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A Survey of conservation education in the Montana elementary schools during the school-year 1949-1950

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A SURVEY OF CONSERVATION EDUCATION IN THE MONTANA ELEMENTARY SCHOOLS DURING THE SCHOOL YEAR 1949-1950

by

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CHAPTER I

THE PROBLEM AND ITS IMPORTANCE

Conservation of Montana natural resources is the responsibility of all of its citizens. Their inherited duty is to use wisely the natural resources of this state in order to preserve those resources for the future generations. The conservation problem has reached a critical stage and therefore all Montana citizens must be prepared to meet this obligation.

> Montana has done well in conserving soil and water in the eight years since. . . two county farmers organized the state's first two soil conservation districts. But good as the progress has been, the biggest part of the soil and water conservation job is still ahead.[1]

> Altogether the conservation job still to be done is tremendous. Whether it is done means much to both the farmers and ranchers and the people in the cities and towns. To the man on the land, it means the same thing for cities and towns, because agricultural income is more than half of the state's total income and much of trade and business is dependent on it.[2]

Conservation, historically and presently, has been approached in Montana from at least two points of view, namely, legislatively and educationally.

In the past, conservation legislation has generally

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[1]Truman C. Anderson, "Montana Soil and Water Conservation Report," (Bozeman, Montana), 1949, p. 1.

[2]Ibid., p. 4.

taken a protective and prohibitive form, such as, fish and game laws, laws controlling fire seasons, establishing water rights, designating Arbor Day, and the like. Sessions S. Wheeler, Director of the Nevada Fish and Game Commission, stated:

> The Congress of the Nation and the Legislatures of the various States finally became alarmed and laws designed to protect natural resources became part of our way of life. These laws were difficult to enforce. They were different from many other laws because their success lay mostly in understanding and cooperation.[3]

In the opinion of the writer, it appears that the legislation protecting Montana natural resources has not solved satisfactorily the conservation problem. This was evident by the fact that the 1951 Montana Legislative Assembly enacted into law Senate Bill Number ten, which was designed to set up the machinery to implement a continuing program of conservation education in the elementary and secondary public schools. This law read as follows:

> Section 1. Establishment. That on and after September, 1951, a continuing program of conservation education shall be taught in the public elementary and secondary schools of the State. The extent of such a program, and its application, shall be determined by the State Board of Education in co-operation with the State Superintendent of Public Instruction, and shall include a widespread understanding of conservation as to facts, principles and attitudes.

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[3]Sessions S. Wheeler, "Introduction," Conservation and Nevada, (Carson City: State Printing Office, 1949).

> Section 2. Supplementary Conservation Education. To supplement this broad conservation program in the elementary and secondary schools of the state, the separate units of the Greater University of Montana shall make available to all students in teacher preparatory courses basic instruction in conservation education; and the Montana State College at Bozeman and the Montana State University at Missoula shall include instruction in conservation in their community or public service programs.
>
> Section 3. Courses of Instruction. The State Board of Education shall determine the type of conservation education to be taught in the public schools of the State and shall also determine the type of services in this general conservation program to be given by the above named agencies at the various units of the Greater University of Montana; provided, that conservation education shall not be taught as a specific subject in the elementary and secondary schools but rather shall be taught as a part of and integrated with all other related subjects and courses.[4]

This second approach to the conservation problem, as is evident in the quotation above, is through education. It assumes a somewhat less direct but sounder approach based on a preventive rather than curative solution. Such conservation instruction obviously must be taught on the adult level, as well as on the elementary and secondary public school level. Adult education in conservation simply doesn't do the whole job because "Conservation is an attitude of mind which must be developed on all levels of our school program."[5]

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[4]Senate Bill No. 10, Introduced by Weydemeyer, Moss, Bovey, and Cotton: 1951 Legislative Assembly of the State of Montana.

[5]Lilian L. Peterson, State Rural Supervisor, "Conservation is First An Attitude of Mind," Montana Education, April, 1950, p. 6.

Although adult education in conservation is only a partial answer to the problem, it must be remembered that such agencies as the Montana Conservation Council, the Soil Conservation Service, the Forest Service, and other government agencies, the Montana Sportsmen Associations and the Conservation Workshops held in some units of the Greater University have recognized the seriousness of the conservation problem and have contributed much toward its improvement.

Considering the long range and over all conservation education program, it seems reasonable to believe that most of the children could be reached in the rural, elementary, and high schools. Working from this assumption, two graduate students in the School of Education at Montana State University, David Thorn and the writer, felt a need for a preliminary conservation education survey in the Montana elementary and high schools to determine, roughly, how much conservation instruction was being given in the Montana public schools during 1949 and 1950.

Both of the persons referred to were teachers in Montana public schools and on the basis of their experience were reasonably sure that some conservation was taught in some of the Montana elementary and high schools. Their belief was shared by Truman C. Anderson who wrote in April, 1950:

> Already many of our boys and girls, particularly those within conservation districts are studying conservation. Some schools have inaugurated conser-

> vation courses and conservation districts in many instances have stimulated essays or public speaking contests on conservation in co-operation with the schools.[6]

Criticisms had been directed at the Montana public schools--criticisms pointing out the lack of good conservation practices in the state. It seems reasonable to assume that the schools have been somewhat at fault because in the final analysis "the effectiveness of a conservation education program is what happens on the land."[7]

In the light of the above statements, the writer felt impelled to make a state-wide survey to obtain data which could be used to provide some measure of the quantity and quality of conservation education in the Montana elementary and rural schools. It was agreed that a similar survey would be made by Mr. Thorn, of the high school conservation program.

THE PURPOSE OF THIS STUDY

The purpose of this study then, was to obtain as complete and as accurate a picture as possible of the conser-

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[6]Truman C. Anderson, "Legacy of Acres," Montana Education, April, 1950, p. 15.

[7]"Some Criteria for Evaluating the Soundness of a Conservation Education Program," Report on the Conservation Education Workshop (Montana State University, July, 1950), p. 18.

vation education program in the Montana elementary and rural schools during the school year 1949-1950. In order to accomplish this purpose an attempt was made:

1. To determine whether conservation instruction was given in the elementary and rural schools of Montana, and on what levels and in what subjects of the school curriculum emphasis on conservation was placed.

2. To discover what methods of presentation were used in the teaching of conservation of natural resources in Montana elementary schools during the 1949-1950 school year.

3. To obtain, from teacher responses, suggestions for improving conservation teaching in the elementary schools.

4. To compare the Montana conservation education picture with other state conservation education programs, and to make recommendations for improvement in Montana, if needed.

CHAPTER II

PROCEDURE

Since part of the value of this paper was to establish basic statistics by which to measure trends in subsequent studies, and to suggest improvements in Conservation Education in Montana, if needed, the writer has attempted to be as accurate as possible in recording all data.

In developing the procedure it seemed logical to use the following outline form:

I. Sources of data

II. Recording of data

  A. Organizing the data for tabulation

  B. Grouping schools according to size and geographical sections

III. Reporting from the master sheet

I. SOURCES OF DATA

The statistical data used in this paper were gathered from a conservation education elementary questionnaire which was carefully prepared and then submitted to about one hundred teachers and administrators for constructive criticism before the final mailing.

In cooperation with the State Department of Public Instruction the questionnaires were sent to the administrators

to be distributed to all Montana elementary teachers of grades four through eight. Questionnaire returns from the teachers who taught in the junior high schools as designated in the Montana Educational Directory 1949-1950 were incorporated in Mr. Thorn's paper. (See Chapter I, page 4.)

Two form letters were mailed out over the signature of Miss Mary Condon, State Superintendent of Public Instruction. One form letter was sent to each administrator requesting that the questionnaires be distributed to all teachers of grades four through eight and the same be returned to the State Superintendent of Public Instruction. The second form letter which was attached to the elementary questionnaire, requested the cooperation of the teachers concerned and asked them to be as accurate as possible in answering the items in the questionnaire. Copies of these two form letters may be seen in Appendix A, pages 60 and 61.

A follow-up letter was sent to the administrators, who had not returned answered questionnaires by March 1, 1950, requesting them to do so.[1] Returns were received finally from 158 schools out of a possible total of 188, giving a state-wide response of eighty-four per cent.

II. RECORDING THE DATA

Many interrelating problems arose when the techniques

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[1]See Appendix A for copy of such a letter, page 65.

of tabulation were being devised. It was obvious that the responses from all the teachers of grades four through eight should not be combined. Also, at that time, it was thought well to group somewhat arbitrarily the schools of Montana according to school population to avoid covering up information that may have been pertinent to the survey. In the light of the fact that Montana has varied geographical sections it seemed evident that emphasis on some phases of conservation and techniques used in conservation teaching would tend to vary somewhat from section to section.

A. Organizing the data for tabulation. It was reasonable to assume that conservation instruction in the fourth, fifth and sixth grades would vary in scope and content with that of the seventh and eighth grades. Upon that assumption the responses from the teachers of the fourth, fifth, and sixth grades were tabulated collectively under the heading of intermediate grades. Likewise, the seventh and eighth grade teacher responses were tabulated and identified as the upper grades.

