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FOURTH BIENNIAL REPORT

OF THE

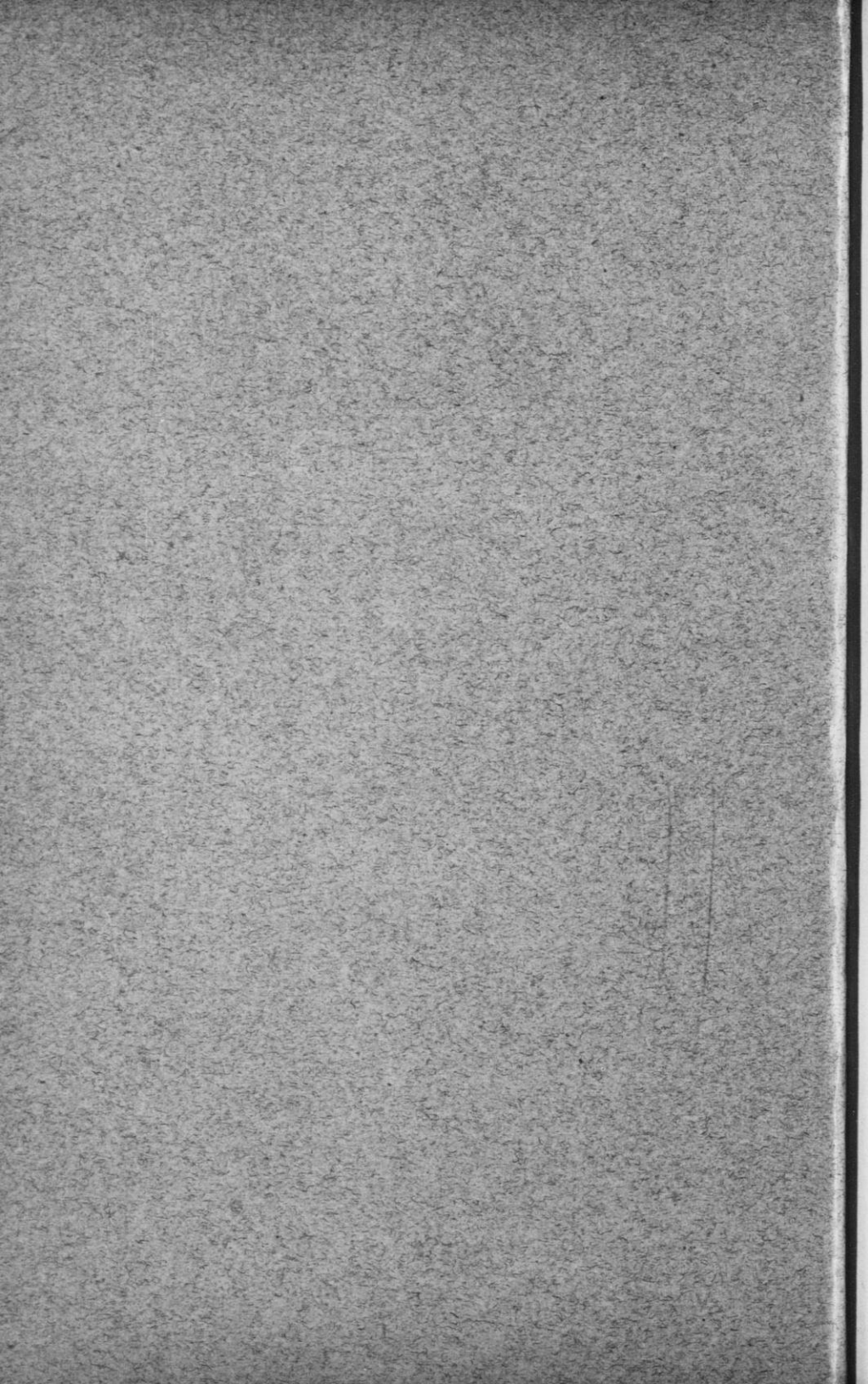
CONSERVATION COMMISSION

OF THE

STATE OF WISCONSIN

Madison, Wisconsin

1915



FOURTH BIENNIAL REPORT

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STATE OF WISCONSIN

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SIR:

Upon behalf of the Conservation Commission of the State of Wisconsin, I transmit herewith their fourth biennial report, with the request that the same be printed as authorized by law.

Very respectfully,

CHARLES R. VAN HISE,
Chairman.

To His Excellency, EMANUEL L. PHILIPP,
Governor of Wisconsin.

Madison, Wisconsin, May 19, 1915.

