

# MAINE STATE LEGISLATURE

The following document is provided by the  
**LAW AND LEGISLATIVE DIGITAL LIBRARY**  
at the Maine State Law and Legislative Reference Library  
<http://legislature.maine.gov/lawlib>



Reproduced from scanned originals with text recognition applied  
(searchable text may contain some errors and/or omissions)

FOREST INSECT MANAGER REPORT  
For Calendar Year 1980

This Report is prepared under the authorization of the Spruce Budworm Suppression Act of 1976 (Amended), Subchapter IV, Section 8414 Subsection 6 and has been prepared for presentation to the First Session of the 110th Legislature.

Maine Forest Service  
DEPARTMENT OF CONSERVATION

January, 1981



TABLE OF CONTENTS

	<u>PAGE #</u>
A. INTRODUCTION .....	1
B. 1980 POLICY & LEGISLATION .....	2
C. 1980 PROGRAM MANAGEMENT .....	7
1. Chemical Suppression Project .....	7
2. Biological Suppression Project .....	13
3. Environmental Monitoring .....	17
4. Human Health Monitoring .....	21
5. Research .....	22
6. Woodlot Management Program .....	26
7. Information & Education .....	28
D. FINANCIAL REPORT .....	31
E. APPENDIX .....	41
A. Chapter 737 of the Public Laws of 1980 .....	42
B. Maine Spruce Budworm Suppression Act (Amended) .....	59
C. Maine Spruce Budworm Management Act ..	75
D. 1980 Spray Advisory Packet .....	87
E. Publications and Reports Prepared During 1980 .....	94



## INTRODUCTION

The Forest Insect Manager's Report is mandated under the Spruce Budworm Management Act, Title 12, MRSA Chapter 803, Sub-Chapter IV, Section 8414, Subsection 6. The purpose of the report is to describe the activities of the program during the preceding calendar year and to provide a complete financial review to the legislature.

The spruce budworm, Choristoneura fumiferana (Glem), is a natural part of the spruce-fir forest and plays a major role in the dynamics of Maine's spruce-fir ecosystem. The current epidemic, arising in the early 1970's, has led to increased emphasis on the part of the State to conduct a program designed to minimize the impact of spruce budworm on our resource through a combination of techniques including survey and assessment of budworm populations and tree condition, predictions and risk ratings of future populations and forest stand conditions, silvicultural hazard reduction treatments, salvage and presalvage harvesting and biological and chemical suppression projects.

This past year may be characterized as one of significant change in the program. The 109th Legislature, following the receipt of the recommendations of the Commissioner of Conservation (refer to the 1979 Forest Insect Manager Report), passed far reaching legislation (Chapter 737, P.L. 1980) that set the stage for these changes.

## 1980 POLICY AND LEGISLATION

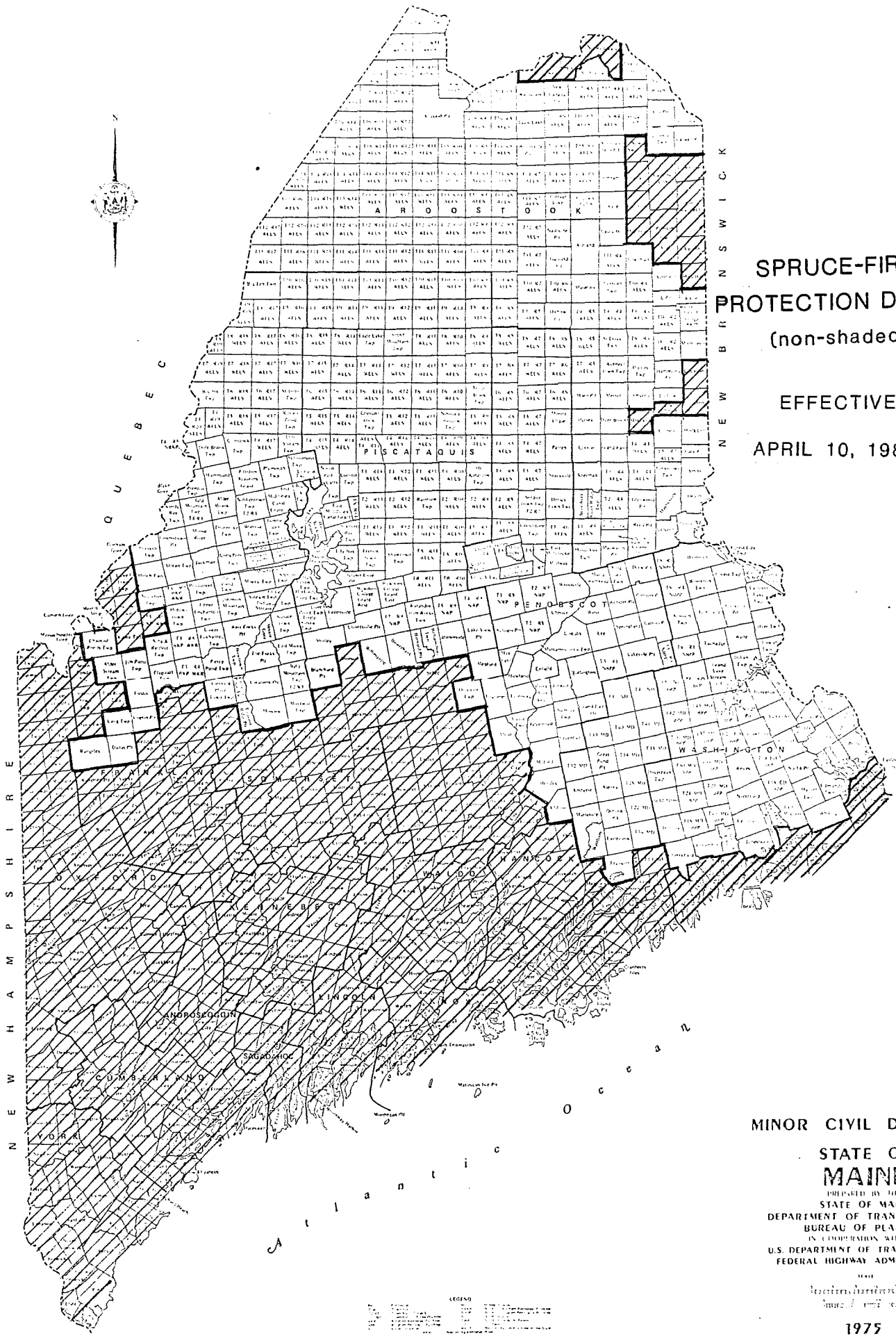
Chapter 737 of the Public Laws of 1980 (Appendix A) accomplished two goals. It amended the 1976 Spruce Budworm Suppression Act (See Appendix B) providing immediate, major shifts in State policy for implementation in 1980. In addition, Subchapter IV-A created an entirely new Spruce Budworm Management Act to be effective October 1, 1981 (See Appendix C).

During 1980 (effective April 10, 1980) the spruce budworm program, functioning under the above mentioned amended 1976 act, began a directed change towards an integrated pest management approach to the spruce budworm problem. The current legislation is included in the appendix of this report; however, a brief description of the basic program and policy changes are summarized as follows:

1. The Spruce-Fir Protection District (SFPD) was reduced by 112 towns alleviating tax burdens on many small forest landowners and generally removing areas that are not practical to treat, are intermingled with populated communities or are characterized by low volumes of spruce-fir timber. This action was a step towards the fully voluntary program scheduled for October, 1981 and reduced the taxable acre base of the SFPD by approximately 300,000 acres, (see map of revised SFPD on page 3.)
2. The funding mechanism for the program was modified dramatically in 1980.



NEW BRUNSWICK  
**SPRUCE-FIR  
 PROTECTION DISTRICT**  
 (non-shaded)  
 EFFECTIVE  
 APRIL 10, 1980



MINOR CIVIL DIVISIONS  
 STATE OF  
**MAINE**  
 PREPARED BY THE  
 STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF PLANNING  
 IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

LEGEND  
 [Symbol] [Symbol] [Symbol]  
 [Symbol] [Symbol] [Symbol]  
 [Symbol] [Symbol] [Symbol]



- a. No General Fund appropriations were made for the support of the 1980 and 1981 spray projects.
  - b. The excise tax levied upon eligible landowners was based on a two tier system whereby the shared tax paid 10% and the spray tax paid 90% of the total non-federal project cost. This change provided powerful economic incentives for landowners to minimize acres sprayed and maximize the use of alternative management techniques on their lands.
  - c. Spray project pre-funding was shared by all taxable acres throughout the District.
3. A Settlement Region, extending two miles either side of all publicly maintained roads, was designated within the SFPD in an attempt to accelerate the cessation of chemical pesticide application within this region at the earliest possible time. Lands within this corridor were only sprayed upon written application of the landowner and satisfaction of criteria established by the Maine Forest Service (MFS). In addition, towns are authorized to disallow the conduct of the MFS spray program within the corridor in their community by passage of an ordinance to that effect.

4. Research activities were broadened to encompass a variety of integrated pest management activities and \$100,000 was appropriated for the continued public support of research.
5. A Budworm Woodlot Management Program was authorized and funded to provide accelerated forest management and utilization assistance to small woodlot owners impacted by the budworm.
6. The MFS was directed to conduct a wood supply/demand analysis to determine the types and levels of future budworm protection needs.
7. The MFS was further directed to work cooperatively with and provide funds to the Department of Human Services for an expanded Environmental Health Monitoring Program.

Chapter 69, Part B, Section 7 of the Public Laws of 1979 directed that State policies be developed in order to accomplish three major goals:

1. reduce current (3.5 million acres in 1979) level of dependence on chemical insecticides
2. allow maximum landowner freedom to choose to participate in the spray program and
3. reduce the tax burden on landowners not being sprayed in any given year

A brief review of 1980 operations [see detailed accounts in the sections "Chemical Suppression Project" (p. 7) and "Biological Suppression Project" (p. 13) of this report] indicates that we are well on our way to accomplishing these objectives. Chemical treatment in 1980 was 1.2 million acres, down from 2.7 million acres in 1979. Silvicultural and automatic withdrawals in the revised SFPD during 1980 were 1.4 million acres and we are currently reviewing requests for an additional 1.2 million acres for 1981. The tax burden on spray acres in 1980 was about \$4.80/acre in comparison with a tax of \$0.10/acre on unsprayed acres.

## 1980 PROGRAM MANAGEMENT

### Chemical Suppression Project

In July, 1979, preliminary planning for the 1980 Spruce Budworm Suppression Project was initiated. High and extreme hazard areas (those areas with the most severe budworm damage) were located in the field, plotted on USGS topographical maps and developed into spray blocks.

The State Entomologist identified five and one half million acres of budworm infested timberland in need of protection. Within this designated area, no-spray acres were selected for a variety of reasons including their location within the settlement corridor and/or buffer zones; the existence of non-host forest type; automatic and silvicultural withdrawals; areas impractical to treat and areas where landowners requested that no spraying take place. As a result, approximately 1,200,000 acres were treated in 1980 with Sevin-4-Oil<sup>R</sup> and Bacillus thuringiensis (Bt).

Spray blocks were designed to most effectively accommodate aerial application. Geometric shape, long flight lines, identifiable terrain features and continuous treatment areas are characteristics which enable pilots to most effectively treat targetted areas.

During planning phases, insecticides were evaluated for effectiveness and cost; Sevin-4-Oil<sup>R</sup> (carbaryl) and the biological insecticide Bacillus thuringiensis became the insecticides of choice. Sevin was chosen as the principal insecticide, because of its proven performance and relatively low cost. Sevin was applied both in single application of 3/4 pound active ingredient per acre and split application of 1/2 pound active ingredient per acre. Split application involves treating the area twice with insecticide

applied 5-7 days apart. The split application treatment blocks were located in North Central Maine. Because this area needed the most foliage protection, it was given priority for special treatment. The first step of the split application kills the early maturing budworm larvae and thus protects the developing bud. The second application of the split kills the later maturing larvae providing continuous protection to the tree whose survival depends upon new bud growth.

TABLE C-1

Sevin-4-Oil<sup>R</sup> Acreage Treated and Gallons Applied by Airport

	Single Application 30 fl. oz/Acre		Split *Application 20 fl. oz/Acre	
	Acres	Gallons	Acres	Gallons
Jackman	118,747	27,661		
Millinocket	292,268	68,110		
Presque Isle	200,812	42,944	170,538	61,525
Red Pine	<u>230,606</u>	<u>49,785</u>		
Total	842,433	188,500	170,538	61,525

Total Sevin = 1,012,971 Acres

\*Sprayed twice, 5-7 days apart

TABLE C-2

Sevin-4-Oil<sup>R</sup> Acreage Treated by Aircraft Type

	Single Application 30 fl. oz/Acre	Split Application 20 fl. oz/Acre
	C-54	233,045
PV-2	224,998	
LSU	<u>384,390</u>	<u>27,187**</u>
Total	842,433	170,538

\*Both applications by C-54

\*\*First application by C-54; second application by LSU

Areas within 3 miles of permanent human habitation were treated with Bacillus thuringiensis (Bt). The application of this insecticide is discussed in another section of this report titled "Biological Suppression Project", (p. 13).

The design and size of spray blocks, distance from airports, and cost, are included in criteria considered in the selection of the types of aircraft to be used. Three fixed wing aircraft types C-54, PV-2 and LSU (Thrush) were used in the project. Thrushes operate effectively over small spray blocks or over those blocks which, due to the existence of sensitive areas, require greater control over spraying of designated areas. On the other hand, C-54's and PV-2's operate best over large blocks with few non-target areas.

Size and complexity of past spray projects have demonstrated the need for a central administrative unit, separate from airport operations. Located on the Northern Maine Vocational Technical Institute campus in Presque Isle, Project Headquarters provided direction, support services, radio communication, and information for the entire project. Project Headquarters was supervised by the Forest Insect Manager (FIM), and the unit provided work space for administration, mapping, public information, contract compliance, incident reporting and investigation, health and safety, radio communication, and weather forecasting.

Airports at Presque Isle, Millinocket, Jackman and Red Pine (T11 R16 WELS), served as bases of operation for the fixed wing portion of the spray program. Location and size of spray blocks, and proximity to meals and lodging facilities were considered in the choice of airports.

Much of the project is conducted by means of contracts awarded through the competitive bid process. Five contractors participated in the 1980 Chemical Suppression Project and a summary of their responsibilities follows:

Globe Air-Biegart Aviation, Joint Venture, Mesa, Arizona - fixed wing spray aircraft (including ground support crews).

Thurber Holt, Presque Isle, Maine - fixed wing monitor and administrative aircraft.

Folsom's Air Service, Greenville, Maine - Medivac helicopter emergency rescue service.

Chempro of Oregon, Portland, Oregon - mixing and loading of insecticide.

MBI Security Services, Portland, Maine - security at airports (except Red Pine).

On May 12, MFS personnel set up Project Headquarters. The four airports began operating a week later. On May 24, the rotary wing operation began the first spray period using Bt. Six days later, application of Sevin by fixed wing aircraft began out of Presque Isle. Delayed development of the budworm larvae caused the rather late commencement of the spray operation.

Careful monitoring of spray behavior and aircraft performance has become an integral part of the spray program to assure safe, accurate application of insecticides. The MFS, prior to the project, trained monitors in topographic map reading, weather observation, radio operation and spray application reporting. In addition, familiarization flights were conducted over all spray blocks. Using this information and training, monitors observed and recorded all spray applications with particular emphasis on deviations from routine spray application.

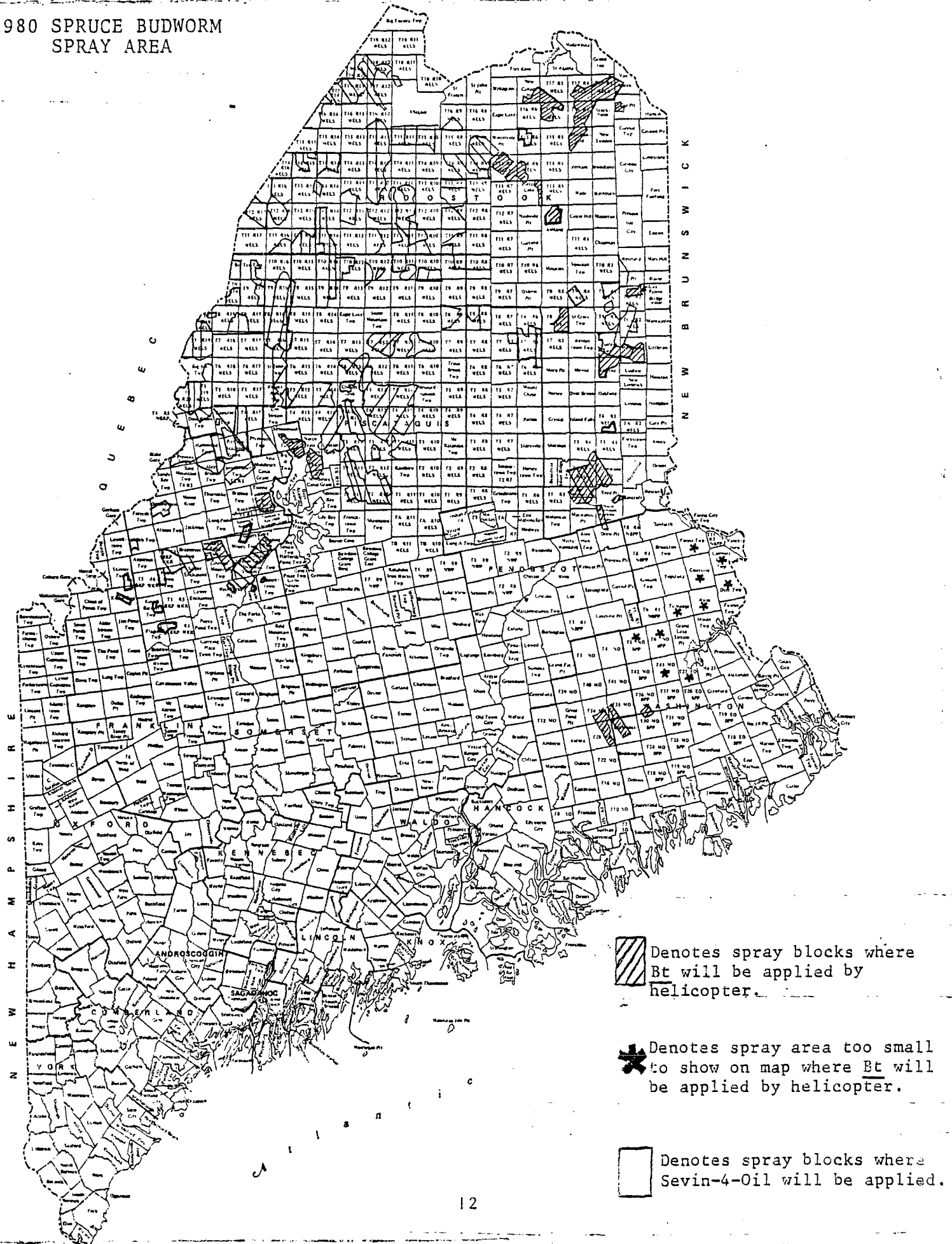
The MFS also employed spray assessment personnel who were responsible for conducting ground examinations to measure the level of insecticide deposit on the foliage in target areas.


