

The Commonwealth of Massachusetts

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REPORT

OF THE

STATE RECLAMATION BOARD

RELATIVE TO

PROVIDING FOR EXEMPTION OF CERTAIN CITIES AND TOWNS  
FROM THE OPERATION OF MOSQUITO CONTROL PROJECTS.

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CHAPTER 105 OF THE RESOLVES OF 1962.

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FEBRUARY, 1963

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COMMISSIONERS OF THE REGISTRY

REPORT

STATE REGISTRATION BOARD

REPORT OF THE BOARD OF REGISTRATION OF PROFESSIONAL ENGINEERS AND ARCHITECTS

January, 1907

## The Commonwealth of Massachusetts

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41 TREMONT STREET,  
BOSTON, MASSACHUSETTS.  
December 21, 1962.

*To the Honorable Senate and House of Representatives, State House, Boston.*

Chapter 105 of the Resolves of 1962 reads as follows:—

*Resolved*, That the state reclamation board is hereby authorized and directed to make an investigation and study of the subject matter of current house document numbered 2566, relative to providing for exemption of certain cities and towns from the operation of mosquito control projects. Said board, in the course of its investigation and study, also shall consider the mosquito control projects as established by chapter one hundred and twelve of the acts of nineteen hundred and thirty-one with particular reference to the effectiveness of said projects. The said board shall report to the general court the results of their investigation and study, and recommendations, if any, together with drafts of legislation necessary to carry such recommendations into effect, by filing the same with the clerk of the house of representatives on or before the fourth Wednesday of December in the current year.

*Adopted May 25, 1962.*

House document No. 2566 referred to in the above resolve reads as follows:

From and after January first, nineteen hundred and sixty-two, chapter one hundred and twelve of the acts of nineteen hundred and thirty-one, shall not be applicable to any city or town in any year in which said city or town certifies to the state reclamation board, on or before April first of that year, that it has, in a town by a majority vote of the voters in town meeting and in a city by a majority vote of the city council or other governing body, appropriated an amount to be spent within the borders of said city or town upon a local mosquito control project, such amount to be a sum which is equal to the average amount contributed by said city or town for the last five years during which said city or town made contributions to the state control project provided for in said chapter.

Chapter 112, Acts of 1931, is an act to provide a measure of relief in the then unemployment emergency by putting men to work in abating mosquito nuisances. In 1930 this board had organized the Cape Cod Mosquito Control Project and many miles of ditching had been carried out by hand labor, compensation for which amounted to over 91 per cent of the entire cost. This use of labor came to the attention of the then Governor, and the Legislature, with the result that legislation appropriating \$270,000 for this work under

the direction of this board was drafted. This board insisted that mosquito control ditching could be effective only if provision was made for the continued maintenance of the ditches and the Legislature adopted the proposed act with a maintenance clause, section 4, which reads as follows:

SECTION 4. On or before December fifteenth of each year, the sums of money necessary to properly maintain during the ensuing year the mosquito control works originally constructed in any city or town hereunder shall be estimated by said board and certified by it to such city or town. The amounts so certified shall be raised and appropriated by such city or town during said ensuing year and shall be paid into the state treasury and disbursed therefrom on warrants drawn by said board.

Under the said section 4 the State Reclamation Board has annually made the required estimates and has certified the same to the cities and towns involved. A summary of the estimates for the calendar year 1962 by groups is shown in the following table.

NORTH SHORE.	
11 cities and towns . . . . .	Total — \$7,150
SOUTH SHORE.	
13 cities and towns . . . . .	Total — 18,100
BRISTOL — SOUTH PLYMOUTH.	
12 cities and towns . . . . .	Total — 15,050
MARTHA'S VINEYARD.	
5 towns . . . . .	Total — 2,775
NANTUCKET.	
1 town . . . . .	Total — 1,000
	Grand Total \$44,075

It will be noted that practically all of the original work was done along our coastline particularly because of the greater flight range of salt marsh mosquitoes than that of the fresh water variety. The purpose of the hand ditching was to relieve standing water and to permit minnows and other small fish, enemies of mosquito larvae, to enter any breeding areas that could not be drained. Upwards of 6,000 men were employed in the work and some 3,000 miles of ditching were dug by hand labor. Some of the work under

Federal funds was done in winter weather since the salt marshes were rarely frozen.

In addition to the municipalities covered on the above table a limited amount of work was done under the original act in a fresh water drainage ditch in the town of Wenham but recently changed conditions make further maintenance there unnecessary. Likewise limited work was done under chapter 112 in Chelsea, Danvers, Everett, Lynn, Malden, Medford, Peabody, Rockport and Winthrop, but various developments and other changed conditions have made further maintenance unnecessary in these municipalities.

The municipalities in the groups of the above table, with limited exceptions have promptly forwarded the funds to the State. On rare occasions certain towns have delayed in remitting the required funds with the result that upon our request to the State Treasurer the amounts were deducted from the income tax distributions.