REPORT OF THE CONSERVATION COMMISSION
OF THE STATE OF WISCONSIN

Commissioners	Term Expires
E. A. BIRGE.....	July 1, 1917
T. H. GILL.....	July 1, 1915
E. M. GRIFFITH.....	July 1, 1917
H. H. HOARD.....	July 1, 1913
V. P. RICHARDSON.....	July 1, 1915
W. N. SMITH.....	July 1, 1913
CHARLES R. VAN HISE.....	July 1, 1917

CHARLES R. VAN HISE, *Chairman,*

E. M. GRIFFITH, *Secretary-Treasurer.*

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REPORT OF THE COMMISSION

The situation in regard to the conservation movement for the state of Wisconsin is somewhat fully presented in the three previous reports of the commission, and is fully summarized in the third report. The situation has not fundamentally changed since the last report appeared. Therefore this fourth report will be made supplementary to the third.

The recommendations of the first and second reports have been largely embodied into law. The same is true to a considerable extent of those of the third report, but a number of recommendations still remain for action. Also the developments of two years require certain modifications of the recommendations made two years ago.

The law creating the conservation commission is found in section 1498x of the Wisconsin statutes. The laws concerning the expenditure of money are found in sections 170-42 and 172-40.

Under 172-40, the commission is allowed \$1,000 per annum to cover necessary expenses in connection with the performance of the duties assigned to the commissioners by the Governor. Since the first appropriation of \$1,000 was made to the commission for the first biennium of its existence, the actual expenditures have been as follows:

Expenditures to July 1, 1913.....	\$120.86
Expenditures for the fiscal year 1913-14.....	197.75
Expenditures fiscal year 1914-15, to January 1, 1915..	00.00
Total.....	<u>\$318.61</u>

In accordance with the law the commissioners give their services without compensation; therefore the entire cost to the state for the preparation of the four reports of the commission, including printing of the three reports, was \$318.61.

MINERALS

As stated in the previous reports the more exhaustible minerals of the state are iron, zinc, and lead. Peat is the only underground mineral fuel occurring in the state.

IRON

In the third biennial report it was shown that recent explorations had disclosed a large tonnage of iron ore in both the Baraboo and the Iron Ridge districts and that these iron ores had in large measure escaped taxation. Also it was shown that in the northern part of the state are considerable areas of land which contain iron bearing formations and upon which in the future merchantable iron ore may be discovered. The mineral rights in some cases are possessed by the landholders; in others they are owned by companies which in disposing of the surface rights have withheld the mineral rights. Such mineral rights have wholly escaped taxation. Because of the above facts the commission made the following recommendations regarding iron.

"1. That the state geological survey make for the Tax Commission careful estimates, and revise them year by year, of the discovered marketable iron ores by grades for the Gogebic, Baraboo, and Iron Ridge districts, also of the ores in these districts probably available for the future."

"2. That the geological survey push forward, as rapidly as possible, the survey of the possible iron bearing areas in the northern part of the state with reference to the delimitation and classification of the lands containing iron bearing formation."

The first recommendation of the commission was met by the legislature by the enactment of the following law:

Section 3921-1, subsection 3. Said geological and natural history survey is directed to examine the mines and explored mineral lands of the state by persons competent to make such examinations and make an accurate determination of the amount of ore therein, the expense of mining, the probable life of the mine, and such other factors as may be necessary, in the judgment of the state tax commission and the geological and natural history survey, for a proper valuation thereof. For the purpose of this investigation all books, inventories, waybills, maps, plats, correspondence, and memoranda relating to or used in the transaction of the business of any person, co-partnership or corporation owning or operating any such mine or explored mineral land, shall on demand by the geological

and natural history survey, or its authorized representative, be open to its or his inspection or examination. Any such person, co-partnership or corporation owning or operating any mine or explored mineral lands shall furnish for inspection to the geological and natural history survey, upon request, copies of all maps and plats that relate to the workings of his or its mine or mines and to his or its explored mineral lands.

Acting under the law the state geologist, Mr. W. O. Hotchkiss, made a complete valuation of the iron mines of the state in the spring of 1914,¹ and turned the results over to the tax commission.

The second recommendation of the commission was also enacted into law by the legislature of 1913 as follows:

Section 3921-1. 1. The geological and natural history survey is directed to examine the lands of the northern part of the state and classify them in accordance with their mineral content and geological and other evidences of the presence of mineral. The classification shall be made in a manner to be agreed upon by the state tax commission and said survey, and as rapidly as the classification of each separate township is completed, the detailed report of such township shall be furnished to the tax commission.