B. Grouping schools according to size and geographical sections. Upon examination of the school enrollments of the 188 elementary schools as listed in the Montana Educational Directory 1949-1950, the following categories seemed most acceptable for the purposes to be met in this paper.

(See Table I, page 11.) The one hundred schools with an enrollment of 149 and under were identified as Class A; sixty-two schools with an enrollment of 150 to 499 as Class B; twenty schools with an enrollment of 500 to 1,499 as Class C; the six schools with an enrollment of 1,500 or over as Class D.

In the opinion of the writer, it seemed logical to divide Montana, geographically and industrially, into three sections. The purpose of sectionizing the state, as can be seen, was to place counties with similar natural resources in their respective sections, although some of the county boundary lines had to be drawn arbitrarily. In the western third of Montana, nineteen counties, roughly west of the Continental Divide, were placed in Section I. Section II, consisting of twenty-three counties, lies east of the Continental Divide and north of the county lines running, roughly, east and west through the central part of the state. The remaining fourteen counties on the southeastern portion of Montana make up Section III. Figure 1 on page 12 shows this geographical division of the counties of the state.

III. REPORTING FROM THE MASTER SHEET

The information on all the items on the questionnaire was recorded on the master sheet according to section, grade group, and size of schools. The intermediate and upper grade

TABLE I

THE NUMBER AND PERCENTAGE OF MONTANA ELEMENTARY SCHOOL SYSTEMS WHICH RETURNED CONSERVATION EDUCATION QUESTIONNAIRES

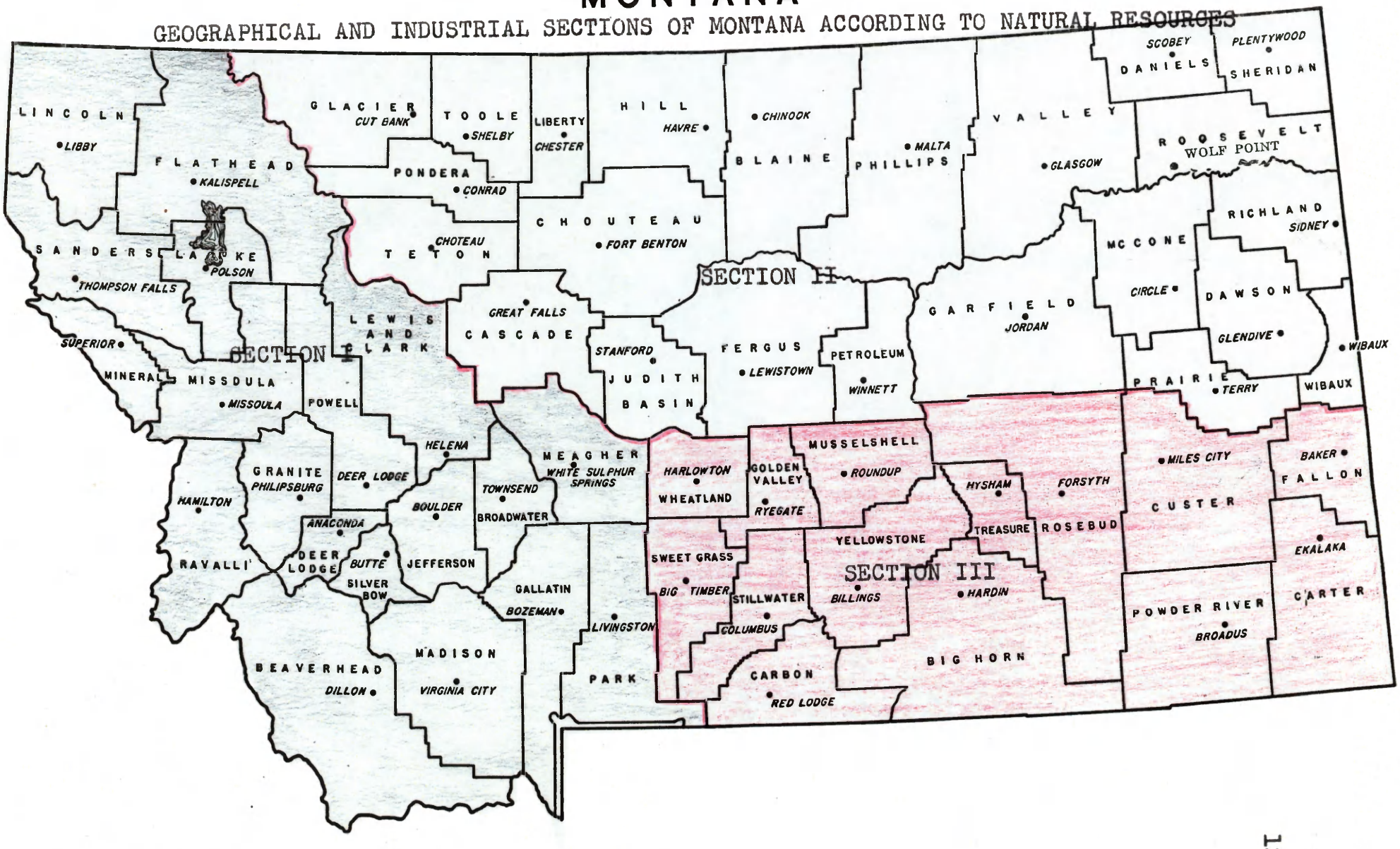
School classification.	Class A	Class B	Class C	Class D	State
School enrollment.	1-149	150-499	500-1,499	1,500-over	Total
Number of School Systems	100	62	20	6	188
Number of School Systems Reporting	84	51	17	6	158
Percentage of School Systems Reporting	84	82.2	85	100	84

Helena

FIGURE I

MONTANA

GEOGRAPHICAL AND INDUSTRIAL SECTIONS OF MONTANA ACCORDING TO NATURAL RESOURCES



groups in each section were totalled, respectively. The state totals were derived from the total of the three sections for each item in the questionnaire. This information appears in chart form within this paper and constitutes the basic data for the paper.

CHAPTER III

CONSERVATION EDUCATION IN MONTANA ELEMENTARY SCHOOLS: BASIC DATA 1949-1950

The purpose of this chapter is to present basic data indicating the status of Conservation Education in Montana Elementary Schools in the 1949-50 school year.

After all the data from the survey were recorded on the master sheet, no marked differences in conservation instruction among the various sizes of schools were apparent. In the light of the above, reference to the basic data from the three sections of Montana will be made according to intermediate or upper grade level rather than to size of school.

The writer felt that the logical order to present the basic findings was to follow the order of the questionnaire.

As can be seen in Table II, page 15, conservation instruction was given in forests, soils, water, minerals and wild life in almost all Montana elementary schools. As state-wide, at least seventy-five per cent of the Montana elementary teachers taught conservation in some form. On the basis of the above data, it is safe to assume that the great majority of Montana elementary schools were aware of the importance of conservation education and were in some degree attempting to meet the need.

TABLE II

NUMBER OF RETURNS WHICH INDICATED THAT CONSERVATION INSTRUCTION WAS GIVEN IN THE FOLLOWING NATURAL RESOURCES IN THE MONTANA ELEMENTARY SCHOOL

Section Number of Returns	I (346)	II (315)	III (203)	State Total (864)
Natural Resources				
Forests	295	257	177	729
Soils	286	243	170	699
Wild Life	287	240	159	686
Water	268	227	155	650
Minerals	239	206	146	591

Of the 864 elementary teachers who replied, only one elementary upper grade teacher taught conservation as a separate course and she abandoned the plan after a trial of a few weeks.

As shown in Table III, page 17, when conservation was taught as a part of other elementary courses in the intermediate grades, science and social studies were the subjects in which it was given major or minor emphasis. Minor and little emphasis were given in reading, which perhaps took the form of supplementary reading in conservation texts. In the upper grades, again major and minor emphasis were given to science and social studies while little emphasis was placed on reading. (See Table IV, page 18.)

Table V, page 19, shows that seventy-one per cent of intermediate grade teachers presented conservation instruction by incidental teaching, while one out of five planned conservation instruction throughout some school course or courses. In the upper grades there seemed to be more planning. Table VI, page 19, indicates that roughly, half the teachers taught conservation incidentally, while one out of every four teachers planned conservation education as a part of some course.

To round out the conservation education picture it was deemed necessary to survey the techniques used by the elementary teachers in their conservation instruction.

