aM with D .50.00	3.1		19 - 17,	31		
Johnson River Marsh					19,712.52	pper Belleisle pper Nappan M
Cotal expenditure for Project				11	d Jubilee Marsh	
Administration, engineeri						valker Marsh
			10.7		8,018,060.46	851,542.43
supervision 08,100,8					IST.	sM STamashm
Total Expe					\$11,535,960.57	1,367,831.6
1 Otal Expe	nartu	16			Ψ11, 333, 700. 31	1,501,651.0

\$56,821.10 was refunded by the Province and in addition to it expenditures of \$46,745.42 were made, which amount was also refunded. Total Provincial

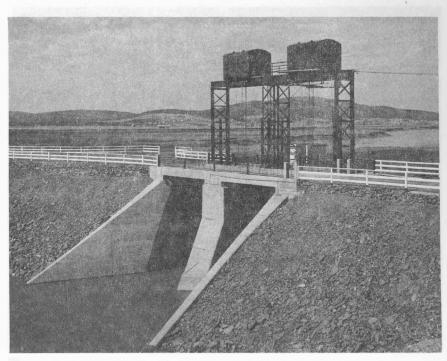
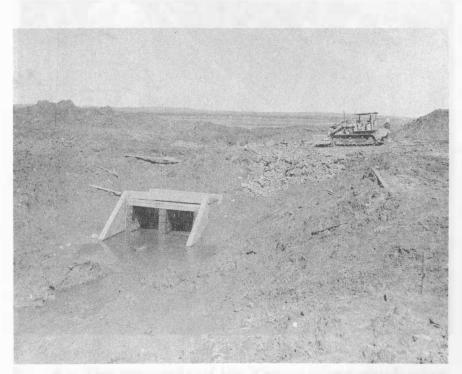


Fig. 1 - Shepody River Dam Project, Albert Co., N.B.-Looking from the south bank of the excavated channel at the upstream side of the completed sluice structure. The main dam extends to the left of the photo. The old river channel can be seen in back of the gate hoist towers. (Photo N.B. 51//572)



<u>Fig. 2</u> - The inlet end of an aboiteau under construction on Old Barns Marsh, Col. Co., N.S. The sluice is a two barrel 4' x 4' with steel, cable hung gates. The machine is spreading fill on the aboiteau. (Photo N.S. 90//2)

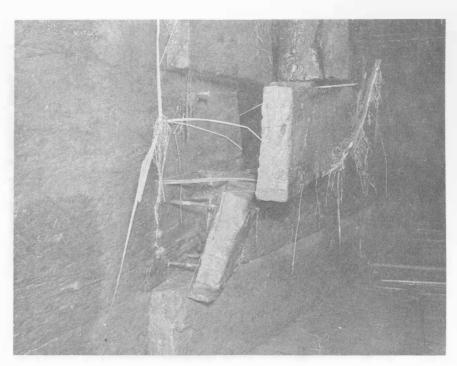


Fig. 3 - Inside the barrel of Abt. # 1, Wellington Marsh, Kings Co., N.S., showing the division wall timbers badly broken up. This old sluice had previously been temporarily repaired by the M. M. R. A. until such time as permanent repairs could be undertaken. (Photo 56-017)

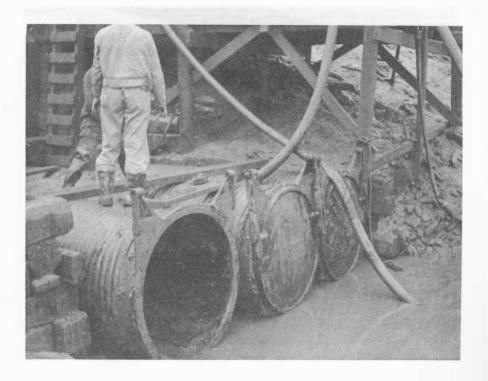


Fig. 4 - The gate ends of the Armco pipes which were threaded through the barrels of the Wellington sluice shown in the above photo. The pipes extend 36 ft. beyond the old end of the sluice to allow for a stable slope on the rock with which the aboiteau is to be faced. (Photo N.S. 56//55)