According to Mr. Hotchkiss under this law the area surveyed during the two field seasons which have elapsed since the survey was made is 3,156 square miles, or 2,019,840 acres. The total cost of the work, including field work, office work, engraving of maps, and printing of reports, has been somewhat less than two cents per acre.²

LEAD AND ZINC.

The recommendations concerning lead and zinc in the Third Biennial Report of the Conservation Commission are as follows:

"1. That a study of mining costs and methods of mining of lead and zinc already begun by Professor R. E. Davis of the Mining Trade School, be continued and completed with reference to working out a practicable graduated royalty plan for leasing mining lands."

"2. That selected areas in the lead and zinc district be mapped in detail by the State Geological Survey in a manner similar to certain areas already mapped by that organization."

¹ The manner in which this work was done is described in the 9th biennial report of the Geological and Natural History Survey, pp. 12-13.

² Detailed description of the work done upon the iron ores is found in the 9th Biennial Report of the Geological and Natural History Survey, pp. 10-11.

"3. That the State Geological Survey continue the general survey of the southwestern part of the state with reference to possible extensions of the area in which lead and zinc may occur in economic amounts."

"4. That the immediately available reserves in the mines be carefully measured and considered in connection with the past production of the mines; that the possibilities of extension of the mines' reserves be ascertained so far as possible; that the average life of mines that have been worked out be ascertained; in short, that all of the data be assembled which are used commercially in judging the probable value of the mines and mineral bearing lands; and that the work be done through coöperation of the mining department of the university and the state geological survey."

"5. That the university and the mining trade school coöperate in a study of the problems of mining concentration and smelting."

"6. That the experimental work by the department of soils of the university regarding the use of ground limestone produced in the lead and zinc district as a fertilizer be continued."

Professor R. E. Davis, of the Mining Trade School, has continued the work mentioned in recommendation No. 1. He will have ready for publication in the near future by the Geological and Natural History Survey a report of the mining, milling, and operating costs for lead and zinc. The results thus far disclosed do not confirm the practicability of introducing a graduated royalty plan for leasing mining lands.

The second recommendation has been partly carried out by the Geological Survey through the preparation of large scale maps of important small areas.¹ This work should be continued until all of the more productive areas are thus surveyed.

Concerning the third recommendation of the commission nothing has been done.

In accordance with the fourth recommendation, Mr. W. L. Uglow under the direction of W. O. Hotchkiss has completed the valuation of the zinc mines of the district with regard to their taxation. In this work he has had the close coöperation of the mining companies. This study disclosed that the average life of zinc mines examined was between 4.5 and 5 years.

¹The maps are described in Bulletin XLIV, pp. 2-6, of the Geological and Natural History Survey.

WATER POWERS

Recommendations concerning water powers in the third report were as follows:

"1. That franchises for water power be granted under a general statute.

"2. That the issuing of such franchises be placed with the railway commission or similar board, under conditions to be provided by the general statute.

"3. That such franchises be indeterminate and carefully safeguarded under the general principles of the public utilities act.

"4. That the prior rights of the state and municipalities for water power for public purposes be recognized and protected.

"5. That where the water power is not adequate to meet all the demands for energy for public purposes, the commission having the matter in charge shall have authority equitably to distribute such power between the state, the various municipalities, and the public utilities.

"6. That the commission have authority, when the public needs require it, to compel maximum development of water powers for which franchises are granted.

"7. So far as is lawful, that no corporation be authorized to create power in the state except for the preferential distribution and use in the state.

"8. That all dams constructed under franchises be made under such regulations as to insure public safety; also that the commission be authorized to require changes in existing dams to this end.

"9. That navigation and all public uses in the navigable streams be fully protected.

"10. That a survey of the water powers and reservoirs of the state be completed by the state geological survey in coöperation with the United States Geological Survey.

"11. That the gauging of the streams which will be necessary in connection with the above act shall be undertaken by the state geological survey in coöperation with the commission having water powers in charge."

A general water power law was passed by the legislature of 1913.²

In this law each of the eleven recommendations has been embodied in full. As yet, no franchises have been granted under this act by the Railroad Commission although a number of applications are on file. The secretary of that commission reports that "gaging stations have been established in all the admittedly navigable streams of the state and gage readings have been recorded at all of these stations at stated periods. Employees of the Federal Geological

²Chapter 69m, Sections 1596-50 to 1596-79, inclusive.