In addition to the original appropriation of \$270,000 further appropriations were made by the State to an aggregate of \$600,000. State appropriations were discontinued when the P. W. A. & W. P. A. came into being but considerable mosquito ditching work was done by this board under these Federal funds particularly in approving proposed projects for the W. P. A. & P. W. A. authorities and in supervising the work.

The assessments in recent years are greater than in the earlier years in that the hourly labor rate of pay has increased markedly since the earlier years. It is pointed out that all of the labor used in the mosquito ditch maintenance is local labor selected by the local municipal authorities or by the county projects.

Since the adoption of the Plymouth County and the Bristol County Mosquito Control Projects, chapter 514 of 1957 and chapter 432 of 1958, respectively, the maintenance of the ditching under chapter 112 of 1931 has been supervised by the superintendents of these projects and the superintendent of our South Shore project has supervised the maintenance work in the city and towns in his project. Unfortunately, there is no organized Mosquito Control Project in Essex County and the maintenance work along the North Shore has of necessity been supervised so far as practicable by agents of this board.

In this connection, attention is called to chapter 516 of 1958 organizing the Essex County Mosquito Control Project. Un-

fortunately, no initial appropriation has been made by the Legislature to start this project but it is assumed that any member of the Legislature from Essex County can activate this project by urging the Budget Commissioner to insert an item in the annual budget. Much of the maintenance work in the municipalities in our organized county projects is done by the ditching machinery available in the county projects and this would be the case when, and if, a project is started along the North Shore in Essex County.

While in the earliest Barnstable and Berkshire County mosquito control acts no provision for a municipality to withdraw is written into the law, the other county acts, viz., Norfolk, Plymouth, Dukes and Bristol carry a provision for withdrawal from the project upon suitable vote of the municipality. Thus far, only the towns of Dartmouth, Norfolk and Halifax have withdrawn from our county projects. Subsequently, the town of Norfolk re-entered the Norfolk County project. In Dukes County the work was not wholly organized in 1957, the year the special act was passed, and subsequently, all the towns withdrew. The maintenance work since then has been carried on by local appropriations. A withdrawal provision is made in chapter 516 of 1958, organizing the Essex County Project.

This board has conferred with the superintendents of our projects who are responsible for maintenance under chapter 112 of 1931, viz., Plymouth and Bristol counties and our South Shore Project. Mr. Warren G. Harding, Superintendent of our Plymouth County Project, refers to recutting some of the ditches with his backhoe unit and states that after this work the ditches again became more effective permitting a positive reduction in spraying. He, also, points out that with increasing concern in the use of pesticides, the maintenance of the original salt marsh ditches should not be neglected. He states that "I would be very hesitant to reduce the maintenance effort as we only have to look to similar programs in New Jersey and Long Island where their larger budgets permit very effective control by salt marsh drainage."

Mr. Robert W. Spencer, superintendent of our Bristol County Project states that the original ditches are in operation in most areas in his project but he feels that larger funds should be made available because of the increase in hourly pay rates. He recommends that the salt marsh maintenance work be continued indefinitely.

Mr. Simon J. Veneau, superintendent of our South Shore Project,

including Quincy and the towns south to and including Marshfield, states: "As this ditching work has progressed over the years the population of mosquitoes breeding on the salt marshes has been reduced greatly. It would be almost impossible to get control of these salt marsh mosquitoes without the continued ditch maintenance. The importance of continuing this work can not be emphasized too strongly."

During the summer and fall of 1962, representatives of the board have examined the salt marsh ditching along the North Shore that is subject to maintenance under the provisions of chapter 112 of 1931. With the limited time and personnel available, it was not possible to view all ditches nor to observe the functioning of the ditches at various stages of the tide. The results of these examinations showed that, although many of the ditches are partially obscured by a cover of dead marsh grass, in general the ditches are still functioning. Some of the smaller lateral ditches were partially obstructed, permitting water to pool in the ditch or on the surface of the marsh after heavy rainfalls or flood tides. In some locations, construction of homes or other buildings has resulted in interference with the proper functioning of some of the drainage ditches. Unfortunately, some municipalities have chosen to operate refuse disposal areas on the edge of salt marshes and careless disposal of refuse at these areas has resulted in obstruction or partial obstruction of some of the ditches. It has not in all cases been possible to correct these conditions with the amount of time and labor available. It was further observed that the banks of some of the ditches had settled or partially collapsed and should now be recut to restore their effectiveness and to facilitate future maintenance.

Many of the ditches empty into tidal creeks or protected inlets but others empty at locations that are subject to wave action and become obstructed from time to time with sand or other materials deposited by storms. The mouths of these latter ditches must be cleaned periodically and at least annually.

Because of difficulties in securing dependable labor and providing competent supervision, maintenance in recent years has not been adequate in all North Shore communities to keep all of the ditches in as good condition as desirable.

