

Final Report

EVALUATION OF
INDIVIDUAL INCOME TAX
PROCESSING AND AUDITING

PROGRAM EVALUATION DIVISION
Office of the Legislative Auditor
State of Minnesota

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OFFICE OF THE LEGISLATIVE AUDITOR
PROGRAM EVALUATION DIVISION
STATE OF MINNESOTA

July 14, 1981

PREFACE

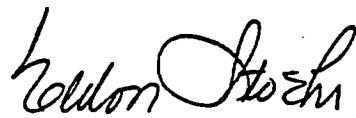
This report presents our evaluation of the Department of Revenue's individual income tax processing and auditing. It is the final report from a broader Program Evaluation Division study of state income tax processing and auditing. Previous reports from the study are Evaluation of Corporate Income Tax Processing, and Evaluation of Department of Revenue Computer Support for Tax Processing.

In this report we indicate several inadequacies in the department's performance. Audit productivity has been hampered by ineffective audit selection procedures. We also found a failure to develop processing procedures which permit equitable treatment of taxpayers, or which are consistent with statutory assessment and refund requirements.

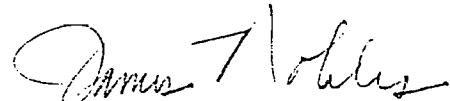
The department is currently making progress to improve audit selection procedures and many examples of specific processing deficiencies cited are being corrected. We urge the department to also address the underlying managerial and control deficiencies which have caused these auditing and processing problems. The department's ability to detect operational problems and initiate corrective action, and its short-range and long-range planning are seriously inadequate. The department is not effectively using its operations auditor, legal, and research staff to ensure higher management has adequate information for decision making, or to ensure that operations are productive and consistent with statute.

We wish to thank the Department of Revenue for its cooperation and we hope all reports from this study will be given serious consideration by the department and appropriate legislative committees.

The Program Evaluation Division's study was directed by Edward Burek. This report was prepared by Edward Burek, with assistance from Daniel Jacobson and Allan Baumgarten.



Eldon Stoehr, Legislative Auditor



James Nobles, Deputy Legislative Auditor for Program Evaluation

July 1981

PROGRAM EVALUATION DIVISION

The Program Evaluation Division was established in 1975 to conduct studies at the direction of the Legislative Audit Commission (LAC). The division's general responsibility, as set forth in statute, is to determine the degree to which activities and programs entered into or funded by the state are accomplishing their goals and objectives and utilizing resources efficiently. A list of the division's studies appears at the end of this report.

Since 1979, the findings, conclusions, and recommendations in Program Evaluation Division reports are solely the product of the division's staff and not necessarily the position of the LAC. Upon completion, reports are sent to the LAC for review and are distributed to other interested legislators and legislative staff.

Currently the Legislative Audit Commission is comprised of the following members:

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John Bernhagen	William Dean
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EXECUTIVE SUMMARY

This is the third report to be published from a study of income tax auditing and processing at the Minnesota Department of Revenue. This report, Evaluation of Individual Income Tax Processing and Auditing, addresses the following issues:

- Are procedures adequate for detecting improper tax payments?
- Are audit selection procedures effective?
- Are taxpayers treated consistently and fairly?

The following sections discuss the machine edit routine, audit selection procedures, and procedures to enforce statutes relating to quarterly estimated tax payments. The concluding section analyzes causes of the operational problems observed.

A. MACHINE EDIT

The machine edit routine is part of the present computerized individual income tax processing system. This routine verifies the mathematical accuracy of tax returns. If there are errors, a tax obligation may be increased or decreased, or refunds may be adjusted.

We found serious problems with the machine edit routine and we strongly question several basic policies followed in the processing of individual income tax returns.

1. NO-REMIT AND PART-PAID RETURNS

The department is presently modifying the computer programming of the machine edit routine to permit the computer to properly handle most no-remit and part-paid tax returns in future processing years. A no-remit tax return has additional taxes due, but the taxpayer failed to remit any payment with the return. On a part-paid return, the taxpayer remitted payment for a portion of the tax obligation due. Through tax year 1980, the machine edit routine examined the mathematics and detected errors, but it could not generate the correct adjusted tax amounts.

Some taxpayers were billed for improper amounts because initial billings were not adjusted to reflect correction of arithmetic errors which affected the tax obligation. Clerical personnel within the Machine Edit Section of the Administrative Services Division developed lists of taxpayers who had been overcharged or undercharged due to improper billings. These lists were then sent to audit staff in the Income Tax Division for further action.

We found:

- Although corrective billings were sent to most taxpayers who owed additional taxes, the Income Tax Division generally failed to refund overpayments to taxpayers who had been overcharged. These overcharges exceed \$100,000 per year.
- According to one manager, the decision whether to refund was not based upon the size of the overpayment. Although the division had lists of the taxpayers involved and the amount of each overpayment, the overpayment was refunded only if the taxpayer eventually detected the error and sent an amended tax return.
- Several cases which were originally thought to be additional tax cases were found upon examination by Revenue auditors to be overpayments. Although the overpayments had been verified by auditors, these cases were closed without sending refunds.

The policy followed by the Income Tax Division of not refunding these overpayments is inconsistent with Minnesota Statutes §270.07, subd. 3, which requires the department to base its refund policy on the cost of processing, handling, and issuing a particular refund.

Furthermore, we conclude:

- The department used auditors to perform a clerical function, which was an inefficient use of audit resources.

There is no reason why these lists should have been channelled to the audit staff. The auditors basically replicated work already performed by the Machine Edit Section, and auditors are not needed for billing and refunding. Corrective action should have been taken by clerical staff.

2. GAP IN MACHINE EDIT COVERAGE

There is a gap in machine edit coverage. Approximately 250,000 returns per year are only partially reviewed by the machine edit routine. As a result, many large arithmetic errors on these returns are not corrected.

The existing computer processing system originally had the capability to fully machine edit these returns. According to department personnel, the system was modified several years ago to exclude these returns from full coverage. The decision rule used is based on the perceived additional net revenue to the state which would occur if a given group is fully processed. If correcting the arithmetic errors on the tax returns in the group results in additional assessments which significantly exceed additional refunds, the group would be

fully processed and corrected. If correcting a group of returns results in additional refunds which exceed additional assessments, the group would be deleted from coverage.

This type of decision rule is inconsistent with equitable taxpayer treatment and effective use of staff for assessment and refund activities:

- The decision rule is inconsistent with statutory requirements to accurately determine the tax obligation of individual taxpayers.
- The department does not effectively use its resources for making additional assessments or refunds.

Since minor assessments are billed and overpayments are refunded for returns which are fully machine edited, while larger potential assessments and refunds remain undetected in the non-coverage group because the computer has been programmed to suppress those errors, the procedure actually reduces the assessments and refunds made by the department.

We recommend that:

- The department should carefully examine statutory requirements governing its activities and develop procedures which are consistent with statutory requirements for assessing taxes and refunding overpayments. Refund procedures should be consistent with Minnesota Statutes §270.07.
- Tasks should be analyzed to determine which section and which personnel should be involved in order to avoid inappropriate use of staff resources and duplication of activity.
- To the extent possible, the department should ensure that errors on tax returns are corrected prior to billing and that accurate billings are issued to taxpayers.
- The processing of all categories of individual income tax returns should be reviewed to ensure effective handling and detection of significant errors, consistent with available staff. The department should also examine established interest and penalty policies and review processing procedures to ensure that these policies are effectively implemented.

B. INDIVIDUAL INCOME TAX AUDIT SELECTION METHODS

The current selectors were developed by auditors and audit management without input of skilled researchers. According to management, the productivity of audits using the current selectors has been disappointing. The department is currently attempting to

develop an improved audit selection approach which can better differentiate between high payoff and low payoff returns.

1. DESIGN OF SELECTION PROCEDURES

Once initial ideas were obtained from auditors, the department should have utilized skilled researchers to develop productive approaches, to further refine the design of the selectors, and to plan for efficient and effective use of computer resources and staff.

We found:

- The department failed to obtain and utilize the skilled researchers necessary to develop productive approaches.
- The department did little sampling or research to ensure that productive selectors were used, and little thought was given to the design and updating of particular selectors.
- Clear decisions were never made concerning which selectors should be developed into a general audit selection routine, and which selectors should be developed into separate audit routines.

2. ATTEMPTS TO IMPROVE DEPARTMENT OF REVENUE AUDIT SELECTION PROCEDURES

Attempts to improve selection procedures have been hampered by several factors:

- Audit management attempted to solve, at the division level, a problem which could only be solved by unified, department-wide action.
- For many years, the problem was not brought to the attention of higher level management where the skills required could have been identified and appropriate action taken.
- Audit management failed to identify and use available public information which would have alerted them to the skills necessary to develop more successful procedures.

In the last several years, the Government Accounting Office (GAO) has performed many studies of Internal Revenue Service (IRS) operations. The report most relevant to the development of auditing procedures is the GAO report, How the Internal Revenue Service Selects Individual Income Tax Returns for Audit. We found, from interviews with management, that the department was unaware of these GAO reports. It was not until last year that steps were taken to ensure that copies of GAO reports dealing with IRS operations were obtained.

3. PROSPECTS FOR IMPROVEMENT

Finally, about a year and one-half ago, the department met to discuss the audit selection problem. From this meeting came a clearer understanding of the need to involve research staff. Work has now begun to improve the audit selection process, although progress has been slowed by other obligations and priorities.

Within the next few months, the department's Research Division hopes to complete initial work on a revised selection procedure. This should result in some productivity improvement. However, significant gains in productivity are possible only if additional data from tax returns and other data sources are obtained and processed.

It is very likely that significant changes to accommodate new data needs will be required in the computerized individual income tax processing system. Given the various system deficiencies noted in our report, Evaluation of Department of Revenue Computer Support for Tax Processing, it may be more efficient to replace the existing system. However, successful development will require the department to carefully identify its needs, set priorities, and unify the various divisions behind those priorities. For various reasons discussed in the computer support report, management has not adequately planned, monitored, or exercised the authority necessary for successful computer development. The department's ability to solve these problems will, in turn, determine its success in developing new auditing procedures.

We recommend that:

- The Department of Revenue should develop the capability to quickly identify deficiencies in procedures and performance and mobilize the necessary resources to correct the problems. This will require use of operations auditor and research staff.
- The department should not underestimate the difficulty of improving its audit selection procedures. To be successful, the department must be willing to devote researchers to this project on a full-time basis.
- Various methodologies should be investigated, and every effort should be made to learn from the experiences of both the IRS and other states.

C. QUARTERLY ESTIMATED INCOME TAXES PROCESSING AND AUDITING

Minnesota Statutes §290.93 requires individuals with significant income (other than wages subject to withholding) to pay estimated taxes on that income in four quarterly installments. While the statute

contains exceptions, taxpayers generally must pay during the course of the year at least 70 percent of the actual year-end tax obligation, or be subject to a penalty. This penalty, called an "additional tax charge" (ATC), is in effect an 8 percent interest charge calculated on the underpayment.

1. ENFORCEMENT PROCEDURES

The auditors performed two procedures relating to estimated taxes. Auditors have verified the accuracy of estimated tax payments claimed on tax returns and they have been responsible for ATC assessment.

a. Verification

In recent years, computer routines have produced printouts of estimated tax verification cases where there is a discrepancy between amounts paid and amounts claimed. The "overclaimer list" contained cases where taxpayers claim on the year-end tax return to have paid more money than can be found in the department's records. If these records were accurate, these taxpayers underpaid their taxes and additional assessments were appropriate. The "underclaimer list" contained cases of taxpayers who failed to claim on the year-end tax return all the estimated tax payments they had made during the year. This resulted in overpayment of taxes, requiring refunds.

We found that the department failed to establish procedures which comply with statutory mandates. We observed practices identical to the handling of no-remit and part-paid returns by income tax auditors:

- The auditors have concentrated entirely on the assessment of additional taxes. The only cases thoroughly investigated were those on the overclaimer list. The Income Tax Division did not remit refunds to or credit the accounts of taxpayers who overpaid their taxes as indicated by the underclaimer list. By the department's own estimates, these refunds could amount to over \$500,000 per year.
- Also, when the auditors investigated overclaimer cases and made adjustments for data errors, they found that some of these apparent overclaimers were entitled to refunds. The department has neither sent refunds to these taxpayers nor credited their accounts.

b. Enforcement Procedures--ATC

The department has been mandated to enforce the timeliness and adequacy of quarterly declaration payments since 1961. We found enforcement procedures were ineffective:

- The department's procedure for detecting deficient or delinquent payments was poorly designed, and inconsistently

used. In recent years potential ATC has been approximately \$1 million per year, of which only a small portion has been detected and assessed.

The department last performed this routine on tax year 1976 returns. It assessed only \$80,000, missing the majority of the available revenue.

2. NEW PROCEDURES--DECLARATION MATCH COMPUTER SYSTEM

The new Declaration Match computer system, operational in mid-1981, is designed to verify the accuracy of estimated tax payments for individuals, to detect delinquent payments, and to assess ATC.

We conclude that while the system will enable the Department of Revenue to enforce statutory requirements more effectively than before, the system design has significant shortcomings in its ability to detect violations and to accurately calculate ATC. The state will continue to lose significant amounts of revenue, and the system will overcharge some taxpayers while undercharging others unless the deficiencies are corrected.

a. Planning Problems

The planning for the Declaration Match computer system was deficient. Although the major component of this system is the enforcement of ATC as mandated by Minnesota Statutes §290.93, the department's attorneys were never asked to review the statute and provide guidelines for programming.

Active participation by attorneys could have helped the department avoid the two main problems with this system:

- The system incorrectly exempts some individuals from ATC because the programming instructions given to ISB misinterpreted the ATC exceptions in Minnesota Statutes §290.93. The department did not realize that the instructions were inconsistent with the legal staff's interpretation of the exceptions. Unless corrected, the state will lose approximately \$200,000 per year. Fairly extensive programming changes will be required to correct this problem.
- The method for calculating ATC is inconsistent with statute, causing some taxpayers to be overcharged and others to be undercharged.

Effective cost-benefit analysis should provide basic information necessary for computer system planning. However, we conclude that the department failed to develop effective cost-benefit analysis for this system and failed to adequately plan for its implementation.

- The department developed only a single estimate of ATC violations. No estimates were made of operation costs involved and potential assessments available through various levels of ATC enforcement. Management could not make informed decisions about the tradeoffs between various system designs.

The single \$80,000 estimate of ATC represented approximately 10 percent of the actual ATC violations. Because the estimate was so deficient, management failed to realize the major revenue loss in unassessed ATC and consequently failed to take effective interim action before the system became operational. Between the time the cost-benefit estimates were developed for the system and the present, the statute of limitations has expired on \$3 million in ATC. An effective interim technique could have detected approximately 70 percent of the revenue.