Survey have worked throughout in conjunction with engineers of this commission. A large number of dams have been inspected and surveyed in a systematic manner."

Certain features of the water power law have been subjected to vigorous attack. These, however, relate to the question of ownership of the energy of the falling water by the riparian owner and the manner of expropriation of water power developments. None of the points of controversy are included in the recommendations of the conservation commission; nor does the conservation commission express any opinion regarding them. The commission, however, believes that if the water power law is amended by the legislature of 1915, the modified law should retain the provisions which carry out the recommendations made by the conservation commission.

FORESTS

The situation concerning forests is greatly changed from that of two years ago. In carrying out the forestry policy considerable tracts of land have been acquired on land contracts with partial payments. One of the companies from which purchase was made is the G. F. Sanborn Company. When the question arose of making the final payment upon these lands, the legality of the proposal was brought into the court, the case being in a form in which the Attorney-General is plaintiff and the Secretary of State defendant.

The opinion of the court is an elaborate one, the points of which will not be discussed in detail. The decree of the court, rendered February 12, 1915, under which the forestry board must act, is as follows:

"By the Court: It is considered, ordered, decreed, and adjudged that:

"First, The demurrer to defendant's pleading be and is overruled.

"Second. The land contract mentioned in the petition is void for reasons indicated in the opinion, particularly because:

"a. It created a state debt and created such when state indebtedness exceeded the constitutional limit.

"b. It is an evidence of indebtedness within the state constitutional prohibition.

"c. The contract was not authorized by statute.

"d. By Section 10, Art. VIII, at the date of the contract, it is fatally within the 'works of internal improvement' feature of the forestry statutes (though they are in important features, as indicated in the opinion, not so tainted) and the addition, in form, to such section in November, 1910, failed for reasons stated in the opinion.

"e. It is an inseparable part of the forestry legislation and particularly of the invalid features thereof stated in the opinion.

"Third. The forestry legislation, including section 1072-1, Chapter 367, Laws of 1897, Chapter 450, Laws of 1903, and Chapter 264, Laws of 1905, and such other acts as there may be, did not repeal or affect sections 250 and 251, Stats. 1898, for reasons cited in the opinion. Such sections are part of the written law of the state and govern the matters therein referred to.

"Fourth. All land derived by the state from the United States under the swamp land grants, the lands in lieu of swamp lands, set aside for educational purposes under Chapter 537, Laws of 1865, and confirmed by Chapter 151, Laws of 1869, and subsequent practice, and all other lands so derived or in lieu of swamp lands and required to be set apart under the terms of said sections 250 and 251, by section 2, Art. X of the constitution and the legislative action referred to became, and so far as not disposed of are, school fund lands, as regards the manner of handling the same, subject to the constitutional duty to conserve the same for the purpose of producing money for the school fund, as indicated in the opinion; but under the control of the legislature in respect to the manner of dealing therewith for such purpose.

"Fifth. The sections of the statutes composing Chap. 740, Laws of 1913, and those composing Chapter 491, Laws of 1907, are unconstitutional for the reasons stated in the opinion.

"Sixth. The provisions of the forestry legislation, other than the features mentioned, are valid within limitations, stated in the opinion.

"Seventh. The state has an equitable lien on the lands included in the illegal contract for the money paid thereon, and such money, equitably, is declared to have been trust money, whereby such lien inures to the benefit of the trust fund property.

"Eighth. For the benefit of the trust funds, the balance due on the contract shall be paid out of trust fund money when practicable, and to provide therefor, all moneys to the credit of the forestry fund derived from sales of land, or from appropriations to buy lands, or in the tax title fund referable to sections 1494-131 to 135 inclusive, Stats. 1913, are declared to equitably belong to the drainage and constitutional trust funds. Because of the diversion of such funds to forestry purposes and to the general fund, and the resulting confusion, the whole is declared to have the character of the more important funds which have wrongfully lost their identity, and such equitable status shall subsist so far as necessary to fully remedy the diversion and confusion.

"Ninth. The newly acquired lands under the forestry law, except those donated to the state for forestry purposes, have the cast of the constitutional trust fund lands and will be administered accordingly until, upon a full accounting it shall be found what part, if any, will remain after fully restoring the integrity of the trust fund lands and trust funds.

"Tenth. The facts being admitted, the alternative writ of mandamus is dismissed, but the cause retained for the purpose of final disposition upon the coming in of the report of the referees hereinafter appointed.