On June 14, the last spray block was treated from Red Pine airport. Compilation and analysis of the results of the operation continued for several weeks and details are included in the MFS report Status of the Spruce Budworm in Maine - 1980 Control Project and 1981 Predictions. In general ninety percent of the targetted acreage received an acceptable level of foliage protection, making the 1980 project a successful attempt at protecting the spruce-fir forests. Results of the Bt operation can be found in the section "Biological Suppression Project", (p.13).


In addition, significant follow-up efforts in spray area mapping were made in order to determine actual acres treated on each participating landowner's property. This information, compiled and stored on the MFS computerized mapping system, was necessary for the computation of the final excise tax levied on the landowners.




1980 SPRUCE BUDWORM  
SPRAY AREA



 Denotes spray blocks where Bt will be applied by helicopter.

 Denotes spray area too small to show on map where Bt will be applied by helicopter.

 Denotes spray blocks where Sevin-4-Oil will be applied.

## Biological Suppression Project

During May and June of 1980, the Maine Bureau of Forestry undertook a joint project with the United States Department of Agriculture, Forest Service to demonstrate the large scale application of Bacillus thuringiensis (Bt) for control of the spruce budworm. On 200,000 acres of infested timberland, the economic feasibility of using high cost microbials for the protection of both present spruce-fir foliage and successive years' foliage was examined. Research also included examining the feasibility of using large helicopters, and of mixing and loading large volumes of insecticides in the field. The Bureau of Forestry administered the project, with technical assistance from the U.S. Forest Service and from Dr. John Dimond of the Entomology Department, University of Maine at Orono. The U.S. Forest Service provided financial assistance; upon completion of the project, they evaluated foliage protection and spruce budworm population control. Furthermore, cooperating landowners provided valuable assistance.

Bt is a rod-shaped bacterium, commonly found in the soil, which is specifically pathogenic to butterfly and moth larvae. Upon ingestion by spruce budworm larvae, on treated foliage, the spores hatch in the mid stomachs and cause ulcers and/or blood poisoning which leads to death or retards the growth of the larvae.

Two Bt insecticides were used - Thuricide 16B<sup>R</sup> (Sandoz Corporation) and Dipel 4L<sup>R</sup> (Abbott Laboratories) - on five widely separated areas of the state. Coordination between state, federal, and private segments occurred throughout the project.

Contracts were awarded for various services to the following companies:

Evergreen Helicopters, of McMinnville, Oregon provided helicopters, personnel and services for the aerial application of the insecticide.

Chempro of Oregon, Portland, Oregon, received the mixing and loading contract, which involved unloading insecticide at Presque Isle and delivering it to the various heliports. As spray operations began, their responsibilities included mixing the insecticide and loading helicopters at the heliports.

Maine Helicopters, Inc., of Augusta, Maine provided monitor helicopters to assure safe, accurate application of insecticide.

Folsoms Flying Service of Greenville, Maine supplied a medivac helicopter in case of possible emergencies.

Private landowners assisted in construction of heliports, in securing those heliports with gates and locks on access roads, and by supplying maps for navigational purposes.

During the project, the Bureau of Forestry assured the delivery of insecticide, calibrated helicopters, assessed insect and foliage development, arranged for meals and lodging for personnel and administered the spray operation. The Bureau also trained four airborne monitors before the project. Prior to each scheduled spray period, the monitors aeriually assessed weather over the spray areas so as to determine if conditions were favorable for spraying. During each spray session, monitors observed all actions of spray ships noting any discrepancies in adherence to buffers, swath widths, boomtimes, and terminated spraying operations whenever conditions or events warranted.

Navigation for helicopters was dependent upon the pilot and navigator, who utilized landmarks and topographic maps. Navigation for fixed wing aircraft was aided by a Loran-based electronic navigation system.

Helicopters have the advantage of being able to utilize small, open areas such as gravel pits, logging roads, or forest clearcuts as bases of operation, rather than requiring longer, better maintained airstrips. The lifting capacity, range and speed of the large jet helicopters, the single engine B205 and twin engine B212, characterize them as high performance spray ships. The precision targetting ability of these aircraft was demonstrated during the project. Because of this ability, sufficient Bt insecticide remained after the helicopter operation was completed to enable small fixed wing Thrush aircraft to use this insecticide on blocks which had been scheduled for the oil-based insecticide, carbaryl. Thus the unanticipated testing of Bt application by fixed wing was also accomplished.

TABLE C-3

Application of Bt and acreage treated by aircraft type

Aircraft Type	ACRES	GALLONS		
		Thuricide 128 fl. oz/acre	16B 80 fl. oz/acre	Dipel 4L 80 fl. oz/acre
Rotary Wing				
B205	48814	48814	30168	51197
and B212	48268			
	<u>81915</u>			
TOTAL	178997			
<u>Fixed Wing</u>				
Thrush Commander	18294			11434
Total Bt	197291	48814	30168	62631

In the weeks following the spray period, the U.S. Forest Service calculated results on foliage protection, defined as the difference between actual observed defoliation and that which was expected to occur if no spray had been applied, and on spruce budworm larval population reduction, calculated by comparing a pre-spray survey of larval populations with a post-spray pupal survey. Results indicate that a high variation in foliage protection and in larval population reduction occurred, with the Caribou area receiving the most effective treatment. An acceptable level of foliage protection was achieved on approximately half the treated area. Detailed information on the Bt demonstration project can be found in:

1980 Bt Demonstration Project: Operations Report  
Maine Forest Service, November 14, 1980.

Summary of Results from Aerial Application of Dipel 4L and Thuricide 16B Against the Spruce Budworm on the Maine 1980 Demonstration Project presented at the CANUSA Workshop on Bt on October 29, 1980 by Imants Millers, Northeastern Area, State and Private Forestry, USDA Forest Service, Portsmouth, New Hampshire..

## Environmental Monitoring

In preceding years, the Environmental Monitoring Program had been concerned with the effects of carbaryl and other insecticides on isolated organisms. In 1980, the program concentrated instead on the consequential effects of mortality of insects destroyed by carbaryl on the vertebrates who depend upon them as food sources.

Researchers from the University of Maine at Orono have conducted investigations for several years on the effects of aerial spraying of insecticides. In 1980, the MFS granted funding for continuation of this research.

--Brook trout fry - Jon Stanley (\$21,480) This study is concerned with monitoring of and research on the effects of accidental overspray of streams with carbaryl (Sevin) on juvenile fishes, with emphasis on brook trout fry.

The preliminary results show that a 150 meter buffer (500 feet) is effective in reducing levels of carbaryl in streams. Even in unbuffered streams, levels of carbaryl were far below those required to cause any adverse effects on cholinesterase levels or on rates of feeding and growth.

--Slow flowing streams and ponds - Katherine Gibbs (\$27,395)

The aim of this study is to determine the impact of overspray on slow-flowing streams and ponds of a single application of Sevin-4-Oil<sup>R</sup> at 3/4 lb./acre A.I. with special reference to:

- a. the persistence of carbaryl in water, pond substrate, and insect tissue following spraying.
- b. the impact on amphipods.
- c. the impact on aquatic invertebrates and emerging aquatic insect adults known to be

utilized as food by immature and adult ducks.

Results show an apparent elimination of Gammarus (a genus of amphipods) from oversprayed ponds. Carbaryl residues have been persisting in the substrate up to 4½ months, considerably longer than was previously documented. Final results are awaiting further analysis of the data.

--Feeding behavior of birds - Malcolm Hunter (\$21,981)

The study monitors the indirect consequences of killing large numbers of foliage-inhabiting arthropods (budworm and other non-target species) on the behavior of birds. The experiments involved measuring (1) parental feeding, growth, and development of nestling black-capped chickadees, and (2) foraging niche selection of warblers.

Although interpretation of the results is confounded by small samples and logistical difficulties, some disturbance of both chickadee and warbler behavior was observed. Chickadees in sprayed areas fledged at lower weights than controls, giving them a poorer chance of survival to reproduce. The warblers changed the location of feeding for 2 1/2 weeks, but no long-term decrease in numbers was observed.

--Feeding behavior of black ducks - Malcolm Hunter (\$18,415)

The experiment examined the effects pesticide-induced depression of food supply can have on the growth of black ducklings. The study involved the measuring of foraging behavior and growth and development of black duck broods living on sprayed ponds.

Again the results are confused by small sample size and by cold weather which immediately followed spraying. The ducklings did start to lose weight after spray day, but it is unclear whether

this is due to spray, or cold, or a combination. Further analysis will help to clarify these results.

--Reduced population of Plecoptera - Joan Trial (\$5,860 from MFS; U.S. Forest Service was major funder)

This study was designed to identify potential long term ecological effects of insecticides in streams by determining:

- 1) the concentration and persistence of carbaryl in leaf litter of streams before and after spray.
- 2) the effects of the loss of Plecoptera species on leaf shredding in first and second order streams during the first year after spray.
- 3) the effects on the ecosystem structure in streams after several years of diminished Plecoptera populations.
- 4) which organisms that are less sensitive to carbaryl fill the niche vacated by Plecoptera in the leaf packs of small streams, if leaf processing and breakdown are unaffected.

The data from this study have not been sufficiently analyzed to yield even preliminary results.

Other environmental studies, not connected with the University of Maine at Orono, which received funding from the MFS were:

--Water and Drift - Bud Brown, Eco-Analysts (\$4,980) Analysis was undertaken of aquatic invertebrate drift samples collected at 4-hour intervals in operational Sevin blocks in the 1979 spray project to correlate with insecticide residue concentrations in stream water.



Detailed analysis of results is not yet complete, but carbaryl did cause some increase in drift of aquatic insects, particularly Plecoptera. This is consistent with previous findings.

--Refugia - Bruce Grantham, Environmental Associates (\$35,526)

A study has begun of the degree of effectiveness (if any) of leaving the headwaters of watersheds in the Spruce Fir Protection District unsprayed during the Spruce Budworm Suppression Project to serve as "refugia" for repopulation of aquatic invertebrates downstream. The objective is to determine if a refugia policy would cause more, less, or an equivalent level of environmental impact as the present buffer policy of the MFS.

Conclusion on the rates of repopulation in the buffered streams and the refugia streams based on the analysis so far would be premature. Early results do show, however, that Plecoptera populations were not depleted in either buffered or refugia streams.

## Human Health Monitoring

A sum of \$50,000 was granted by the Maine Forest Service to the Department of Human Services for health monitoring. A full report of the activities and results of that program will be submitted to the legislature at a future date.

## Research

Funding awarded by the Maine Forest Service for research activities initiated in calendar year 1980 totalled \$121,933. Research on alternatives to insecticide use in controlling the defoliation of spruce and fir trees by the spruce budworm received the largest percentage of appropriated funds. Improvements in production, economic assessment, utilization and marketing of spruce and fir continued to be of significance as has been the case since 1976. Survey and detection of damage created by the spruce budworm and examination of spray technology to control the spruce budworm have also been ongoing research items since 1976. Results have been published for the study by Dr. John Dimond. All other research is in progress; therefore, results are not yet available.

The majority of contracts were awarded for research at the University of Maine at Orono on:

--Spruce budworm sex pheromones - John Dimond (\$12,532)

This demonstration project was designed to:

- a. demonstrate that the Hercon<sup>R</sup> formulation of (budworm) sex pheromone will significantly reduce baited trap catches of male spruce budworm moths.
- b. identify possible problems in aerial application of the Hercon<sup>R</sup> flake formulation.
- c. monitor distribution of flakes in tree crowns following application and to monitor their persistence.

- d. monitor pheromone release rates from the flakes by analyzing samples of flakes collected from the field at specific intervals and by analyzing air samples.
- e. gain experience with pheromone application and efficacy measurements in anticipation of future, large scale, mating disruption and population reduction trials.

Results show that the technical difficulties involved in the aerial application of the flakes were successfully surmounted. Disruption occurred but only temporarily; no reduction in population resulted. Large population levels and increased inflights of moths may have significantly affected the results.

--Utilization of Budworm destroyed spruce and fir for pulp production - John Genco (\$15,455) Research is designed to investigate the potential for utilizing budworm-killed spruce and fir in the production of pulp, utilizing the kraft and sulfite pulping processes (those most commonly used with spruce-fir in Maine). The study will also compare the relative yield and strength of pulp produced from sound (green) fir vs sound spruce.

--Accelerated fir utilization for lumber: processing and marketing - Richard Hale & Jim Shottafer (\$28,085) This study will analyze the potential for improving kiln drying schedules for balsam fir so as to make the processing of fir for lumber more comparable to spruce in terms of cost and time required. The study will also include the review and analysis of currently accepted strength criteria. If justified, changes may be proposed for grading standards for balsam fir so as to improve the marketability of fir lumber.

--Budworm feeding deterrents - Michael D. Bentley (\$14,875)

Phytochemicals that show promise for use as spruce budworm feeding deterrents are being investigated as a potential alternative to insecticides in controlling the defoliation of spruce and fir trees by spruce budworm.

Other research studies funded by the Maine Forest Service were:

--Mycoinsecticides - Richard Soper, USDA, SEA-AR (\$28,500)

A study is aimed at further developing the potential of using Entomophthora sphaerospermia fungi as mycoinsecticides for spruce budworm control.

--Spruce-Fir Sawlog Exportation - Jack Aley, Private Consultant (\$6,500) A study of the impact of sawlog exports

from Maine on the Maine economy, has begun and is addressing the factors affecting the differential between the prices paid by Canadian and U.S. mills for sawlogs.

---

The MFS is presently participating in a joint Canadian - U.S. venture, the Canada/United States Spruce Budworm Program (CANUSA), designed to coordinate research and management efforts in the control of the spruce budworm. The Canadian Forestry Service and the USDA Forest Service are cooperating in the joint program which is designed to perfect current techniques and find alternative methods of protecting the spruce-fir resource. During 1980, representatives from the MFS, the University of Maine, and the major landowners met with CANUSA directors. The focus was upon the spruce budworm problem as it exists in Maine, with emphasis upon the effects of the destruction of spruce-fir forest upon the

State and the significant differences between the problem experienced in the western U.S. and that in the eastern section. As a result, Kenneth Stratton, Director of the Bureau of Forestry, representing the National Association of State Foresters, was named to the Joint Planning Unit of CANUSA.

The MFS has also begun a wood supply-demand analysis. Mandated by the Legislature (Title 12 Subchapter IV-A Section 8424 subsection 8) in 1980, this study is designed to "determine the types and levels of future spruce budworm protection needs and strategies for such spruce and fir resources". Representatives from the Department of Conservation, U.S. Forest Service, State Planning Office, University of Maine, and Great Northern Paper Company met in early September to discuss the manner in which the study would be conducted. In November, the request for proposals was issued. A pre-bid conference was held in December, with the MFS expecting to receive bids in January 1981. By March a contract should be signed and the study underway. A progress report is due September 1981, with the completion of the study anticipated for the Spring of 1982.

## Woodlot Management Program

Policies adopted by the State of Maine and the federal government to minimize the use of chemical pesticides for budworm control have encouraged both large and small woodland owners to look seriously at alternative methods of controlling budworm damage. Many of the larger industrial and non-industrial landowners have begun implementing strategies of sophisticated detection, mapping, management, and utilization of their spruce-fir forests. In an effort to assist small non-industrial spruce-fir woodlot owners in integrated management of their woodlands, the State of Maine initiated the Spruce Budworm Woodlot Management Program as a pilot project in the fall of 1978. Infrared aerial photographs of target areas were obtained, areas of significant budworm damage were mapped, and frequent landowners' town meetings were held to inform landowners of potential or existing budworm mortality on their lands.

Beginning July 1, 1980, the State of Maine began committing annual funds of approximately \$175,000, matched by the U.S. Forest Service, in a cooperative effort to continue and expand the program. Integrated management on small, non-industrial private forests is being accomplished through stand treatments including presalvage, salvage, pre-commercial thinnings, controlled natural regeneration, planting of alternate non-host species or combinations of these techniques.

Combined State and federal funding provides for one Entomology/Service Forester, two Utilization and Marketing Foresters, four Forest Technicians, one Public Information Officer, one Insect Ranger and two Clerk-Typists.

These personnel and services allow for expansion of the program to be aimed at providing technical advice and management assistance to the landowners. Moreover, by providing assistance in identifying existing, new, and expanded markets for spruce, fir, and non-host species, the program is encouraging cultivation of less budworm-vulnerable mixed stands.



### Information and Education

The Spruce Budworm Program staff conducts information and education activities throughout the year to inform citizens, groups, and businesses of the spray program. Information for the 1980 project was supplied to municipal officials and county commissioners, organic farmers, beekeepers, dairymen, blueberry growers, owners of fish hatcheries and fee fishing ponds, citizens residing near spray areas and other interested individuals. This information was supplied before the project and included descriptions of the insecticides to be used, a map of the spray area, specifics regarding buffers, and a "request for contact" sheet which could be sent to the Information and Education Section (I & E) if the individual(s) desired pre-spray notification. Information was also submitted for inclusion in the newsletters of the aforementioned organizations.

Guides, outfitters, regional and district forest rangers, forest industry officials, airport managers, sporting camp owners and sportsmen were provided with materials about the spray program and were asked to make this information available to their clients.

In 1980, a new policy regarding the buffering of drinking water intakes was established. I & E informed the water companies involved of the insecticides to be used for the project and of the new buffering policy, and requested location of the intakes.

As a precautionary measure, medical information (including symptoms of exposure) about the insecticides being used in the project was sent to medical society presidents, hospitals, osteopathic committees and all physicians in the state. Treatment recommendations for insecticide exposure were included in the mailing.

Posters of the spray advisory, printed in both French and English, were distributed to landowners and the North Maine Woods Association, who were responsible for posting them along all access points, five days in advance of spraying and removing them 48 hours after spraying.

Also new this year was a cooperative information program with the North Maine Woods Association. Various gates were manned and all those who proceeded beyond the gates did so on their own accord after receiving and reading a copy of the "advisory packet", (See Appendix D). Other gates which were not manned, were posted and physically blocked from May 27 until June 20 or 48 hours after spraying.

Five I & E personnel - two at Project Headquarters, one at Presque Isle airport, and two at Millinocket airport - gave pre-spray notification to those who had requested it, arranged and conducted tours for citizens and public officials, informed FAA and Loring Air Force Base one hour prior to each scheduled spray period of the intended flight plans and immediately notified them when a spray period had been completed. Maine Poison Control Center was also contacted prior to each spray period to advise them of the areas to be treated during the spray period. The press was kept informed of spray schedules and progress of the spray operation. I & E prepared daily press releases, provided up-to-date information to newspapers who requested it from Project Headquarters.