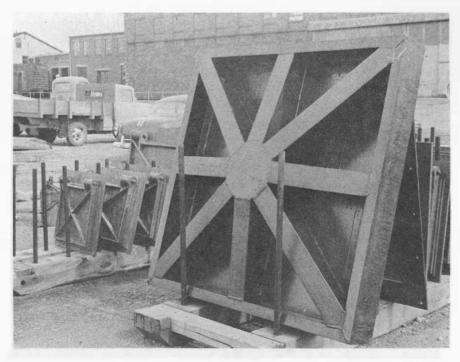


Fig. 5 - A few of the various sizes of gates which are used on sluices. The large gate is a steel 5'  $\times$  5', the smallest on the next rack is a bronze 1-1/2'  $\times$  1-1/2'. (Photo 95-003)

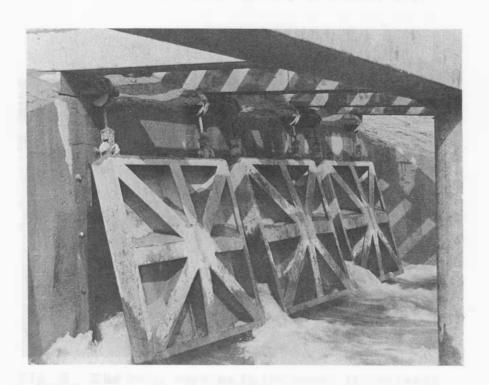


Fig. 6 - The first cable hung, steel gates to be used.

They are installed on Palmers' Creek Sluice, Dorchester
N.B., and measure 4' x 5' each. (Photo 13-032)



Fig. 7 - Bank erosion on Memramcook West Marsh, West. Co., N.B. The Memramcook River has worn away the outside berm, until only 15 ft. remains between the bank and the toe of the dyke, which is in danger of undercutting. The pile of rock indicates that protective works are in progress. (Photo 21-037)



Fig. 8 - The same view as in the above photograph; after heavy rock has been placed over the bank in a series of piers. This method proved to be the most permanent protection against undercutting. (Photo 21-054).

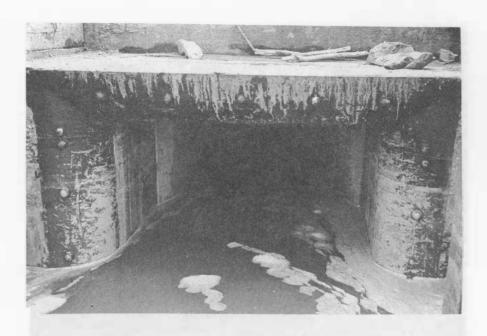


Fig. 9 - A rounded inlet to the sluice through Abt. #5, Glenholme Marsh, Gol. Co., N.S. The quarter-round steel section is lag screwed to the ends of the timbers, and filled with concrete. There is a noticeable improvement in flow through the sluice as a result. (Photo 64-023).



Fig. 10 - Abt. #1 on Allan River Marsh, Anna. Co.,  $\overline{\text{N.S.}}$ , under construction. The sluice has been set on its bed, and brushing of the aboiteau fill is in progress. Brushing, as shown here, is done between every 2 ft. layer of fill. (Photo N.S. 30//10)

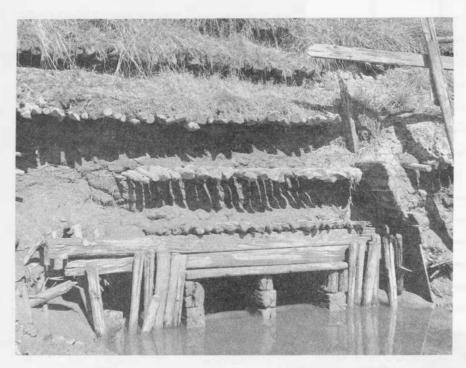


Fig. 13 - The inlet end of Abt. #3, Seaman Marsh, Cumb. Co., N.S. The condition of this aboiteau is typical of many old aboiteaux which have fallen into a state of disrepair through lack of maintainance. Note the fill washed out from between the layers of brush. (Photo N.S. 55//3)



Fig. 14 - A general view of the completed works on the Isgonish River, Col. Co., N.S. This large sluice of reinforced concrete, is under the new Trans-Canada Highwa and replaces a single-lane bridge which was located off the right of the photo. (Photo 15-025)