TABLE III

FREQUENCY OF THE VARIOUS DEGREES OF EMPHASIS ON CONSERVATION INSTRUCTION IN THE INTERMEDIATE GRADE SUBJECTS AS REPORTED BY ELEMENTARY TEACHERS

Emphasis	MAJOR	MINOR	LITTLE
Total Returns	(567)	(567)	(567)
Subjects			
Science	169	190	67
Geography	125	204	71
Social Studies	63	137	41
Citizenship	59	110	41
Health	42	117	67
History	40	153	69
Reading	30	199	127
Language	13	93	69
Civics	11	22	15
Art	8	63	53
Spelling	6	45	48
Arithmetic	5	48	67
Music	1	17	18
Current Events	1	0	0
Extra-Curricular Activities	0	15	9
Agriculture	0	1	0

TABLE IV

FREQUENCY OF THE VARIOUS DEGREES OF EMPHASIS ON CONSERVATION INSTRUCTION IN THE UPPER GRADE SUBJECTS AS REPORTED BY ELEMENTARY TEACHERS

Emphasis	MAJOR	MINOR	LITTLE
Total No. of Returns	(297)	(297)	(297)
Science	84	72	12
Geography	68	66	9
Social Studies	37	58	19
Civics	31	47	10
Citizenship	27	34	11
History	15	82	28
Reading	12	70	40
Agriculture	11	1	1
Health	8	49	11
Arithmetic	5	31	33
Language	5	25	26
Spelling	5	20	14
Extra-Curricular Activities	5	17	4
Art	4	11	17
Current Events	1	1	0
Music	0	3	6
Industrial Arts	0	1	0

TABLE V

FREQUENCIES OF METHODS OF PRESENTATION OF CONSERVATION INSTRUCTION IN THE INTERMEDIATE GRADES

Section	I	II	III	State Total
No. of Frequencies	(209)	(206)	(152)	(567)
Incidental Teaching	146	141	114	401
Planned separate unit	20	18	16	54
Planned throughout course	32	33	19	84

TABLE VI

FREQUENCIES OF METHODS OF PRESENTATION OF CONSERVATION INSTRUCTION IN THE UPPER GRADES

Section	I	II	III	State Total
No. of Frequencies	(137)	(109)	(51)	(297)
Incidental Teaching	76	62	28	166
Planned separate unit	16	12	4	32
Planned throughout course	38	26	13	77

According to the data furnished in Tables VII and VIII, pages 21 and 22, bulletin boards and blackboards, pamphlets and bulletins, still pictures and sound films were used most frequently in the intermediate grades to teach conservation. Probably, because of a more advanced reading ability in the upper grades, pamphlets and bulletins headed the list. In decreasing order, bulletin boards and blackboards, sound films, charts and graphs followed.

For enriching and supplementing their conservation instruction, teachers were asked what various representatives of public service agencies were used. As can be seen in Tables IX and X, pages 23 and 24, in the intermediate and upper grades, county agents and forest rangers in that order headed the list. The forest ranger led by a large margin in the western section of the state, while the county agent led in the northeastern section of Montana. This variation is obvious because of the different types of topography and vegetation in the two sections. Soil erosion experts, game wardens and wild life technicians ranked third.

When the teachers were asked how they felt toward the preparation of a state course of study in conservation education, 49.7 per cent of the teachers responded that they favored the idea. The northeastern section of the state led with 56.2 per cent of the teachers favoring such a publication.

TABLE VII

FREQUENCY OF TECHNIQUES USED BY INTERMEDIATE GRADE TEACHERS IN CONSERVATION INSTRUCTION IN MONTANA ELEMENTARY SCHOOLS

Section	I	II	III	State Total
No. of Frequencies	(209)	(206)	(152)	(567)
Techniques	Affirmative Returns			
Bulletin Boards and Blackboards	133	106	103	342
Pamphlets and Bulletins	98	103	85	286
Still Pictures	80	77	66	223
Sound Films	98	75	47	220
Charts and Graphs	55	56	40	151
Film Strips	50	53	33	136
Planned Field Trips	25	39	28	92
Displays and Models	31	27	23	81
Basal Conservation Textbook	17	22	15	54
Lantern Slides	20	14	9	43
Speakers	26	11	6	43
Supplementary Readers	2	1	3	6
Current Events and Newspapers	2	0	0	2
Dramatics	0	1	0	1

TABLE VIII

FREQUENCY OF TECHNIQUES USED BY UPPER GRADE TEACHERS IN CONSERVATION INSTRUCTION IN MONTANA ELEMENTARY SCHOOLS

Section	I	II	III	State Total
No. of Frequencies	(137)	(109)	(51)	(297)
Techniques	Affirmative Returns			
Pamphlets and Bulletins	85	57	29	171
Bulletin Boards and Blackboards	88	54	28	170
Sound Films	82	47	29	158
Charts and Graphs	66	38	29	133
Still Pictures	56	22	19	97
Film Strips	46	27	5	78
Planned Field Trips	25	17	11	53
Displays and Models	25	17	10	52
Speakers	26	14	11	51
Lantern Slides	20	21	2	43
Basal Conservation Textbooks	10	9	5	24
Current Events and Newspapers	1	1	0	2
Supplementary Readers	0	1	0	1
Radio and Recordings	1	0	0	1

TABLE IX

NUMBER OF INTERMEDIATE GRADE TEACHERS WHO USED VARIOUS REPRESENTATIVES OF PUBLIC SERVICE AGENCIES IN SUPPLEMENTING AND ENRICHING CONSERVATION INSTRUCTION

Section	I	II	III	State Total
Number of Returns	(209)	(206)	(152)	(567)
Representatives	Affirmative Returns			
County Agents	32	38	14	84
Forest Rangers	54	15	9	78
Game Wardens	14	16	7	37
Wild Life Technicians	11	9	5	25
Soil Erosion Experts	4	11	0	15
Geologists	4	3	8	15
Petroleum Engineers	2	4	6	12
Range Managers	2	6	1	9
Water Commissioners	2	3	3	8
Park Superintendent	1	0	6	7

TABLE X

NUMBER OF UPPER GRADE TEACHERS WHO USED VARIOUS REPRESENTATIVES OF PUBLIC SERVICE AGENCIES IN SUPPLEMENTING AND ENRICHING CONSERVATION INSTRUCTION

Section	I	II	III	State Total
Number of Returns	(137)	(109)	(51)	(297)
Representatives	Affirmative Returns			
Forest Rangers	54	6	10	70
County Agents	19	26	18	63
Soil Erosion Experts	10	16	9	35
Game Wardens	8	13	9	30
Wild Life Technicians	13	9	3	25
Geologists	1	9	3	13
Water Commissioners	3	6	2	11
Range Managers	1	6	3	10
Petroleum Engineers	3	4	3	10
Park Superintendents	2	0	1	3

These data can be found in Table XI, page 26 and Figure 2, page 26.

Teachers of the intermediate and upper grades were asked to express their opinion as to the various degrees of emphasis on conservation in their schools as a whole. Combining both grade levels, roughly forty-six per cent of the teachers felt that the emphasis was about right; (See Tables XII and XIII, page 27) while forty per cent of the teachers indicated that they thought conservation was being under-emphasized in their whole school system. No teacher indicated that conservation was over-emphasized in the Montana elementary schools.

The same three degrees of emphasis on conservation instruction as it applied to their own classes, was asked of the teachers. In the intermediate grades 53.4 per cent of the teachers felt that the emphasis was about right in their own classes, while 39.2 per cent of the teachers thought that conservation was under-emphasized. No teachers indicated that conservation was over-emphasized in their classes.

In the upper grades 51.5 per cent of the teachers felt that emphasis on conservation was about right in their own classes, while 41.4 per cent indicated that conservation was under-emphasized in their own classes. Again no teacher thought that conservation was over-emphasized. These data can be found in Tables XIV and XV, page 28.

TABLE XI

NUMBER OF MONTANA ELEMENTARY TEACHERS WHO FELT THAT A COURSE OF STUDY IN CONSERVATION EDUCATION SHOULD BE PREPARED FOR MONTANA ELEMENTARY SCHOOLS

Section of State	I	II	III	State Total
Total Returns	(346)	(315)	(203)	(864)
Teacher Responses	161	177	91	429
Percentage	46.5%	56.2%	44.3%	49.7%

FIGURE 2

PERCENTAGE OF MONTANA ELEMENTARY TEACHERS WHO FELT THAT A COURSE OF STUDY IN CONSERVATION EDUCATION SHOULD BE PREPARED FOR THE MONTANA ELEMENTARY SCHOOLS