We again found that the department failed to use available information. If the department had contacted officials in Wisconsin, it would have realized there was a serious problem with the ATC estimate:

- In telephone interviews with officials from the State of Wisconsin, we were informed that they assess nearly \$1 million per year in ATC. This knowledge could have prompted Department of Revenue officials to re-examine the estimate of \$80,000 in ATC in Minnesota, and to reconsider the decisions made as a result of that estimate.

b. Need to Review ATC Policy

The department has not recognized that its interest and penalty policies are not compatible with its planned operation of the Declaration Match system. The department does not charge interest or penalty on ATC after it is technically due (April 15 for most taxpayers), regardless of how long it remains unpaid. However, the department contends that it cannot operate the system during year-end processing because of the heavy burden already placed on processing staff. ATC violations will not be detected and billed until six to twelve months after April 15th. Since no interest is ever charged to these amounts, the state will be granting interest-free loans for six to twelve months, causing a loss to the state, assuming a 10 percent interest rate, of \$50,000 to \$100,000. Additional losses depend on how promptly taxpayers pay ATC after receiving the bills. If the present no-interest policy continues, taxpayers will have no incentive to pay promptly, causing additional losses to the state.

If, in the planning of this system, the department had contacted the IRS and the State of Wisconsin and reviewed their ATC procedures, the Minnesota Department of Revenue would have recognized the need to either run this system during year-end processing, or to take actions to change interest policies. IRS does not assess interest on ATC. Wisconsin does not assess interest, unless the

taxpayer does not promptly respond to the billing. Given these policies, IRS and Wisconsin officials stressed the need to detect and bill ATC during year-end processing to avoid the granting of interest-free loans.

- If the department cannot operate this system during year-end processing, it should have brought to the attention of the Legislature that interest and penalty procedures need to be changed if the state is to minimize losses due to delinquent ATC payments.

We recommend that:

- The department should review the programming and data requirements of the Declaration Match computer system and make the necessary changes to improve ATC detection and to ensure that the system is consistent with statutory requirements.
- The Legislature should review and consider alternative interest and penalty policies for delinquent ATC.

D. CAUSES OF OPERATIONAL PROBLEMS

- Management has placed inadequate emphasis on both departmental and detailed operational planning. The department does not have effective planning procedures for its manual and computerized operations.

As a long-run solution to operational problems, the Department of Revenue has often attempted to develop new computer systems. However, there has been a lack of commitment to serious initial planning.

Interim planning has also been inadequate. The department has made inadequate efforts to modify existing procedures while computer systems are being developed. As a result, procedural deficiencies existed for several years even though management was aware of the problems and alternative short-term remedies were available. Many of the deficiencies reported here would not have been observed if the department attempted, in both the short run and the long run, to use its resources to effectively satisfy statutory mandates.

- The department has not assigned operations to units that can most efficiently perform various functions, nor has it ensured that the operations are consistent with the goals and orientation of the units.

The Income Tax Division has performed many clerical functions which are, at least in part, inconsistent with the division's staffing, orientation, and goals. Verifying estimated income taxes, handling no-remit and part-paid tax returns where taxpayers were

initially billed for incorrect amounts, and correcting arithmetic problems on the tax returns are clerical functions and should not be routinely handled by auditors.

In addition, lists of overpayments should not be sent to units whose primary function is the assessment of additional tax.

- Much of the department's operating policy is made at section and division levels, rather than at the department level. Consequently, inconsistent processing and refunding policies occur, and processing and refunding policies often reflect the orientation of a particular division or section rather than the statutory mandates of the department.
- The department does not adequately monitor tax law compliance to determine where additional enforcement efforts are needed.

The department has failed to effectively use operations auditor, legal, and research staff. The operations auditor staff should be the monitoring unit for the department. The unit should encourage high-level management to establish necessary policies and disseminate these policies to the divisions. The operations of the divisions should be monitored to ensure that they are consistent across divisions and consistent with the policies and priorities established by management. This unit should also ensure that the department has sound procedures for accurately obtaining benefit estimates for new computer systems. Finally, it should ensure that management information systems are functioning and adequate.

Management has not effectively used its operations auditor function:

- The unit is understaffed. Furthermore, despite urging from the operations auditor staff, the department is behind in development of overall plans, policies, procedures, and standards. Management has also been slow to address basic problems brought to its attention by the operations auditor staff.

While there has been recent improvement, department management has been slow to recognize the value of research staff. Given the nature of operations performed by the Department of Revenue, there is no other agency in state government in which efficient use of resources is more vital and operations more conducive to cost-benefit analysis. In the Department of Revenue, inefficient staff and resource use translate directly to lost revenue to the state.

We find:

- The Research Division has mainly performed duties of value to outside decision-makers and to the public. The department has not effectively utilized its research capability to address its internal needs and to improve the quality of information received by management.

In reviewing the operations of the department, we observed several problems with use of legal staff:

- Attorneys are not knowledgeable of department operations, nor are they integrated into the department's activities. Attorneys are not effectively involved in procedural review of operations or in operational planning to ensure consistency with statutes.

In closing conferences with the Department of Revenue, we were informed that the department recognizes the basic problems with effectively utilizing legal staff and is attempting to correct the situation. We fully encourage the department's attempts in this area.

We recommend that:

- The department should make a greater commitment to serious initial planning.
- The department should review its operations and develop both short-range and long-range solutions to operational problems.
- The department should establish the procedures and policies necessary to ensure that adequate information is developed to support effective decision making.
- The department should assign duties compatible with the orientation and goals of the specific unit. If the duties are not compatible, either the goals of the unit should be changed, or the duties should be assigned to a more appropriate unit.
- The department should improve its monitoring of tax law compliance to identify areas where increased enforcement would be productive.
- The department should determine what changes in use and staffing levels of operations auditor, research, and legal staff are required to assist management in: establishing effective planning procedures, strengthening managerial control, and developing procedures that are productive and consistent with statute. Internal department staffing allocations should be adjusted to reflect these priorities.

INTRODUCTION

This is the third report to be published from a study of income tax auditing and processing at the Minnesota Department of Revenue. The first report, Evaluation of Corporate Income Tax Processing, examined the department's procedures to ensure adequate payment of corporate liabilities and its ability to formulate effective and consistent policies and procedures. The second report, Evaluation of Department of Revenue Computer Support for Tax Processing, analyzed the adequacy of current computer support for tax processing and auditing, and examined the causes of recent problems with development of new systems.

This report, Evaluation of Individual Income Tax Processing and Auditing, addresses the following issues:

1. Are procedures adequate for detecting improper tax payments?
 - When tax returns are examined for mathematical accuracy during the machine edit routine, are there errors in or problems with system design which cause some underpayments or overpayments to go undetected?
 - Are all tax returns thoroughly examined, or only a portion?
 - Are problems detected and proper action taken when quarterly estimated tax payments are untimely or inadequate?
2. Are audit selection procedures adequate?
 - What audit selection procedures are used for individual income tax returns?
 - Are these procedures productive? Are all taxpayers subject to the possibility of an audit?
3. Are taxpayers treated consistently and fairly?
 - Are adequate attempts made to identify and refund tax overpayments?
 - Are department procedures for assessment of interest and penalties equitable?

In order to examine how equitably taxpayers are treated, we first developed an audit standard against which the practices of the Department of Revenue could be compared. Our standard is based upon the statutes:

- The Commissioner of Revenue is required by Minnesota Statutes §270.065 to use all available information to ensure equal and consistent application and enforcement of all tax laws administered by the department.
- Minnesota Statutes §290.46 requires the commissioner to make any necessary examinations of taxpayer records and accounts to determine the proper tax obligation. If the proper tax exceeds the amount paid, additional tax should be assessed; if an overpayment occurred, it should be refunded.
- The department's decisions regarding assessments and refunds must be based on the guidance provided by Minnesota Statutes §270.07, subd. 3:

Notwithstanding any other provision of law the commissioner of revenue may,

- (a) based upon the administrative costs of processing, determine minimum standards for the determination of additional tax for which an order shall be issued, and . . .
- (c) based upon the administrative costs of processing, determine the minimum amount of refunds for which an order shall be issued and refund made where no claim therefore has been filed.

We conclude that the Department of Revenue is mandated to utilize its resources as efficiently as possible to ensure that each taxpayer pays the proper tax obligation. Within the limits imposed by its funding, staff complement, and cost effective criteria, the department should utilize its resources to bill for additional taxes and to refund overpayments. Failure to do so is inconsistent with statutory requirements and causes inequitable taxpayer treatment.

Other findings in this report follow from the premise that the Department of Revenue should enforce, to the extent possible given its staff complement and resources, all taxation statutes. The reasons are:

- Selective enforcement of statutes is not consistent with the department's mandate.
- Selective enforcement of statutes is not consistent with maximizing tax revenues.
- Selective enforcement of statutes is not consistent with equitable taxpayer treatment.

The department should first allocate its resources to cases of large tax avoidance. It is possible that these cases would be concentrated in violations of only a few statutes. However, as the

department allocates additional resources, limiting enforcement to these specific areas would result in the department using resources to make smaller assessments, while ignoring more significant violations of other statutes. By shifting resources from less productive to more productive areas, audit revenues would increase for the same expenditure of resources, and the range of statutes enforced would expand. Furthermore, treatment of taxpayers would be more equitable because the department would not assess taxpayers for minor violations while more significant violations by other taxpayers are not detected.

In summary, the department is mandated to enforce the broad array of tax statutes; it would be inconsistent with the department's role as a government agency to do otherwise. We do not feel there is a significant conflict between this mandate--efficient allocation of the department's resources--and equitable treatment of taxpayers. One is almost a natural consequence of the other.

Based on this audit standard, we comment in the report on failures to enforce statutory provisions only if there are significant potential assessments, in both number and dollar value, which exceed the minimum amount deemed by the Department of Revenue to be worthy of initiating an audit of a taxpayer's accounts.

The first chapter of this report briefly describes the early steps in the processing of individual income tax returns and analyzes the machine edit routine. Chapter II discusses the audit selection procedures which have been used by the department. Chapters III and IV discuss the Income Tax Division's procedures for taxpayers who must file quarterly estimated tax payments. Chapter III deals with procedures used to date, while Chapter IV reviews a new computer system which will significantly affect enforcement of estimated tax requirements. The concluding chapter discusses departmental problems in properly utilizing its research staff, legal staff, and operations auditor staff.

I. MACHINE EDIT

A. BACKGROUND

The machine edit routine is part of the present computerized individual income tax processing system and performs three specific functions:

- It verifies the mathematical accuracy of computations on tax returns.
- It examines tax returns for certain statutory violations.
- It notes tax returns which exceed or violate certain general audit selection parameters that are unrelated to mathematical accuracy.

Tax returns that are mathematically incorrect, or that are flagged because of the general audit detection elements of the program, are reviewed by staff of the Machine Edit Section. Based upon a manual review of the actual tax return and a computer printout, the tax returns may either be corrected by machine edit personnel or be sent to audit staff. The Machine Edit Section is a unit of the Administrative Services Division, within the Revenue Management Program area. This division is the accounting, revenue depositing, and processing unit for the various taxes collected by the department.

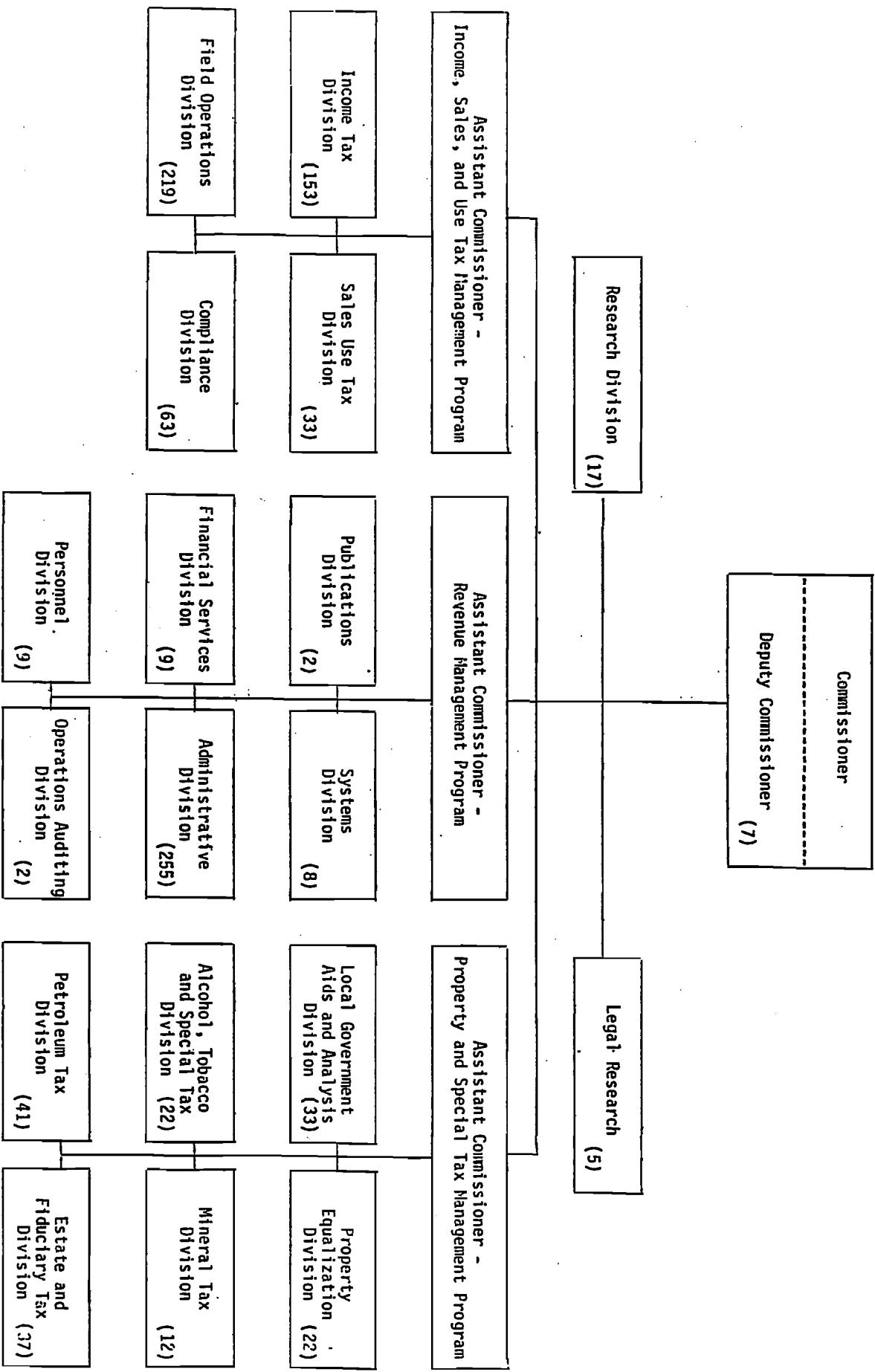
If there are errors on a tax return, a tax obligation may be increased or decreased. The department may then assess additional tax, send a refund, or change the size of the refund claimed by the taxpayer. According to Department of Revenue officials, the machine edit produces net additional tax revenue in excess of \$10 million annually.