Initiated in 1980 was the toll free '800' telephone number. The purpose was to provide an opportunity for individuals to gain up-to-date information on all aspects of the spray program. The phone was generally staffed from 4:00 A.M. to 10:00 P.M. each day and was extremely busy indicating the success of this effort and the need to continue it in future operations.

## FINANCIAL REPORT

The financial support for the 1981 Spruce Budworm Program changed significantly from previous years as a result of the passage of Chapter 737 of the Public Laws of 1980 (see details on page 2 of this Report). Among those changes were several that impacted directly on the financial aspects of the program. These included (1) no General Fund support for the spray project, (2) reduction in the area of the Spruce Fir Protection District, (3) pre-funding of the project by all S.F.P.D. taxpayers, and (4) implementation of a two tiered post-project tax structure.

Table D-1 summarizes the overall financial situation of the program for calendar year 1980. As is footnoted, no General Funds were used for the 1980 spray project. The income shown under federal funds is the federal cost sharing authorized by the U.S.F.S. for the Bt Pilot Demonstration Project. No federal cost sharing was directly provided in support of the chemical suppression project. The income in the 4505.4 account came from two basic sources; (1) the excise tax and (2) charges for spray services for lands outside the Spruce Fir Protection District.

Table D-2 summarizes the taxable acres and acres withdrawn (tax exempt acreage) by county.

The silviculture-automatic withdrawal provision of the 1976 Spruce Budworm Management Act (amended) provides authorization and procedures for landowners to exempt lands within the Spruce Fir Protection District from the excise tax. This program has been in effect since 1976 and had resulted in approximately 1.7 million acres so designated at the end of calendar year 1979.

TABLE D-1

SUMMARY OF APPROPRIATIONS, INCOME &  
EXPENDITURES FOR 1980 C.Y. SPRUCE BUDWORM PROGRAM

	General Fund (1505.4)	Federal Fund (3505.4)	State Ded Funds (4505.4)	TOTAL
Resources Available (1/1/80)	\$1,765,010	\$332,996	\$184,493	\$2,282,499
De-Appropriated*	(1,657,504)			
Research	100,000		(100,000)	
Personal Services	7,104			
Appropriation*	482,248			
Balance	<u>696,858</u>	<u>332,996</u>	<u>84,493</u>	<u>1,114,347</u>
Income				
Federal Grant		1,272,731		
Excise Tax			6,426,390	
Miscellaneous			18,145	
Balance	<u>696,858</u>	<u>1,605,727</u>	<u>6,529,028</u>	<u>8,831,613</u>
Expenditures	273,514	1,444,464	6,192,258	7,910,236
Outstanding Encumb.	125,067	16,231	231,684	372,982
Balance (12/31/80)	<u>298,277</u>	<u>145,032</u>	<u>105,086</u>	<u>548,395</u>

\*These items resulted from the passage of Chapter 737, P.L. of 1980 which deleted all General Fund monies previously targetted for 1980 spray project expenditures. No General Fund monies were authorized or expended on the 1980 spray project.

TABLE D-2

SUMMARY OF TAXABLE AND WITHDRAWN ACRES IN THE  
 SPRUCE FIR PROTECTION DISTRICT - 1980  
 (From Bureau of Taxation - 12/17/80)

	<u>Taxable Acres in</u> <u>Organized Towns</u>	<u>Taxable Acres in</u> <u>Unorganized Towns</u>	<u>Acres Withdrawn</u>	<u>Total</u> <u>Taxable Acres</u>
Aroostook	415,669	1,621,965	454,344	2,037,634
Softwood	223,956	1,145,285		1,369,241
Mixedwood	191,713	476,680		668,393
Franklin	50,329	19,951	63,062	70,280
Softwood	22,635	5,240		27,875
Mixedwood	27,694	14,711		42,405
Hancock	64,077	110,254	80,773	174,331
Softwood	30,332	63,436		93,768
Mixedwood	33,745	46,818		80,563
Penobscot	263,766	384,214	262,634	647,980
Softwood	146,490	210,190		356,680
Mixedwood	117,276	174,024		291,300
Piscataquis	100,021	1,104,812	278,295	1,204,833
Softwood	46,739	772,551		819,290
Mixedwood	53,282	332,261		385,543
Somerset	99,919	1,005,900	144,364	1,105,819
Softwood	43,870	621,409		665,279
Mixedwood	56,049	384,491		440,540
Washington	253,328	343,195	119,379	596,523
Softwood	122,253	203,758		326,011
Mixedwood	131,075	139,437		270,512
*TOTAL S.F.P.D.	1,247,110	4,590,291	1,402,851	5,837,400
Softwood	636,275	3,021,869		3,658,144
Mixedwood	610,835	1,568,422		2,179,256

\*Note: Totals do not cross check due to rounding off.

The program was designed to provide tax incentives for the application of certain silvicultural practices on spruce-fir lands where such practices would reduce vulnerability and minimize susceptibility to budworm attack. The program is explained in Section 8408, 8409 and 8410 in the act (see Appendix B).

The 1980 amendment to the act reduced the Spruce Fir Protection District by 112 towns. One effect of this amendment was to reduce the total acres withdrawn by approximately 358,000 acres. At the time the pre-project tax was assessed, April 28, 1980 a total of 1,402,851 acres had been withdrawn and were not eligible for tax purposes (see Table D-3).

Currently the Director of the Maine Forest Service is reviewing silvicultural and automatic withdrawals for the 1981 season amounting to 1,281,300 acres and 14,354 acres respectively. It is anticipated that all or most of these requests will be approved. We anticipate a total area withdrawn for 1981 of approximately 2,675,000 acres and a residual taxable acreage in the S.F.P.D. of 4.5 million acres (2.9 million acres of softwood and 1.6 million acres mixed wood). The silviculture-automatic withdrawal provision ends on September 30, 1981 and will no longer be in effect after that date.

The current law calls for pre-project and post-project taxes. The pre-project tax provides the necessary working capital to conduct the spray program. The post-project tax allows for additional assessments and rebates, as appropriate, to adjust for (1) difference in budgeted and actual project costs, (2) receipt of federal cost sharing funds and, (3) acres treated and

TABLE D-3SUMMARY OF ACRES WITHDRAWN BY COUNTY - 1980

	<u>Organized</u>	<u>Unorganized</u>	<u>Total</u>
Aroostook	44,036	410,308	454,344
Franklin	4,048	59,014	63,062
Hancock	16,242	64,531	80,773
Penobscot	108,492	154,142	262,634
Piscataquis	48,110	230,185	278,295
Somerset	13,030	131,334	144,364
Washington	43,791	75,588	119,379
TOTALS	<u>277,749</u>	<u>1,125,102</u>	<u>1,402,851</u>



not treated. The latter adjustment is required because of the new two tiered tax policy which provides that 90% of the project cost be paid by the spray tax and 10% of the cost by the shared tax. Table D-4 summarizes these tax revenues by county and source.

There are approximately 90 taxpayers in the Spruce Fir Protection District. Post-project tax adjustments resulted in additional assessments for two taxpayers and rebates, ranging from \$5 to over \$400,000, for the remaining taxpayers.

Total expenditures for the 1980 spray project were \$7,381,000, of which the federal government cost shared \$1,273,731. The non-federal share was raised through the excise tax which was \$4.69 for the spray tax, \$0.065 for the mixed wood shared tax and \$0.13 for the softwood shared tax.

A summary of the operational costs for the 1980 spray project grouped into nine general components is shown in Table D-5. Table D-6 shows the per acre cost trends over the last several years.

The research program is described in the section of this report entitled "Research". Expenditures for research have generally averaged \$100,000/year over the program period. Fiscal year 1981 was the first year that General Fund support was provided for research.

TABLE D-4  
 SUMMARY OF EXCISE TAX REVENUES  
 FOR THE 1980 SPRUCE BUDWORM SPRAY PROJECT  
 (From Bureau of Taxation - 12/17/80)

	<u>Total Pre-Project Tax</u>	<u>Post-Project Shared Tax</u>	<u>Post-Project Spray Tax</u>	<u>Total Post-Project Tax</u>
Aroostook	\$2,469,986	\$224,854	\$2,315,240	\$2,540,094
Franklin	71,162	6,479	----	6,479
Hancock	194,373	17,695	37,318	55,013
Penobscot	728,380	66,308	109,080	175,388
Piscataquis	1,467,490	133,592	1,151,883	1,285,475
Somerset	1,284,047	116,892	2,031,990	2,148,882
Washington	668,836	60,887	111,837	172,724
STATE(SFPD)TOTAL	<u>\$6,884,274</u>	<u>\$626,707</u>	<u>\$5,757,348</u>	<u>\$6,384,055</u>

TABLE D-5

SUMMARY OF EXPENDITURES BY  
TREATMENT\* AND OPERATIONAL COMPONENT  
(In thousands of dollars)

	<u>Bt</u>	<u>Sevin</u>	<u>Total</u>
Aircraft	1,135	1,996	3,131
Insecticide	860	1,964	2,824
Fuel Oil	---	54	54
Mixing/Loading	228	152	380
Security	20	61	81
Food & Lodging	47	155	202
Temporary Labor	146	219	365
Environmental Health Monitoring	---	195	195
Miscellaneous	62	87	149
	<u>2,498</u>	<u>4,883</u>	<u>7,381</u>

\*NOTE: Acres treated were 197,291 (Bt) and 1,012,971 (Sevin).

TABLE D-6

EXPENDITURE TRENDS/ACRE FOR SPRUCE  
BUDWORM SPRAY PROJECT FROM 1976-1980 1/

	1976	1977	1978	1979	1980		Ave.
					Sevin	Bt <sup>2/</sup>	
Aircraft	\$ .68	\$ .98	\$1.01	\$1.29	\$1.97	\$5.75	\$2.59
Insecticide	1.59	1.70	1.86	1.99	1.94	4.36	2.33
Fuel Oil (Carrier)	.02	.02	.02	.04	.05	--	.04
Food & Lodging	.01	.08	.07	.07	.15	.24	.17
Temporary Labor	.01	.12	.05	.19	.22	.74	.30
Environmental/ Health Monitoring	--	.05	.04	.06	.19	--	.16
Mixing & Loading	.09	.14	.14	.08	.15	1.16	.31
Miscellaneous	.02	.12	.09	.16	.15	.41	.19
TOTAL	\$2.43	\$3.21	\$3.28	\$3.87	\$4.82	\$12.66	\$6.09

1/ Cost components have experienced some changes in definition over time, causing some variation in cost.

2/ These figures represent total cost. Federal cost sharing was authorized to cover 50% of these expenditures.

In 1980, the MFS created the position of Director of Research to more adequately supervise the awarding of research grants. Of the authorized \$100,000 from the General Fund, \$25,000 was used for the salary and expenses of the research director.

Table D-7 summarizes the annual research expenditures for the program since 1973.

TABLE D-7  
RESEARCH EXPENDITURES, 1973 - 1981

	<u>Authorization</u>	<u>Commitments</u>	<u>Surplus</u>
1973-4	N/A	\$58,139	---
1974-5	N/A	\$34,860	---
1976	\$100,000	\$80,472	\$19,528
1977	\$100,000	\$95,000	\$24,528
1978	\$100,000	\$100,000	\$24,528
1979	\$100,000	\$36,100	\$88,428 3,492
1980 (FY)	\$100,000	\$96,508	\$91,920
1981 (FY)	\$100,000*	\$146,933*	\$44,987

\*Includes \$25,000 for salary and expenses of the Research Director.

APPENDIX

- A. Chapter 737 of the Public Laws of 1980
- B. Maine Spruce Budworm Suppression Act (Current Law)
- C. Maine Spruce Budworm Management Act (Law going into effect October 1, 1981)
- D. 1980 Spray Advisory Packet
- E. Publications and Reports Prepared During 1980



APPROVED

APR 10 '80

BY GOVERNOR

CHAPTER

737

PUBLIC LAW

# STATE OF MAINE

IN THE YEAR OF OUR LORD NINETEEN HUNDRED AND EIGHTY

H. P. 1980 — L. D. 2015

## AN ACT to Create the Maine Spruce Budworm Management Act.

**Emergency preamble.** Whereas, Acts of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

Whereas, spruce budworm spray projects must be undertaken, in order to be effective, prior to the expiration of such 90-day period following adjournment; and

Whereas, the Legislature has determined that, beginning in 1980, it is necessary and appropriate to effectuate certain modifications in the manner in which spruce budworm spray projects and management programs are undertaken and financed; and

Whereas, in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore,

Be it enacted by the People of the State of Maine, as follows:

**Sec. 1.** 5 MRSA § 711, sub-§ 2, ¶ A, sub-¶ (3), divs. (f) and (g), as repealed and replaced by PL 1977, c. 874, § 6, are amended to read:

(f) Director, Bureau of Parks and Recreation; and

(g) Director, Bureau of Public Lands; and

**Sec. 2.** 5 MRSA § 711, sub-§ 2, ¶ A, sub-¶ (3), div. (h) is enacted to read:

(h) Forest Insect Manager, Bureau of Forestry.

**Sec. 3.** 12 MRSA § 8404, as enacted by PL 1979, c. 545, § 3, is repealed and the following enacted in its place:

### § 8404. Spruce Fir Forest Protection District

There is established a Spruce Fir Forest Protection District consisting of the following municipalities and townships:

**Aroostook County.** All municipalities and townships except the following: Caribou, Easton, Fort Fairfield, Fort Kent, Frenchville, Houlton, Limestone, Littleton, Madawaska, Mapleton, Mars Hill, New Limerick, New Sweden, Oakfield, Presque Isle, Washburn and Woodland;



**Franklin County.** The following municipalities and townships: Alder Stream, Chain of Ponds, Coburn Gore, Coplin Plantation, Dallas, Eustis, Jim Pond, Lang and Rangeley;

**Hancock County.** All municipalities and townships north and east of a line formed by the northern and eastern boundaries of the following municipalities and townships: Otis, Ellsworth, T.3,S.D., Hancock, Sullivan and T.7, S.D.; except the following: T.9, S.D.; and T.10, S.D.

**Penobscot County.** All municipalities and townships north of a line formed by the southern and western boundaries of the following municipalities: Bradley, Clifton, Milford, Argyle, Alton and Lagrange;

**Piscataquis County.** All municipalities and townships, except the following: Abbot, Atkinson, Dover-Foxcroft, Guilford, Kingsbury, Milo, Monson, Parkman, Sangerville, Sebec and Wellington;

**Somerset County.** All municipalities and townships north and east of a line formed by the southern and western boundaries of the following municipalities and townships: Mayfield, Moscow, Pleasant Ridge Plantation, Carrying Place, T.3, R.4, B.K.P., W.K.R. and Flagstaff, except for the following: T.5, R.6, B.K.P., W.K.R.; and

**Washington County:** All municipalities and townships, except the following: Addison, Beals, Cutler, Eastport, Harrington, Jonesport, Lubec, Machias, Machiasport, Milbridge, Roque Bluffs, Steuben and Trescott.

**Sec. 4.** 12 MRSA § 8405, sub-§§ 3, 4 and 5, as enacted by PL 1979, c. 545, § 3, are repealed and the following enacted in their place:

**3. Excise tax funds.** Persons owning parcels of forest land, including persons claiming timber and grass rights in public reserved lands, which are classified as forest land pursuant to Title 36, chapter 105, subchapter II-A, of more than 500 acres within the Spruce Fir Forest Protection District shall be subject to the pre-project and post-project excise taxes established under section 8406 on the privilege of owning and operating such parcels of forest land, except as provided in this subchapter. In cases of divided ownership of the forest land, the persons owning or claiming timber rights in such forest land shall be subject to such taxes. The Legislature hereby finds that it would not be administratively feasible to apply such taxes to smaller parcels of such forest land.

**4. Spray project special accounts.** Accounts shall be established in the following manner.

**A.** The Treasurer of State shall establish 2 dedicated revenue accounts as follows.

(1) Into one account shall be deposited any revenues received by the State from the Government of the United States for any spray project.

(2) Into the other account shall be deposited any revenues received by the State from the excise taxes authorized pursuant to this subchapter.

B. The moneys credited to these accounts shall be used by the Bureau of Forestry to pay any expenses, debts, accounts and lawful demands incurred in connection with spray projects authorized under this subchapter and the director shall authorize the State Controller to draw his warrant therefor at any time. Any remaining balance in these accounts shall continue from year to year as a fund available for the purposes set out in this subchapter and for no other purpose.

5. Borrowing from General Fund. To accomplish the purposes of this subchapter, the director may, subject to the approval of the Governor, borrow moneys from the General Fund for up to 120 days, at no interest, in order to enable the bureau to pay expenses, debts, accounts and lawful demands for any spray project authorized under this subchapter; provided, however, that the aggregate amount of that borrowing may not, at any time, exceed the amount of uncollected excise taxes authorized under this subchapter for such spray project.

Sec. 5. 12 MRSA § 8406, as enacted by PL 1979, c. 545, § 3, is repealed and the following enacted in its place:

§ 8406. Taxation

1. Pre-project excise tax. The pre-project excise tax on parcels of softwood forest land shall be \$1.45 per acre for 1980 and 1981. The pre-project excise tax on parcels of mixed-wood forest land shall be 72½¢ per acre for 1980 and 1981. The tax shall be assessed and billed by the State Tax Assessor within 30 days following the effective date of this section for 1980, and on or before April 1, 1981.

2. Post-project excise tax. The post-project excise tax on forest land shall be computed and assessed as follows.

A. The Director of the Bureau of Forestry shall determine the total amount of costs incurred or budgeted to be expended in connection with any spray project conducted during the 1980 and 1981 calendar years.

B. The amount computed in paragraph A for each of the years 1980 and 1981 shall be reduced by the amount of any moneys received for such project from the Government of the United States and from contract payments made for spraying services pursuant to section 8414, subsection 3.

C. 90% of the balance computed under paragraph B shall be raised by a post-project spray tax, the per acre rate of which shall be calculated by dividing the sum to be so raised by the number of acres, subject to excise taxation under this subchapter, which actually received spray treatment in 1980 and 1981.

D. 10% of the balance computed under paragraph B shall be raised by a post-project shared tax, applicable to all taxable acres in the district, the per acre rates of which shall be calculated in accordance with the following:

Each taxable acre in the district which is classified as mixed wood shall be taxed at half the rate applicable to each taxable acre in the district classified as softwood; and each such acre classified as hardwood is not subject to taxation under this paragraph.

E. The director shall certify in writing to the State Tax Assessor, by September 1st, the post-project shared tax rates for softwood and mixed-wood

acres and the post-project spray tax rate, together with the number of acres within each ownership which are subject to such taxes.