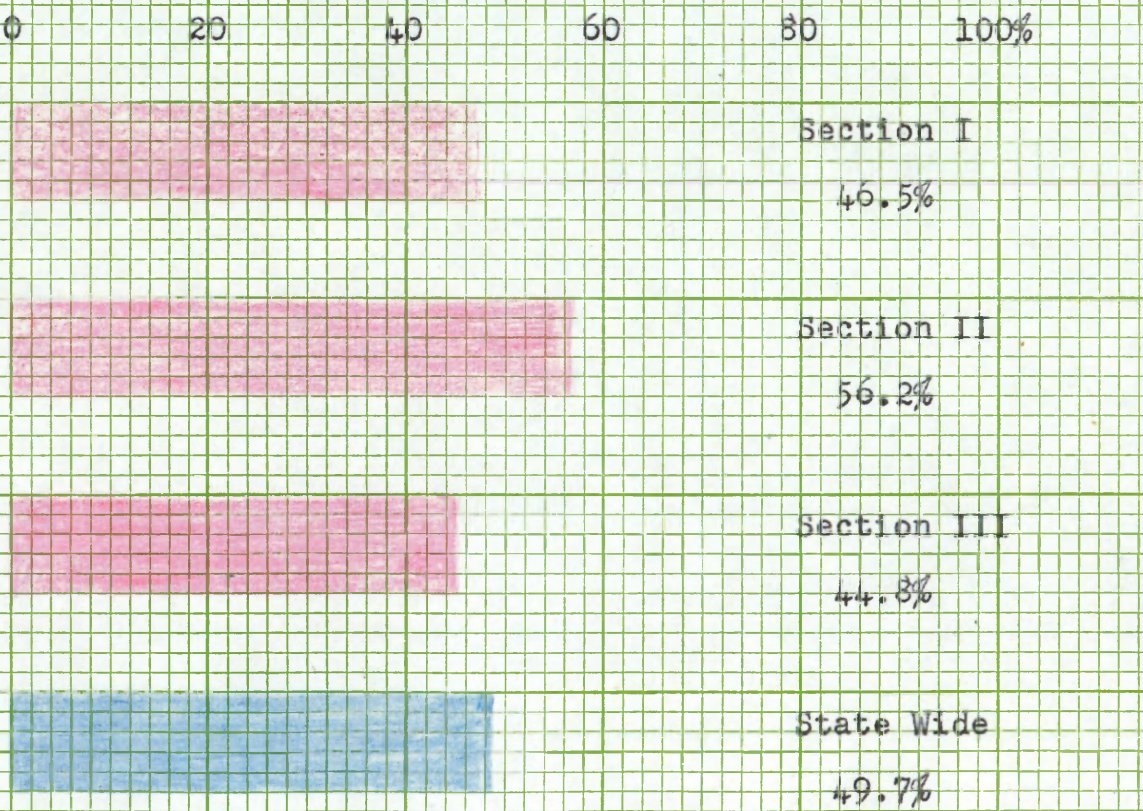


TABLE XII

FREQUENCY OF THE VARIOUS DEGREES OF EMPHASIS ON CONSERVATION IN THE WHOLE SCHOOL SYSTEM IN THE OPINION OF INTERMEDIATE TEACHERS

Section of State	I	II	III	State Total
No. of Returns	(209)	(206)	(152)	(567)
Emphasis about right	108	76	71	255
Under-emphasized	66	90	62	218
Over-emphasized	0	0	0	0

TABLE XIII

FREQUENCY OF THE VARIOUS DEGREES OF EMPHASIS ON CONSERVATION IN THE WHOLE SCHOOL SYSTEM IN THE OPINION OF UPPER GRADE TEACHERS

Section of State	I	II	III	State Total
No. of Returns	(137)	(109)	(51)	(297)
Emphasis about right	78	45	23	146
Under-emphasized	52	50	23	125
Over-emphasized	0	0	0	0

TABLE XIV

FREQUENCY OF THE VARIOUS DEGREES OF EMPHASIS ON CONSERVATION IN OWN CLASSES AS INDICATED BY THE INTERMEDIATE TEACHERS

Section of State	I	II	III	State Total
No. of Frequencies	(209)	(206)	(152)	(567)
Emphasis about right	129	97	77	303
Under-emphasized	63	91	68	222
Over-emphasized	0	0	0	0

TABLE XV

FREQUENCY OF THE VARIOUS DEGREES OF EMPHASIS ON CONSERVATION IN OWN CLASSES AS INDICATED BY THE UPPER GRADE TEACHERS

Section of State	I	II	III	State Total
No. of Frequencies	(137)	(109)	(51)	(297)
Emphasis about right	77	50	26	153
Under-emphasized	52	45	26	123
Over-emphasized	0	0	0	0

When the teachers were asked if a separate course in conservation of natural resources of Montana was justified in their curriculum, 8.1 per cent answered in the affirmative. They were then asked if planned units in the conservation of natural resources of Montana should be made a part of existing subjects in their present elementary curriculum. To this, 63.8 per cent responded that there should be planned units. The intermediate and upper grade teachers desired prepared units in conservation instruction to be made a part of the various subjects in the elementary curriculum. Science and social studies headed the list by a large margin in both the intermediate and upper grade levels, as the preferred subjects for these prepared units. This can be seen in Tables XVI and XVII, pages 30 and 31.

On a state-wide basis 67.7 per cent of the elementary teachers who responded to the survey, indicated that a conservation education course should be inaugurated in the units of the Greater University of Montana. (See Figure 3, page 33.)

When they were asked if a course in conservation education should receive college credit in the School of Education to apply on the Bachelor of Arts, Master of Education, or Master of Arts degrees, roughly seventy-five per cent indicated that it should. (See Figure 4, page 33.)

The elementary teachers were asked to express their

TABLE XVI

DESIRABILITY OF MAKING PREPARED UNITS IN CONSERVATION INSTRUCTION A PART OF VARIOUS SUBJECTS IN THE INTERMEDIATE CURRICULUM

Section of State	I	II	III	State Total
Total Returns	(209)	(206)	(152)	(567)
Subjects	Affirmative Returns			
Science	82	119	66	267
Geography	64	65	51	180
Social Studies	33	37	31	101
Reading	19	21	17	57
History	15	9	13	37
Language	12	1	2	15
Civics	1	3	5	9
Agriculture	3	1	3	7
Art	3	1	1	5
Health	2	2	0	4
Arithmetic	1	1	0	2

TABLE XVII

DESIRABILITY OF MAKING PREPARED UNITS IN CONSERVATION INSTRUCTION A PART OF VARIOUS SUBJECTS IN THE UPPER GRADE CURRICULUM

Section of State	I	II	III	State Total
Total Returns	(137)	(109)	(51)	(297)
Subjects	Affirmative Returns			
Science	61	44	25	130
Geography	32	24	19	75
Social Studies	30	22	8	60
Civics	16	14	6	36
Reading	10	14	8	32
History	8	8	8	24
Agriculture	8	6	5	19
Arithmetic	7	2	1	10
Language	6	2	0	8
Art	3	0	0	3
Industrial Arts	0	1	0	1

opinion as to whether a course in conservation education be made compulsory for all prospective teachers. Only 36.5 per cent indicated that they felt the course should be made compulsory. (See Figure 5, page 33.)

SUMMARY

On the basis of teachers' reports there was a considerable amount of conservation instruction given in Montana elementary schools during the school year 1949-1950, but it was evidently taught as a part of other courses. Science, social studies, and reading tended to head the list of courses in which conservation was stressed. Conservation education in the Montana elementary schools was taught incidentally by two-thirds of the teachers, however, there seemed to be more planned work in the upper grades. Visual and audio aids were used by teachers in their conservation instruction. Representatives of public agencies were used by teachers to enrich their conservation teaching, the most frequently used being the forest ranger and county agent. There was very little evidence that a separate course in conservation was desired in the schools, but it was definitely indicated that planned units in science and social studies should be prepared to become a part of other elementary school courses. A definite demand was made by teachers for a college course in conservation education which should

FIGURE 3

PERCENTAGE OF MONTANA ELEMENTARY TEACHERS WHO INDICATED THAT A CONSERVATION EDUCATION COURSE SHOULD BE INAUGURATED IN THE UNITS OF THE GREATER UNIVERSITY OF MONTANA

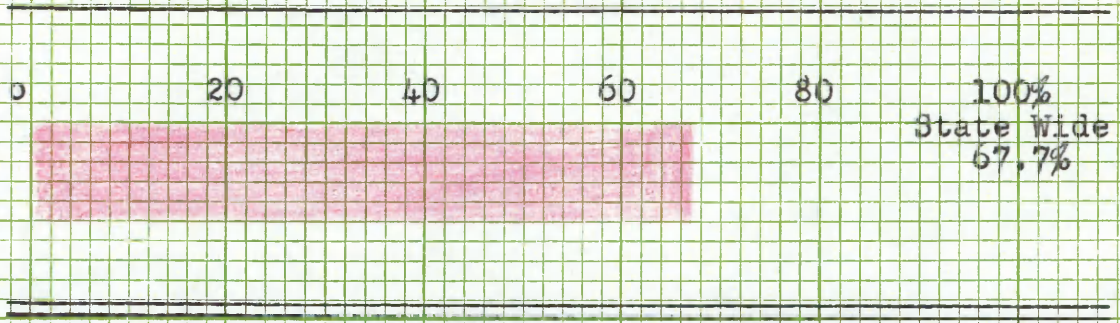


FIGURE 4

PERCENTAGE OF MONTANA ELEMENTARY TEACHERS WHO INDICATED THAT A COURSE IN CONSERVATION SHOULD RECEIVE COLLEGE CREDIT IN THE SCHOOL OF EDUCATION TO APPLY ON A B.A., M.E., M.A.