B. SPECIFIC PROBLEMS WITH MACHINE EDIT

We found serious problems with the machine edit routine and we strongly question several basic policies followed in processing individual income tax returns. These problems are discussed below in two sections. The first section deals with problems with no-remit

¹The department disagrees that these items are generalized audit selectors. The department views these criteria as related to editing (part of a quick "front-end" review) rather than auditing.

MINNESOTA DEPARTMENT OF REVENUE ORGANIZATION CHART



Source: Department of Revenue Personnel Division, 7/21/01.

Note: The number of employees in each organizational unit is shown on the chart.

and part-paid returns, while the second section discusses problems caused by a gap in machine edit coverage.¹

1. NO-REMIT AND PART-PAID RETURNS

This section discusses problems with the processing of no-remit and part-paid tax returns which existed through the processing of tax year 1980 returns. The department is presently modifying the programming of the machine edit routine to properly handle most of these returns in future processing years.

a. Processing Problems

At the time of our audit, due to the programming of the machine edit routine, no-remit and part-paid returns could not be thoroughly machine edited. The machine edit routine examined the mathematics and detected errors, but it could not generate the correct adjusted tax amounts. It was therefore necessary, if consistent coverage of all tax returns was to be achieved, to coordinate the activities of several units to develop a complementary manual processing system. However, we found:

- The department failed to coordinate the actions and the policies of the various divisions to ensure a consistent, efficient, and equitable department policy.
- Some taxpayers were billed for improper amounts because prior to billing the department did not correct arithmetic errors which affected the tax obligation.
- The department used auditors to perform a clerical function, which was an inefficient use of audit resources.
- While corrective billings were sent to most taxpayers who owed additional taxes, the department frequently failed to refund overpayments of tax when arithmetic corrections to the tax return had reduced the tax obligation.

In the case of no-remit and part-paid returns, the taxpayer always received a billing for the tax due as stated on the tax return. If there were no errors on a tax return, this was proper. However, if there was an arithmetic error on the return, the taxpayer was billed for an improper tax obligation, because the tax stated on the return was incorrect.

At the end of each processing year, auditors in the Income Tax Division received a list of the no-remit and part-paid returns

¹A no-remit tax return has additional taxes due, but the taxpayer failed to remit any payment with the return. A part-paid return is also a balance-due return, but the taxpayer remitted payment for only a portion of the tax obligation.

that contained mathematical errors. These lists contained each taxpayer's name and the amount of additional tax owed or the amount of the overpayment. These additional taxes and overpayments were calculated by the Machine Edit Section. Because these returns contained mathematical errors, any previous billings which were issued to the taxpayer were incorrect. Assuming that these amounts had now been paid, the Income Tax Division should have generated new billings to some taxpayers for additional tax, plus any additional interest or penalties. In other cases, the taxpayers should have received a tax refund plus any excessive interest and penalty charges already paid. We found:

- The Income Tax Division used a higher cutoff figure (additional taxes below this amount were not billed) than the Machine Edit Section.
- The Income Tax Division generally failed to refund the overpayments. We found that additional tax cases were billed, but typically no action was taken on overpayment cases. The overpayments in these groups exceed \$100,000 per year. According to one manager, the decision whether to refund these overpayments was not based upon the size of the overpayment. Instead, an overpayment was refunded only if the taxpayer eventually detected his own error and sent an amended tax return.
- We examined several cases which were originally thought to be additional tax cases, but upon examination by the auditors were found to be overpayments. These were closed without sending refunds.

There is no reason why these lists of problem cases should have been channelled to the audit staff. In each case, the additional tax owed or the amount overpaid had been determined by the staff of the Machine Edit Section. Auditors are not needed for billing or refunding. Corrective action should have been taken by clerical staff.

Also, the policy followed by the Income Tax Division of not refunding these overpayments is inconsistent with Minnesota Statutes §270.07, subd. 3. The department did not have a refund policy which was based on the cost of processing, handling, and issuing a particular refund. Some minimal overpayments were not economical to refund and could be cancelled. However, many should have been refunded, including nearly all overpayments noted on the lists given to the income tax auditors. These cases were screened by the machine edit staff, who were instructed to include on the list only those cases which exceeded a specific, fairly high, dollar value. A policy of not refunding these overpayments, regardless of size, is not consistent with the department's mandate.

b. System Modifications

The logic of the proposed new tax processing system would allow most of these tax returns to be properly handled within machine

edit. While the new system was in development, the department (with urging from the Information Services Bureau) decided not to incorporate that change into the existing system. Now that development has been halted, the department has requested that the Information Services Bureau (ISB) change the programming of the existing system to allow for machine edit of most of these returns. The estimated cost of this change is only \$20,000. However, the request was made too late for the modification to be incorporated into the processing of tax year 1980 returns.

Given that the department failed to establish an equitable set of manual procedures and given the low cost of this modification, this change should have been made several years ago, well before development of the new system was begun.

2. GAP IN MACHINE EDIT COVERAGE

There is a gap in machine edit coverage. Approximately 250,000 returns per year are only partially reviewed by the machine edit routine. As a result, many large arithmetic errors on these returns are not corrected. Due to the confidential nature of this information, we cannot disclose the characteristics of the returns which are not covered by the machine edit.

The existing computer processing system originally had the capability to fully machine edit these returns. According to department personnel, a decision was made several years ago to modify the machine edit system to exclude these returns. We were not able to find written documentation stating why this decision was made. However, audit staff and clerical personnel identified two reasons. First, the department felt pressured to quickly send refunds to taxpayers. Second, a subsequent study by the department found that when a specific category of tax returns was fully machine edited and corrected, the state sent out more money in additional refunds than was gained in additional taxes.

The department also did not assign anyone to follow up on these returns after the processing season, although the department has maintained that option. One of the audit selectors used by the Income Tax and Field Operations Divisions permits the auditors to request and examine the returns in this non-coverage group. However, audit management contends that if the additional refunds exceed the additional taxes due, the project would cause a loss of revenue, making it inefficient to use audit resources to ensure that individuals within the non-coverage group are billed for proper tax amounts. Therefore, the auditors have failed to take any action.

For tax year 1980 returns, there was some improvement in processing procedures for this non-coverage group. However, major inconsistencies remain between the handling of this group and other tax returns. Errors in this group which go undetected continue to greatly exceed errors on other tax returns which are corrected.

These recent changes were motivated by a computer printout produced in the last few months which initially suggested that, contrary to earlier expectations, there could be as much as \$10 million in additional taxes to be assessed to this non-coverage group if a full machine edit were performed, and perhaps as much as \$1 million in additional refunds. However, a careful examination of the printout revealed to the department that key-punch errors--rather than taxpayer mathematical errors--accounted for many of the cases listed. The department concluded that no useful estimate of additional taxes or refunds for this group could be determined from the printout. The changes for this group which were made in the processing of tax year 1980 returns were an attempt to develop more accurate information about this category of returns.

The decision rule used by the department is based on the perceived additional net revenue to the state which would occur if a given group is fully processed. If correcting the arithmetic errors on the tax returns in the group results in additional assessments which significantly exceed additional refunds, the group would be fully processed and corrected. If correcting a group of returns results in additional refunds which exceed additional assessments, the group would be deleted from coverage.

This type of decision rule is inconsistent with equitable treatment of taxpayers and effective use of staff for assessment and refund activities:

- The decision rule is inconsistent with statutory requirements to accurately determine the tax obligation of taxpayers.

Whether a tax return is corrected, and a billing or refund issued, does not depend on the size of the individual overpayment or underpayment. Using the "net revenue" decision rule, large underpayments by some taxpayers will not be billed if there are comparable or greater overpayments by other taxpayers within the group. This procedure of weighing overpayments by some taxpayers against underpayments by others is inconsistent with statutory requirements to accurately determine the tax obligation of individual taxpayers, and to ensure that those proper obligations are paid.

- The department does not effectively use its resources for making additional assessments.

By programming the machine edit to suppress errors in the non-coverage group, the department is using some of its resources to make minor additional assessments to taxpayers who fall into the groups which are fully machine edited, while it fails to make large assessments to other individual taxpayers within the non-coverage group. By suppressing errors in this group, the department is not effectively using its resources to assess additional taxes. Since minor assessments are billed for most returns, while larger potential assessments remain undetected in the non-coverage group, the procedure actually reduces the assessments made by the department.

- The department does not effectively use its resources for refunding overpayments.

Minor overpayments detected in machine edit are refunded to taxpayers within the group that is machine edited. A more significant error on a tax return in the non-coverage group will not be corrected, because the computer is programmed to ignore errors within that group.

The department is mandated by Minnesota Statutes §270.07, subd. 3 to refund overpayments, consistent with processing costs and available resources. The department cannot fully comply with this statute if it continues to use the "net revenue" decision rule. There are two related problems. First, some overpayments which ought to be refunded will be suppressed by the current program logic of the machine edit. Second, a "net revenue" decision rule directly contradicts the intent of this statute. This rule makes it less likely, rather than more likely, that significant overpayments will be refunded.

Given the need to distribute its resources for machine editing or any other tax processing or auditing operation, the department should adopt a policy which bases assessment and refund decisions on the characteristics of the individual returns, ensuring that significant violations receive precedence over minor ones, and major overpayments receive precedence over minor overpayments. By ensuring that large errors are corrected before using resources to correct minor violations, the department will obtain greater output from the same level of staff and support services. Any policy which deviates from this principle reduces the effectiveness of both assessment and refund activities.

The department should review its policies on minimum errors permissible on a tax return before it bills for additional tax or issues a refund. Since some resources should be shifted from handling the least significant errors in groups presently covered to handling larger overpayments and underpayments in the group presently not covered, it may be necessary to raise these cutoffs slightly. Once the revised cutoffs are established, they should apply to all tax returns.

Several factors which influence the proper level of these cutoffs should be examined:

- The department can alter the amount of resources allocated to machine edit functions.
- The department can reduce or change the generalized audit selectors built into machine edit which are unrelated to mathematical accuracy.
- Although not ideal, the department could defer a group of tax returns from machine edit, and then provide proper coverage of those returns after the peak processing season.

- The department can alter its goals on the time between receipt of a refund tax return and issuance of the refund check. Lengthening the time permits fuller analysis and coverage in machine edit. Shortening the time will sacrifice coverage.

C. COMBINING AUDITING AND PROCESSING FUNCTIONS

The first section below briefly discusses the functions performed by clerical staff during tax return processing. It concludes that clerks have a direct impact on audit revenues through their actions to identify and channel questionable returns to audit staff. The second section notes problems inherent in the department's stationing of auditors in the tax processing units, given that auditors and processing staff are from two separate program areas and under the authority of different assistant commissioners.

1. AUDIT RELATED FUNCTIONS OF CLERICAL STAFF

In performing the background work for this study, we found a tendency on the part of the Department of Finance, the Legislature, and legislative staff to make a distinction between revenue-generating positions (auditors) and non-revenue-generating positions (clerical and support staff). To some extent, this distinction is improper. At a minimum, clerks have an indirect dollar impact because reducing the number of clerks would reduce the efficiency of the audit operations they support, causing reduced assessments. We also found very direct impacts. Clerks detect certain categories of delinquent tax payments and returns, and they compute interest and penalties. Also, we found that during tax return processing, clerks perform more than processing or audit support functions; they also act as an audit selecting group. Therefore, their performance has a direct impact on audit revenues.

The combination of processing and audit selection functions is most evident in the activities of the Machine Edit Section. While it is not widely recognized, even by staff in the Department of Revenue, the machine edit process is designed to do more than simply examine tax returns for mathematical accuracy. A significant component of the design of the machine edit is to select tax returns for review based on several general computerized criteria.

As tax returns are examined in the machine edit routine, some are flagged because of arithmetic errors, while others are flagged by the more general selection parameters of the routine. Clerks in the Machine Edit Section examine these flagged tax returns for arithmetic errors, improper credits, and unallowable itemized deductions. In cases where the tax return has been flagged due to arithmetic errors, clerks initiate action which changes the tax obligation of the taxpayer. If they find questionable items on a return, or

if the return is flagged because of the more general audit selection components of the system, the return will be channelled to auditors. These auditors work closely with clerks in the Machine Edit Section.

Clearly, the clerks in the Machine Edit Section perform more than a simple audit support or clerical role--they are in part acting as an audit selection unit. Furthermore, according to clerks in the Machine Edit Section, they have occasionally performed audits under the direction and supervision of income tax auditors, using referral information from the Internal Revenue Service (IRS).

2. PROBLEMS OF MANAGERIAL CONTROL

Although including general selectors in the processing system and stationing auditors in processing units is generally beneficial, there are certain problems inherent in this approach. The processing units are all part of the Revenue Management program. The auditors, however, are from an entirely different program area--the Income, Sales, and Use Tax program. This makes managerial control more difficult and has contributed to friction between processing and auditing staff.

The problem of managerial control is twofold:

- The assistant commissioner in charge of the Income, Sales, and Use Tax program has no direct control over the processing of individual or corporate tax returns. He has direct authority over only the auditing steps and other functions which are conducted within the Income Tax and Field Operations Divisions.

This makes it more difficult to detect and correct processing problems which impair auditing functions, and to coordinate the processing and auditing functions located in the processing units to ensure a single, coherent system and policy. Furthermore, if there are processing problems, the assistant commissioner of the Income, Sales, and Use Tax program technically has no direct authority to correct those deficiencies. Any corrections must be a coordinated and to some extent negotiated effort between the assistant commissioners for the two different program areas.

- Although auditors and managers within the Income, Sales, and Use Tax program have no direct authority to control processing, in practice they are actively involved in coordinating processing functions to ensure that steps and processes necessary for certain audit detection elements are performed. This has inevitably led to conflicts in roles and authority, as individuals within the Income, Sales, and Use Tax program have attempted to bypass the chain of command within the processing units.

D. RECOMMENDATIONS

In conducting our audit, we found frequent problems in refunding, in planning, and in effective use of staff. Several cases appear in this chapter; others appear in later chapters and in the other reports of this study. Since the cases discussed in this chapter are frequently specific examples or consequences of more general problems, where appropriate, we address the recommendations to the broader underlying problem areas.

- The department should carefully examine statutory requirements governing its activities and develop procedures which are consistent with statutory requirements for assessing taxes and refunding overpayments.