F. The amount of the post-project excise taxes payable by each landowner shall be reduced by the amount assessed upon that landowner on account of the pre-project excise tax payable for that calendar year.

G. The State Tax Assessor shall compute, assess and bill, by September 30th the amount of post-project excise taxes payable by each landowner in accordance with this section.

Notice of the amount owed by each landowner shall be sent to him or his agent at the address shown on the records of the State Tax Assessor or of the municipality in which the land is located. In the event that the amount so calculated results in a negative balance for any landowner, the State Tax Assessor shall refund to that landowner the amount of the balance in the form of a tax rebate. The rebate shall be made no later than February 28th of the year following the assessment date.

3. Due date. The pre-project excise tax is due June 30th of the year in which it is assessed. The post-project excise tax is due December 31st of the year in which it is assessed. Notice of the taxes shall be presumed complete upon mailing.

4. Interest and penalty. Any tax assessed under this subchapter which is not paid when due shall accrue interest at the rate of 1 1/2% for each month, or fraction thereof, that the tax remains unpaid and a penalty equal to 20% of the unpaid tax shall be added to the liability of any person who fails to pay a tax when due.

5. Lien. There shall be a tax lien on all land subject to taxation under this subchapter to secure the payment of all sums due hereunder, and the lien may be enforced in the manner provided by Title 36, sections 1282 and 1283.

6. Collection by Attorney General. Whenever any person fails to pay any tax, interest and penalty due under this subchapter within the time provided, the Attorney General shall enforce payment by civil action against the person from whom it is due for the amount of such tax, interest and penalty, together with costs, in either the Superior or District Court in Kennebec County or in the judicial division in which the person has a residence or established place of business.

Sec. 6. 12 MRSA § 8407-A is enacted to read:

§ 8407-A. Settlement corridors

1. Designation. All land within 2 miles of publicly-maintained roads in the Spruce Fir Forest Protection District shall be designated by the Director of the Bureau of Forestry as settlement corridors. That designation shall be made to the State Tax Assessor by August 1, 1980.

2. Insecticide spray treatment; exceptions. Land within settlement corridors may not receive insecticide spray treatment except under the following circumstances:

A. The landowner makes a written request for that treatment in accordance with schedules and procedures adopted by the director;

B. The request is accompanied by such information as the director may require and meets such criteria as the director may adopt in furtherance of the legislative policies of this subchapter; and

C. The request does not relate to land within a settlement corridor located in a municipality which has taken action to prohibit spray projects within that corridor pursuant to subsection 4.

3. Director's authority. The provision for settlement corridors under this section does not impair or affect the director's authority to define and carry out other policies and procedures, including, without limitation, the use of no-spray buffers, designed to protect the public health and the environment, as he deems necessary or appropriate.

4. Prohibition by municipalities. Any municipality within the Spruce Fir Forest Protection District may prohibit the execution of spray projects authorized under this subchapter within settlement corridors, as designated pursuant to this section, which lie within that municipality. Any such prohibition, or the repeal thereof, may be enacted in accordance with the procedures for enactment of municipal ordinances; provided that any such prohibition shall be enacted before April 15th of any calendar year in which it shall apply and that the municipality shall send a certified copy of its enactment to the director within 5 days following the adoption of the same.

5. Tax levy. No tax levied pursuant to section 8406 may be assessed on lands within settlement corridors for which the execution of spray projects has been prohibited by a municipality as provided in subsection 4.

Sec. 7. 12 MRSA § 8411, sub-§§ 9 and 10 are enacted to read:

9. Reimbursement to state agencies. Out of funds available for any spray project, the director, subject to the approval of the Governor, may reimburse other state agencies for costs incurred by them in connection with that spray project. Such cost may include, but shall not be limited to, those incurred for environmental and health monitoring and regulation. Any department or agency of State Government is authorized to accept funds which may be available for carrying out the purposes of this subchapter.

10. Removal of lands from the spray application. Upon application of a forest landowner received no later than April 1, 1980, for the 1980 spray project and December 31, 1980, for the 1981 spray project, the director shall withdraw lands of that owner from spray application. Those lands shall remain subject to the pre-project excise tax and to the post-project shared tax.

Sec. 8. 12 MRSA § 8415, as enacted by PL 1979, c. 545, § 3, is repealed.

Sec. 9. 12 MRSA § 8417, as enacted by PL 1979, c. 545, § 3, is repealed and the following enacted in its place:

§ 8417. Research

The Bureau of Forestry, acting through its director, may make grants of funds and enter into contracts for purposes of research related to forest management strategies, insecticide and spray application technologies, integrated pest management techniques, forest product marketing and utilization and other

issues pertinent to the purposes of this subchapter. This research shall be funded out of moneys available to the director for that purpose.

Sec. 10. 12 MRSA § 8417-A is enacted to read:

§ 8417-A. Technical programs

1. Implementation. The Bureau of Forestry shall undertake to develop and implement budworm management technical assistance programs for small wood lot owners.

2. Analysis of future supply and demand. The Bureau of Forestry shall conduct or cause to be conducted an analysis of future supply and demand for the spruce and fir resources of the State. The purpose of this analysis shall be to determine the types and levels of future spruce budworm protection needs and strategies for such spruce and fir resources.

3. Environmental health monitoring. The Bureau of Forestry shall cause to be conducted by an agency other than the Department of Conservation an environmental health monitoring program each year in which a spray project is conducted. The Bureau of Forestry shall prepare and submit an annual report to the Legislature dealing with all aspects of the environmental health monitoring conducted during the previous calendar year.

Sec. 11. 12 MRSA § 8419 is enacted to read:

§ 8419. Review

Chapter 803, subchapter IV, which pertains to establishment, description and participation in the Spruce Fir Forest Protection District, shall be reviewed by the Joint Standing Committee on Appropriations and Financial Affairs during the First Regular Session of the 110th Legislature.

Sec. 11-A. 12 MRSA § 8420 is enacted to read:

§ 8420. Repeal

This subchapter is repealed on October 1, 1981.

Sec. 12. 12 MRSA c. 803, subchapter IV-A is enacted to read:

SUBCHAPTER IV-A

MAINE SPRUCE BUDWORM MANAGEMENT ACT

§ 8421. Short title

This subchapter shall be known and may be cited as the "Maine Spruce Budworm Management Act."

§ 8422. Legislative policy

The Legislature declares that it shall be the policy of the State to undertake a spruce budworm management program to minimize the short-term and long-term impacts of spruce budworm insect infestations upon the state's spruce and fir forests in accordance with the following policy objectives:

1. Supply of wood. The protection of an adequate present and future supply of wood to support the long-term economic needs of the State and of its forest products industries;

2. Development of program. The development and utilization in both the public and private sectors of forest protection and management programs which are cost-effective, biologically sound and responsive to the environmental and health concerns of the public;

3. Reduction in use of insecticides. The reduction in reliance upon the use of chemical insecticides in spruce budworm suppression programs;

4. Private efforts; pest management. The encouragement of private efforts to undertake a variety of integrated pest management techniques which result in a long-term reduction in the susceptibility of the state's forests to spruce budworm infestation and loss;

5. Implementation. The implementation of equitable methods for determining private and public participation in, and financing of, spruce budworm suppression and prevention programs, including provision for voluntary participation in future insecticide spray projects;

6. Regulatory review. The provision for adequate regulatory review of insecticide spray projects by an independent state agency; and

7. Assistance programs. The provision of management and utilization assistance programs for small forest landowners designed to minimize impacts of spruce budworm infestation and loss.

#### § 8423. Definitions

As used in this subchapter, the following terms have the following meanings.

1. Commissioner. "Commissioner" means the Commissioner of Conservation.

2. Director. "Director" means the Director of the Bureau of Forestry.

3. Designated spray area. "Designated spray area" means that land area designated by the director, pursuant to section 8424, subsection 4, for inclusion within a spray project.

4. Forest land owners. "Forest land owners" means persons who own forest lands, including, without limitation, persons owning or claiming timber and grass rights in public reserved lands located within that district.

5. Management program. "Management program" means all activities undertaken by the Bureau of Forestry in connection with the short-term and long-term suppression, control and prevention of spruce budworm infestations, including, without limitation, any activities undertaken in connection with spray projects, spruce budworm survey and detection activities, silvicultural, marketing and integrated pest management programs, research and related activities.

6. Person. "Person" means any individual, partnership, joint venture, corporation or other legal entity, or any group of persons which acts as a tenancy

in common or joint tenancy for ownership purposes, and includes any government or any agency, bureau or commission thereof.

7. Rebate. "Rebate" means a payment by the State back to a person subject to taxation pursuant to this subchapter.

8. Rule. "Rule" means a duly-adopted regulation of general applicability promulgated by the Bureau of Forestry. Such rules shall have the force and effect of law.

9. Spray program area. "Spray program area" means all that forest land for which applications have been made and approved by the director pursuant to section 8424, subsections 2 and 3, except as removed pursuant to section 8425, subsection 2.

10. Spray project. "Spray project" means all activities undertaken or caused to be undertaken by the Bureau of Forestry in connection with the application of insecticides or other materials against spruce budworm insects within a single year.

11. Spruce budworm. "Spruce budworm" means the insect of the species known as *Choristoneura fumiferana*, Clem., at any stage of its biological development.

#### § 8424. Program planning

1. General authority. In accordance with the provisions of this subchapter, the Bureau of Forestry, acting under the supervision of the director, shall be empowered to plan for and undertake activities related to spray projects and management programs on behalf of the State.

2. Application for spray project eligibility. Forest land owners may apply to the director prior to December 1st of any year to be eligible to participate in the spray project for the following year. The application shall show:

- A. The name and address of the applicant and its agent, if any;
- B. The number and location on maps prescribed by the director of the acres of forest land for which application is being made;
- C. The location on maps prescribed by the director of the timber types, timber ages and proportions of spruce, fir and non-host species within such forest land;
- D. The location on maps of private and public road access to such forest land;
- E. The location on maps of all residences within that forest land;
- F. A 5-year cutting plan for such forest land showing plans for timber cutting, road construction and other planned land utilizations; and
- G. Any other information pertinent to the description, utilization and management of such forest land as the director may require for purposes of spray project and management program planning.

The date for submission of the information required under subsection 2,

paragraph C, may be extended by the director upon a showing that such information is not then available.

Cutting plans accompanying the application may be utilized by the Bureau of Forestry for planning purposes, and may be shared with other government agencies, but shall not constitute records available for public inspection or disclosure pursuant to Title 1, section 408.

For excise tax purposes, such application must designate one person who shall be billed and notified of any lien recorded under this subchapter. When a tax bill or notice of lien is sent to this person, it shall constitute notice to all other landowners listed on the application. Each forest landowner shall be jointly and severally liable for any tax, penalty or interest imposed under this subchapter.

3. Effect of application. The director shall accept, not later than December 1st of each year, any application which to his satisfaction meets the requirements of this section and any additional criteria which the director may impose by regulation in furtherance of the legislative policies of this subchapter. By December 31st, the director shall certify in writing to the State Tax Assessor the complete list of all participants in the program. The list shall include the names of the forest landowners, the names and addresses of the persons designated to be billed and served with notices of liens, particularized descriptions of the real estate included in the spray program area and statements of the acreage included in each parcel. If a change in ownership occurs after December 31st, the director shall inform the State Tax Assessor not later than the following September 1st.

Upon the director's acceptance of any such application, the forest land involved shall be eligible for inclusion within the spray project, and shall be subject to taxation pursuant to section 8427, regardless of any change in ownership of that forest land.

4. Spray project designation. Spray projects shall be designated in the following manner.

A. The director, acting in accordance with this subchapter, shall have ultimate and final discretion to determine, and from time to time modify, the location, type and manner of any spray project within the spray program area, subject to such regulatory review and approval by other state and federal agencies as is provided by law. The director shall make these determinations based upon evidence of the extent of budworm hazard to forest lands within the spray program area, forest stand composition, wood supply needs, buffer policies, opportunities for silvicultural and other management alternatives, the cost-effectiveness and biological soundness of spray treatment for particular forest lands, the recommendations of affected forest land owners and the public, environmental and public health concerns and such other factors as the director may deem to be in furtherance of the legislative policies of this subchapter.

B. The director shall, not later than December 15th of each year, make a preliminary determination of the forest lands within the spray program area to which he tentatively deems it necessary and appropriate to apply chemical or biological spray treatment in the following year. Within 15 days following such preliminary determination, the director shall furnish and make available to the affected forest land owners and to the public maps showing the forest lands



preliminarily so designated. Notice of the preliminary designation shall be published in the state paper and such other newspapers as the director deems appropriate. The notice shall indicate where spray area maps will be available for inspection and where further information may be obtained, and shall provide information concerning withdrawal procedures.

C. Any forest land within the spray program area may be withdrawn from any annual spray project provided that a written request, adequately specifying on maps prescribed by the director the location of the acres to be withdrawn, is submitted by the forest land owner to the director no later than February 1st of the calendar year of the spray project involved. The director may at his discretion receive and act upon later-submitted requests for withdrawal.

5. General conditions for applications and requests. In addition to any other requirements for applications for spray project eligibility or for spray treatment and requests for withdrawal established under this subchapter, such applications and requests shall conform with the following requirements.

A. They shall be accompanied by maps, depicting the forest land involved, of the same size and scale as those accepted by the State Tax Assessor in the administration of the Tree Growth Tax Law.

B. They shall include a statement of ownership rights in the forest lands involved.

C. Subject to the provisions of paragraph D, they shall include written authorization from each owner of, or claimant to, an interest in the forest land involved, other than owners of easements and mortgages.

D. In the case of applications or requests affecting parcels of forest land held in common and undivided or joint ownership, a controlling or majority interest in the parcel shall have the power to make applications and requests under this subchapter and such applications and requests, as well as the decisions of the director thereon, shall be binding on all owners of interests in those lands.

E. Within 30 days following the transfer of any interest, other than an easement or mortgage, in any forest lands which are part of the spray program area, written notice of the transfer shall be sent to the director.

6. Settlement corridors. Settlement corridors are subject to the following provisions.

A. All land within 2 miles of publicly maintained roads shall be designated by the director as settlement corridors.

B. Land within settlement corridors shall not receive insecticide spray treatment except under the following circumstances:

(1) The land is in the spray program area;

(2) The landowner makes a written request for the treatment not later than January 15th in the calendar year of the spray project involved;

(3) The request is accompanied by such information as the director may require and meets such criteria as the director may adopt in furtherance of the legislative policies of this subchapter; and

(4) The request does not relate to land within a settlement corridor located in a municipality which has taken action to prohibit spray projects within that corridor pursuant to section 8425, subsection 2.

C. The provision for settlement corridors under this section does not impair or affect the director's authority to define and carry out other policies and procedures, including, without limitation, the use of no-spray buffers, designed to protect the public health and the environment, as he deems necessary or appropriate.

7. Technical assistance programs. The Bureau of Forestry shall undertake to develop and implement budworm management technical assistance programs for small wood lot owners.

8. Supply-demand analysis. The Bureau of Forestry shall conduct or cause to be conducted an analysis of future supply and demand for the spruce and fir resources of the State. The purpose of such analysis shall be to determine the types and levels of future spruce budworm protection needs and strategies for such spruce and fir resources.

9. Environmental health monitoring. The Bureau of Forestry shall cause to be conducted by an agency other than the Department of Conservation an environmental health monitoring program each year in which a spray project is conducted. The Bureau of Forestry shall prepare and submit an annual report to the Legislature dealing with all aspects of the environmental health monitoring conducted during the previous calendar year.

#### § 8425. Regulatory Jurisdiction

1. General rule. The Bureau of Forestry, in undertaking any spray project, shall apply for and obtain any permits and approvals of the Maine Pesticide Control Board and the Maine Department of Agriculture, as required by the laws administered by those agencies. Except as provided in this section, spray projects may be conducted without adherence to the laws administered by other state agencies or by any municipal, county or other local government body.

2. Municipal action. Any municipality may prohibit the execution of spray projects within settlement corridors, as designated pursuant to section 8424, subsection 6, which lie within the municipality. Any such prohibition, or the repeal thereof, may be enacted in accordance with the procedures for enactment of municipal ordinances; provided that any such prohibition shall be enacted before April 1st of any calendar year in which it shall apply and that the municipality shall send a certified copy of its enactment to the director within 10 days following the adoption of the same. Settlement corridors within which spray projects have been prohibited pursuant to this subsection shall thereupon be removed by the director from the spray program area.

#### § 8426. Funding

1. Recommendation of the director. On or before January 1st of each year, the director shall report in writing to the Bureau of the Budget and to the Legislature his estimate of the costs of implementation of any spray project proposed for that calendar year.

2. Authorization by Legislature. Following the recommendation made in

accordance with subsection 1, the Legislature shall determine, not later than February 15th the amount, if any, authorized for expenditure for any spray project in that calendar year and shall determine the pre-project excise tax rate, applicable to all acres within the spray program area, necessary to finance the full amount so authorized. That excise tax shall be assessed and collected in accordance with section 8427, subsection 2.

3. Spray project special accounts. Special accounts shall be established in the following manner.

A. The Treasurer of State shall establish 2 dedicated revenue accounts as follows.

(1) Into one account shall be deposited any revenues received by the State from the Government of the United States for any spray project.

(2) Into the other account shall be deposited any revenues received by the State from the excise taxes authorized pursuant to this subchapter.

B. The moneys credited to such accounts shall be used by the Bureau of Forestry to pay any expenses, debts, accounts and lawful demands incurred in connection with spray projects authorized under this subchapter, and the director shall authorize the State Controller to draw his warrant therefor at any time. Any remaining balance in these accounts shall continue from year to year as a fund available for the purposes set out in this subchapter and for no other purpose.

4. Borrowing from General Fund. To accomplish the purpose of this subchapter, the director, subject to the approval of the Governor, may borrow moneys from the General Fund for up to 120 days, at no interest, in order to enable the bureau to pay expenses, debts, accounts and lawful demands for any spray project authorized under subsection 2; provided that the aggregate amount of such borrowing may at no time exceed the amount of uncollected excise taxes authorized under this subchapter for that spray project.

#### § 8427. Taxation

1. Generally. Forest land owners within the spray program area shall be subject to the excise taxes authorized under this section for the privilege of owning such lands and of receiving the benefits of spray project eligibility. In cases of divided ownership of such lands, the persons owning or claiming timber rights shall be subject to such taxes.

2. Pre-project excise tax. Forest land owners within the spray program area shall be subject to the pre-project excise tax at the rate established by the Legislature pursuant to section 8426, subsection 2. The tax shall be assessed and billed by the State Tax Assessor within 30 days following that legislative authorization.

3. Post-project excise tax. The post-project excise tax for all land owners within the spray program area shall be computed and assessed as follows.

A. The director shall determine the total amount of costs incurred or budgeted to be expended in connection with any spray project conducted during the then current calendar year.

B. The amount computed in paragraph A shall be reduced by the amount of any moneys received for that project from the Government of the United States.