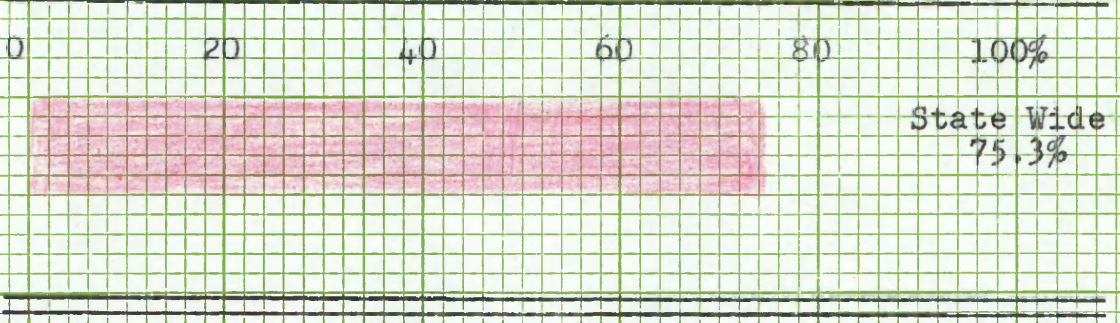
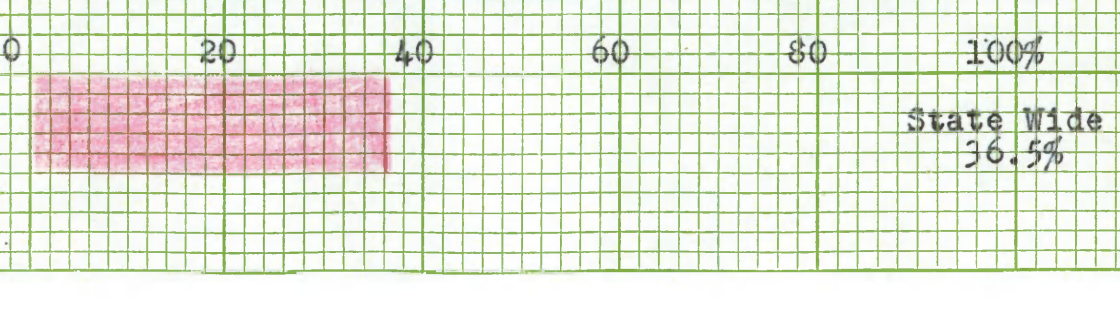


FIGURE 5

PERCENTAGE OF MONTANA ELEMENTARY TEACHERS WHO INDICATED THAT A COURSE IN CONSERVATION EDUCATION SHOULD BE MADE COMPULSORY FOR ALL PROSPECTIVE TEACHERS



receive college credit toward both baccalaureate and masters degrees. Only about one out of three teachers wanted to make the course compulsory for beginning teachers.

CHAPTER IV

CONSERVATION EDUCATION IN MONTANA RURAL SCHOOLS: BASIC DATA 1949-1950

The purpose of this chapter is to present basic data regarding the status of conservation education in 177 rural schools in Montana in the school year of 1949-1950.

A form letter[1] was sent to all Montana county superintendents asking them to distribute five conservation questionnaires[2] to rural teachers in their counties who they thought were emphasizing conservation education. From the total of 280 questionnaires mailed, 177 returns were received. The three sections of Montana, as used in treating the elementary data, were fairly well represented in the returns.

As indicated in Table XVIII, page 36, the rural schools which responded to the survey were especially emphasizing conservation instruction in wild life, forests, soils, water and minerals. On the basis of these returns at least seventy-five per cent of these rural teachers apparently taught conservation in some form. The reader must bear in mind of course that the teachers who responded to

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[1]See Appendix A for copy of form letter, page 66.

[2]See Appendix A for copy of questionnaire, page 61.

TABLE XVIII

NUMBER OF RETURNS WHICH INDICATED THAT CONSERVATION INSTRUCTION WAS GIVEN IN THE FOLLOWING NATURAL RESOURCES IN THE MONTANA RURAL SCHOOLS

Section	I	II	III	State Total
Number of Returns	(50)	(94)	(33)	(177)
Natural Resources		Positive Responses		
Wild Life	49	88	30	167
Forests	49	87	28	164
Soils	48	87	28	163
Water	49	79	28	156
Minerals	40	71	26	137

this survey were people who, in the opinion of their county superintendent, stressed conservation instruction in their teaching. The purpose of this selection was to get a general picture of some of the better conservation education practices in Montana rural schools.

No rural teacher reported that conservation was taught as a separate course. Rather, conservation was introduced as part of other courses in the school curriculum. As can be seen in Table XIX, page 38, major emphasis on conservation was given in science, minor emphasis on the social studies and reading, and little emphasis in reading. This picture is similar to that of the elementary town schools.

When the rural teachers were asked how they presented the conservation instruction, 66.1 per cent indicated that it was by incidental teaching. (See Table XX, page 39.) Roughly, one fourth of the teachers replied that they used planned conservation instruction throughout some course or courses. About one teacher in sixteen taught conservation as a separate planned unit of some course.

The techniques used by rural teachers in teaching conservation, in order of frequency, were: pamphlets and bulletins, bulletin boards and blackboards, planned field trips, charts and graphs and still pictures. This information can be found in Table XXI, page 40. It is interesting to note that only about one half of the teachers responding

TABLE XIX

FREQUENCY OF THE VARIOUS DEGREES OF EMPHASIS OF CONSERVATION INSTRUCTION IN VARIOUS SUBJECTS AS REPORTED BY RURAL TEACHERS

Emphasis	MAJOR	MINOR	LITTLE
Total Returns	(177)	(177)	(177)
Subjects	Positive Responses		
Science	72	61	12
Geography	54	74	16
Citizenship	48	39	8
Social Studies	31	47	13
Civics	30	42	10
History	25	46	26
Health	23	46	21
Reading	16	67	38
Agriculture	11	8	1
Extra-Curricular Activities	11	11	1
Art	6	22	18
Language	6	29	24
Arithmetic	5	28	24
Spelling	2	12	14
Music	1	5	4

TABLE XX

FREQUENCY OF VARIOUS METHODS OF PRESENTATION OF CONSERVATION INSTRUCTION IN THE RURAL SCHOOLS

Section of State	I	II	III	State Total
Total Returns	(50)	(94)	(33)	(177)
Methods				
Incidental Teaching	47	58	16	111
Planned Separate unit	2	7	2	11
Planned throughout course	10	25	11	46

TABLE XXI

FREQUENCY OF VARIOUS TECHNIQUES USED BY RURAL TEACHERS IN CONSERVATION INSTRUCTION

Section of State	I	II	III	State Total
Total Returns	(50)	(94)	(33)	(177)
Techniques	Affirmative Returns			
Pamphlets and Bulletins	39	57	17	113
Bulletin Boards and Blackboards	36	58	14	108
Planned Field Trips	22	43	16	81
Charts and Graphs	23	42	13	78
Still Pictures	21	33	8	62
Displays and Models	15	26	4	45
Sound Films	23	11	3	37
Speakers	11	11	1	23
Film Strips	10	10	1	21
Basal Conservation Textbook	4	10	5	19
Current Events and Newspapers	1	4	0	5
Lantern Slides	2	2	1	5
Supplementary Readers	0	3	0	3
Essays	1	0	0	1

participated in planned field trips.

When the rural teachers were asked what representatives of public service agencies were used to supplement and enrich their conservation instruction, forest rangers headed the list in the western section of the state, while county agents led in the northeastern portion of Montana. (See Table XXII, page 42.) This variation is probably due to the different types of topography and vegetation in the two sections. In the state-wide picture game wardens ranked third and again predominated in section two.

As shown in Figure 6, page 43, over the state 52.5 per cent of the rural teachers participating in the survey indicated that a course of study in conservation education should be prepared for the Montana rural schools.

According to Table XXIV, page 45, approximately one half the teachers from whom responses were received indicated the emphasis on conservation was about right in their schools; the other one half indicated that conservation was under-emphasized in their schools. No teacher indicated that conservation was over-emphasized.

As can be seen in Table XXV, page 45, 64.4 per cent of the rural teachers responding felt that the emphasis on conservation in their rural school classes was about right. Roughly, one third of the teachers felt that conservation was under-emphasized in their classes. No teacher indicated

TABLE XXII

NUMBER OF RURAL SCHOOL TEACHERS WHO USED VARIOUS REPRESENTATIVES OF PUBLIC SERVICE AGENCIES IN SUPPLEMENTING AND ENRICHING CONSERVATION INSTRUCTION

Section of State	I	II	III	State Total
Total No. of Returns	(50)	(94)	(33)	(177)
Representatives:				
County Agents	15	37	9	61
Forest Rangers	25	10	5	40
Game Wardens	7	15	4	26
Soil Erosion Experts	2	7	4	13
Range Managers	2	5	1	8
Geologists	3	4	1	8
Wild Life Technicians	0	6	0	6
Water Commissioners	1	4	0	5
Petroleum Engineers	1	3	0	4
Chamber of Commerce Speakers	0	1	0	1
Indian Agents	0	1	0	1