Procedures adopted should be consistent with the requirement of ensuring that individual taxpayers pay their proper tax obligation. Within the machine edit operation we found a tendency to consider tax returns in groups, rather than to focus on the accuracy of individual tax returns. We observed the same tendency within the Income Tax Division. As a result, staff allocation decisions are inconsistent with statutory requirements to accurately determine the tax obligation of individual taxpayers, or to treat those taxpayers equitably. Further consequences are inefficient use of resources for assessing and refunding, and gaps in coverage. The department should avoid thinking in terms of groups of returns, and should instead concentrate on detecting serious individual violations.

The procedures adopted should have the following characteristics. First, overpayments should be considered separately from underpayments. Clear decisions should be made regarding the level of resources to devote to each operation and the minimum amounts to be refunded or assessed. By separating these categories, emphasis is placed on the accuracy of the individual returns, as required by statute, and both significant overpayments and significant underpayments will be corrected.

Second, there should be no gaps in coverage. All categories or groups of individual income tax returns should be subject to review, and every effort should be made to handle the most significant individual underpayments and overpayments in each category before handling lesser cases. This approach will eliminate gaps in the coverage, since significant violations in all groups will be detected. Given staff limitations, not all cases can be covered, but those not handled will be the least significant underpayments or overpayments in all categories.

- The department should carefully examine its refund policies and develop refund procedures which are consistent with Minnesota Statutes §270.07.

To implement this statute, the department should determine dollar cutoffs for refunds, based on available resources and the cost of handling. Once the cutoff is determined, overpayments above this

level should be refunded, and overpayments below this level should be cancelled. Present policies are not consistent with this requirement. We find that in some situations the department refunds minimal overpayments, while in other situations overpayments have not been refunded regardless of their size.

- Management should carefully review department operations and eliminate unnecessary procedures and steps.
- Tasks should be analyzed to determine which section and which personnel should be involved in order to avoid inappropriate use of staff resources and duplication of activity.
- To the extent possible, the department should ensure that errors on tax returns are corrected prior to billing and that accurate billings are issued to taxpayers.

This will ensure that taxpayers pay their proper obligations without the need for corrective rebillings or eventual refunding of overpayments.

The three recommendations above follow from the discussion of no-remit and part-paid returns. We are also aware of problems with other categories of individual income tax returns. A general departmental review is required.

- The processing of all categories of individual income tax returns should be reviewed to ensure effective handling and detection of significant errors, consistent with available staff. The department should also examine established interest and penalty policies, and review processing procedures to ensure that these policies are effectively implemented.
- The department should re-examine its lines of authority for the processing of tax returns, with the goal of centralizing control and planning of processing and auditing functions.



II. INDIVIDUAL INCOME TAX AUDIT SELECTION METHODS

The department's primary audit selection procedures are conducted within the Income Tax and Field Operations Divisions. These selectors are run against the Tax Master File, a computerized listing of information from each tax return which is compiled as the returns are keypunched for machine editing. These audit selectors are typically run a year or more after tax returns are filed. These later selection methods are the subject of this chapter.

The Department of Revenue has had problems developing effective audit selection procedures. To best understand these problems, we first describe the development of IRS audit procedures. This facilitates comparison to Minnesota's audit selection methods, which are described in the second section, and permits a clearer understanding of the deficiencies in procedures developed by Department of Revenue auditors. This section also discusses current research by the department's Research Division to improve audit selection procedures.

A. DEVELOPMENT OF IRS AUDIT SELECTION CRITERIA

IRS replaced manual screening procedures with a computerized approach in 1962. According to a Government Accounting Office (GAO) report, the computerized approach made use of 38 to 50 different classification criteria.¹ Most of these selectors were ratios, such as the ratio of contributions to income, or the ratio of various types of interest deductions to income. At first any return which was flagged by at least one parameter was eligible for audit, but IRS found that the number of returns selected by the computer routine greatly exceeded the number of returns which could feasibly be audited. Consequently, personnel had to manually sort through the large number of flagged tax returns to obtain a more feasible group for auditing.

In 1966, IRS improved its procedures for ranking returns by audit potential. After running the tax returns against the computerized criteria, IRS simply ranked the tax returns by the number of selectors exceeded. Those tax returns which were flagged by the greatest number of selectors were identified for examination first. This approach assumed that the greater the number of selectors exceeded, the higher the audit potential of a given tax return. Many deficiencies remained. GAO noted that because the ranking method

¹ GAO Report, How The Internal Revenue Service Selects Individual Income Tax Returns For Audit, November 5, 1976.

was crude, a high level of secondary manual screening was still needed, and the approach was only marginally successful in identifying returns with high audit potential.

- The most significant weakness of these early IRS attempts is that they failed to use statistical techniques that could differentiate between high audit potential and low audit potential cases.

Techniques which differentiate or rank returns by audit potential involve the following steps. A sample of tax returns can be audited and then detailed information from these returns can be keypunched. Using the computer to ease handling this data, and then applying any of several statistical techniques, it is possible to determine which characteristics or combinations of characteristics are associated with high audit potential. Basically, the statistical methodology develops a proper set of weights to be applied to each factor. Characteristics, or combinations of characteristics, which lead to high audit potential receive high weights. Other characteristics which are not as strongly associated with high payoff receive smaller weights. These techniques can also be used to determine which factors are not related to audit payoff. This information can then be used to determine which information should be keypunched and which information is unnecessary. Thus these techniques not only lead to improved audit productivity, but also permit savings and more effective use of processing and clerical resources.

Once the weighting structure has been developed from the sample, all the tax returns filed for a given year can be run through the selector routine and sorted by audit potential.

The first IRS audit selection method to combine both computer capabilities and statistical sophistication became operational in 1970, utilizing a statistical technique known as discriminant function analysis. While the name is intimidating, the basics of the approach are very simple. It is a selection technique used to sort or "discriminate" between high payoff returns and low payoff returns. The IRS did not develop or invent discriminant function analysis. It simply applied a standard statistical methodology to the problem of grouping tax returns by audit potential. The technique was actually developed in the 1930s and has since been applied to many research issues in archeology, psychology, sociology, and economics.

- The current selection formulas used by IRS are the result of a significant commitment of research staff resources, and cooperation between auditors and researchers.

The auditors provide the sampling and feedback to research staff which is necessary to keep the procedure current and productive. A GAO evaluation of the approach has concluded that the procedure is highly effective. GAO evaluated the success of the discriminant function technique using several different approaches, standards, and comparisons. One of the comparisons made was between audits of tax year 1969 returns selected using the weighting

technique first developed in 1966, and fiscal year 1973 audits selected using the discriminate function technique. The audit productivity of the two selection techniques was compared both for individual income tax returns and for business tax returns. Although GAO made no attempt to correct for inflation over that period, it was able to conclude that the discriminate function approach is highly effective.

- For individual income tax returns the discriminate function approach was twice as productive as the earlier approach.
- For business returns the discriminate function approach was more than three times as productive.

To maximize productivity, IRS has found it is best to first group tax returns by tax type, income range, and to some extent occupational categories. For example, it is evident from reading the GAO report that IRS has developed separate sets of audit criteria (discriminate functions) for farming operations, commercial operations, and individuals. For individual income taxpayers who are not farmers, the subgroups include low income standard deduction cases, low income itemized deduction cases, medium income cases, and high income cases. For each income subgroup, IRS has developed a separate set of discriminate function audit selectors because the pattern of tax evasion differs by income range. Separate sets of audit selectors for each income range ensures that the selectors are designed to detect patterns of tax evasion typically found within the group and ensures that all taxpayers, regardless of their income level, are subject to the possibility of an audit.

B. DEPARTMENT OF REVENUE AUDIT SELECTION PROCEDURES

Several years ago the Department of Revenue developed a list of audit selectors. This list has been used to select audits for both the Income Tax and the Field Operations Divisions. According to management of the Income Tax Division and higher level management, the productivity of audits using the current selectors has been disappointing. The department is currently attempting to develop an improved audit selection approach which can better differentiate between high payoff and low payoff returns.

1. DESIGN OF SELECTION PROCEDURES

According to Income Tax Division management, the current selectors were developed through memos and discussions with auditors. Each auditor was asked to suggest good audit selectors. These suggestions were then sorted by management and a list of selectors was developed which, it was hoped, would be both feasible and productive.

It was at this stage that skilled researchers should have been involved to develop productive approaches, to further refine the design of the selectors, and to plan for efficient and effective use of computer resources and staff. This did not occur. After gathering a list of potential selectors, clear decisions were never made concerning the basic design and content of the current selection system. The system remained basically a list of options which could be used by auditors to select groups or categories of returns for further examination. The computer does not automatically use all selectors. Instead, the auditors can specify which particular subgroup of selectors to use in the computer run, and all tax returns flagged by one or more selectors appear on a computer printout. Typically, only a few selectors have been used in the computer runs. We found, however, that the department did little sampling or research to ensure that the most productive selectors were used, and little thought was given to the design and updating of particular selectors.

Some of the selectors could perhaps be used in a generalized audit routine similar to the computerized approaches used by IRS in the early 1960s, but it appears this was not attempted. Other selectors must be considered as separate audit routines, rather than as elements of a single selection procedure. Some selectors can flag taxpayers by income, while other selectors can flag taxpayers by occupation. The occupation selectors should have been considered as separate audit routines. Another selector is a procedure to detect certain non-filers. Again, this is really a separate audit routine, since it has no relevance for filed tax returns. Finally, one selector provides the option to examine tax returns within the non-coverage group discussed in Chapter I. As noted previously, the auditors have not used this option.

Given the above factors, it is very difficult to describe the specific nature or content of the audit selection which has been used by the auditors in past years because the auditors could vary the content at whim. One safe conclusion, however, is that the department has not had an effective audit selection system which truly submits all tax returns to the possibility of an audit. Nor is the system as productive as it should be. The necessary planning, sampling, and designing have not been performed.

The basic problem with the selection procedure is that the department has been using the computer as a crude sorting device rather than a true selecting device. The department has primarily used the computer simply to isolate a particular group of returns, and then the entire group has been manually screened to select those returns with audit potential. This causes excess work for clerical staff and results in ineffective use of audit resources. An effective approach would first divide the individual tax returns into groups, and then use the computer to select tax returns with audit potential from within those groups.

This is best illustrated by reference to the income level or income range selectors. Any effective general audit selection approach must begin by grouping tax returns by income level. As noted earlier, IRS first groups tax returns by income level because

patterns of tax evasion vary by income. The types of credits and deductions typically found on a tax return of an individual who earns \$100,000 per year are much different than those found on the return of an individual who earns \$20,000 per year. Sources of income also differ. It is therefore appropriate to first sort the returns by income and to then use separate selector routines designed to detect those cases with the highest audit potential within each group. As observed in the previous discussion of the recent audit approaches used by IRS, effective selection is basically a two-step process. First, tax returns must be grouped by similar characteristics and then selection techniques must be applied.

The audit selection techniques used by the Minnesota Department of Revenue have not successfully gone beyond the first step. If the auditors use the income level selectors, a minimum of a quarter of a million tax returns would be listed by the computer. The department has lacked an effective way to use the computer to then examine the tax returns within that group to select those returns that merit further examination by audit staff. If the entire group is reviewed, Central Files personnel would have to pull 250,000 tax returns and the subsequent review by audit staff could take ten or more auditors nearly a year simply to identify those tax returns which have audit potential.

2. ATTEMPTS TO IMPROVE DEPARTMENT OF REVENUE AUDIT SELECTION PROCEDURES

While Department of Revenue audit management has been dissatisfied with audit productivity, attempts to improve selection procedures have been hampered by several factors:

- Developing and refining audit selection procedures was attempted at the division level by audit staff, without use of skilled research input necessary for successful procedures.
- For many years, the problem was not brought to the attention of higher level management where the skills required could have been identified and appropriate action taken.
- There was a failure to identify and use available public information which would have alerted managers to the skills necessary to develop more successful procedures.

The problem can be summarized briefly:

- Audit management attempted to solve, at the division level, a problem which could only be solved by unified, department-wide action.

Personnel with research skills necessary to accomplish this task are not assigned to the auditing divisions. Furthermore, assuming that a successful approach were identified, it would then be necessary to

provide support for that selection routine. This would require changes in clerical and computer support procedures, adjustments in tax return processing, and changes in data and data processing needs. These changes would affect many sections within the processing units, and would clearly require high level planning and coordination of department-wide activities.

The individuals involved failed to recognize what functions should be performed by auditors and management and what functions must be performed by skilled researchers. Auditors are trained to manually audit tax returns. They are not trained to plan and develop a computer system to effectively sort through two million tax returns to select cases with high audit potential. Effective selection procedures require careful planning of computerized selection to minimize the need for manual screening. The most successful computerized selection procedures require the use of statistical methodologies, an area in which auditors are not proficient. We know from GAO reports and through telephone interviews with IRS officials that the recent IRS audit selection procedures were developed through the joint efforts of a highly trained research staff and auditors.

Department of Revenue audit management informed us that they have been aware for many years of the discriminate function technique used by IRS. Over the years several requests were made to IRS to provide details of the approach so that the Department of Revenue could develop a similar audit selection method, or at least improve its procedures. IRS did not provide the information requested and the department's selection procedures have remained basically unchanged.

The department erroneously believed that IRS was the only source of the technique. It failed to understand that discriminate function analysis is not a new statistical technique developed by IRS, but is an adaptation of a widely known technique to the specific problem of audit selection. The basic methodology is public knowledge. The statistical method has widespread use in the hard and social sciences. There are numerous academic articles and books which present the technique and the approach is taught in post-graduate statistics courses at universities. There were dozens of people in the immediate geographic area who could have assisted the department on a full-time or consultant basis to improve the department's audit selection procedures.

According to audit management, after becoming frustrated at attempts to get information from IRS, they hoped that certified public accountants (CPAs) within the division could develop a statistical selection procedure with assistance from the department's Systems Office. The Systems Office is a group of analysts who determine the computer needs of the department and communicate these needs to ISB for programming. That project never materialized. However, we note that CPAs would not likely have adequate statistical training to successfully perform this task, and significant involvement by the Systems Office would be unnecessary. The possible techniques which

could be used have already been programmed and are available at universities. ISB does not currently have these programs and it is probably inefficient for ISB to also develop these programs.

We also found that significant improvements could have occurred in audit selection if the department had recognized and utilized readily available federal government reports. In the last several years, GAO has performed many studies of IRS operations. These studies have described and evaluated IRS management procedures, audit selection techniques, and quality control procedures relating to both individual and corporate tax returns. Significant improvements in many department activities could have occurred if management had read these reports. At a minimum, the reports would have been valuable as sources of information to help guide development of the new corporate and individual income tax processing systems and to adequately plan for auditing procedures. The report most relevant to the development of auditing procedures is the 1976 GAO report, How the Internal Revenue Service Selects Individual Income Tax Returns for Audit.