C. The amount computed under paragraph B shall be divided by the number of acres which actually received spray treatment, as determined by the director, and that per acre allocation shall constitute the post-project spray tax rate.

D. By September 1st of each year, the director shall certify in writing to the State Tax Assessor the post-project spray tax rate, together with the number of acres within each ownership which actually received spray treatment.

E. The State Tax Assessor shall compute, assess and bill, by November 1st of each year, the amount of post-project excise taxes payable by each landowner within the spray program area, based upon:

(1) The product of the number of acres owned which actually received spray treatment times the post-project spray tax rate; less

(2) The amount assessed upon that owner on account of the pre-project excise tax for that calendar year.

In the event that the sum so calculated results in a negative balance for any landowner, the State Tax Assessor shall credit the amount of that balance against the next pre-project excise tax owed by that landowner; provided that if the landowner's participation in the program ceases, he shall receive the amount of that balance in the form of a rebate.

4. Due date. The pre-project excise tax is due April 30th of the year in which it is assessed. The post-project excise tax is due December 15th of the year in which it is assessed. Notice of the amount of any tax due under this subchapter shall be presumed complete upon mailing of a bill therefor.

5. Interest and penalty. Any tax assessed under this subchapter which is not paid when due shall accrue interest at the rate of 1 1/2% for each month, of fraction thereof, that the tax remains unpaid; and a penalty equal to 20% of the unpaid tax shall be added to the liability of any person who fails to pay a tax when due.

6. Tax Lien. There shall be a tax lien to secure the payment of all taxes, penalties and interest assessed under this subchapter. The lien shall attach to all real estate described in any application made under section 8424, subsection 2, and shall take precedence over all other claims on that real estate and shall continue in force until the taxes, penalties and interest are paid or until the lien is otherwise terminated.

For purposes of lien foreclosure, unpaid taxes assessed under this subchapter shall be delinquent on the date due. Thereafter, the State Tax Assessor may record, in the registry of deeds of the county or registry district where that real estate lies, a certificate signed by the State Tax Assessor setting forth the name of the person designated in section 8424, subsection 2, the amount of unpaid taxes, penalties and interest and a description of the real estate subject to the lien. Not later than one week after recording the lien, the State Tax Assessor shall notify the person designated in section 8424, subsection 2, that a lien has been recorded. If the full amount of the tax, penalty and interest is not paid within 6 months of the

recording, the lien shall be foreclosed. Upon foreclosure, the State shall become fee simple owner of the real estate free of all encumbrances. That real estate shall be inventoried as provided in Title 36, section 1283.

7. Review of assessments, supplemental assessments. Any forest landowner aggrieved by an assessment made under this subchapter may petition the State Tax Assessor for reconsideration, pursuant to Title 36, section 151, provided that the petition is filed within 45 days of the date of assessment. If justice requires, the State Tax Assessor may, with the approval of the Governor, abate, within 3 years from the date of assessment, all or part of any tax assessed under this subchapter by the State Tax Assessor.

Within 3 years of an assessment made under this subchapter, the State Tax Assessor may make a supplemental assessment if he finds that any previous assessment is imperfect or incomplete in any material aspect. An assessment may be made at any time with respect to a time period for which a fraudulent application has been filed.

The State Tax Assessor may require the assistance of the director in the performance of his duties under this subsection. The director shall recommend to the State Tax Assessor an appropriate disposition of any matter brought under this subsection. That recommendation shall be made within 15 days of the request and shall be in writing.

8. Collection by Attorney General. Whenever any person fails to pay any tax, interest and penalty due under this subchapter within the time provided, the Attorney General shall enforce payment by civil action against the person from whom it is due for the amount of the tax, interest and penalty, together with costs, in either the Superior or District Court in Kennebec County or in the judicial division in which that person has a residence or established place of business.

§ 8428. Duties and authority of the Director of the Bureau of Forestry

1. General. The director shall supervise and coordinate the activities of bureau personnel in connection with all management programs.

2. Rules. From time to time the director may adopt and amend rules for the implementation of this subchapter. The rules shall be adopted in accordance with the procedures set forth in Title 5, chapter 375, subchapter II.

3. Applications. The director shall consider applications and requests made pursuant to section 8424, and shall grant conditionally or deny any such applications or requests.

4. Declaration of termination of spray projects. Upon receipt of information satisfactory to him to the effect that future spray projects will not be beneficial, cost-effective or otherwise in furtherance of the legislative policies of this subchapter, the director shall report the same to the Commissioner of Conservation and to the Governor and shall recommend to the Legislature that this subchapter be repealed or amended as appropriate.

5. Entry and inspection of lands. The director or his representatives may enter, upon reasonable advance notice to the landowner, at any reasonable time and in a reasonable manner, any tract of land for which application pursuant to section 8424, subsection 2, has been made in order to inspect the same free of any charge or cost imposed by the owner or his agents.

6. Inspection of records. The director or his representatives may likewise inspect the books and records of any applicant under section 8424, subsection 2, with respect to any information submitted in connection with that application. He also may require periodic progress reports from such persons in connection with any such information.

7. Contractual authority. The director, with the approval of the commissioner, shall have the authority to enter into contracts for the acquisition of insecticides, aircraft, personnel and other goods and services necessary or appropriate for management programs and for other purposes related to this subchapter.

8. Reimbursement to state agencies. Out of funds available for any spray project, the director, subject to the approval of the Governor, may reimburse other state agencies for costs incurred by them in connection with such spray project. Such costs may include, but shall not be limited to, those incurred for environmental and health monitoring and regulation. Any department or agency of State Government is authorized to accept funds which may be available for carrying out the purposes of this subchapter.

§ 8429. Forest insect manager

1. Position created. There is established within the Bureau of Forestry the position of Forest Insect Manager, which shall be funded by the General Fund. This position is not subject to the Personnel Law. The manager shall be appointed by the director with the approval of the Commissioner of Conservation and may be removed by the director with the approval of the commissioner. The manager shall be directly responsible for the development, coordination and implementation of management programs.

2. Cooperation. The manager shall consult and cooperate with the United States Forest Service, other agencies of the United States and of any state, the federal government of Canada, the governments of any provinces of Canada and public and private landowners in Maine in developing and undertaking joint management program activities.

3. Report. The manager shall, at the end of each calendar year, undertake a complete financial review of any management program activities undertaken that year and shall make a full report thereon to the next session of the Legislature. The report shall include, but not be limited to, sources of funding, private, state or federal and total expenditures broken down in the following categories: insecticides, aircraft, monitoring, research and other appropriate categories. Also to be included shall be a statement of any remaining balance by source, private, state or federal.

4. Permit applications. The manager shall be responsible for processing all applications for regulatory permits and approvals for spray project operations as required by this subchapter.

§ 8430. Research

1. Authority. The Bureau of Forestry, acting through its director, with the approval of the commissioner, may make grants of funds and enter into contracts for purposes of research related to forest management strategies, insecticide and spray application technologies, integrated pest management techniques, forest

product marketing and utilization and other issues pertinent to the purposes of this subchapter. This research may be funded with other than excise tax moneys, provided that the cost of environmental and health monitoring of spray projects shall be part of annual spray project costs and not paid out of General Fund moneys.

2. Research on public lands. The commissioner, director or other chief executive officer of any state agency having jurisdiction over any public land may make that land available on such terms and conditions as he deems reasonable to any public or private nonprofit entity engaged in spruce budworm control research and related silvicultural control research. The Forest Insect Manager shall likewise encourage private landowners within the State to make their lands available for the same purposes.

Sec. 13. PL 1979, c. 164, Pt. B, that part relating to spruce budworm control under the caption "DEPARTMENT OF CONSERVATION" is repealed and the following enacted in its place:

0234 Spruce Budworm Control....2-595	1979-80	
Unallocated	1,192,481	_____

Sec. 14. PL 1979, c. 164, Pt. D, § 2, is repealed.

Sec. 15. Appropriation. The following funds are appropriated from the General Fund to carry out the purposes of this Act. Any unexpended balance of this appropriation and funds previously appropriated for this purpose do not lapse, but shall remain a continuing carrying account for these purposes. The breakdown shall be as follows:

	1979-80	1980-81
NATURAL RESOURCES		
DEPARTMENT OF CONSERVATION		
0234 Spruce Budworm Control		
Positions	(1)	(9)
Personal Services	\$10,000	\$165,161
All Other	147,248	123,839
Capital Expenditures		36,000
	_____	_____
Total	\$157,248	\$325,000

Emergency clause. In view of the emergency cited in the preamble, this Act shall take effect when approved, except that sections 1, 2, 11-A and 12 shall take effect on October 1, 1981, provided that the tax lien for closure, collection and enforcement provisions applicable to any tax levied under the Revised Statutes, Title 12, chapter 803, subchapter IV, shall continue in effect as to any such tax.

IN HOUSE OF REPRESENTATIVES, ..... 1980

Read twice and passed to be enacted.

.....**Speaker**

---

IN SENATE, .....1980

Read twice and passed to be enacted.

.....**President**

---

Approved..... 1980

.....**Governor**





APPENDIX B

SUBCHAPTER IV SPRUCE BUDWORM SUPPRESSION ACT

Section 8401. Short title

The subchapter shall be known and may be cited as the "Maine Spruce Budworm Suppression Act."

Section 8402. Legislative policy

The Legislature declares that it shall be the policy of the State to undertake reasonable measures to control and suppress infestations of spruce budworm insects in the spruce and fir forests of the State during the years 1976-1981, including such measures as the minimization and equitable distribution of the burden of losses attributable to budworm infestation, the maintenance of wood resources sufficient to permit the forest products industries of the State to operate as near to full production capacity as would be possible but for the existence of the budworm infestation; accomplishment of the maximum sustained yield harvest possible; utilization of the most cost-effective methods of budworm protection and control; and as the financing of the state share of suppression and control measures by the General Fund of the State of an extent commensurate with the public benefit accruing from a suppression and control program and by excise taxes on the privilege of owning and operating such forest land for the services of protection rendered to the forest lands to an extent commensurate with the benefits accruing to the owners of the lands from such a program.

Section 8403. Definitions

For the purposes of this subchapter, unless the context otherwise indicates, the following words shall have the following meanings.

1. Contiguous. "Contiguous" means in actual contact. Contiguous parcels of land are those which share a common boundary whether acquired by one or more deeds. Roads, streams and natural features shall not be deemed to interrupt a boundary which would otherwise be common.

2. Forest land. "Forest land" means land in contiguous parcels which are subject to mandatory taxation pursuant to Title 36, chapter 105, subchapter II-A.

3. Hardwood. "Hardwood" means forest land on which maple, beech, birch, oak, elm, basswood, poplar and ash, singly or in combination, comprise 75% or more of the stocking.

4. Mixed wood. "Mixed wood" means forest land on which neither hardwood or softwood comprise 75% of the stand but are a combination of both.

5. New market. "New market" means a wood-processing plant which did not utilize budworm infested or damaged wood on or before January 1, 1976 or the physical expansion of an existing wood processing plant, which expansion did not utilize budworm infested

or damaged wood on or before January 1, 1976. The volume of spruce and fir used by an expanded wood processing plant in any one year shall have subtracted from the volume the average annual volume of spruce and fir utilized by that plant during the calendar years 1973-1975 to determine the volume which represents a new market.

6. Nonfederal share per acre. "Nonfederal share per acre" means the total amount of money raised from General Fund appropriations and excise tax revenues provided for the suppression and control of spruce budworm divided by the number of acres within the designated spray area.

7. Person. "Person" means any individual, partnership, joint venture, corporation or other legal entity, or any group of persons which acts as a tenancy in common or joint tenancy, for ownership purposes, except any government or any agency, bureau or commission thereof.

8. Rebate. "Rebate" means a payment by the State back to a person subject to taxation pursuant to this subchapter.

9. Rule. "Rule" means a duly adopted regulation of the Bureau of Forestry of general applicability. Such rules shall have the force and effect of law.

10. Sawlog. "Sawlog" means a log suitable in size and quality for producing one or more of the following products: Veneer, sawn boards and sawn timber.

11. Softwood. "Softwood" means forest land on which pine, spruce, fir, hemlock, cedar and larch, singly or in combination, comprise 75% or more of the stocking.

12. Spray project. "Spray project" means all operations connected with the application of insecticides or other materials against spruce budworms or bud moths within a single year.

13. Spruce budworm. "Spruce budworm" means the insect of the species known as choristoneura fumiferana, Clem., at any stage of its biological development.

14. Wood Classification. "Wood classification" means the typing of forest land into the categories of hardwood, mixed wood and softwood.

#### Section 8404. Spruce Fir Forest Protection District

There is established a Spruce Fir Forest Protection District consisting of the following municipalities and townships:

Aroostook County. All municipalities and townships except the following: Caribou, Easton, Fort Fairfield, Fort Kent, Frenchville, Houlton, Limestone, Littleton, Madawaska, Mapleton, Mars Hill, New Limerick, New Sweden, Oakfield, Presque Isle, Washburn and Woodland;

Franklin County. The following municipalities and townships: Alder Stream, Chain of Ponds, Coburn Gore, Coplin Plantation, Dallas, Eustis, Jim Pond, Lang and Rangeley;

Hancock County. All municipalities and townships north and east of a line formed by the northern and eastern boundaries of the following municipalities and townships: Otis, Ellsworth, T.8,S.D., Hancock, Sullivan and T.7,S.D.; except the following: T.9,S.D.; and T.10,S.D.

Penobscot County. All municipalities and townships north of a line formed by the southern and western boundaries of the following municipalities: Bradley, Clifton, Milford, Argyle, Alton and Lagrange;

Piscataquis County. All municipalities and townships, except the following: Abbot, Atkinson, Dover-Foxcroft, Guilford, Kingsbury, Milo, Monson, Parkman, Sangerville, Sebec and Wellington;

Somerset County. All municipalities and townships north and east of a line formed by the southern and western boundaries of the following municipalities and townships: Mayfield, Moscow, Pleasant Ridge Plantation, Carrying Place, T.3,R.4, B.K.P., W.K.R. and Flagstaff, except for the following: T.5,R.6, B.K.P., W.K.R.; and

Washington County. All municipalities and townships, except the following: Addison, Beals, Cutler, Eastprot, Harrington, Jonesport, Lubec, Machias, Machiasport, Milbridge, Roque Bluffs, Steuben and Trescott.

#### Section 8405. Funding

1. Advance budget planning. The Director of the Bureau of Forestry shall annually, prior to January 1st of each of the years 1977-1981, certify to the Bureau of the Budget his estimate of the cost, if any, of the nonfederal share for the implementation of this Part for the calendar year following that legislative session. The Bureau of the Budget shall include this recommended amount in the Part I budget. The Legislature shall annually, in its Part I budget, determine the amount, if any, which shall be expended for this program and the manner in which the amount shall be funded. The determination shall authorize the budworm suppression program provided for by this subchapter for such calendar year and shall supersede any requirements which may exist for the approval of this program by any other state agency. In the event that the director subsequently determines that the amount necessary to conduct the activities authorized by this subchapter in any calendar year exceeds the amount appropriated in the Part I budget, he shall inform the Bureau of the Budget and it shall certify the additional amount necessary. Any such additional amount shall become a part of the Part II budget, subject to increase, reduction or approval by the Legislature.

2. General Fund. On or before January 1, 1977, and on January 1st for the 4 years thereafter, the Commissioner of Conservation shall report in writing to the Legislature, recommendations of the department as to the percentage of the cost of the annual program for the control and suppression of spruce budworm which the Department of Conservation recommends to be paid out of the General Fund and the percentage from excise or other tax funds during 1977 and 1978 in the first instance and thereafter for the calendar year following the legislative session, the percentages to be based upon the benefits to the State and to private landowners, respectively. Prior to making the recommendations, the commissioner shall hold a public hearing to provide opportunity for public comment on these matters. Money appropriated from the General fund for these purposes shall be paid into the budworm suppression Fund hereinafter established.

3. Excise tax funds. Persons owning parcels of forest land, including persons claiming timber and grass rights in public reserved lands, which are classified as forest land pursuant to Title 36, chapter 105, subchapter II-A, of more than 500 acres within the Spruce Fir Forest Protection District shall be subject to the pre-project and post-project excise taxes established under section 8406 on the privilege of owning and operating such parcels of forest land, except as provided in this subchapter. In cases of divided ownership of the forest land, the persons owning or claiming timber rights in such forest land shall be subject to such taxes. The Legislature hereby finds that it would not be administratively feasible to apply such taxes to smaller parcels of such forest land.

4. Spray project special accounts. Accounts shall be established in the following manner.

A. The Treasurer of State shall establish 2 dedicated revenue accounts as follows.

(1) Into one account shall be deposited any revenues received by the State from the Government of the United States for any spray project.

(2) Into the other account shall be deposited any revenues received by the State from the excise taxes authorized pursuant to this subchapter.

B. The moneys credited to these accounts shall be used by the Bureau of Forestry to pay any expenses, debts, accounts and lawful demands incurred in connection with spray projects authorized under this subchapter and the director shall authorize the State Controller to draw his warrant therefor at any time. Any remaining balance in these accounts shall continue from year to year as a fund available for the purposes set out in this subchapter and for no other purposes.

5. Borrowing from General Fund. To accomplish the purposes of this subchapter, the director may, subject to the approval of the Governor, borrow moneys from the General Fund for up to 120 days, at no interest, in order to enable the bureau to pay expenses, debts, accounts and lawful demands for any spray project authorized under this subchapter; provided, however, that the aggregate amount of that borrowing may not, at any time, exceed the amount of uncollected excise taxes authorized under this subchapter for such spray project.

#### Section 8406. Taxation

1. Pre-project excise tax. The pre-project excise tax on parcels of softwood forest land shall be \$1.45 per acre for 1980 and 1981. The pre-project excise tax on parcels of mixed-wood forest land shall be 72½¢ per acre for 1980 and 1981. The tax shall be assessed and billed by the State Tax Assessor within 30 days following the effective date of this section for 1980, and on or before April 1, 1981.

2. Post-project excise tax. The post-project excise tax on forest land shall be computed and assessed as follows.

A. The Director of the Bureau of Forestry shall determine the total amount of costs incurred or budgeted to be expended in connection with any spray project conducted during the 1980 and 1981 calendar years.

B. The amount computed in paragraph A for each of the years 1980 and 1981 shall be reduced by the amount of any moneys received for such project from the Government of the United States and from contract payments made for spraying services pursuant to section 8414, subsection 3.

C. 90% of the balance computed under paragraph B shall be raised by a post-project spray tax, the per acre rate of which shall be calculated by dividing the sum to be so raised by the number of acres, subject to excise taxation under this subchapter, which actually received spray treatment in 1980 and 1981.