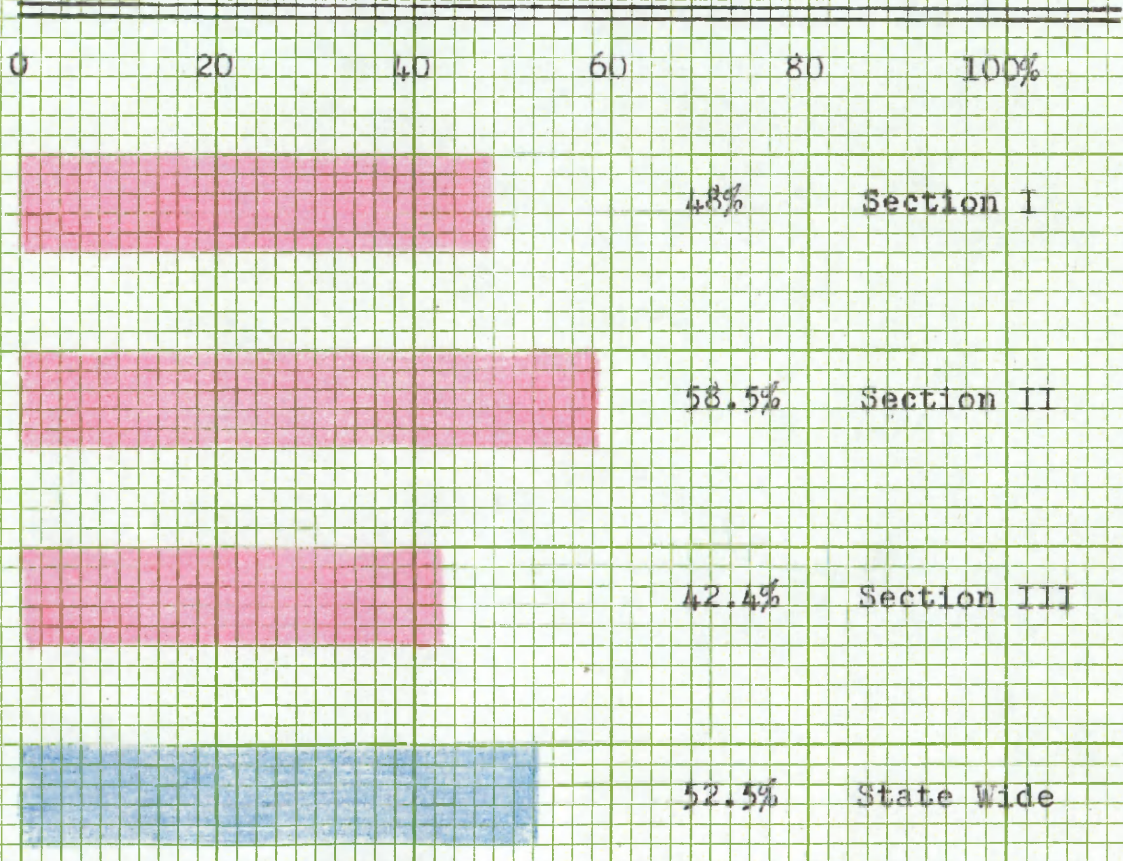
TABLE XXIII

NUMBER OF MONTANA RURAL TEACHERS WHO INDICATED THAT A COURSE OF STUDY IN CONSERVATION EDUCATION SHOULD BE PREPARED FOR MONTANA RURAL SCHOOLS

Section of State	I	II	III	State Total
No. of Returns	(50)	(94)	(33)	(177)
Teacher Responses	24	55	14	93
Percentages	48%	58.5%	42.4%	52.5%

FIGURE 6

PERCENTAGE OF MONTANA RURAL TEACHERS WHO INDICATED THAT A COURSE OF STUDY IN CONSERVATION EDUCATION SHOULD BE PREPARED FOR THE MONTANA RURAL SCHOOLS



that conservation was over-emphasized in the rural school classes.

When the rural teachers were asked if a separate course in conservation of natural resources of Montana was justified in their curriculum, 14.7 per cent answered in the affirmative. When they were then asked if planned units in the teaching of conservation should be made a part of the existing subjects in their present rural curriculum, 55.4 per cent indicated that there should be planned units and that these conservation units ought to be prepared to fit into the school subjects of geography, science and agriculture. (See Table XXVI, page 46.)

On a state-wide basis, roughly two thirds of the rural teachers reporting indicated that a conservation course should be inaugurated in the units of the Greater University of Montana. Roughly 75 per cent felt that the course in conservation education should receive college credit in the School of Education and to apply on the Bachelor of Arts, Master in Education, and Master of Arts degrees. This information is graphically presented in Figures 7 and 8, page 47.

The rural teachers were asked if the course in conservation education should be made compulsory for all prospective teachers. To this only 44.6 per cent answered "Yes" as shows on Figure 9, page 47.

TABLE XXIV

FREQUENCY OF THE VARIOUS DEGREES OF EMPHASIS ON CONSERVATION IN THE RURAL SCHOOLS AS INDICATED BY THE TEACHERS

Section of State	I	II	III	State Total
No. of Frequencies	(50)	(94)	(33)	(177)
Degrees of Emphasis				
Emphasis about right	21	49	16	86
Under-Emphasized	26	43	15	84
Over-emphasized	0	0	0	0

TABLE XXV

FREQUENCY OF THE VARIOUS DEGREES OF EMPHASIS ON CONSERVATION IN RURAL SCHOOL CLASSES AS REPORTED BY TEACHERS OF THOSE CLASSES

Section of State	I	II	III	State Total
No. of Frequencies	(50)	(94)	(33)	(177)
Degrees of Emphasis				
Emphasis about right	24	60	19	103
Under-emphasized	21	26	10	57
Over-emphasized	0	0	0	0

TABLE XXVI

DESIRABILITY OF MAKING PREPARED UNITS IN CONSERVATION INSTRUCTION A PART OF VARIOUS SUBJECTS IN THE RURAL SCHOOL CURRICULUM

Section of State	I	II	III	State Total
Total Returns	(50)	(94)	(33)	(177)
Subjects	Affirmative Returns			
Geography	25	31	8	64
Science	18	34	11	63
Agriculture	13	23	7	43
Civics	8	12	5	25
History	7	9	3	19
Social Studies	3	9	2	14
Reading	3	5	1	9
Language	2	2	0	4
Arithmetic	1	0	1	2
Art	1	0	0	1

FIGURE 7

PERCENTAGE OF MONTANA RURAL TEACHERS WHO INDICATED THAT A CONSERVATION EDUCATION COURSE SHOULD BE INAUGURATED IN THE UNITS OF THE GREATER UNIVERSITY OF MONTANA

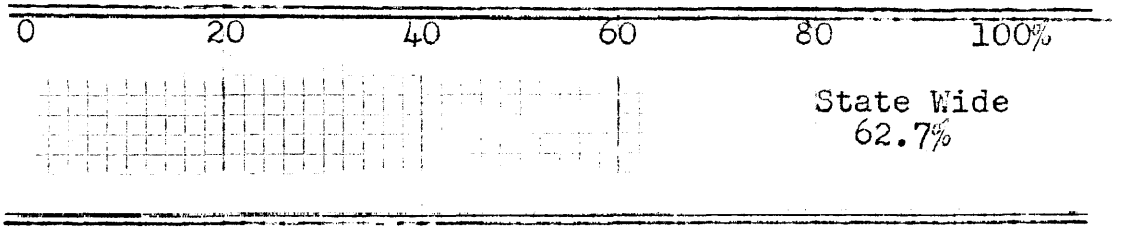


FIGURE 8

PERCENTAGE OF MONTANA RURAL TEACHERS WHO INDICATED THAT A COURSE IN CONSERVATION RECEIVE COLLEGE CREDIT IN THE SCHOOL OF EDUCATION TO APPLY ON A B.A., M.E., M.A.

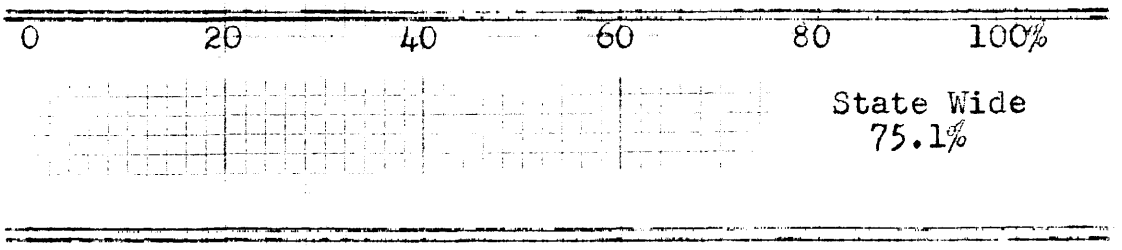
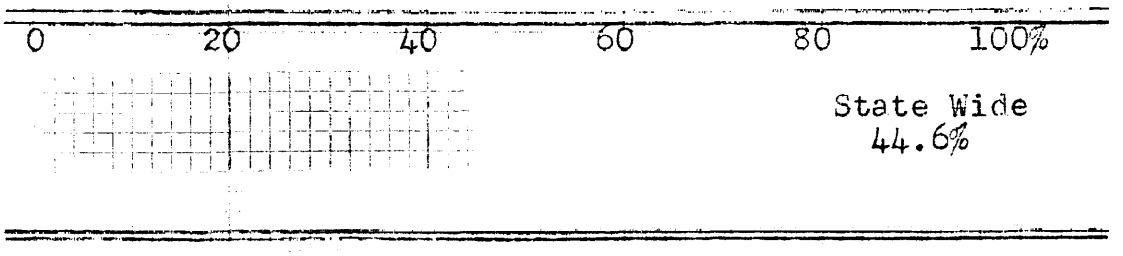


FIGURE 9

PERCENTAGE OF MONTANA RURAL TEACHERS WHO INDICATED THAT A COURSE IN CONSERVATION EDUCATION SHOULD BE MADE COMPULSORY FOR ALL PROSPECTIVE TEACHERS



SUMMARY

The rural teachers who responded to the conservation survey seemed to do considerable amounts of conservation teaching of Montana natural resources in the school year 1949-1950, but definitely as a part of other courses and not as a separate course. Conservation was given the most emphasis when taught as a part of science, social studies and reading. About two thirds of the rural teachers presented their conservation instruction incidentally and, roughly, twenty-five per cent planned conservation instruction throughout some course.