We found, from interviews with management, that the department was unaware of these GAO reports. It was not until last year that steps were taken to ensure that copies of GAO reports dealing with IRS operations were obtained. If the department had received the audit selection report it would have found basic information to improve selection procedures even if statistical methodologies were not utilized. It would have found clear documentation of the success of sophisticated selection procedures. Finally, published in an appendix to that report is a detailed technical discussion of the steps and decisions made by IRS in developing one of its early discriminate function approaches. This is exactly what the department requested from IRS but did not receive.

It is likely that audit managers would have had difficulty following the entire discussion in that appendix because of its technical nature. This, however, would have clearly alerted audit management to the need for skilled research personnel to develop and implement more successful procedures.

3. PROSPECTS FOR IMPROVEMENT

Finally, about a year and one-half ago, the department met to discuss the audit selection problem. The meeting included management from the auditing divisions, higher level management, and the director of the department's Research Division. From this meeting came a clearer understanding of the need to involve research staff. Work has now begun to improve the audit selection process, although progress has been slowed by other obligations and priorities.

Short-term improvements may be limited. Within the next few months, the department's Research Division hopes to complete initial work on a revised selection procedure. This procedure should increase the likelihood that all taxpayers, regardless of income and

occupation, are subject to the possibility of an audit. But significant increases in audit productivity may not occur. In the longer term, the success achieved in improving audit productivity will depend upon the department's commitment to the project and its ability to address and solve its basic managerial problems.

Significant gains in audit productivity are possible only if additional data from tax returns and other data sources are obtained and processed. The department is fully aware of the need for additional data. The present lack of adequate data from tax returns is cited by the department as a reason for the limited scope and design of the new interim procedures. The data changes which are required will affect both the processing and auditing groups. It is very likely that significant changes to accommodate new data needs will be required in the computerized individual income tax processing system. Given the various system deficiencies noted in our report, Evaluation of Department of Revenue Computer Support for Tax Processing, it may be more efficient to replace the existing system. However, successful development will require the department to carefully identify its needs, set priorities, and unify the various divisions behind those priorities. For various reasons discussed in the computer support report, management has not adequately planned, monitored, or exercised the authority necessary for successful computer development. The department's ability to solve these problems will, in turn, determine its success in developing new auditing procedures.

C. RECOMMENDATIONS

- The Department of Revenue should develop the capability to quickly identify deficiencies in procedures and performance and mobilize the necessary resources to correct the problem.

To detect problems in procedures and performance, the department must have a strong, well-staffed operations auditor function. As discussed more fully in Chapter V, the operations auditor unit is understaffed and has not been used to perform typical monitoring functions. Management must use the operations auditor unit to monitor and obtain information on operations and performance if there is to be a high level of accountability within the department. This will cause the problems to surface, either through the direct actions of the operations auditor, or through direct actions of section and division managers.

Once problems have been identified, high-level management should analyze the problems, determine what department resources are necessary to correct the problems, and take corrective action.

We urge the department not to underestimate the difficulty of improving its audit selection procedures.

- To be successful, the department must be willing to devote researchers to this project on a full-time basis.

Within the last year and one-half, the director of the Research Office has been involved in the project, but only on a part-time basis. A greater commitment of research skills is required if truly productive procedures are to be developed.

- Various methodologies should be investigated, and every effort should be made to learn from the experiences of both the IRS and other states.

Researchers should strive to develop procedures of high productivity, subject to the staff complement and the department's sampling and support capabilities.

- There must be a high level of communication, understanding, and cooperation between auditors and researchers.

To be most effective, the researchers should be aware of statutory requirements which affect auditing, and they should be familiar with actual procedures and policies used by the auditing divisions. This will help ensure that the procedures developed are compatible with the staff complement and are practical to implement.

The project should be a joint effort of the research and auditing staff. The audit staff should provide the sampling needed to develop data for the research effort, and there should be a high level of interaction between the auditors and the researchers. In large part, the project's success will depend on the mutual respect, understanding, and commitment which develops.

III. QUARTERLY ESTIMATED INCOME TAXES PROCESSING AND AUDITING

A. BACKGROUND

As their principal income source, most taxpayers have wage income which is subject to withholding. However, many taxpayers are self-employed or derive a large portion of their income from stocks, bonds, royalties, and other sources which are not subject to typical withholding procedures.

In order to collect taxes from these individuals on a quarterly basis rather than at the end of the year, the Legislature enacted Minnesota Statutes §290.93. This statute has remained basically unchanged since 1961. The most significant change in the statute has been to increase the interest rate on delinquent or deficient remittances.

The basic requirements established by Minnesota Statutes §290.93 are as follows:

- Taxpayers must file a declaration of estimated tax by April 15 of the taxable year if the tax on income other than wages subject to withholding is greater than \$50. A declaration is the taxpayer's estimate of his tax obligation, minus allowable credits, for the tax year.
- The estimated tax for the year is to be paid in four equal installments. The due dates are April 15, June 15, September 15, and January 15.
- Once the year-end tax return has been filed, the actual tax obligation can be compared to prepaid taxes. The taxpayer must have paid during the course of the year at least 70 percent of the actual tax obligation, or else be subject to additional penalties. Therefore, each quarterly payment of estimated tax, plus any withholding or other credits which are credited to that quarter, must equal at least one-quarter of 70 percent of the year-end tax obligation.
- An "additional tax charge" (ATC) may be assessed at the rate of 8 percent per year on the amount of underpayment.

This chapter examines how the Department of Revenue currently enforces the estimated tax requirements. The two key enforcement activities are to verify the accuracy of estimated tax payments claimed on tax returns and to assess ATC on delinquent payments. The following chapter examines the Declaration Match computer system, which will be used to enforce estimated tax requirements beginning in mid-1981.

Verification is done by comparing the total amount of estimated taxes claimed on the year-end return with the payment records contained in the department's systems. Normally, the amount of estimated taxes which the taxpayer claims to have paid during the year is equal to the amount of payments actually received by the department. Nonetheless, these returns must be verified to note and properly handle those cases where the taxpayer claims more or less than was actually paid. Either additional assessments are required or the taxpayer has overpaid, and these overpayments should be refunded.

Withholding is verified in one of the early processing units (the Cashier Verification Unit) as the tax returns are received by the department. Clerical staff examine withholding forms which are remitted with the tax return and note whether the sum of the amounts withheld is equal to the withholding stated on the tax return. However, given the department's current computer support, it is not feasible to verify estimated tax payments claimed on the tax return while these returns are processed. Instead, Income Tax Division auditors have verified estimated tax payments a year or more after the year-end tax return has been filed.

B. ENFORCEMENT PROCEDURES

The Department of Revenue is mandated to take appropriate action to ensure a high level of compliance with the tax laws. The Commissioner of Revenue has the authority to examine tax returns and other taxpayer records and accounts in order to determine whether the proper tax liability has been paid. If a taxpayer has underpaid his taxes, or has been delinquent with payments, appropriate additional assessments are to be made. If the taxpayer has overpaid the tax obligation, the excess is to be refunded.

To date, the department's procedures for individual income taxes are inconsistent with this mandate. The department has not adequately enforced estimated tax payment requirements nor has it met its mandate to refund or credit overpayments of taxes. We found:

- In recent years potential ATC has been approximately \$1 million per year, of which only a small portion was detected and assessed.
- According to research conducted by Department of Revenue staff, overpayments detected when verifying estimated tax payments could exceed \$500,000 per year. The department has not refunded or credited these amounts to taxpayers. In Chapter I, we noted a similar failure to refund overpayments for no-remit and part-paid tax returns.

Section 1 below is a more detailed presentation of problems with the assessment of ATC. Section 2 is a discussion of the verification procedures which have been used by the Income Tax Division.

1. ADDITIONAL TAX CHARGES (ATC)

This section examines how the department enforced estimated tax payment requirements through the beginning of 1981. We conclude that the department did not adequately detect underpayments of estimated tax and as a result only a small portion of potential ATC was assessed. Whether the design of the new Declaration Match computer system will correct these deficiencies is examined in Chapter IV.

Past efforts to enforce ATC mandated by Minnesota Statutes §290.93 have consisted of two approaches. First, if a tax return was selected through the department's normal selection procedures for audit, the auditor would check to see whether ATC for delinquent or deficient quarterly payments was appropriate. According to discussions with auditors, if ATC was appropriate, it was assessed. The weakness has been that only those tax returns which were audited were examined for ATC. This approach missed the vast majority of cases.

Second, in some years the income tax auditors also flagged tax returns which had a large balance due. The auditors manually reviewed the flagged returns and assessed ATC for delinquent or deficient payments. The reasoning behind this selection procedure is that if a taxpayer has a large additional tax payment to make at year-end, there is a high probability that the taxpayer should be filing estimated tax payments and has failed to prepay 70 percent of the tax obligation. Therefore, the department probably could assess ATC on many returns selected by this procedure.

The balance-due approach is a reasonably effective procedure which can detect many ATC violators. Based on our research, we conclude that a well-designed balance-due procedure could detect approximately \$700,000 per year in ATC violations. It would fail to detect approximately \$300,000 in potential ATC.

A balance-due routine does not provide full enforcement because it cannot detect problems with the timeliness of payments. Clearly, the purpose of Minnesota Statutes §290.93 is to ensure that individuals pay their taxes during each quarter rather than at the end of the year. However, it is possible for the taxpayer to not make any payment in the first three quarters and still not be detected by the balance-due routine. If the taxpayer makes a very large payment in the fourth quarter, so that the year-end tax return does not have a large balance due, the violation would not be detected.

Consequently, a balance-due routine does not provide full enforcement, but it is an acceptable interim procedure until more

effective approaches are developed. Wisconsin used a balance-due approach prior to development three or four years ago of an effective computerized system which examines both the timeliness and the adequacy of the payments.

As previously mentioned, the Minnesota Department of Revenue also has used a balance-due approach. However, as this routine was used by the department, it had two serious drawbacks:

- The balance-due approach was not consistently performed. This approach was last used on tax year 1976 returns. We are uncertain how frequently it was used before that time.
- When the department performed this routine on tax year 1976 returns, it assessed only \$80,000, missing the majority of the available revenue.

An effective balance-due routine should have detected five to ten times more revenue. While we did not attempt to clearly identify the specific causes of the low productivity, it appears that it was caused by a combination of factors, including the design of the selector and deficiencies in the data file.

2. VERIFICATION PROCEDURES

As previously mentioned, the auditors in the Income Tax Division have been responsible for verifying the accuracy of estimated tax payments claimed on year-end tax returns. In recent years, the bulk of the comparison has been performed by computer routines, so that the auditors need not examine the vast majority of cases--those where the tax paid is equal to the amount claimed. The auditors received several types of printouts which list only those cases with a discrepancy between amounts paid and amounts claimed.

Although the auditors received four types of printouts, the two most significant printouts were the "overclaimer list" and the "underclaimer list." The overclaimer list contained cases where taxpayers claim to have paid more money than can be found in the department's records. If these records were accurate, these taxpayers underpaid their taxes and additional assessments were appropriate. The other list contained cases of taxpayer overpayments, requiring refunds.

We found:

- The auditors have concentrated entirely on the assessment of additional taxes. The only cases thoroughly investigated were those on the overclaimer list.
- The Income Tax Division did not remit refunds to or credit the accounts of taxpayers who overpaid their taxes as indicated by the underclaimer list. By the department's own estimates, these refunds could amount to over \$500,000 per year.

In its internal documentation for the new Declaration Match computer system, the department wrote:

It is difficult to know what to expect in terms of numbers of actual refunds . . . since we have not made this type of refund. However, we do know that about 4,000 items are listed in the "underclaimer" match books . . . [By] checking a sample of the listed items against returns, 60 percent were found to be valid which when applied to the total list would yield about 2,500 valid items. An average of \$170 per return was determined from the sample. Therefore, the department should be prepared to fund as much as \$0.5 million in refunds and perhaps as much as \$0.75 million.

Prior to making these refunds, the department would first have to validate the data to ensure that the apparent overpayment is not a data error. The department performed a similar data search when investigating the overclaimer list, and it did so without using a large amount of staff resources. Consequently, the department should also have been able to issue refunds for most of the tax overpayments without using a large amount of staff resources, particularly if it had concentrated on the larger refunds.

The department's new Declaration Match computer system will simplify how refunds for tax overpayments are generated. However, it will still be necessary to manually validate the data used by the computer. Unless the department is willing to devote the resources necessary to validate these cases, the problem with refunds will continue.

We also found that when the auditors investigated overclaimer cases and made adjustments for data errors, they found that some of these apparent overclaimers were entitled to refunds. Although the auditors have determined that these taxpayers overpaid their taxes, the department has neither sent refunds to these taxpayers nor credited their accounts. We observed identical practices in the handling of no-remit and part-paid returns by the Income Tax Division auditors.

Cases we reviewed and interviews with auditors indicate that the department has not refunded any overpayments detected during verification, regardless of their merit. However, according to management, the department's refund policy is to issue refunds when auditors determine that an overpayment was made unless the return contains questionable items which offset the refund. We found no indication that auditors follow this policy when they verify estimated tax payments. Furthermore, even if the stated policy were followed by auditors, the policy is questionable.

- This policy assesses an additional tax equal to the unspent refund without notifying the taxpayer or allowing the taxpayer to defend the questionable items. In contrast, taxpayers who are audited are clearly aware of the department's actions and may defend any items which the auditor challenges.

C. CAUSES OF OPERATIONAL PROBLEMS

We attribute the problems discussed in the previous sections primarily to three factors:

1. Inadequate monitoring of tax law compliance,
2. Lack of interim planning, and
3. Inappropriate use of staff.

Each of these factors is discussed below.

1. INADEQUATE MONITORING OF TAX LAW COMPLIANCE

Although the department has been mandated to enforce the timeliness and adequacy of quarterly declaration payments since 1961, it has failed to establish an adequate enforcement system through early 1981. Two factors have contributed to this problem:

1. The department does not devote significant resources to enforcing certain statutory provisions unless officials are convinced that there is substantial non-compliance.
2. The department has not effectively monitored compliance with estimated tax payment requirements. Management did not obtain the information necessary to demonstrate the need for greater enforcement efforts.

There has been poor enforcement because there has been poor monitoring. Department officials failed to recognize the magnitude of the problem, and consequently they have been very slow to take action to improve compliance. It has not been until the last few years that the department has moved to establish effective enforcement procedures. The department's new Declaration Match computer system, operational in 1981, is a step toward enforcing the timeliness and adequacy of these quarterly payments. However, even during the development of this system, the department remained unaware of the magnitude of the problem, a factor which contributed to its failure to take effective interim action. The department estimated that only \$80,000 per year in ATC would be assessed. Using the department's new computer system, and an extensive data file developed by the department, we conclude that there is over \$1 million in potential ATC. Departmental priorities cannot be effectively set and resources cannot be efficiently allocated when revenue estimates are incorrect by 1,000 percent.