D. 10% of the balance computed under paragraph B shall be raised by a post-project shared tax, applicable to all taxable acres in the district, the per acre rates of which shall be calculated in accordance with the following:

Each taxable acre in the district which is classified as mixed wood shall be taxed at half the rate applicable to each taxable acre in the district classified as softwood; and each such acre classified as hardwood is not subject to taxation under this paragraph.

E. The director shall certify in writing to the State Tax Assessor, by September 1st, the post-project shared tax rates for softwood and mixed-wood acres and the post-project spray tax rate, together with the number of acres within each ownership which are subject to such taxes.

F. The amount of the post-project excise taxes payable by each landowner shall be reduced by the amount assessed upon that landowner on account of the pre-project excise tax payable for that calendar year.

G. The State Tax Assessor shall compute, assess and bill, by September 30th the amount of post-project excise taxes payable by each landowner in accordance with this section.

Notice of the amount owed by each landowner shall be sent to him or his agent at the address shown on the records of the State Tax Assessor or of the municipality in which the land is located. In the event that the amount so calculated results in a negative balance for any landowner, the State Tax Assessor shall refund to that landowner the amount of the balance in the form of a tax rebate. The rebate shall be made no later than February 28th of the year following the assessment date.

3. Due date. The pre-project excise tax is due June 30th of the year in which it is assessed. The post-project excise tax is due December 31st of the year in which it is assessed. Notice of the taxes shall be presumed complete upon mailing.

4. Interest and penalty. Any tax assessed under this subchapter which is not paid when due shall accrue interest at the rate of  $1\frac{1}{2}\%$  for each month, or fraction thereof, that the tax remains unpaid and a penalty equal to 20% of the unpaid tax shall be added to the liability of any person who fails to pay a tax when due.

5. Lien. There shall be a tax lien on all land subject to taxation under this subchapter to secure the payment of all sums due hereunder, and the lien may be enforced in the manner provided by Title 36, sections 1282 and 1283.

6. Collection by Attorney General. Whenever any person fails to pay any tax, interest and penalty due under this subchapter within the time provided, the Attorney General shall enforce payment by civil action against the person from whom it is due for the amount of such tax, interest and penalty, together with costs, in either the Superior or District Court in Kennebec County or in the judicial division in which the person has a residence or established place of business.

#### Section 8407. Designated spray areas

1. Designation. The director shall, not later than October 15th of each year, designate the areas of the State upon which it is, in his judgment, necessary to apply chemical, biological or other material in order to suppress and control spruce budworm infestations. The designations made by the director shall be on the basis of data compiled for the Bureau of Forestry including, but not limited to, egg mass counts, evidence of defoliation, tree vigor, timber cruises, photography and similar information. The director shall provide forest land owners in the Spruce Fir Protection District with an opportunity to submit their recommendations and any information in support thereof with respect to what areas should be designated.

The director shall annually prepare maps showing the areas designated for spraying by him in the following year by the dates first stated in this section and shall report in writing the number of acres in each township designated for spraying.

2. Notice. Within 10 days of the preparation of the maps and reports required by subsection 1, the director shall cause to be published in the state paper and such other newspapers as he deems appropriate, notice of the designation of the spray areas pursuant to this section. The notice shall state that the designation is complete, shall indicate locations where area maps will be available for inspection and where further information may be obtained, and shall provide information concerning withdrawal procedures pursuant to sections 8408 to 8409.

#### Section 8407-A. Settlement corridors

1. Designation. All land within 2 miles of publicly-maintained roads in the Spruce Fir Forest Protection District shall be designated by the Director of the Bureau of Forestry as settlement corridors. That designation shall be made to the State Tax Assessor by August 1, 1980.

2. Insecticide spray treatment; exceptions. Land within settlement corridors may not receive insecticide spray treatment except under the following circumstances:

A. The landowner makes a written request for that treatment in accordance with schedules and procedures adopted by the director;

B. The request is accompanied by such information as the director may require and meets criteria as the director may adopt in furtherance of the legislative policies of this subchapter; and

C. The request does not relate to land within a settlement corridor located in a municipality which has taken action to prohibit spray projects within that corridor pursuant to subsection 4.

3. Director's authority. The provision for settlement corridors under this section does not impair or affect the director's authority to define and carry out other policies and procedures, including, without limitation, the use of no-spray buffers, designed to protect the public health and the environment, as he deems necessary or appropriate.

4. Prohibition by municipalities. Any municipality within the Spruce Fir Forest Protection District may prohibit the execution of spray projects authorized under this subchapter within settlement corridors, as designated pursuant to this section, which lie within that municipality. Any such prohibition, or the repeal thereof, may be enacted in accordance with the procedures for enactment of municipal ordinances; provided that any such prohibition shall be enacted before April 15th of any calendar year in which it shall apply and that the municipality shall send a certified copy of its enactment to the director within 5 days following the adoption of the same.



5. Tax levy. No tax levied pursuant to section 8406 may be assessed on lands within settlement corridors for which the execution of spray projects has been prohibited by a municipality as provided in subsection 4.

#### Section 8408. Automatic withdrawals

1. Conditions. Any person owning or claiming rights in timber or land within the Spruce Fir Forest Protection District and subject to taxation hereunder may, by November 15th of each year, apply in writing to the director for the withdrawal of not less than 500 acres nor more than 1,000 acres. Each person who is an owner or claimant of real estate shall be entitled to only one withdrawal pursuant to this section and all acres withdrawn shall be contiguous.

2. Consent. Applications made pursuant to subsection 1 shall be granted by the director when he is satisfied that the information contained in the application is complete, truthful and accurate. In the event that he is not so satisfied within 30 days after submission of an application, it shall be deemed denied and the director shall state his reason for denial in writing to the applicant. Upon the granting of an application, the director shall notify the State Tax Assessor.

3. Tax exemption. Lands withdrawn pursuant to this section shall not be subject to taxation under this subchapter for the years in which such withdrawal is accepted. The director shall certify on or before December 31st of each year, to the State Tax Assessor and the acreages and owners exempt from taxation under this section.

#### Section 8409. Silvicultural treatment designation

1. Conditions. Any person owning or claiming rights in timber on land within the Spruce Fir Forest Protection District and subject to taxation hereunder may, by November 15th of each year, apply in writing to the Director of the Bureau of Forestry for designation of contiguous parcels of land of not less than 500 acres as silvicultural treatment areas. Designation as a silvicultural treatment area shall be granted only upon the submission and approval of a plan for the area which provides for the adoption of silvicultural practices designed to minimize susceptibility and vulnerability to future spruce budworm infestations as those practices are defined by the rules.

2. Consent. Applications made pursuant to subsection 1 may be granted, or granted conditionally, by the director when he is satisfied that the information contained in the application is complete, truthful and accurate and that the plan submitted conforms with the rules relating to such designation. In the event that the director is not so satisfied with 60 days after the submission of the application, it shall be deemed denied and the director shall state his reasons for the denial in writing to the applicant.

3. Tax exemption. Lands designated by the director pursuant to this section shall be exempt from taxation under this subchapter so long as they retain such designation. For applications for designation made by April 25, 1976, if acceptance occurs after the tax imposed by this subchapter has been paid, the Treasurer of State shall rebate the tax payments out of the Budworm Suppression Fund. The parcels shall be exempt from taxation pursuant to this subchapter so long as they retain the designation. In the event that the director finds that the owner or claimant is in noncompliance with the terms upon which the application was granted, then an amount equal to the tax, interest and penalty as provided for in section 8406, subsection 6, for each year the parcel was designated as a silvicultural treatment area shall immediately become due and payable and his land shall be subject to a lien as provided for in section 8406, subsection 7.

Section 8410. General conditions for withdrawals

1. Forms. All applications for withdrawals and designations pursuant to sections 8408 to 8409 shall be made on forms prepared under the supervision of the director and shall contain the following information:

- A. The number of acres which are the subject of the application;
- B. The timber types thereon;
- C. Their location on maps of the same size and scale as those accepted by the State Tax Assessor in the administration of the Tree Growth Tax Law;
- D. Statement of ownership rights therein;
- E. Subject to the provisions of paragraph G, written authorization from each owner of, or claimant to, an interest therein, other than owners of easements and mortgages;
- F. Any other information relating to the suitability of the parcel for withdrawal or designation as the director may require, including, but not limited to, the age of the stands within the acreage, the timber volumes to be removed, the budworm hazard classes of the stand therein, management plans therefor and the basis for the application for withdrawal or designation; and
- G. In the case of applications for parcels of land within townships or portions of townships which are held in common and undivided ownership, the owners of a controlling interest in the parcel shall have the power to make applications authorized under this subchapter and the decisions of the director shall be binding on all owners of interests therein.

2. Limitations. The director shall not accept, nor shall he consider, any application for withdrawal or designation pursuant to sections 8408 to 8409 for any acre of land for which withdrawal or designation pursuant to any other of the aforementioned sections already has been granted.

3. Prohibition. No parcel of land for which withdrawal or designation has been granted pursuant to sections 8408 to 8409 shall be sprayed with insecticides by the Bureau of Forestry for the purpose of suppressing spruce budworm populations at any time following the grant, except following a finding by the director that the land has not been operated in accordance with an application or its rules, or as provided in subsection 4 or in section 8413, subsection 4.

4. Petition. A landowner who determines that, notwithstanding the implementation of a plan accepted by the director, there exists a need for the application of insecticides, may petition the director for inclusion in future spray projects. In the event that the director accepts the petition, the applicant shall be assessed for excise taxes due for the year in which the application for exemption was made and each year thereafter. The director shall reject any petition made for the purpose of evading penalties for which the applicant might otherwise be liable for failure to comply with a plan submitted pursuant to section 8409 or the rules pertaining thereto.

5. Written notification. Owners of tracts under silvicultural or automatic withdrawals shall send written notification to the director within 30 days of any transfer of any interest, other than an easement or mortgage, in those tracts.

Section 8411. Duties and authority of the Director of the Bureau of Forestry

1. General. The director shall coordinate the activities of the bureau personnel and render all assistance practicable to the Committee on Spruce Fir Silviculture.

2. Rules. From time to time he shall adopt and amend rules for the implementation of this subchapter consistent with section 8413. These rules shall be adopted in accordance with the procedures set forth in Title 5, chapter 375, subchapter II.

3. Applications. He shall consider applications made pursuant to sections 8408 to 8409 and grant, conditionally or deny such applications.

4. Reduction. In the event that the director determines that the total number of acres remaining within the spruce fir forest type after applications have been made is not sufficient to provide the amount of wood necessary to meet the reasonably foreseeable future need for spruce and fir in the State, then he may reduce the acreage included in each otherwise acceptable application made pursuant to section 8409 in equal portions so that the total number of acres withdrawn does not exceed the number he deems necessary to supply such wood.

5. Declaration of termination of infestation. Upon receipt of satisfactory information to the effect that the severity of the infestation of spruce budworm has declined to the extent that no spray program will be beneficial or cost effective in all the years remaining during which this Part is in effect, he shall report the same to the Commissioner of Conservation and the Governor and shall recommend to the Legislature that it declare a termination of infestation.

6. Markets and utilization. He shall have the authority to conduct and contract for research relating to the marketing and utilization of wood resources which are or may be affected by spruce budworm infestation.

7. Entry and inspection. The director may enter, upon reasonable advance notice to the landowner, at any reasonable time in a reasonable manner, any tract of land for which application pursuant to sections 8408 to 8409 has been made or granted in order to inspect the same free of any charge or cost imposed by the owner or his agents to assure compliance with the rules and order of the director.

8. Inspection. The director or his duly authorized representatives may likewise inspect the books and records of any applicant with respect to any information set forth in an application or verification thereof. He also may require periodic progress reports from applicants in connection with his verification procedures.

9. Reimbursement to state agencies. Out of funds available for any spray project, the director, subject to the approval of the Governor, may reimburse other state agencies for costs incurred by them in connection with that spray project. Such cost may include, but shall not be limited to, those incurred for environmental and health monitoring and regulation. Any department or agency of State Government is authorized to accept funds which may be available for carrying out the purposes of this subchapter.

10. Removal of lands from the spray application. Upon application of a forest landowner received no later than April 1, 1980, for the 1980 spray project and December 31, 1980, for the 1981 spray project, the director shall withdraw lands of that owner from spray application. Those lands shall remain subject to the pre-project excise tax and to the post-project shared tax.

#### Section 8412. Committee on Spruce Fir Silviculture

1. Committee created. To perform the duties specified in this subchapter, there is established a Committee on Spruce Fir Silviculture.

2. Membership. The committee shall consist of 5 citizens of the State at least 3 of whom shall be registered foresters who are knowledgeable as to commercial forest land management. They shall be appointed for a term of 2 years each by the Commissioner of Conservation with the advice and consent of the Governor. Each member shall be entitled to his actual expenses and \$50 per diem to be drawn from the Budworm Suppression Fund. They shall be subject to removal for cause by the commissioner with the approval of the Governor.

3. Duties. The Committee shall carry out the following duties:

- A. Elect one of its members to serve as chairman for the year in which the election is conducted;
- B. Approve the rules to be issued pursuant to sections 8411 and 8413;
- C. Determine appeals as provided in section 8418, subsection 2; and
- D. Provide advice and consultation to the Director of the Bureau of Forestry with respect to the subject matter of this subchapter.

Section 8413. Rules relating to silviculture

1. Purpose. The director shall adopt and may, from time to time, amend and repeal, subject to the approval of the Committee on Spruce Fir Silviculture, rules to carry out the purposes of this subchapter including, but not limited to, rules relating to the qualifications of parcels of forest land for silvicultural treatment designation.

The purpose and scope of the rules shall be to reduce the vulnerability and susceptibility of the Maine spruce fir forest to spruce budworm depredations, to reduce the economic losses to the State from such depredations as do occur and to assure future supplies of spruce and fir. The rules shall establish standards for forest management including, but not limited to, timber stand improvement and harvesting in accordance with sound silvicultural principles. Economic considerations as well as all other relevant considerations shall be taken into account in determining the rules. The director shall promulgate only those rules directly related to the foregoing purposes. In particular, it is not the intent of this subchapter to regulate operational techniques including, but not limited to, road layout and construction, equipment use and erosion control.

2. Silvicultural designation rules. The director shall adopt rules relating to the eligibility of parcels of land for designation as silvicultural treatment areas to fulfill the objectives of subsection 1 including, as appropriate:

- A. Standards for cutting by selection, shelterwood, clearcutting and such other methods as the director may allow including, but not limited to, the number of cuts, diameter and volumes under reasonable classifications of site conditions;
- B. Minimum standards for seed tree retention including the number and location per acre under reasonable classifications of cutting methods and site conditions; and
- C. Silvicultural practices reasonably related to the alteration of stand composition and the thrift and vigor of the resulting stand.

3. Spraying rules. The director may make rules requiring the mandatory inclusion of parcels within the designated spray area when, in his judgment, the action is necessary because of the intensity of the infestation or because it would be excessively costly or logistically difficult to avoid applying insecticides and for like reasons.

4. Verification. The director also may make rules for verification of compliance with the rules promulgated hereunder.

#### Section 8414. Forest Insect Manager

1. Position created. There is established within the Bureau of Forestry the position of Forest Insect Manager. Such position shall not be subject to the Personnel Law and shall terminate upon the expiration date hereinafter provided for by this Part. The manager shall be appointed by the Director of the Bureau of Forestry with the approval of the Commissioner of Conservation and may be removed by the director with approval of the commissioner. He shall be directly responsible for the development, coordination and implementation of policies and programs of the State as they relate to the control and suppression of the spruce budworm epidemic. The Forest Insect Manager shall also be known as the coordinator of the spruce budworm program.

2. Contractual authority. The manager shall have the authority to enter into and administer contracts for the acquisition of chemicals, aircraft, personnel services and other goods and services necessary to carry out spruce budworm suppression operations subject to the provisions of Title 5, chapters 145 and 155.

3. Spraying services. The manager shall have the authority to enter into and administer contracts to spray with insecticides or similar materials parcels of spruce-fir forest land outside the designated spray area upon application for the provision of the services by the owner of the parcel, provided that:

A. The application is submitted within 30 days of the notice provided for in section 8407, subsection 2, for inclusion in spray projects in subsequent years;

B. He is satisfied that the area for which the application is made can benefit from the spraying and that spraying is practical; and

C. The applicant enters into a contract with the Bureau of Forestry to pay the actual per acre cost to the bureau to spray the land, less any amount which may be provided by the Government of the United States and less the amount of any excise tax paid or assessed under this subchapter on the parcel for the year in which spraying actually takes place.

Forest land under these contracts shall be included in Maine's spruce budworm suppression program.

#### 4. Executive Director

A. The manager shall serve as Executive Director of the Committee on Spruce Fir Silviculture and carry out such duties as the committee may assign to him.

B. He shall certify to the State Tax Assessor on December 31st of each year the specific acreages, their locations and owners exempted by the director from liability for excise taxes pursuant to sections 8408 and 8409.

C. He shall certify any parcels which the director has found to be in noncompliance with an accepted application or its rules and therefore liable to taxation and penalties and any parcels which are liable to taxation pursuant to section 8410, subsection 4.

5. Cooperation. The manager shall consult with and cooperate with the United States Forest Service, the federal government of Canada, the governments of the Provinces of Quebec and New Brunswick and public and private landowners in Maine in developing joint research and operations projects to control and suppress spruce budworm infestations and on related matters.

6. Report. The manager shall, each year after the completion of a spray program, make a complete financial review of the program, and make a full report to the next session of the Legislature. The report shall include, but not be limited to, source of funding, private, state or federal, and total expenditures broken down in the following categories: Chemicals, aircraft, research and other appropriate categories. Also to be included shall be a statement of any remaining balance by source, private, state and federal.

#### Section 8416. Other state and municipal agencies.

1. Withdrawal. The chief executive officer of any state agency, authority, commission or that of any county or municipality, may withdraw any land, within the ownership or control of the agency, from the designated spray area upon application to the director in the form provided for by section 8410, subsection 1, within 30 days after notice, pursuant to section 8407, subsection 2.

2. Research on public lands. The commissioner or director of any agency of the State with jurisdiction over public land may make the land available on such terms and conditions as he deems reasonable to any public or private nonprofit entity engaged in spruce budworm control research and related silvicultural research. The Forest Insect Manager shall likewise encourage private landowners within the State to make their lands available for the same purposes.

## Section 8417. Research

The Bureau of Forestry, acting through its director, may make grants of funds and enter into contracts for purposes of research related to forest management strategies, insecticide and spray application technologies, integrated pest management techniques, forest product marketing and utilization and other issues pertinent to the purposes of this subchapter. This research shall be funded out of moneys available to the director for that purpose.