Forest rangers and county agents seemed to stand out as public representatives who were used by rural teachers to enrich their conservation teaching. Pamphlets, bulletins, field trips and charts were some of the techniques used most by rural teachers.

Approximately one half of the rural teachers indicated they desired that a course of study in conservation be prepared for the Montana rural schools. About one half the teachers felt that conservation was emphasized about right in their schools.

The teachers preferred prepared planned units to be integrated with science, social studies, and agriculture rather than setting up a separate course in conservation.

Approximately two thirds of responses indicated that rural teachers wanted a conservation course taught and given college credit in teacher training institutions of Montana, but slightly less than half wanted it to be made compulsory to prospective teachers.

CHAPTER V

SOME CRITERIA FOR EVALUATING THE CONSERVATION EDUCATION PROGRAM IN MONTANA

In this chapter the statements presented are mainly opinions of the writer, substantiated somewhat by state programs that seem to be successfully attacking the conservation problem.

In the opinion of the writer there seem to be at least two basic factors involved in conservation teaching: first, a good conservation attitude on the part of the teacher which must be communicated to the students, and secondly, a reasonably adequate working knowledge in the field of conservation. Both of these factors are important, but the writer feels that teachers are apt to be long on attitude and short on conservation subject matter.

Criterion One: Teacher Training in Conservation. In the light of the above statement, it seems reasonable to believe that teachers should receive training in conservation subject matter and methods of presenting this knowledge. The present trend in conservation training is through the conservation workshop whereby the class works as a unit. Several units of the Greater University of Montana have conducted conservation classes and workshops in the past several years,

especially during the summer sessions, but the greater proportion of Montana teachers have yet to be reached. On this criterion, Montana has quite a ways to go.

Criterion Two: Conservation Education Handbook for Teachers. The writer feels that a conservation handbook or a course of study in conservation used as a guide by teachers is needed in the teaching of conservation. Michigan, Wisconsin, North Dakota, Nevada, Iowa and other states have adopted such publications. The Department of Public Instruction in Montana has done some work along that line, but as yet has no handbook or course of study devoted solely to conservation.

Criterion Three: Listing of Conservation Materials. In the opinion of the writer, the State Department of Public Instruction should send to each teacher in Montana a list of current conservation materials, as for example, bulletins, pamphlets, slide films, phonograph records, and the like. The Department of Education in Michigan, Wisconsin, Arkansas, New York, and other states perform this service to their teachers.[1]

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[1]American Association of School Administrators, Conservation Education in American Schools, 29th Yearbook, (Washington, D.C., 1951), pp. 156-163.

Many Montana private and public agencies have compiled such lists but they are unknown to many teachers.

Criterion Four: State Department Supervisor of Conservation Education. Michigan, Wisconsin, and North Carolina, in the opinion of the writer, seem to be progressing rapidly in the conservation movement. These three states have set up departments of conservation headed by a conservation commissioner or supervisor who works with the State Department of Education and the different agencies which are conservation-minded, in an attempt to coordinate the conservation movement in his state.[2] Montana has neither a Department of Conservation nor a conservation commissioner or supervisor.

Criterion Five: Compulsory Conservation Teaching in Schools. The writer deems that the time has come to make the teaching of conservation compulsory in our public schools. If all teachers were conservation enthusiasts, no need for such legislation would be necessary. The three "R's" are taught in the Montana schools because the requirements are so set up.

Criterion Six: Adequate State Support for Conservation Education. The writer feels that conservation education

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[2]Ibid., pp. 154-177.

must have its requirements and financial support from the state legislature. Little can come from merely making conservation education compulsory in the public schools without financial backing to set up the necessary machinery to promote successfully a conservation education program. The Montana Legislature in 1951 enacted a law making conservation education compulsory in the Montana public schools with no appropriations to establish the necessary organization to build a sound conservation education program.

SUMMARY

In the light of the six criteria listed above, the writer feels that Montana has made some progress in at least three of the standards set; first, offering teacher training in conservation, second, listing of available conservation materials for teaching by different agencies, and lastly, passing legislation making conservation teaching compulsory in the public schools.

> The state departments of education that are most effective in developing conservation programs are those that give both leadership and service to the schools. They stimulate groups and individuals to develop programs concerned with the wise use of natural resources. They disseminate information about the resources of the state and their uses. They suggest curriculum experiences that will provide the knowledge, develop the skills, and build the attitudes necessary for understanding, using and enjoying the state's natural resources. They provide consultation service for school and com-

munity groups.[3]

In line with the above, the writer feels that the Department of Public Instruction in Montana is willing and ready to inaugurate a similar state conservation education program when the necessary funds are made available.

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[3] Ibid., p. 149.

CHAPTER VI

SUMMARY AND RECOMMENDATIONS

During the 1949 summer session of the Montana State University, two graduate students (David Thorn and Donald Fox) and the writer composed two conservation education questionnaires, one being applicable to the high school and the other to the elementary schools.

With the cooperation of the State Department of Public Instruction this preliminary survey of conservation education was made in the Montana elementary schools in grades four through eight inclusive, and in five rural schools in each of the fifty-six counties.

The purpose of the survey was to gather data which could be used to provide some measure of the quantity and quality of conservation education in the Montana elementary and rural schools.

On the basis of teacher responses from the elementary town schools and rural schools there seemed to be a considerable amount of conservation teaching of Montana natural resources during the school year 1949-1950.

In only one case was conservation taught as a separate course, and that only lasted for a few weeks. In both the elementary and rural schools conservation education was emphasized as part of science, social studies and reading.

Two-thirds of the teachers in rural and elementary schools indicated that conservation instruction was incidental. There seemed to be more specific planning in the teaching of conservation in the upper grades than in the middle grades.

Both the elementary and rural school teachers used audio and visual aids in presenting conservation materials, bulletins, pamphlets, blackboards and bulletin boards being used most commonly.

To enrich and supplement their conservation teaching the rural and elementary teachers indicated that the forest ranger and the county agent were the representatives most used.

According to the responses received, roughly one-half of the elementary and rural teachers felt that conservation education was under-emphasized in the elementary school as a whole, and in their classes also.

Most of the Montana teachers who responded felt that a separate course in conservation was not justified in their crowded curriculum but they did indicate that there was a definite place for prepared planned units in the science and social studies courses.

The elementary and rural teachers definitely desired that a conservation course be taught in the units of the Greater University of Montana--such course to receive college credit to be applied to under-graduate and graduate work.

Roughly, only one-third and one-half of the elementary and rural teachers, respectively, wanted a conservation course to be made compulsory for prospective teachers. In the opinion of the writer the teachers responding to the above question concerning a compulsory conservation course were influenced by the fact that such a requirement might apply to them at a future date.

RECOMMENDATIONS

This preliminary survey has not brought to light all the facts regarding conservation education in Montana elementary schools. To obtain a more comprehensive picture of the conservation teaching in the Montana public schools, the writer makes the following recommendations:

1. The preliminary survey of the Montana High School conservation education program in the school year 1949-1950 should be completed.
2. A study of the qualifications of teachers who teach conservation in the public schools of Montana should be made.
3. More teacher training in conservation, not only to develop good conservation attitudes but to acquire adequate working knowledge in the field of conservation should be presented.
4. In five to ten years hence a more elaborate study

should be made to measure the progress made in conservation education in Montana schools. The writer recommends that the study be conducted by observation and interviews rather than by questionnaire.

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BIBLIOGRAPHY

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APPENDIX

APPENDIX A

STATE DEPARTMENT OF PUBLIC INSTRUCTION
State Capitol
Helena, Montana
November 21, 1949

To All Superintendents and County High School Principals:

Our department is sending you herewith questionnaires concerning conservation education in the elementary and secondary schools of Montana. We will appreciate your examining the same, and then distributing them to all teachers of grades 4 through 12 in the school or schools under your supervision. If we have not provided a sufficient number, drop us a line indicating the number of extra copies you need, and we will send them to you by return mail.

Will you please urge your teachers to return the questionnaires promptly to you. They should be mailed to this office, if possible, under one cover.

Thank you for your cooperation.