2. LACK OF INTERIM PLANNING

The Department of Revenue has often attempted to correct operational deficiencies through development of new computer systems. In some circumstances this may be an effective long-run solution. However, since it usually takes several years to implement these

computer systems, it is important to consider short-run procedural changes and alternatives which will address these deficiencies.

- The department has made inadequate efforts to modify existing procedures while computer systems are being developed.

As a result, procedural deficiencies existed for several years even though alternative short-term remedies were available.

Examples can be drawn from the department's procedures to enforce estimated tax requirements, from problems with no-remit and part-paid returns discussed in Chapter I, and from various refund procedure deficiencies.

- Although the department's new Declaration Match computer system is designed to facilitate refunding overpayments of estimated taxes, the department did not devote any resources to make these refunds while the system was being developed.

The logic to aid refunding of overpayments was not part of the initial proposed system, but was added to the design in 1979, increasing the cost and complexity of the system. Presumably, that modification represents a commitment by the department to enforce the refund requirements established by Minnesota Statutes §§270.07 and 290.93, subd. 9. Yet prior to implementation of the system in mid-1981, we found that the department's procedures contradicted the implied commitment made in 1979. Not only did we find no resources devoted to verifying overpayments on the underclaimer list, but even those overpayments discovered by the auditors as they examined likely additional assessment cases were not refunded.

As previously noted, it would not require substantial staff resources to refund overpayments, particularly if staff concentrated on the larger overpayments. The move from a manual system to a more computerized operation will clearly influence the minimum overpayment which is cost effective to refund. But it simply cannot be argued that most overpayments should be refunded once the new computer system is implemented, whereas prior to implementation it would be inappropriate to refund any overpayments, regardless of their size.

Management should modify existing procedures and establish the control necessary to ensure that current procedures are consistent with both statutory requirements and department goals.

- The department did not adequately enforce ATC assessments prior to implementation of the Declaration Match computer system.

As discussed previously, the department's balance-due routine was infrequently used and was ineffective due to various design problems.

- Procedures for handling no-remit and part-paid returns have been inefficient and inconsistent with statute.

For many years, the Machine Edit Section has calculated the effect on the true tax obligation caused by arithmetic errors on no-remit and part-paid returns. Taxpayers, however, have been billed for the tax stated on the return, resulting in various overpayments and underpayments. The Income Tax Division has eventually used the list received from machine edit to bill for most underpayments; but they failed to refund the overpayments.

Given that the errors are due to arithmetic mistakes by the taxpayer, and the resulting underpayments and overpayments have already been calculated by the Machine Edit Section, no Income Tax Division auditors should be involved in the operation. Furthermore, the failure to refund overpayments, regardless of size, cannot be justified.

The department failed to take any interim action to cease involvement by auditors, to ensure that taxpayers were initially billed for proper amounts, or to have clerical staff initiate corrective billings and refunds. Problems existed prior to beginning development of the new computerized individual income tax processing system, and continued through its cancellation after several years of development.

3. INAPPROPRIATE USE OF STAFF

Another reason for the department's operating problems is that it has not assigned operations to units that can most efficiently perform these functions, nor has it ensured that the operations are consistent with the goals and orientation of these units. The Income Tax Division has performed many clerical functions which are, at least in part, inconsistent with the division's staffing, orientation, and goals. Verifying estimated income taxes, handling no-remit and part-paid tax returns where taxpayers were initially billed for incorrect amounts, and correcting arithmetic problems on the tax returns are clerical functions and should not be routinely handled by auditors.

In addition, in each of the above cases, some taxpayers have overpaid, while others have underpaid. Correcting both types of errors is not consistent with the orientation of the audit units. The primary emphasis of any audit group is assessing additional taxes, not refunding.

Until quite recently, department management has established specific annual revenue generation goals for the auditing divisions. It should not be surprising that the auditors have failed to refund overpayments, even when provided with lists of overpayers, because generating refunds is inconsistent with their revenue goals. Even without specific revenue targets, the department should not expect

the auditing groups to make significant efforts to refund overpayments because it is not in the interest of any individual auditor. Auditors are judged by their ability to generate additional revenues, not their ability to make refunds.

- If the statutory mandate of the Department of Revenue is to be reflected in the operations of the department, the duties assigned to specific units should be compatible with the orientation and goals of the unit. If not, either the goals of the unit should be changed or the function should be moved to a more appropriate unit.

In addition, assigning clerical functions to auditors is not an efficient use of staff resources. Verification is a processing function which need not and should not be done by auditors. We observed that the verification of withholding information for individuals is performed by clerks in the Cashier Verification Unit. The verification of corporate returns is performed by clerks in the Accounting Unit.

Also, when the auditors performed these clerical functions they did not examine the tax returns for compliance with other statutory requirements, even those which also relate to estimated tax payments. In examining verification cases which had been handled by the auditors, and in discussing these cases with them, we found the auditors to be solely concerned with whether or not the taxpayer had paid an amount equal to the amount claimed on the tax return. They were not concerned with the timeliness or adequacy of the individual payments. There were cases where ATC should have been assessed, but the auditors failed to take action. It has also been possible for a taxpayer to file a year-end tax return claiming amounts not yet paid. Payments could be sent weeks or even months later, and no corrective action would be taken.

D. RECOMMENDATIONS

- The department should review its operations and develop both short-range and long-range solutions to operational problems.

The deficiencies discussed in this chapter would not have occurred if the department had adequate short-range and long-range planning, and were actively trying both in the short run and in the long run to effectively use staff to satisfy statutory mandates.

The department tends to address operational problems through development of new computer systems. However, the department has made inadequate efforts to modify existing procedures during the lengthy development process. Consequently, procedures have conflicted with statutory requirements and staff has been used ineffectively for years after the problems have been identified.

Management should develop interim procedures to ensure that staff is effectively utilized to enforce statutory mandates. These procedures should also be consistent with the goals of the department.

- The department should improve its monitoring of tax law compliance to identify areas where increased enforcement would be productive.

The basic purpose of department activities should be to ensure a high level of compliance with the tax laws. The department was unaware of the magnitude of noncompliance with estimated tax requirements for both individuals and corporations. More effective monitoring should be performed since it is an essential first step in department planning and effective use of department resources.

- In reviewing its procedures, the department should ensure that audit staff does not perform clerical functions.

Audit staff has been verifying estimated tax payments and assessing additional taxes due to mathematical errors. Clerical staff should perform most, or all, of these functions.

- The duties assigned to specific units should be compatible with the orientation and goals of the unit. If they are not, either the goals of the unit should be changed, or the duties should be assigned to a more appropriate unit.

The most noticeable problem has involved refunds. The auditors routinely received computer printouts and lists of overpayments, but failed to make refunds. In order to ensure that refunds are sent, and to avoid improper use of audit resources, known or suspected overpayments should be channelled to a processing or service unit rather than an auditing group. However, it will always be the case that auditors will find occasional overpayments. These should be handled appropriately, according to a department policy based on Minnesota Statutes §270.07.

- The department should refund overpayments of estimated tax as required by statute.

To date, the department has not issued refunds to individuals who have overpaid estimated taxes. At a minimum, the department should refund large overpayments after verifying the accuracy of the data.

While the department's Declaration Match computer system will facilitate refunding of overpayments, it will still be necessary to manually examine the data to ensure that these overpayments are valid. This will require a commitment of resources which the department previously failed to make. One reason for the failure may be that audit staff would be assigned to refunding. As suggested in Chapter I, to the extent possible, overpayments should be separated from assessment activities and should be assigned to an appropriate section.

IV. NEW PROCEDURES--DECLARATION MATCH COMPUTER SYSTEM

The new Declaration Match computer system is designed to verify the accuracy of estimated tax payments for individuals, to detect delinquent payments, and to assess ATC.

We conclude that while the system will enable the Department of Revenue to enforce statutory requirements more effectively than before, the system design has significant shortcomings in its ability to detect violations and to accurately calculate ATC. The state will continue to lose significant amounts of revenue, and the system will overcharge some taxpayers while undercharging others unless the deficiencies are corrected.

This chapter discusses problems with the design of this system and identifies weaknesses in the department's planning which contributed to these problems.

A. BACKGROUND

The Declaration Match computer system was in its final testing phase in February 1981. This computer system will significantly affect verification of estimated tax payments and calculation of ATC. It will contain logic:

- to calculate ATC;
- to handle both underclaimer and overclaimer verification problems; and
- to handle combinations of verification and ATC problems in a single operation.

If this system operates effectively, it should correct some of the major deficiencies which exist. However, the system's development has been plagued by serious planning and communication problems. This has led to delays in planning, greatly expanded scope and cost, and problems with programming instructions given to ISB. Several modifications will be needed before the system is consistent with statutory ATC procedures.

Based on the initial plan for the project, the department requested \$15,000 to develop the system. The Legislature granted this appropriation in fiscal years 1976 and 1977. Afterwards, the Systems Office and Income Tax Division realized that the system, as conceived, was inadequate.

The initial design was developed through interviews with staff in the user division by Systems Office personnel. The Income Tax Division requested that the balance-due approach for detecting

ATC cases be the basis for the ATC logic. It was later realized how easily that logic could be defeated. As the Systems Office and the user division improved the logic to make it more difficult to defeat the system, the logic became more similar to the explicit statutory statement in Minnesota Statutes §290.93. Ironically, the individuals who designed the system did not review the statute and the Income Tax Division legal staff were not involved. In any case, as the system increased in sophistication and complexity, the cost of the system also increased. Rather than implementing a simple \$15,000 system, the department has spent \$241,000 in development. Nearly all that expenditure has been financed internally.

B. SYSTEM DEFICIENCIES

The new system has serious deficiencies:

- Taxpayers are exempt by law from ATC if they meet certain exceptions set forth in Minnesota Statutes §290.93. However, the system incorrectly exempts many taxpayers from ATC. As a result, the state will lose approximately \$200,000 per year.

Legal staff was never asked to provide an interpretation of the statute to facilitate programming. Instead, the individuals involved in developing this system used Department of Revenue form M-429-I for guidance. The form is a worksheet with instructions for calculating ATC and is designed for use by taxpayers to self-assess ATC amounts. This form, however, should be clarified through a general redesign. Several interpretations arose concerning how to properly perform certain steps. The instructions which were given to ISB staff for programming are not consistent with the legal staff's interpretation of how those functions should be performed. Once this issue is finally clarified, it is likely that fairly extensive programming changes will be necessary.

- The system does not accurately calculate the length of time that quarterly estimated tax payments are delinquent. Consequently, some taxpayers will be undercharged and others will be overcharged.

The Declaration Match system will frequently overcharge or undercharge taxpayers because it does not accurately determine when taxpayers make their tax payments. The department records neither the date quarterly payments are received nor the date the year-end tax return is received, unless the year-end return is received after April 15. By statute, interest charges for delinquent estimated tax payments should be based on the time between the quarterly due date and the payment date. Most taxpayers who underpay their estimated tax obligation make up the difference with their year-end tax return payment. The Declaration Match computer system assesses ATC based

on the assumption that payment was made on April 15. Consequently, the program will frequently overcharge taxpayers who submit paid tax returns early. For example, if a declaration non-filer actually made the payment on March 15, the taxpayer will be overcharged by approximately 12 percent.

The Declaration Match system will fail to detect some violators and will undercharge others who make delinquent quarterly estimated tax payments because it does not properly use information on when these payments were made. Although the Department of Revenue does not record the date the estimated tax payments are received, it does record the date the payments are posted (entered into the state's accounts). According to interviews with processing personnel, payments are consistently posted within one week of receipt. The only exception is the period around April 15, when there may be a lag of as much as three weeks. The date each payment was received could be closely approximated by using the post date and noting the proper lag. However, the Declaration Match system considers a payment to be timely if its post date is within one and one-half months of the first quarter due date, two and one-half months of the second quarter due date, and three and one-half months of the third and fourth quarter due dates.¹ As a result, many payments which are clearly one to three months late will be treated as though they were timely. Instead of using cushions ranging from one and one-half to three and one-half months, the system should use cushions of approximately two weeks for most quarters and three or four weeks for the April 15 due date. This would still ensure that timely quarterly payments are not treated as delinquent, and will result in more accurate calculation of ATC. Alternatively, the department could record and utilize the dates the payments are actually received.

- The system identifies only those taxpayers who owe ATC exceeding a certain amount. The department has not adequately justified the use of this cutoff figure. Lowering the cutoff would result in as much as \$400,000 per year in additional revenue.

After the Declaration Match system detects and calculates ATC for taxpayers who make delinquent payments, it is designed to list only those taxpayers with ATC exceeding the cutoff figure (unless they are also identified by the verification logic in the program). One reason for not billing taxpayers for ATC less than the cutoff figure may be cost-benefit considerations. However, the department has not justified this cutoff figure. Computer costs incurred to identify these taxpayers exist whether or not the taxpayer is billed. The extra cost of billing these taxpayers consists of the costs of manually reviewing the cases and the cost of issuing and

¹The department has indicated that it will change the procedure for determining when payments are made in order to correct the problems noted.

sending the billing. Interviews with Income Tax Division management indicate that little effort was made to determine the proper cutoff to use with the system. Basically, management set a figure to be initially used, and if it were later found through operation of the system that a lower cutoff would be cost effective, the cutoff would be lowered.

We estimate that if the ATC cutoff were lowered, the state could gain as much as \$400,000 per year in additional revenue. Given the large potential revenue, the department should quickly determine the cost of processing these cases and determine the proper cutoff. Also, the department should make maximum use of clerical staff to lower per case costs. In the future, the department should determine proper cutoffs during the planning stages of system development, not after implementation.

C. PLANNING PROBLEMS

Planning for the Declaration Match system was seriously deficient. We found:

- Although the major component of this system is the enforcement of ATC as mandated by Minnesota Statutes §290.93, attorneys were never asked to review that statute and provide guidelines for programming. As a result, planning and development of the system began without a clear concept of what needed to be accomplished.
- The department significantly underestimated the potential ATC that could be assessed by this system. As a result, the department did not recognize the need to enforce ATC while the system was being developed and could not adequately plan for staffing needs.
- The department did not adequately review similar computer systems or ATC procedures used by other states or IRS. Information from Wisconsin would have suggested that the department greatly underestimated the potential ATC and could have helped to avoid problems in the system's design. Furthermore, procedures used by IRS and Wisconsin should have caused the department to re-examine Minnesota's interest and penalty policy for delinquent ATC.

The following three sections examine problems with the department's use of legal staff, cost-benefit estimates, and ATC policies.

1. INEFFECTIVE USE OF ATTORNEYS

Many problems with the planning and content of the Declaration Match system could have been avoided had attorneys been

part of the planning unit actively involved in development of the system. We found that the failure to involve attorneys prolonged the planning process and allowed that process to become misdirected.