### Section 8417-A

1. Implementation. The Bureau of Forestry shall undertake to develop and implement budworm management technical assistance programs for small woodlot owners.
2. Analysis of future supply and demand. The Bureau of Forestry shall conduct or cause to be conducted an analysis of future supply and demand for the spruce and fir resources of the State. The purpose of this analysis shall be to determine the types and levels of future spruce budworm protection needs and strategies for such spruce and fir resources.
3. Environmental health monitoring. The Bureau of Forestry shall cause to be conducted by an agency other than the Department of Conservation an environmental health monitoring program each year in which a spray project is conducted. The Bureau of Forestry shall prepare and submit an annual report to the Legislature dealing with all aspects of the environmental health monitoring conducted during the previous calendar year.

## Section 8418. Appeals

1. Abatement. Any owner or claimant aggrieved by the action of the State Tax Assessor in determining the tax on owners of forest lands, through error or mistake in calculating the same, may apply for abatement of any such excessive tax within 60 days of the notice of the tax and if, upon reexamination, the tax appears to be excessive through such error or mistake, the State Tax Assessor may thereupon abate the excess.
2. Appeal. Any person aggrieved by any final action of the director under this subchapter may take an appeal therefrom within 30 days of the date of the action to the Committee on Spruce Fir Silviculture and the committee may amend or reaffirm the action in accordance with the subchapter and may order such remedial action as is appropriate, including a refund in whole or in part of any taxes, interests or penalties which have been erroneously or unjustly paid. If the committee fails to give written notice of its decision within 90 days of the filing of the appeal, the appeal as provided unless the appellant shall in writing have consented to further delay. The appeal to the committee shall be filed with the Director of the Bureau of Forestry. The committee may adopt reasonable rules relating to the conduct of procedure under this subsection.



3. Appeal to Superior Court. Any party may appeal from the decision of the Committee on Spruce Fir Silviculture to the Superior Court in accordance with the Maine Rules of Civil Procedure, Rule 80B.

Section 8419. Review

Chapter 803, subchapter IV, which pertains to establishment, description and participation in the Spruce Fir Forest Protection District, shall be reviewed by the Joint Standing Committee on Appropriations and Financial Affairs during the First Regular Session of the 110th Legislature.

Section 8420. Repeal

This subchapter is repealed on October 1, 1981.

APPENDIX C

SUBCHAPTER IV-A

MAINE SPRUCE BUDWORM MANAGEMENT ACT  
(Editor's Note: Goes into effect Oct. 1, 1981)

Section 8421. Short title

This subchapter shall be known and may be cited as the "Maine Spruce Budworm Management Act."

Section 8422. Legislative policy

The Legislature declares that it shall be the policy of the State to undertake a spruce budworm management program to minimize the short-term and long-term impacts of spruce budworm insect infestations upon the State's spruce and fir forests in accordance with the following policy objectives:

1. Supply of wood. The protection of an adequate present and future supply of wood to support the long-term economic needs of the State and of its forest products industries;
2. Development of program. The development and utilization in both the public and private sectors of forest protection and management programs which are cost-effective, biologically sound and responsive to the environmental and health concerns of the public;
3. Reduction in use of insecticides. The reduction in reliance upon the use of chemical insecticides in spruce budworm suppression programs;
4. Private efforts; pest management. The encouragement of private efforts to undertake a variety of integrated pest management techniques which result in a long-term reduction in the susceptibility of the state's forests to spruce budworm infestation and loss;
5. Implementation. The implementation of equitable methods for determining private and public participation in, and financing of, spruce budworm suppression and prevention programs, including provision for voluntary participation in future insecticide spray projects;

6. Regulatory review. The provision for adequate regulatory review of insecticide spray projects by an independent state agency; and

7. Assistance programs. The provision of management and utilization assistance programs for small forest landowners designed to minimize impacts of spruce budworm infestation and loss.

#### Section 8423. Definitions

As used in this subchapter, the following terms have the following meanings.

1. Commissioner. "Commissioner" means the Commissioner of Conservation.

2. Director. "Director" means the Director of the Bureau of Forestry.

3. Designated spray area. "Designated spray area" means that land area designated by the director, pursuant to section 8424, subsection 4, for inclusion within a spray project.

4. Forest land owners. "Forest land owners" means persons who own forest lands, including, without limitation, persons owning or claiming timber and grass rights in public reserved lands located within that district.

5. Management program. "Management program" means all activities undertaken by the Bureau of Forestry in connection with the short-term and long-term suppression, control and prevention of spruce budworm infestations, including, without limitation, any activities undertaken in connection with spray projects, spruce budworm survey and detection activities, silvicultural, marketing and integrated pest management programs, research and related activities.

6. Person. "Person" means any individual, partnership, joint venture, corporation or other legal entity, or any group of persons which acts as a tenancy in common or joint tenancy for ownership purposes, and includes any government or any agency, bureau or commission thereof.

7. Rebate. "Rebate" means a payment by the State back to a person subject to taxation pursuant to this subchapter.

8. Rule. "Rule" means a duly-adopted regulation of general applicability promulgated by the Bureau of Forestry. Such rules shall have the force and effect of law.

9. Spray program area. "Spray program area" means all that forest land for which applications have been made and approved by the director pursuant to section 8424, subsections 2 and 3, except as removed pursuant to section 8425, subsection 2.

10. Spray project. "Spray project" means all activities undertaken or caused to be undertaken by the Bureau of Forestry in connection with the application of insecticides or other materials against spruce budworm insects within a single year.

11. Spruce budworm. "Spruce budworm" means the insect of the species known as *Choristoneura fumiferana*, Clem., at any stage of its biological development.

#### Section 8424. Program planning

1. General authority. In accordance with the provisions of this subchapter, the Bureau of Forestry, acting under the supervision of the director, shall be empowered to plan for and undertake activities related to spray projects and management programs on behalf of the State.

2. Application for spray project eligibility. Forest land owners may apply to the director prior to December 1st of any year to be eligible to participate in the spray project for the following year. The application shall show:

- A. The name and address of the applicant and its agent, if any;
- B. The number and location on maps prescribed by the director of the acres of forest land for which application is being made;
- C. The location on maps prescribed by the director of the timber types, timber ages and proportions of spruce, fir and non-host species within such forest land;
- D. The location on maps of private and public road access to such forest land;
- E. The location on maps of all residences within that forest land;
- F. A 5-year cutting plan for such forest land showing plans for timber cutting, road construction and other planned land utilizations; and
- G. Any other information pertinent to the description, utilization and management of such forest land as the director may require for purposes of spray project and management program planning.

The date for submission of the information required under subsection 2, paragraph C, may be extended by the director upon a showing that such information is not then available.

Cutting plans accompanying the application may be utilized by the Bureau of Forestry for planning purposes, and may be shared with other government agencies, but shall not constitute records available for public inspection or disclosure pursuant to Title 1, section 408.

For excise tax purposes, such application must designate one person who shall be billed and notified of any lien recorded under this subchapter. When a tax bill or notice of lien is sent to this person, it shall constitute notice to all other landowners listed on the application. Each forest landowner shall be jointly and severally liable for any tax, penalty or interest imposed under this subchapter.

3. Effect of application. The director shall accept, not later than December 1st of each year, any application which to his satisfaction meets the requirements of this section any additional criteria which the director may impose by regulation in furtherance of the legislative policies of this subchapter. By December 31st, the director shall certify in writing to the State Tax Assessor the complete list of all participants in the program. The list shall include the names of the forest landowners, the names and addresses of the persons designated to be billed and served with notices of liens, particularized descriptions of the real estate included in the spray program area and statements of the acreage included in each parcel. If a change in ownership occurs after December 31st, the director shall inform the State Tax Assessor not later than the following September 1st.

Upon the director's acceptance of any such application, the forest land involved shall be eligible for inclusion within the spray project, and shall be subject to taxation pursuant to section 8427, regardless of any change in ownership of that forest land.

4. Spray project designation. Spray projects shall be designated in the following manner.

A. The director, acting in accordance with this subchapter, shall have ultimate and final discretion to determine, and from time to time modify, the location, type and manner of any spray project within the spray program area, subject to such regulatory review and approval by other state and federal agencies as is provided by law. The director shall make these determinations based upon evidence of the extent of budworm hazard to forest lands within the spray program area, forest stand composition, wood supply needs, buffer policies, opportunities for silvicultural and other management alternatives, the cost-effectiveness and biological soundness of spray treatment for particular forest lands, the recommendations of affected forest land owners and the public, environmental and public health concerns and such other factors as the director may deem to be in furtherance of the legislative policies of this subchapter.

B. The director shall, not later than December 15th of each year, make a preliminary determination of the forest lands within the spray program area to which he tentatively deems it necessary and appropriate to apply chemical or biological spray treatment in the following year. Within 15 days

following such preliminary determination, the director shall furnish and make available to the affected forest land owners and to the public maps showing the forest lands preliminarily so designated. Notice of the preliminary designation shall be published in the state paper and such other newspapers as the director deems appropriate. The notice shall indicate where spray area maps will be available for inspection and where further information may be obtained, and shall provide information concerning withdrawal procedures.

C. Any forest land within the spray program area may be withdrawn from any annual spray project provided that a written request, adequately specifying on maps prescribed by the director the location of the acres to be withdrawn, is submitted by the forest land owner to the director no later than February 1st of the calendar year of the spray project involved. The director may at his discretion receive and act upon later-submitted requests for withdrawal.

5. General conditions for applications and requests. In addition to any other requirements for applications for spray project eligibility or for spray treatment and requests for withdrawal established under this subchapter, such applications and requests shall conform with the following requirements.

A. They shall be accompanied by maps, depicting the forest land involved, of the same size and scale as those accepted by the State Tax Assessor in the administration of the Tree Growth Tax Law.

B. They shall include a statement of ownership rights in the forest lands involved.

C. Subject to the provisions of paragraph D, they shall include written authorization from each owner of, or claimant to, an interest in the forest land involved, other than owners of easements and mortgages.

D. In the case of applications or requests affecting parcels of forest land held in common and undivided or joint ownership, a controlling or majority interest in the parcel shall have the power to make applications and requests under this subchapter and such applications and requests, as well as the decisions of the director thereon, shall be binding on all owners of interests in those lands.

E. Within 30 days following the transfer of any interest, other than an easement or mortgage, in any forest lands which are part of the spray program area, written notice of the transfer shall be sent to the director.

6. Settlement corridors. Settlement corridors are subject to the following provisions.

A. All land within 2 miles of publicly maintained roads shall be designated by the director as settlement corridors.

B. Land within settlement corridors shall not receive insecticide spray treatment except under the following circumstances:

- (1) The land is in the spray program area;
- (2) The landowner makes a written request for the treatment not later than January 15th in the calendar year of the spray project involved;
- (3) The request is accompanied by such information as the director may require and meets such criteria as the director may adopt in furtherance of the legislative policies of this subchapter; and
- (4) The request does not relate to land within a settlement corridor located in a municipality which has taken action to prohibit spray projects within that corridor pursuant to section 8425, subsection 2.

C. The provision for settlement corridors under this section does not impair or affect the director's authority to define and carry out other policies and procedures, including, without limitation, the use of no-spray buffers, designed to protect the public health and the environment, as he deems necessary or appropriate.

7. Technical assistance programs. The Bureau of Forestry shall undertake to develop and implement budworm management technical assistance programs for small wood lot owners.

8. Supply-demand analysis. The Bureau of Forestry shall conduct or cause to be conducted an analysis of future supply and demand for the spruce and fir resources of the State. The purpose of such analysis shall be to determine the types and levels of future spruce budworm protection needs and strategies for such spruce and fir resources.

9. Environmental health monitoring. The Bureau of Forestry shall cause to be conducted by an agency other than the Department of Conservation an environmental health monitoring program each year in which a spray project is conducted. The Bureau of Forestry shall prepare and submit an annual report to the Legislature dealing with all aspects of the environmental health monitoring conducted during the previous calendar year.

#### Section 8425. Regulatory Jurisdiction

1. General rule. The Bureau of Forestry, in undertaking any spray project, shall apply for and obtain any permits and approvals of the Maine Pesticide Control Board and the Maine Department of Agriculture, as required by the laws administered by those agencies. Except as provided in this section, spray projects may be conducted without adherence to the laws administered by other state agencies or by any municipal, county or other local government body.

2. Municipal action. Any municipality may prohibit the execution of spray projects within settlement corridors, as designated pursuant to section 8424, subsection 6, which lie within the municipality. Any such prohibition, or the repeal thereof, may be enacted in accordance with the procedures for enactment before April 1st of any calendar year in which it shall apply and that the municipality shall send a certified copy of its enactment to the director within 10 days following the adoption of the same. Settlement corridors within which spray projects have been prohibited pursuant to this subsection shall thereupon be removed by the director from the spray program area.

Section 8426. Funding

1. Recommendation of the director. On or before January 1st of each year, the director shall report in writing to the Bureau of the Budget and to the Legislature his estimate of the costs of implementation of any spray project proposed for that calendar year.

2. Authorization by Legislature. Following the recommendation made in accordance with subsection 1, the Legislature shall determine, not later than February 15th the amount, if any, authorized for expenditure for any spray project in that calendar year and shall determine the pre-project excise tax rate, applicable to all acres within the spray program area, necessary to finance the full amount so authorized. That excise tax shall be assessed and collected in accordance with section 8427, subsection 2.

3. Spray project special accounts. Special accounts shall be established in the following manner.

A. The Treasurer of State shall establish 2 dedicated revenue accounts as follows.

(1) Into one account shall be deposited any revenues received by the State from the Government of the United States for any spray project.

(2) Into the other account shall be deposited any revenues received by the State from the excise taxes authorized pursuant to this subchapter.

B. The moneys credited to such accounts shall be used by the Bureau of Forestry to pay any expenses, debts, accounts and lawful demands incurred in connection with spray projects authorized under this subchapter, and the director shall authorize the State Controller to draw his warrant therefor at any time. Any remaining balance in these accounts shall continue from year to year as a fund available for the purposes set out in this subchapter and for no other purpose.

4. Borrowing from General Fund. To accomplish the purpose of this subchapter, the director, subject to the approval of the Governor, may borrow moneys from the General Fund for up to 120 days, at no interest, in order to enable the bureau to pay expenses, debts, accounts and lawful demands for any spray project authorized under subsection 2; provided that the aggregate amount of such borrowing may at no time exceed the amount of uncollected excise taxes authorized under this subchapter for that spray project.



Section 8427. Taxation

1. Generally. Forest land owners within the spray program area shall be subject to the excise taxes authorized under this section for the privilege of owning such lands and of receiving the benefits of spray project eligibility. In cases of divided ownership of such lands, the persons owning or claiming timber rights shall be subject to such taxes.

2. Pre-project excise tax. Forest land owners within the spray program area shall be subject to the pre-project excise tax at the rate established by the Legislature pursuant to section 8426, subsection 2. The tax shall be assessed and billed by the State Tax Assessor within 30 days following that legislative authorization.

3. Post-project excise tax. The post-project excise tax for all land owners within the spray program area shall be computed and assessed as follows.

A. The director shall determine the total amount of costs incurred or budgeted to be expended in connection with any spray project conducted during the then current calendar year.

B. The amount computed in paragraph A shall be reduced by the amount of any moneys received for that project from the Government of the United States.

C. The amount computed under paragraph B shall be divided by the number of acres which actually received spray treatment, as determined by the director, and that per acre allocation shall constitute the post-project spray tax rate.

D. By September 1st of each year, the director shall certify in writing to the State Tax Assessor the post-project spray tax rate, together with the number of acres within each ownership which actually received spray treatment.

E. The State Tax Assessor shall compute, assess and bill, by November 1st of each year, the amount of post-project excise taxes payable by each landowner within the spray program area, based upon:

(1) The product of the number of acres owned which actually received spray treatment times the post-project spray tax rate; less

(2) The amount assessed upon that owner on account of the pre-project excise tax for that calendar year.

In the event that the sum so calculated results in a negative balance for any landowner, the State Tax Assessor shall credit the amount of that balance against the next pre-project excise tax owed by that landowner; provided that if the landowner's participation in the program ceases, he shall receive the amount of that balance in the form of a rebate.

4. Due date. The pre-project excise tax is due April 30th of the year in which it is assessed. The post-project excise tax is due December 15th of the year in which it is assessed. Notice of the amount of any tax due under this subchapter shall be presumed complete upon mailing of a bill therefor.

5. Interest and penalty. Any tax assessed under this subchapter which is not paid when due shall accrue interest at the rate of 1 1/2% for each month, or fraction thereof, that the tax remains unpaid; and a penalty equal to 20% of the unpaid tax shall be added to the liability of any person who fails to pay a tax when due.

6. Tax Lien. There shall be a tax lien to secure the payment of all taxes, penalties and interest assessed under this subchapter. The lien shall attach to all real estate described in any application made under section 8424, subsection 2, and shall take precedence over all other claims on that real estate and shall continue in force until the taxes, penalties and interest are paid or until the lien is otherwise terminated.

For purposes of lien foreclosure, unpaid taxes assessed under this subchapter shall be delinquent on the date due. Thereafter, the State Tax Assessor may record, in the registry of deeds of the county or registry district where that real estate lies, a certificate signed by the State Tax Assessor setting forth the name of the person designated in section 8424, subsection 2, the amount of unpaid taxes, penalties and interest and a description of the real estate subject to the lien. Not later than one week after recording the lien, the State Tax Assessor shall notify the person designated in section 8424, subsection 2, that a lien has been recorded. If the full amount of the tax, penalty and interest is not paid within 6 months of the recording, the lien shall be foreclosed. Upon foreclosure, the State shall become fee simple owner of the real estate free of all encumbrances. That real estate shall be inventoried as provided in Title 36, section 1283.

7. Review of assessments, supplemental assessments. Any forest landowner aggrieved by an assessment made under this subchapter may petition the State Tax Assessor for reconsideration, pursuant to Title 36, section 151, provided that the petition is filed within 45 days of the date of assessment. If justice requires, the State Tax Assessor may, with the approval of the Governor, abate, within 3 years from the date of assessment, all or part of any tax assessed under this subchapter by the State Tax Assessor.

Within 3 years of an assessment made under this subchapter, the State Tax Assessor may make a supplemental assessment if he finds that any previous assessment is imperfect or incomplete in any material aspect. An assessment may be made at any time with respect to a time period for which a fraudulent application has been filed.

The State Tax Assessor may require the assistance of the director in the performance of his duties under this subsection. The director shall recommend to the State Tax Assessor an appropriate disposition of any matter brought under this subsection. That recommendation shall be made within 15 days of the request and shall be in writing.

8. Collection by Attorney General. Whenever any person fails to pay any tax, interest and penalty due under this subchapter within the time provided, the Attorney General shall enforce payment by civil action against the person from whom it is due for the amount of the tax, interest and penalty, together with costs, in either the Superior or District Court in Kennebec County or in the judicial division in which that person has a residence or established place of business.

Section 8428. Duties and authority of the Director of the Bureau of Forestry.

1. General. The director shall supervise and coordinate the activities of bureau personnel in connection with all management programs.

2. Rules. From time to time the director may adopt and amend rules for the implementation of this subchapter. The rules shall be adopted in accordance with the procedures set forth in Title 5, chapter 375, subchapter II.