Sincerely yours,

Mary M. Condon

Mary M. Condon
State Superintendent
of Public Instruction

APPENDIX A

STATE DEPARTMENT OF PUBLIC INSTRUCTION
State Capitol
Helena, Montana
November 21, 1949

Elementary

TO ALL TEACHERS IN MONTANA:

In cooperation with the School of Education of Montana State University, the Department of Public Instruction is submitting for your consideration this questionnaire to determine present trends in the teaching of conservation in Montana elementary and secondary schools.

We feel that this matter of conservation is becoming more and more a vital issue in the development of Montana resources and citizens. We would appreciate your careful consideration of the items listed in order that we may evaluate current practice and make recommendations for improvement of our conservation education program, if needed, in the elementary and secondary schools.

We realize that you do not have too much time to give to these matters, but we are hoping that each one of you will spend a few minutes in filling out this questionnaire and returning it to this office by December 1, 1949. We suggest that questionnaires from each school be returned all together by the administrator of that school. We ask you to make this report as accurate as possible.

Sincerely yours,

Mary M. Condon

MARY M. CONDON
State Superintendent
of Public Instruction

Definition of Terms: For the purpose of this questionnaire, we define the following terms:

Conservation of Natural Resources - The wise use of natural resources (such as Forests, Soils, Water, Minerals, Wild Life) without waste and the development of their fullest permanent usefulness.

Course - A definite period of instruction and study in a certain subject; as, a course in Conservation.

Unit - A unit is a major subdivision of a course devoted to a particular topic or theme in conservation, limited to a definite period of instruction.

Incidental Teaching - The teaching of certain conservation attitudes and concepts only as the need for them occurs in connection with other school work or with the pupil's activities or interests.

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Teacher _____ Name of School _____

No. of years you've taught (✓): None___, 1 to 5___, 6 to 10___, 11 or over___.

What grade level and subjects do you teach? _____, _____,

_____, _____, _____, _____, _____,

What extra-curricular activities do you supervise?

_____, _____, _____, _____.

Directions: Place an "X" in the block or blocks that best apply to your situation.

1. Is conservation of the following natural resources of Montana taught in your schools?

	YES	NO
a. Forests	☐	☐
b. Soils	☐	☐
c. Water	☐	☐
d. Minerals	☐	☐
e. Wild Life	☐	☐

2. Is conservation taught as a separate course? ☐ YES ☐ NO

   a. If your answer to number 2 was "yes",

      1. at what grade level? (encircle one) 1, 2, 3, 4, 5, 6, 7, 8, 9.
      2. how many semesters? (encircle one) 1, 2, 3, 4.

3. Is conservation instruction introduced "as part of" the following courses? (If "yes" is checked, please indicate the degree of emphasis.)

			EMPHASIS		
	YES	NO	Major	Minor	Little
a. Reading	☐	☐	☐	☐	☐
b. Arithmetic	☐	☐	☐	☐	☐
c. Health	☐	☐	☐	☐	☐
d. Geography	☐	☐	☐	☐	☐
e. Science	☐	☐	☐	☐	☐
f. History	☐	☐	☐	☐	☐
g. Civics	☐	☐	☐	☐	☐
h. Citizenship	☐	☐	☐	☐	☐
i. Spelling	☐	☐	☐	☐	☐
j. Language	☐	☐	☐	☐	☐
k. Social Studies	☐	☐	☐	☐	☐
l. Music	☐	☐	☐	☐	☐
m. Art	☐	☐	☐	☐	☐
n. Extra-Curricular Activities	☐	☐	☐	☐	☐
o. Others					
_____	☐	☐	☐	☐	☐
_____	☐	☐	☐	☐	☐

4. If you answered number 3 "yes", how do you present the conservation instruction? (check one)

   a. Incidentally (see definition of terms, page 1) (__)
   b. As a <u>definitely planned</u> part of the total course. . (__)

	YES	NO
1. If planned, is it taught as a separate unit within the subject?	(__)	(__)
2. Or, is it taught right along throughout the course?	(__)	(__)

5. Which of the following techniques are used in teaching of conservation practices in your classes

a. Basal textbook with content devoted solely to conservation	(__)	(__)
b. Planned field trips	(__)	(__)
c. Sound films	(__)	(__)
d. Film strips	(__)	(__)
e. Lantern slides.	(__)	(__)
f. Still pictures.	(__)	(__)
g. Bulletin boards and blackboards	(__)	(__)
h. Pamphlets and bulletins	(__)	(__)
i. Displays and models	(__)	(__)
j. Charts and graphs	(__)	(__)
k. Speakers.	(__)	(__)
l. Others		
_____	(__)	(__)
_____	(__)	(__)
_____	(__)	(__)
_____	(__)	(__)

6. Which of the following representatives of public service agencies are used in supplementing and enriching your conservation teaching?

	YES	NO
a. Forest Rangers.	(__)	(__)
b. County Agents	(__)	(__)
c. Water Commissioners	(__)	(__)
d. Game Wardens.	(__)	(__)
e. Range Managers.	(__)	(__)
f. Wild Life Technicians	(__)	(__)
g. Soil Erosion Experts.	(__)	(__)
h. Petroleum Engineers	(__)	(__)
i. Geologists.	(__)	(__)
j. Others		
_____	(__)	(__)
_____	(__)	(__)
_____	(__)	(__)

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	YES	NO
7. Do you think that a course of study in Conservation Education ought to be prepared for Montana Elementary Schools?	(___)	(___)
8. a. In your school system as a whole, what is your feeling with regard to the emphasis on conservation? (check one)		
1. conservation is over-emphasized	(___)	
2. emphasis on conservation is about right	(___)	
3. conservation is under-emphasized	(___)	
b. In your <u>own</u> <u>classes</u> as a whole, what is your feeling with regard to the emphasis on conservation?		
1. conservation is over-emphasized	(___)	
2. emphasis on conservation is about right	(___)	
3. conservation is under-emphasized	(___)	
9. a. Do you feel that a <u>separate</u> <u>course</u> in conservation of natural resources of Montana is justified in your curriculum?	(___)	(___)
<u>or</u>		
b. Do you feel that <u>planned</u> <u>units</u> in the conservation of natural resources of Montana should be made a part of existing subjects in your present curriculum?	(___)	(___)
c. If you indicate "yes" in 9b, in what subject or subjects do you feel these units should be placed. . . .		
_____ _____ _____		
10. Do you believe that a course designed to train teachers in Conservation Education should be inaugurated in the units of the Greater University of Montana?.	(___)	(___)
11. Do you feel that a teacher training course in Conservation should receive college credit in the School of Education to apply on a B.A., M.E., M.A. degree?	(___)	(___)
12. Do you feel that a teacher training course in Conservation Education should be compulsory for all prospective teachers?	(___)	(___)

General Remarks:

If you have conducted any particularly worthwhile activities pertaining to Conservation Education, we would appreciate an account of the same on the back of this sheet. Any other comments will be accepted gladly.

State Department of Public Instruction
State Capitol
Helena, Montana

March 1, 1950

_____

_____

Dear _____,

To date we haven't received the elementary conservation questionnaires from your school which were mailed from this office before the first of the year. Probably the questionnaire blanks were lost in mailing. We will send gladly upon request sufficient blanks to supply teachers of grades four (4) through eight (8).

This Conservation Study has been held open in order that further data can be obtained. We feel that more questionnaire returns will give us a better state-wide picture.

We appreciate your cooperation and immediate attention in this matter.

Sincerely yours,

Mary M. Condon
State Superintendent
of Public Instruction.

STATE DEPARTMENT OF PUBLIC INSTRUCTION
State Capitol
Helena, Montana
November 21, 1949

To All Montana County Superintendents:

We are sending you five questionnaires (more may be requested, if needed) concerning conservation education in the elementary schools of Montana. I would appreciate your distributing these questionnaires to those one or two-room rural schools in your county which are especially emphasizing conservation of natural resources (town schools are being contacted through their superintendents and principals).

Will you please urge the teachers to return the questionnaires promptly to you, following which, they should be mailed to our office.

Thank you for your cooperation.

Sincerely yours,

Mary M. Condon
State Superintendent
of Public Instruction

DEFINITION OF TERMS

For all purposes in this paper, the following terms will be used as defined:

Elementary School: Elementary school has been used as that part of the public school system preceding the secondary school (usually the first six or eight grades, depending on whether the 6-3-3 or 8-4 plan of organization is used).

Intermediate grades: Intermediate grades include grades four, five, and six in the elementary school.

Upper grades: Upper grades include grades seven and eight in the elementary school, but not the Junior High School.

Rural School: Rural school has been used as that part of the public school system that has no designated administrator within itself. It is administered by the County Superintendent.

Conservation of Natural Resources: The wise use of natural resources (Forest, Soils, Water, Minerals, and Wild Life) without waste, and the development of their fullest permanent usefulness.

Course: A definite period of instruction and study in a certain subject; as, a course in Conservation.

Unit: A unit is a major subdivision of a course devoted to a particular topic or theme in conservation, limited to a definite period of instruction.

Incidental Teaching: The teaching of certain conservation attitudes and concepts only as the need for them occurs in connection with other school work or with the pupil's activities or interests.