However, without the annual maintenance that has been carried out over the years, the important local benefits in mosquito reduction resulting from the construction of the ditches would by

now be lost to these North Shore communities. The conditions observed during this study that needed correction have either been subsequently corrected or recorded for correction during 1963.

House document No. 2566 of 1962, referred to in chapter 105 of the Resolves of 1962, was on petition of John H. Matheson, Jr., of Essex and it is assumed that his interest was, in part at least, because of the mosquito nuisance in the region including the town of Essex. This board is aware of the mosquito nuisance in this general region and feels that it is not due so much to the possible lack of proper maintenance of the salt marsh ditching carried on under chapter 112 but that it can be attributed to a considerable extent to the operations within the Parker River Wildlife Refuge.

In regard to salt marsh mosquito control in the vicinity of Plum Island, extending along the coast from the city of Newburyport southerly into the towns of Newbury, Rowley and Ipswich — mosquito control in this area has deteriorated progressively since the establishment of the Parker River Wildlife Refuge in 1945.

At the formal hearing in Washington, D. C., June 12, 1945, one of the objections presented in opposition to the development of the Sanctuary was the probable resulting increase in the mosquito menace. In refuting this contention, the then Secretary of the Interior claimed that development plans under consideration for the Refuge provided stabilized or regulated impoundments which would reduce the mosquito population and the elimination of mud flats would greatly reduce the "mud" mosquito hazard. Furthermore, during an early survey of the area on January 18, 1944, by representatives of this board and the State Department of Public Health with the Acting Regional Director of the U. S. Fish and Wildlife Service, the state representatives were assured that the existing mosquito control ditching within the proposed Sanctuary would be maintained by the Wildlife Service in accordance with the agreement made by Dr. Ira N. Gabrielson, then Director of the Fish and Wildlife Service, Washington, D. C.

Under the provisions of chapter 112 of the Acts of 1931 approximately \$75,000 was expended for installation of salt marsh ditching in the towns of Newbury and Rowley by the above-mentioned towns, the Commonwealth of Massachusetts and certain private individuals. Through this co-operative effort the salt marsh mosquito nuisance was adequately controlled. However, in recent years the establishment of an impoundment at the southern tip of

Plum Island resulted in the invasion of the town of Ipswich and adjacent towns by a horde of salt marsh mosquitoes. In addition, the installation of pot holes, for the benefit of flights of wild ducks and geese during the migration periods, has added to the mosquito menace. The alteration of the salt marsh to attract migrating shore birds has produced conditions conducive to increased mosquito breeding. As a result, the Plum Island Airport, located on the Plum Island Turnpike, and residents along Rolfe Lane immediately west of the Plum Island salt marshes have complained bitterly regarding the increased mosquito nuisance. As the result of complaints from citizens in the towns of Ipswich, Rowley and Newbury, these communities have found it necessary to appropriate funds annually for adulticide aerial spraying particularly in the residential sections.

#### CONCLUSIONS.

The original appropriation contained in chapter 112 of 1931, as a measure of relief in the then unemployment emergency, and for the relief of the mosquito nuisance along our coastline, was followed with additional appropriations from year to year until the Public Works Administration came into being. Thus, the thinking of the succeeding Legislatures was that this work accomplished a measure of unemployment relief. The effect of the work, in providing mosquito control ditches by hand labor in our salt marshes, was to markedly reduce the salt marsh mosquitoes for the benefit of the citizens of our shore line communities and the increasing summer population in these regions.

That the public has appreciated this work is evidenced by the forwarding of funds by the various municipalities for the annual maintenance of the original ditching. In this connection, it is pointed out that these funds have been received annually from the 42 municipalities where the original work was done with the exception of a very limited number of towns along the North Shore from which the funds were eventually obtained by deductions in the state income tax distributions.

It is unfortunate that the Essex County Mosquito Control Project, authorized by chapter 516 of the Acts of 1958, has not been activated by the required initial appropriation by the State. The board recommends that the act be put into effect so that the mosquito control work, including the maintenance work under chapter

112 of 1931, can be properly carried on in Essex County as is being done in the other county projects along our coastline.

The board feels that the maintenance work under chapter 112 of the Acts of 1931 should not be discontinued and accordingly is not now requesting any legislation under the provisions of chapter 105 of the Resolves of 1962.

STATE RECLAMATION BOARD.

EDWARD WRIGHT,  
*Chairman,*

HAROLD D. ROSE,  
*Member,*

JOHN J. McCOLGAN,  
*Member*

HOUSE

No. 3854

**Car Employment of Government**

*Author: [Faint Name]*

Approved by the Senate on [Date] and by the House on [Date]

That the sum of [Amount] be appropriated for the purchase of motor vehicles for the use of the Government, to remain available until expended, and that the Secretary of the Interior be and he is authorized to expend the same in accordance with the provisions of this act.

The first part of the report deals with the general conditions of the country during the year.

The second part of the report deals with the various branches of the service.

REPORT ON THE SERVICE

1912-13

1912-13

1912-13

1912-13