Active participation by the legal staff could have helped to avoid the following problems:

- The department initially planned to base the computer system's ATC logic on the balance-due approach, which does not fully enforce statutory requirements. Not until a year or more later did the department drop the balance-due approach and begin planning for a system that more fully enforces the statute.
- The original design of the system contained no logic for refunding overpayments detected in verification. These overpayments were later estimated by the department to exceed \$500,000 annually.
- The system incorrectly exempts some individuals from ATC because the programming instructions given to ISB misinterpreted the ATC exceptions in Minnesota Statutes §290.93. The department did not realize that the program was inconsistent with the legal staff's interpretation of the exceptions. Fairly extensive programming changes will be required to correct this problem.
- The method for calculating ATC is inconsistent with statute. As described previously, some taxpayers will be overcharged and others will be undercharged unless the system's calculation method is changed.
- Policy statements in the statutes, rules, and billing forms are inconsistent.

In developing the Declaration Match computer system, the managers and auditors of the Income Tax Division were, in effect, responsible for both determining statutory requirements and making major decisions on system design. Deviations from statutory requirements occurred without adequate justification.

We found that rules for ATC should be updated. At present, department rules differ from statutes concerning requirements for filing, the interest rate to be used to calculate ATC, and the conditions under which taxpayers are exempt from ATC. Every effort should be made to ensure that there is a single policy statement. Presently there are three policy statements: the policy implied by the statute, the policy stated in the rules, and the policy implicit in the programming of the system.

We also found no clear, readily accessible public statement of interest and penalty policies to be used once ATC has been assessed. The only documents which clearly specify the department's

policy are internal department memos. The current policy is to not assess interest or penalty on ATC regardless of how long the amount remains unpaid. An explicit statement concerning treatment should be contained in statute and/or rule, and the billing forms should be modified so that taxpayers are clearly informed how they will be treated. The statements now accessible to taxpayers are ambiguous. A later section in this chapter discusses statutory ATC statements, and concludes that there can be varying interpretations of ATC policy. Our review of the department's rules indicates that they provide no guidance about interest and possible penalty on ATC.

The billing forms used by the department convey an erroneous impression that interest and penalty will accrue to ATC. Some billing forms state that additional taxes, if they remain unpaid, will accrue interest and penalty. These forms do not adequately differentiate between additional taxes and additional tax charges (ATC). It is likely that a taxpayer would erroneously infer that the statements relating to interest and penalty on additional taxes also apply to ATC. Actually, the department uses several forms depending upon, among other things, whether the billing is manual or computerized. These other forms tend to be even more vague about the treatment of ATC. Some simply state that if a "charge" is made as a result of the notification, interest and penalty will accrue.

One of the recommendations in this chapter is that the Legislature review ATC procedures and decide upon a policy that the department should follow. The policy should be clearly stated in statute and/or rules, and the department's billing and notification forms should be amended so taxpayers receive a clear statement of interest and penalty policies for ATC.

In order to avoid these problems, the department should have required legal staff to review all legal aspects of verification, ATC, and refunding procedures. The statutes, rules, and billing forms should have been reviewed to ensure that there is a consistent, accurate statement of policy. Existing procedures and statements of planned procedures should be reviewed to ensure compliance with statutory intent.

Legal staff should also have developed a detailed statement of what the system must do to enforce Minnesota Statutes §290.93, and the various refunding and processing requirements involved. Any decision to deviate in design from compliance with these statements should be made only after explicit, careful analysis of statutory requirements, costs, and benefits. This procedure would have three advantages:

- It would help to ensure that system design reflects the broad statutory requirements and goals of the department, rather than the more narrow goals and orientation of the primary system user.
- It would require that suggested deviations from full statutory enforcement be carefully analyzed and justified.

- It would provide statements to guide programming which accurately reflect statutory requirements, avoiding the problem that occurred with this computer system--misinterpretation of the exceptions in Minnesota Statutes §290.93.

2. COST-BENEFIT ESTIMATION PROBLEMS

Effective cost-benefit analysis should provide basic information necessary for computer system planning. However, we conclude that the department failed to develop effective cost-benefit analysis for this system and failed to adequately plan for its implementation.

a. Estimate of Potential Revenues

The department developed only a single estimate of total ATC violations. This estimate was highly inaccurate. No estimates were made of revenues lost or gained by changing the design of the system. An effective cost-benefit analysis should include estimates of ATC which would be obtained through full enforcement of Minnesota Statutes §290.93, through partial enforcement, and through various balance-due designs. The analysis should also estimate the dollar losses and number of cases excluded under different dollar value cut-offs. Only with this information can the department determine the costs and tradeoffs of various system designs.

The department's \$80,000 estimate of ATC was derived directly from work within the Income Tax Division on tax year 1976 returns that had large balances due. As we noted earlier, using a copy of the department's new system, which we modified to correct for various design flaws, and a data file developed by the Department of Revenue's Research Office, we conclude that potential ATC is approximately \$1 million per year. The department's estimate of total ATC is actually less than one-tenth of the actual amount available through proper enforcement.

Second, although the department changed the system's design to more fully reflect the statutory requirement to detect delinquent quarterly payments, it failed to estimate ATC which would be assessed through this fuller enforcement. This change should produce an additional \$250,000 to \$300,000.

Because the single \$80,000 estimate of ATC was so deficient, it resulted in poor decisions and significant lost revenue to the state:

- Management failed to realize the major revenue loss in ATC to individuals and consequently failed to take effective interim action before the system became operational. Although it would have been very difficult to have full enforcement without the Declaration Match system, much could have been done. Between the time the cost-benefit estimates were developed for the system and the present,

the statute of limitations has expired on \$3 million in ATC. An effective balance-due routine could have detected approximately 70 percent of the revenue.

- Accurate estimates of staffing needs could not be developed. Since each ATC case identified by the system must be manually verified, staffing requirements depend on the number of ATC cases detected. Potential revenue is roughly ten times greater than was initially estimated, and similarly, the number of cases which must be handled will greatly exceed the initial estimates.

b. Failure to Use Available Information

The department should have recognized that its initial estimate of ATC was too low based on readily available information from the State of Wisconsin.

- In telephone interviews with officials from the State of Wisconsin, we were informed that they assess nearly \$1 million per year in ATC. This knowledge could have prompted Department of Revenue officials to re-examine the estimate of \$80,000 in ATC in Minnesota.

The State of Wisconsin has been enforcing ATC for at least the last ten years. It has had excellent detection and enforcement for the last three or four years. This high level of enforcement serves to educate taxpayers and to deter them from making improper or delinquent payments. In spite of this, \$1 million in ATC is still assessed annually in Wisconsin. On the other hand, enforcement in Minnesota has been poor and very sporadic. Therefore, the knowledge that Wisconsin assesses \$1 million annually in ATC should have immediately made the department's \$80,000 estimate suspect.

c. Need for Improved Planning

In conducting our evaluation, we found that the department has problems in planning for its manual and computerized operations. In its computer development, there is a lack of commitment to serious initial planning. Rather than devoting sufficient resources to planning, the department tends to request changes to the proposed system late in development or after implementation. Many of these changes are required because of simple errors or omissions which are easily avoidable through effective planning and monitoring. Furthermore, it would be far less expensive to devote the resources to planning and monitoring than to pay for costly system modification. An additional benefit of effective planning is that the information generated will lead to sound suggestions for interim procedures.

Given a commitment to serious planning, the department must then establish the procedures and policies necessary to ensure that adequate information is developed to support effective decision-making. Currently, the information generated is inadequate.

As discussed in our report on Department of Revenue computer support, the Systems Office should ensure that proper cost-benefit analysis is performed and must retain a central role in system design and development. Since the Systems Office reports directly to the assistant commissioner for Revenue Management, the assistant commissioner should be held accountable and responsible for effective systems development activities.

In performing its functions, the Systems Office should have clear access to legal staff and should have authority to obtain needed assistance from principal system users, operations auditor staff, and Research Division staff.

Attorneys should play a more significant role in system development. We found through observation and interviews that the department has no established procedures for involving attorneys in system planning, or in review of proposed or existing computer systems for consistency with statutory requirements.

The Research Division should also play an expanded role. Involvement of research staff in system development has been very limited, although there has been some recent involvement in determining data needs. Where possible, the Research Division should play a primary role in developing benefit estimates for computer systems. Where involvement of the principal system user is required to estimate system benefits, the procedures to be used in developing the samples should be specified by the Research Division and careful monitoring should occur to ensure accuracy and objectivity.

Finally, the operations auditor staff should be involved to ensure that cost-benefit and general planning procedures are adequate and are followed by the appropriate individuals and department units. The operations auditor staff should also ensure that all sources of system benefits and costs have been identified by the groups involved in the project. Failure to identify all sources of system benefits and costs, and to then develop estimates of these effects, has been a problem with the department's system development efforts.

3. INCONSISTENCY BETWEEN SYSTEM USE AND ATC POLICIES

The department does not charge interest or penalty on ATC after it is technically due (April 15 for most taxpayers), regardless of how long it remains unpaid. As a result, taxpayers who do not pay ATC by the due date, in effect, receive an interest-free loan from the state.

- The department has not recognized that its interest and penalty policies are not compatible with the operation of the Declaration Match system. It has not brought to the attention of the Legislature that interest and penalty procedures need to be changed if the state is to minimize losses due to delinquent ATC payments.

Since very few taxpayers assess themselves for ATC, the loss to the state depends on how long after the due date the state first bills for ATC, and how long the taxpayers take to pay their bills. The department has decided to run the Declaration Match computer system approximately six to twelve months after the due date (April 15). The department contends that limited staff resources make it infeasible to run the system sooner because of the heavy workload during year-end processing of tax returns. However, since no interest is ever charged to these amounts, the state will be granting interest-free loans for at least six to twelve months. Assuming a 10 percent interest rate, the loss to the state will be \$50,000 to \$100,000. Additional losses depend on how promptly taxpayers pay ATC after receiving the bills. As previously noted, to date taxpayers have not had a clear statement of the department's ATC interest policy. If the present no-interest policy continues, and clear policy statements are made available to the public, taxpayers will have no incentive to pay promptly, causing additional losses to the state.

To avoid these losses, the department would have to bill ATC close to the due date and make significant efforts to collect these amounts. Since it may not be feasible for the department to detect and bill ATC when due, a more realistic alternative may be legislative action to specify in statute that interest would be assessed to delinquent ATC.

The department indicates that it does not assess interest on delinquent ATC for two reasons. First, the department believes that present statutes prevent it from assessing interest on ATC. Second, it argues that in order to minimize confusion for taxpayers, the state's interest policy should be the same as the federal policy, which is to not assess interest on ATC.

Regarding these points, we observe that there is no clear legislative mandate to not assess interest on ATC. As discussed later, alternative interpretations of the statutes are possible. Second, we agree there are advantages to having state procedures conform with federal procedures. But, in this case, the loss to the state in not assessing interest may outweigh the advantage of conforming to federal procedures. The state should not adopt federal procedures without examining their merit.

a. IRS Procedures

If Department of Revenue officials had studied IRS operations, they would have recognized the need to either run the Declaration Match system during year-end processing, rather than several months later, or take steps to change ATC interest policies.

IRS assesses neither interest nor penalty on ATC. Consequently, in telephone interviews with IRS officials, they stressed the importance of detecting ATC as soon as it is technically due (April 15). If these charges are not promptly billed and collected, the federal government would not be compensated for delays in obtaining these funds. To avoid this, IRS detects ATC in the course of

processing year-end returns and taxpayers are immediately billed for these amounts. Because no interest or penalty is assessed, it is necessary for IRS to take vigorous enforcement action after billing to ensure prompt payment. This consists of frequent contact with the taxpayers in question, demanding payment. According to IRS officials, estimated tax payments from repeated offenders are reviewed each quarter rather than waiting until year-end. If IRS believes a payment is deficient or if the payment has not been received at the proper time, the taxpayer is immediately notified.

Given the Department of Revenue's current staff levels and the heavy burden already placed on the department's resources, it may be infeasible to detect ATC violations during year-end processing. Therefore, to avoid revenue loss it may be necessary to assess interest on these amounts from April 15 until the time these payments are actually made. Furthermore, in order to avoid use of a high level of tax compliance resources to collect these payments, interest could be assessed on delinquent payments. This would make it in the best interests of taxpayers to pay these obligations promptly.

In conclusion, IRS and the Minnesota Department of Revenue have an identical ATC interest policy--neither assesses any interest on an ATC obligation. IRS recognizes the need to assess these charges during the year-end processing and to have vigorous enforcement and collection efforts to ensure prompt payment. The Minnesota Department of Revenue has not, and perhaps cannot, adopt similar internal procedures. However, the department has not taken steps to revise interest and penalty policies to be compatible with the operation of this system.

b. Wisconsin's ATC Procedures

We also contacted Wisconsin officials and investigated Wisconsin's ATC procedures. Wisconsin does not assess interest on ATC prior to billing, but it departs from the federal policy once taxpayers have been notified of these tax obligations. Since ATC does not accrue interest prior to billing, Wisconsin officials also stressed the need to assess ATC as part of the routine year-end processing. This again protects against revenue loss. Wisconsin officials cited additional reasons for performing this operation during processing: it makes maximum use of clerical staff rather than audit staff, and it saves additional money by tying into that state's machine edit billing operation.

In order to minimize the enforcement efforts that are needed to collect ATC once billed, Wisconsin considers an ATC to be the same as any other delinquent tax obligation. If ATC is not paid within 60 days after billing, the charge begins to accrue interest at the rate of 18 percent per year.

c. The Need to Clarify Minnesota's ATC Policy

As the basis of its policy relating to ATC, the department refers to Minnesota Statute §270.75, subd. 4. That subdivision reads:

There shall be added to the amount of any underpayment of estimated income tax, computed pursuant to Chapter 290, an amount in lieu of interest determined at the rate of 8 percent per annum.

The department interprets the phrase "in lieu of interest" to imply that an ATC amount will never be charged interest or penalty, regardless of how long the obligation remains unpaid.

Another interpretation would be to argue that the above provision was intended to guide the initial calculation of ATC, but was not intended as a statement of interest and penalty procedures to be used once these ATC amounts become unpaid tax obligations. Minnesota Statutes §290.93, subd. 10, states that ATC will be calculated using the rate specified in Minnesota Statutes §270.75 (which at the time of this writing is 8 percent), and that ATC will become part of the taxes imposed by Chapter 290. It would not be unreasonable to assume that the procedures specified by Minnesota Statutes §290.53, subd. 1 would be followed relating to interest and penalty. ATC not paid by April 15 is a delinquent tax. Minnesota Statutes §290.53, subd. 1, states that delinquent tax will incur an additional 10 percent penalty, plus 8 percent interest on both the unpaid balance and the penalty.

The Legislature should review alternative ATC policies. Options include:

1. Continue the current policy of not assessing interest or penalty on delinquent ATC .
2. Apply interest and penalty procedures of Minnesota Statutes §290.53, subd. 1 to delinquent ATC.
3. Apply only interest to delinquent ATC.