3. Applications. The director shall consider applications and requests made pursuant to section 8424, and shall grant conditionally or deny any such applications or requests.

4. Declaration of termination of spray projects. Upon receipt of information satisfactory to him to the effect that future spray projects will not be beneficial, cost-effective or otherwise in furtherance of the legislative policies of this subchapter, the director shall report the same to the Commissioner of Conservation and to the Governor and shall recommend to the Legislature that this subchapter be repealed or amended as appropriate.

5. Entry and inspection of lands. The director or his representatives may enter, upon reasonable advance notice to the landowner, at any reasonable time and in a reasonable manner, any tract of land for which application pursuant to section 8424, subsection 2, has been made in order to inspect the same free of any charge or cost imposed by the owner or his agents.

6. Inspection of records. The director or his representatives may likewise inspect the books and records of any applicant under section 8424, subsection 2, with respect to any information submitted in connection with that application. He also may require periodic progress reports from such persons in connection with any such information.

7. Contractual authority. The director, with the approval of the commissioner, shall have the authority to enter into contracts for the acquisition of insecticides, aircraft, personnel and other goods and services necessary or appropriate for management programs and for other purposes related to this subchapter.

8. Reimbursement to state agencies. Out of funds available for any spray project, the director, subject to the approval of the Governor, may reimburse other state agencies for costs incurred by them in connection with such spray project. Such costs may include,

but shall not be limited to those incurred for environmental and health monitoring and regulation. Any department or agency of State Government is authorized to accept funds which may be available for carrying out the purposes of this subchapter.

#### Section 8429. Forest insect manager

1. Position created. There is established within the Bureau of Forestry the position of Forest Insect Manager, which shall be funded by the General Fund. This position is not subject to the Personnel Law. The manager shall be appointed by the director with the approval of the Commissioner of Conservation and may be removed by the director with the approval of the commissioner. The manager shall be directly responsible for the development, coordination and implementation of management programs.

2. Cooperation. The manager shall consult and cooperate with the United States Forest Service, other agencies of the United States and of any state, the federal government of Canada, the governments of any provinces of Canada and public and private landowners in Maine in developing and undertaking joint management program activities.

3. Report. The manager shall, at the end of each calendar year, undertake a complete financial review of any management program activities undertaken that year and shall make a full report thereon to the next session of the Legislature. The report shall include, but not be limited to, sources of funding, private, state or federal and total expenditures broken down in the following categories: insecticides, aircraft, monitoring, research and other appropriate categories. Also to be included shall be a statement of any remaining balance by source, private, state or federal.

4. Permit applications. The manager shall be responsible for processing all applications for regulatory permits and approvals for spray project operations as required by this subchapter.

#### Section 8430. Research

1. Authority. The Bureau of Forestry, acting through its director, with the approval of the commissioner, may make grants of funds and enter into contracts for purposes of research related to forest management strategies, insecticide and spray application technologies, integrated pest management techniques, forest product marketing and utilization and other issues pertinent to the purposes of this subchapter. This research may be funded with other than excise tax moneys, provided that the cost of environmental and health monitoring of spray projects shall be part of annual spray project costs and not paid out of General Fund moneys.

2. Research on public lands. The commissioner, director or other chief executive officer of any state agency having jurisdiction over any public land may make that land available on such terms and conditions as he deems reasonable to any public or private nonprofit entity engaged in spruce budworm control research and related silvicultural control research. The Forest Insect Manager shall likewise encourage private landowners within the State to make their lands available for the same purposes.

Sec. 13. PL 1979, c. 164, Pt. B, that part relating to spruce budworm control under the caption "DEPARTMENT OF CONSERVATION" is repealed and the following enacted in its place:

0234 Spruce Budworm Control....2-595	1979-80
Unallocated	1,192,481

Sec. 14. PL 1979, c. 164, Pt. D, subsection 2 is repealed.

Sec. 15. Appropriation. The following funds are appropriated from the General Fund to carry out the purposes of this Act. Any unexpended balance of this appropriation and funds previously appropriated for this purpose do not lapse, but shall remain a continuing carrying account for these purposes. The breakdown shall be as follows:

	1979-80	1980-81
NATURAL RESOURCES		
DEPARTMENT OF CONSERVATION		
0234 Spruce Budworm Control		
Positions	(1)	(9)
Personal Services	\$10,000	\$165,161
All Other	147,248	123,839
Capital Expenditures		36,000
	<hr/>	<hr/>
TOTAL	\$157,248	\$325,000

Emergency clause. In view of the emergency cited in the preamble, this Act shall take effect when approved, except that sections 1, 2, 11-A and 12 shall take effect on October 1, 1981, provided that the tax levied under the Revised Statutes, Title 12, chapter 803, subchapter IV, shall continue in effect as to any such tax.

# SPRUCE BUDWORM SPRAY ADVISORY

1980

SPRAY AREA: The Maine Forest Service will spray the chemical insecticide carbaryl (Sevin-4-Oil) and the bacterial insecticide Bt, from aircraft on the areas shown in blocks on the reverse side. Crosshatched blocks will be sprayed with Bt; locations marked with a star identify small Bt blocks; the remaining blocks will be treated with carbaryl.

SPRAY TIMES: The exact time a location is sprayed depends upon the development of the budworm. Each location will be sprayed once or, in some instances, twice. Spraying is generally scheduled to take place during the early morning and early evening hours between May 15th and June 20th.

HEALTH STATEMENT: Scientific evidence is not conclusive that any of the spray materials being used in Maine this year affect human health when applied as proposed.

A Medical Advisory Panel (findings included) has recommended that the Maine Forest Service proceed with caution until more data is attained. They advise that human exposures to the insecticide be minimized and that persons entering spray blocks understand and accept a potential but unknown health risk. Since effects on health remain under study, we recommend that individuals who need not be in spray blocks avoid them during the period of May 15th and June 20th. Persons who plan to be in the spray blocks between May 15th and June 20th and who are concerned about possible health hazards may wish to consult with a physician or call the Poison Control Center in Portland at 1-800-442-6305 for advice.

PRECAUTIONS: Campers, fishermen, hikers woodworkers, farmers, and others who find themselves in an area being sprayed should take the following precautions;

Food & Utensils:

1. If you are preparing an outdoor meal when spray aircraft approach, wrap or place under cover all exposed food.
2. Try to get all pots, pans, dishes, and other utensils under cover before spray aircraft arrive. If unable to do so, wash in soap and water before use.

Clothing:

If clothing is sprayed, change as soon as possible. Wash sprayed clothing by usual methods.

Personal Hygiene:

Persons sprayed by aircraft should wash exposed areas with soap and water as soon as possible.

BUFFER ZONES: No-spray buffer zones will be observed as follows:

	<u>Sevin-4-Oil</u>	<u>Bt</u>
Permanent Habitation	3 mi.	½ mi.
Public Roads	3 mi.	500 ft.
Agricultural Lands	500 ft. <sup>S</sup>	500 ft.
Critical Fisheries*	500 ft. <sup>L</sup>	none
	1,000 ft.	

\*S = Small aircraft, L = Large aircraft

FOR FURTHER INFORMATION on the 1980 project, contact Ann Pistell, Information Officer, Maine Forest Service, State House Station #22, Augusta, Maine 04333 (207) 289-2791 until May 15th. After May 15th call the toll free number: 1-800-432-1795.



# FACT SHEET - BUDWORM '80

## 1980 SPRUCE BUDWORM SUPPRESSION PROJECT

Prepared by the Information & Education Section of the Maine Department of Conservation

This year the Maine Forest Service plans to treat approximately 1 million acres of spruce and fir forest land with the chemical insecticide carbaryl (Sevin-4-Oil). A biological insecticide, 'Bt' will be sprayed on an additional 200,000 acres in a separate demonstration project. (A separate fact sheet is available on the 'Bt' demonstration)

### WHY IS THE SPRAYING NECESSARY ?

The spray program is designed to prevent significant tree mortality from occurring on 1.2 million acres selected from about 5.3 million acres affected by the budworm in 1980.

### WHEN WILL SPRAYING BEGIN ?

The 'Bt' project is scheduled to begin during the week of May 25th. The application of carbaryl is expected to start the week of June 1, 1980.

### HOW WILL THE PROJECT BE SUPERVISED ?

Employees of the Maine Forest Service will supervise the mixing, loading and application of the insecticide which is carried out by professional contractors. In addition to 25 spray aircraft, there will be 15 aircraft used to monitor the chemical spray operation. The biological spray operation will be carried out by six helicopters, monitored by an additional four helicopters. All spray operations will be observed from these monitor aircraft.

### WHAT TYPES OF AIRCRAFT WILL BE USED ?

Carbaryl will be applied by 6 four-engine DC '4s, 4 two-engine PV '2s and 15 single-engine Light Spray Units (LSU's).

### HOW LONG WILL THE PROJECT TAKE TO COMPLETE ?

Depending on the weather, the carbaryl application will take approximately 20 days. Under ideal conditions, the 'Bt' operation could be finished in 10-14 days.



WHERE ARE THE SPRAY PROJECT AIRBASES LOCATED AND HOW MUCH FOREST LAND WILL BE SPRAYED FROM EACH BASE ?

Sevin-4-Oil

Presque Isle - 296,800 acres  
Millinocket - 306,000 acres  
Jackman - 117,200 acres  
Red Pine - 273,600 acres

'Bt'

'Bt' will be applied from a number of heliports.  
Acreage to be sprayed is as follows:  
Washington-Hancock counties - 34,000 acres  
Aroostook county - 124,000 acres  
Somerset-Piscataquis counties - 42,000 acres

WHAT BUFFERS WILL BE OBSERVED ?

No-spray buffer zones will be observed as follows:

	<u>Sevin-4-Oil</u>	<u>Bt</u>
Permanent Habitation	3 mi.	1/4 mi.
Public Roads	3 mi.	500 ft.
Agricultural Lands	500 ft. S	500 ft.
Critical Fisheries*	500 ft. L	none
	1,000 ft.	
Other Waters	500 ft. L	none
	250 ft. S	none
Municipal Water Supplies	1 mile	1 mile

\* S = Small aircraft, L = Large aircraft

WHAT IS THE LIFE CYCLE OF THE SPRUCE BUDWORM ?

The dull gray budworm moths lay their eggs in July on the underside of spruce and fire tree needles. They hatch into tiny caterpillars in about five days. They grow and molt into the second caterpillar stage and spend the winter in a cocoon. In May, these second stage caterpillars emerge from their cocoons and feed on needles by tunneling into them. Later they attack the developing buds. As the caterpillars grow, they molt and pass through the 3rd, 4th, 5th and 6th caterpillar stages. In late June, they enter the non-feeding pupal stage and about a week later emerge as moths to begin the cycle anew.

WHAT IS THE BEST TIME TO SPRAY THE INSECT ?

Carbaryl is most effective when the budworm is in its fourth caterpillar stage, a period lasting about one week. 'Bt' is best applied while the caterpillar is in the third stage. Spraying will terminate when the budworm caterpillars enter the non-feeding pupal stage which usually occurs by June 20th.

HOW MAY I OBTAIN MORE INFORMATION ?

Call the toll-free Maine Forest Service number, 1-800-432-1795, for information about the spray project. Human health questions should be addressed to the Portland Poison Control Center, 1-800-442-6305.



**MAINE POISON CONTROL CENTER**  
22 BRAMHALL STREET, PORTLAND, MAINE 04102  
TOLL FREE TELEPHONE: 1-800-442-6305

January 21, 1980

Mr. Kenneth Stratton, Director  
Bureau of Forestry  
Department of Conservation  
Augusta, Maine 04330

Dear Mr. Stratton:

On January 18, 1980, the Health Advisory Panel that you appointed (list of members attached) met to review data available on Sevin-4-Oil, specifically that related to viral potentiation.

The findings of the Committee and recommendations are as follows:

A. Finding

There is a potential but inconclusive health risk of Sevin-4-Oil, on the basis of viral potentiation data available.

B. Recommendation

1. No uninformed, unconsented human exposure occurs during a forest spray operation.
2. The formulation must be fully disclosed to the satisfaction of the registering agency.
3. The spray formulation must be consistent with the formula registered.

C. Finding and Recommendation

Additional data is required:

- a. laboratory data
- b. epidemiologic data

The Panel members reviewed these findings and recommendations in writing and voted on them favorable and unanimously on January 18, 1980.

Sincerely yours,

*Frank H. Lawrence*

Frank H. Lawrence, M.D.  
Health Advisory Panel Chairman

FHL/emc  
enclosures  
cc: Panel members

## INTERPRETATION OF FINDINGS AND RECOMMENDATIONS

In research yet to be completed, early results suggest that Sevin-4-Oil, or one or more of its constituents, potentiates the virus Herpes virus varicellae, the causative virus in Chicken Pox and "shingles". Enhancement ranges from 1.7 to four-fold.

Based on research which is highly conclusive and has been published, constituents of certain pesticide formulations have been shown to potentiate numerous other viruses in tissue culture. Additional research involving the use of laboratory mice as substantiated a significant amount of the tissue culture work.

Reye's Syndrome, a disease of children with a mortality rate that ranges up to 50%-60%, has, as one plausible etiology, a chemical-viral interaction. Incidental and very incomplete epidemiologic data has suggested that Reye's Syndrome may have some relationship to pesticide application. It is to be stressed that such findings form only an early hypothesis, not a conclusion.

Based on the above information the Panel offered the advice that there is an unknown degree of health risk. The Panel could not be conclusive because neither the laboratory data, nor the epidemiologic studies have done to firmly link an increase in human disease incidence with pesticide application. There is a very strong basis for worry, however, and the panel exercised its best judgement and suggested that wisdom leads one to conservatism where matters of human health are concerned.

Recognizing the potential for human exposure to Sevin-4-Oil in Forest Spray Operations, the Panel felt more stringent limitations should be developed by the Bureau of Forestry to prevent human exposure. Because of individual health states as well as the fact that an individual should have the right to choose whether or not he or she should incur any health risk, the Panel suggested that there be no uninformed or unconsented exposure of human beings to Sevin-4-Oil during a spray operation.

Because of the difficulties of making intelligent decisions without full knowledge of facts the Panel felt that it is imperative that the Bureau of Forestry know all of the ingredients that they are spraying or are allowing to be sprayed. It is highly probable that not all of the ingredients listed as "inert" are actually inert. Therefore, it is mandatory, and in line with common sense health practices, that one know the ingredients of a spray formulation as well as the demonstrated and tested effects of that formulation before exposure of the populace.

Furthermore, the Panel recommends that if and when a formulation is approved for use that than and only that formulation be acceptable for use. Any other formulation should require another approval process. This recommendation implies a higher degree of quality control and surveillance of material sprayed.

Finally the Panel recognizes that it is offering a best judgment. As scientists, we recognize the need for firm data if firm conclusions are to be drawn. In this context we advise that the Bureau of Forestry recognize and support the need for further data both from the laboratory and from epidemiologic study.



MAINE MEDICAL CENTER • PORTLAND, MAINE 04102

FRANK H. LAWRENCE, M.D., CHIEF  
DEPARTMENT OF EMERGENCY MEDICINE  
(207) 871-2617

April 25, 1980

Mr. Kenneth Stratton  
Bureau of Forestry  
Department of Conservation  
Ray Building  
Augusta, Maine 04330

Dear Mr. Stratton:

This letter is in response to your request for interpretation of the new data produced by Dr. Jerkofsky's laboratory and its relevance to and implications for Maine's Spruce Budworm Spray program.

I have talked with Dr. Jerkofsky and understand that she has viral potentiation data in hand which is reproduceable and statistically significant. The data indicate that carbaryl, the "active ingredient" of Sevin-4-oil, does increase the incidence of viral infection of tissue cultured cells; the range of enhancement varies from twofold to thirtyfold with a mean enhancement value of tenfold.

In light of this new data I have called several members of the Advisory Committee which met last January and have solicited their opinion relative to the additional data from Dr. Jerkofsky.

The discussions with these Health Advisory Committee members yield the following statements:

- 1) The additional data supplied by Dr. Jerkofsky lend further credence and support to the recommendations of January 21, 1980. Our level of concern about potential health risk is elevated, the rationale being as follows: As the validity of the data base increases, the degree of risk for tissue cultured cells increases. Our previous health statement which cites a "potential but inconclusive" health risk of Sevin-4-oil is based on the risk for tissue cultured cells and the implied risk to the total organism.
- 2) The original recommendations need not be modified to preclude spraying on the basis of possible individual patient exposure because the recommendations, as written, eliminate uninformed, unconsented human exposure.
- 3) From a public health point of view it would seem responsible and wise to attempt to minimize human exposure for those who have not supplied their consent. As I understand the proposed process, all who enter a spray block will be consenting. Thus those who can potentially be exposed but unconsenting would be in off-target dissemination areas. Thus droplet size, maximizing buffer zones and adherence to optimal spray conditions become of great importance.

Page 2  
Mr. Kenneth Stratton  
April 25, 1980

I hope that these points address your concerns. Please let me know if you require additional explanation.

Sincerely yours,

A handwritten signature in cursive script that reads "Frank".

Frank H. Lawrence, M.D.

FHL/emc  
cc: Rufus Brown  
Ellen Baum

APPENDIX E

PUBLICATIONS AND REPORTS PREPARED DURING 1980

1. Hulsey, Charles, Contract Compliance and Incident Investigation in Conjunction with the 1980 Spruce Budworm Suppression Project, July 10, 1980.
2. Kaselis, Richard, Spray Deposit Assessment for the 1980 Spruce Budworm Suppression Project, Maine Forest Service, July 24, 1980.
3. 1980 Bt Demonstration Project: Operations Report, Maine Forest Service, November 14, 1980.
4. Pistell, Ann, Outline of 1980 Spruce Budworm Spray Project Information and Education Activities, August, 1980.
5. Selser, Jan, Comparison of Aircraft Types Used in Maine Spruce Budworm Spray Operations: LSU Feasibility Report, Maine Forest Service, 1980.
6. Spruce Budworm in Maine: The 1980 Cooperative Spruce Budworm Suppression Project, Maine Forest Service, compiled and edited by Jean Parkin-Clunie.
7. Summary of Results from Aerial Application of Dipel 4L<sup>R</sup> and Thuricide 16B<sup>R</sup> Against the Spruce Budworm on the Maine 1980 Demonstration Project presented at the CANUSA Workshop on Bt on October 29, 1980 by Imants Millers, Northeastern Area, State and Private Forestry, USDA Forest Service, Portsmouth, New Hampshire.
8. Trial, Henry Jr., Spruce Budworm Suppression Project Efficacy, Maine Forest Service, August, 1980.
9. Trial, Henry Jr., Status of the Spruce Budworm in Maine 1980: Control Project and 1981 Predictions, Entomology Division, Maine Forest Service, Department of Conservation, October, 1980.