With an appropriate interest rate, the third option would compensate the state for delays in receiving ATC payments, but would not impose additional penalties on the taxpayer.

D. RECOMMENDATIONS

- The Legislature should review and consider alternative interest and penalty policies for delinquent ATC.

The department does not assess interest on ATC, regardless of how long it is overdue. In effect, the state is giving interest-free loans to taxpayers who owe ATC. As a result, the state will lose approximately \$50,000 to \$100,000 per year unless interest is assessed. Once a decision is made concerning the ATC policy to be used, a clear statement of policy should be provided either in statute or in rule. Also, department billing forms should be revised to provide a clear statement of the interest policy.

- The department should analyze the cost of making ATC assessments and base the cutoff figure on that cost.
- Procedures for establishing cutoffs in department assessment and refund activities should be reviewed by the department's Research Division.

We have observed several situations where the department has failed to recognize what costs are relevant for making decisions on proper minimum assessment and refund cutoffs.

- The department should review the programming and data requirements of the Declaration Match computer system and make the necessary changes to improve ATC detection and to ensure that the system is consistent with statutory requirements.

Implementing changes outlined in this chapter would enable the system to more accurately calculate ATC and to detect additional delinquent payments.

The following recommendations address the need for improved general and computer development planning.

- The department should make a greater commitment to serious initial planning.
- The department should establish the procedures and policies necessary to ensure that adequate information is developed to support effective decision making.
- The department should place a higher priority on establishing accurate cost-benefit estimates in the early stages of a development project.
- The Systems Office should have clear access to legal staff and should have authority to obtain needed assistance from the principal system users, the operations auditor staff, and the Research Division staff.
- Although the Systems Office should retain responsibility for ensuring that cost-benefit analysis is performed, the Research Division should play a primary role in developing benefit estimates for computer systems. Where involvement of the principal system user is required to estimate system benefits, the procedures for developing the samples should be specified by the Research Division and carefully monitored to ensure accuracy and objectivity.

Accurate cost-benefit estimates are important in order to determine the proper scope and priority for each proposed computer system. The department made little effort to estimate the benefits of the Declaration Match computer system and as a result greatly underestimated the benefits. Although the Research Division staff has the

skills necessary to make these estimates, and can provide objectivity, it was not involved in estimating the benefits of this system.

- Similar systems developed in other states should be reviewed so that the State of Minnesota can benefit from the experience of other states and avoid unproductive approaches.
- Attorneys should be actively involved in the early stages of the development process to ensure that all statutory requirements have been defined. Attorneys should also ensure that the system's design and the statutes, rules, and billing forms are mutually consistent.
- The operations auditor staff should be involved to ensure that cost-benefit and general planning procedures are adequate and are followed. The operations auditor staff should also ensure that all sources of system benefits and costs have been identified by the groups involved in the project.

The above recommendations would help avoid costly design changes and would help ensure that the design is consistent with statutory requirements. Some costly changes were made during the development of the Declaration Match computer system and several changes will still be necessary to make the design consistent with statutory requirements. In addition, if the above procedures had been followed, the department would have recognized the importance of either charging interest on ATC after it becomes due, or billing ATC during routine year-end processing.

V. USE OF OPERATIONS AUDITOR, RESEARCH, AND LEGAL STAFF

A. BACKGROUND

We urge the department to go beyond correcting the specific cases and procedural problems noted in the three reports from this study. To effectively perform in the future, the department should identify, examine, and correct the basic managerial and control deficiencies which have caused these problems.

We found:

- Management has placed inadequate emphasis on both departmental and detailed operational planning. Consequently, there have been failures to develop effective planning procedures, to devote adequate resources to planning, and to effectively use operations auditor, legal, and research staff. The department has also failed to identify and use available public information which would be valuable for decision making. As a result, higher level management has not had the information necessary to make informed managerial decisions.
- The department has failed to establish and enforce consistent processing and refunding policies. Much of the inconsistency observed stems from policy being made at the section and division levels, rather than at the department level.
- There has been duplication of activity and inappropriate use of staff, with auditors performing research and clerical functions.

This chapter concentrates on the department's use of its operations auditor, research, and legal staff--units that must be properly used if the above problems are to be solved. Effective use of the operations auditor staff is essential if the actions of the individual units are to reflect statutory requirements and departmental goals. The department's research staff is capable, if properly used, of ensuring that audit staff is productively and effectively allocated. Finally, legal staff can perform an important role in operations planning, and can assist in monitoring operations to ensure consistency with statutes.

B. OPERATIONS AUDITOR STAFF

The operations auditor staff should be the monitoring unit for the department. The unit should encourage high-level management to establish necessary policies and disseminate these policies to

the divisions. The operations of the divisions should be monitored to ensure that they are consistent across divisions and consistent with the policies and priorities established by management. This unit should also ensure that the department has sound procedures for accurately obtaining benefit estimates for new computer systems. Finally, it should ensure that management information systems are functioning and adequate.

Management has not effectively used its operations auditor function. The unit is understaffed. Furthermore, despite urging from the operations auditor staff, the department is behind in development of overall plans, policies, procedures, and standards. Management has also been slow to address basic problems brought to its attention by the operations auditor staff. We also find that this unit is used to conduct various special projects, and as a policy-making group. While we do not question the value of these projects, or the need to establish policies, we do question using the operations auditor staff for these activities. The current staff complement of two individuals is inadequate to perform the basic functions of the unit, and involving these individuals in other activities further detracts from the unit's effectiveness. In addition, it causes conflicts by involving the unit in development of procedures it may later be required to evaluate.

C. RESEARCH STAFF

Department management has been slow to recognize the value of research staff. Given the nature of operations performed by the Department of Revenue, there is no other agency in state government in which efficient use of resources is more vital and operations more conducive to cost-benefit analysis. In the Department of Revenue, inefficient staff and resource use translates directly to lost revenue to the state.

It was not until approximately four years ago that the department developed a separate research office. But department management then failed to effectively utilize the resource. The Research Division was given the role of collecting, consolidating, and interpreting data for various Department of Revenue publications dealing with tax collections and aid distributions. The unit was also assigned the duty of estimating revenue impacts of proposed law changes. These are vital functions and the Research Division has performed them well. However, these functions are most beneficial to individuals outside the department--to outside decision-makers and to the public. The department has failed to effectively utilize its research capability to address its internal needs and to improve the quality of information received by management. We found the Research Division was not adequately involved in assisting users and the Systems Office to develop cost-benefit estimates for computer systems. The Research Division was not, until a year and one-half ago, involved in developing audit selection procedures and planning for data needs. Finally, there has been little effort to involve the

Research Division in developing information which would be vital to staff allocation decisions. Given the large amount of money involved, even the slightest improvement in auditing or use of collection staff would result in significant additional revenue.

There are several factors which contributed to the problem with use of research staff:

- Management did not fully comprehend the capabilities of professional research staff and consequently did not adequately recognize the need to involve researchers in areas which required their skills.
- Problem areas have not been clearly identified and brought to the attention of higher level management so that the necessary resources could be mobilized.

The poor use of the operations auditor function and ineffective use of researchers interrelate. An adequately staffed operations auditor unit could detect problem areas and assist in mobilizing specialized staff resources to correct the deficiencies. The Research Division did not have the staff or authority to monitor departmental activities and independently initiate corrective actions.

Use of research staff has recently improved, particularly in developing audit selection procedures. However, we believe that the department continues to underestimate the value of research staff and does not fully recognize the areas where researchers can and should be used. There is much work that can still be done on audit selectors for individual income tax and for various other taxes collected by the department, particularly corporate and sales taxes. Revenue collections could be improved by utilizing research staff to determine which collection activities are productive. Finally, research staff could be used to review the production, design, and use of audit productivity statistics. The Department of Finance and legislators have frequently questioned the accuracy and proper interpretation of these statistics. Improvements in this area would be invaluable for staff allocation decisions within the Department of Revenue and improved information would become available to the Department of Finance and the Legislature.

D. ATTORNEYS

1. DEPARTMENT USE OF ATTORNEYS

In reviewing the operations of the department we observed a general problem with use of legal staff:

- Attorneys are not integrated into the department's activities so that legal decisions can be made which result in consistent operations among divisions, and reflect the department's capabilities.

We observe that legal staff is attached to the commissioner's office and that they appear to be in a position to review matters from a departmental perspective. However, their effectiveness is hampered because they are somewhat removed from the operations of the department, reducing their knowledge of actual department capabilities and operating practices. Attorneys are also attached directly to the Income Tax Division, but these attorneys, given their position within the organization and their use by division management, lack perspective on department-wide operations.

In closing conferences with the Department of Revenue, we were informed that the department recognizes the basic problems with effectively utilizing legal staff and is attempting to correct the situation. We fully encourage the department's attempts in this area.

2. INCOME TAX DIVISION ATTORNEYS

Attorneys within the Income Tax Division are utilized as division attorneys--handling legal questions and projects which arise within the division and which, for the most part, are channelled to the attorneys by division management. There is a definite need for legal staff acting in this capacity. However, we found areas where their input is needed but is currently lacking. We also found that these attorneys are assigned certain tasks which could be more effectively performed if they were more knowledgeable of Income Tax Division and processing unit procedures.

- The attorneys are primarily used as specialized legal advisors. They are not used in an operational review of procedures within the division to ensure that the procedures are consistent with statute. Consequently, the attorneys lack detailed knowledge of practices within their own division.

If these reviews were performed, the attorneys would provide input for planning, assist management in monitoring and controlling division operations, and acquire better knowledge of the environment in which they operate.

The Income Tax Division attorneys have been assigned a role in designing, updating, and clarifying all forms used for individual and corporate income taxation. They have also been given the task of updating income tax rules. These functions are best performed if there is a high level of communication between processing and auditing groups, and if these attorneys are knowledgeable about operations within the processing units. However, we find that communication could be improved between the processing and auditing units. We also find that the attorneys lack knowledge of processing unit procedures because they have not been used to clarify Administrative Services Division procedures relating to proper handling of individual and corporate tax returns.

The task of designing, updating, and clarifying all forms used for individual and corporate income taxation is a joint responsibility of the Income Tax Division legal staff and the Forms Design Unit within the division. The attorneys are responsible for ensuring that procedural statements and interest and penalty statements on the forms accurately reflect statute. The Forms Design Unit ensures that forms and instructions are comprehensive and readable. However, the ability of the Income Tax Division legal staff and the Forms Design Unit to perform their functions is hampered by a lack of communication between the Income Tax Division and the processing units. Problems which result from confusing wording in tax forms and instructions affect the processing units; it is the processing units which must deal with incomplete or improperly completed tax forms received from taxpayers.

Some of these problems can be reduced by improved communication between the processing and auditing groups. We were informed of a situation where corporate tax receipts were held in the Cashier's Unit of the Administrative Services Division because the corporations had overpaid interest and penalty. These overpayments occurred because the corporations assessed themselves under a procedure which differs from the department's policy. The payments were held in the unit until a decision was reached on whether to simply accept the payments, or to refund the overpayments. In part, the overpayment problem was caused by confusing language about interest and penalty contained in the corporate year-end tax forms. We brought this problem to the attention of Income Tax Division attorneys for corrective action.

The Income Tax Division attorneys have been assigned the task of updating income tax rules. The last major revision of income tax rules occurred in 1963, with minor revisions in 1965. Presently the division is making a serious effort to update these rules. However, the project will be hampered by the attorneys' lack of knowledge of operating procedures both within the division and within the processing units which handle income tax returns. Ideally, rules should be detailed and serve as a direct statement which an agency can follow in its operations. Efforts should be made to minimize the need for additional internal policy statements to guide specific procedures because those statements would not be subject to external review. However, the attorneys do not fully recognize the level of detail necessary to provide guidance in certain operations. Finally, they are not familiar with areas where there are conflicting policies within the department. Clearly, every attempt should be made to deal with these areas through rule making, specifying a single procedure to be followed.

Presently, there is a lack of legal oversight in income tax processing. Attorneys are not assigned to the processing units and little effort has been made to fill that gap by using Income Tax Division attorneys. Income Tax Division attorneys have not been used to clarify procedural questions which arise in the processing units. The Cashier's Section, which is part of the Administrative Services Division in the Revenue Management Program area, is required in certain situations to assess interest and penalty on both

individual and corporate tax returns. According to processing staff, requests were made to Income Tax Division staff to clarify interest and penalty policies for corporate tax returns. In general, the Income Tax Division staff have not been willing to state procedures to be followed, arguing (we think correctly) that they do not have the authority to clarify or establish policies. However, lacking a policy-making group or directives from top management, these requests should have been channelled by Income Tax Division staff to attorneys within the Income Tax Division. For whatever reasons, the attorneys were not informed of the problems or made aware of the need to clarify policies.

E. RECOMMENDATION

- The department should determine what changes in use and staffing levels of operations auditor, research, and legal staff are required to assist management in: establishing effective planning procedures, strengthening managerial control, and developing procedures that are productive and consistent with statute. Internal department staffing allocations should be adjusted to reflect these priorities.

STUDIES OF THE PROGRAM EVALUATION DIVISION

Final reports and staff papers from the following studies can be obtained from the Program Evaluation Division, 122 Veterans Service Building, Saint Paul, Minnesota 55155, 612/296-8315.

1977

1. Regulation and Control of Human Service Facilities
2. Minnesota Housing Finance Agency
3. Federal Aids Coordination

1978

4. Unemployment Compensation
5. State Board of Investment: Investment Performance
6. Department of Revenue: Assessment/Sales Ratio Studies
7. Department of Personnel

1979

8. State-sponsored Chemical Dependency Programs
9. Minnesota's Agricultural Commodities Promotion Councils
10. Liquor Control
11. Department of Public Service
12. Department of Economic Security, Preliminary Report
13. Nursing Home Rates
14. Department of Personnel, Follow-up Study

1980

15. Board of Electricity
16. Twin Cities Metropolitan Transit Commission
17. Information Services Bureau
18. Department of Economic Security
19. Statewide Bicycle Registration Program
20. State Arts Board: Individual Artists Grants Program

1981

21. Department of Human Rights
22. Hospital Regulation
23. Department of Public Welfare's Regulation of Residential Facilities for the Mentally Ill
24. State Designer Selection Board
25. Corporate Income Tax Processing
26. Computer Support for Tax Processing

27. State-sponsored Chemical Dependency Programs, Follow-up Study
28. Construction Cost Overrun at the Minnesota Correctional Facility - Oak Park Heights
29. Individual Income Tax Processing and Auditing

In Progress

30. Division of State Building Construction
31. Real Estate Management Division
32. State Timber Sales
33. Fire Inspections of Residential Facilities for the Disabled
34. State Mineral Leasing Policies and Procedures
35. State Purchasing
36. Department of Education Information System
37. Procurement Set-Asides