"Eleventh. There shall be an accounting which is hereby ordered of all dealings with the trust fund lands of the date of Ch. 367, Laws of 1897, and so long prior thereto as practicable, not earlier than the decision under Chapter 537, Laws of 1865,—and of lands acquired under the forestry legislation since 1897, except those donated to the state for forestry purposes or acquired by proceeds of the latter, and an accounting of all proceeds of such trust lands and income thereof and income which such proceeds would have earned had the same been devoted to the trust to which they belonged, such accounting to include all moneys paid into the forestry fund or general fund, derived from trust fund lands or lands purchased therewith and income from such proceeds, and a partition shall be made of the entire property so found equitably and legally to belong to the constitutional trusts, including any indebtedness from the general fund; giving due credit for all proper disbursements chargeable to such trust funds,—so that each of the constitutional trusts will have their equitable and legal portion of the trust fund property with identity established as to lands and other assets, as near as may be, after the manner of the decision under Chapter 537, Laws of 1865. Such accounting shall include all matters not specifically mentioned so far as necessary to cover the field discussed in the opinion and carry out the intent thereof guided by such opinion; and the referee shall report the result of the accounting to the court with all convenient speed.

"For the purposes of the accounting the cause is referred to the commissioners of public land and Judge Samuel D. Hastings as special referee.

"The holders of land contracts like the particular one shall be bound by the decision herein subject to the right of any vendor or assignee of such vendor to show cause why to the contrary within twenty days after service of a copy of this order on such vendor or assignee and notice to show such cause within such time or be so bound, and such notice in writing shall be given, so far as practicable, within twenty days after the entry hereof and proof be filed as part of the proceeds of this case.

"Administrative orders will be accorded, if necessary, for further guidance in the course of the accounting, to the end that this determination may be fully carried out according to the intent thereof.

"Upon the coming in and confirmation of the report of the referees judgment shall be rendered in respect to the matters covered thereby in accordance with such confirmation."

While the opinion accompanying the order of the court raises doubt in regard to the right of the state to raise taxes for the purpose of acquiring and handling land as a forest reserve, this doubt is not shared by Supreme Justice Winslow, who, in a concurring opinion, makes the following statement:

"My difficulty with the opinion" (of the court) "stated in a general way, is this: It so limits and circumscribes the powers of the state with regard to the afforestation and reforestation that it leaves little more than a shell behind. At least this is the way the opinion impresses me and the way I think it will be generally understood.

"There are three general propositions which I think should be stated in this case clearly and fully, without hedging them about with limitations, qualifications, and provisos which render them practically useless, and those propositions are as follows:

"First, the acquisition, preservation, and scientific care of forests and forest areas by the state, as well as the sale of timber therefrom for gain in accordance with the well understood canons of forest culture, is pre-eminently a public purpose. It would be a mere affectation of learning to dwell upon the value to a state of great forest areas. That has been established long since and is not open to question. The lamentable results which have followed the cutting of forests over large areas, the serious effects of such cutting upon climate, rainfall, preservation of the soil from erosion, regularity of river flow, and other highly important things which go to make up the welfare of the state, are matters of history. They need not be descanted upon.

"Second, before a public purpose of the first rank in importance, there can be no question of the power of the state to levy taxes for the accomplishment of the purpose. The power of taxation exists for every public purpose unless some constitutional prohibition, either federal or state, has taken it away. I find no such prohibition. I confess my inability to understand the reasoning which finds it in that clause of the Constitution which commands the legislature to levy an annual tax to defray the estimated expenses of the state. The power of taxation is one of the necessary attributes of sovereignty. To say that, because the Constitution makers thought best to make a specific provision that taxes should be levied for certain purposes, they intended thereby to interdict taxation for all other public purposes, is to my mind unthinkable. Besides, if afforestation and reforestation be public purposes, then the moneys spent in carrying them on are necessarily and properly expenses of the state and come within the constitutional command. The expenses of a state include the moneys which it spends in carrying out the public purposes which the legislative judgment directs to be carried out.

"Third, afforestation and reforestation of large areas are not 'works of internal improvement' within the meaning of the Constitution. In stating the proposition, I accept the definition given in the case of the *State v. Froehlich*, 115, Wis. 32, 91 N. W. 115, 58. L. R. A. 757, 95 Am. St. Rep. 894. It was there said that the term includes 'those things which ordinarily might, in human experience, be expected to be undertaken for profit or benefit to the property interests of private promoters, as distinguished from those other things which primarily and preponderantly merely facilitate the essential functions of government. In the same opinion it was said, in substance, that this classification does not exclude the possibility that some of the dominant characteristics of one class may be present, but, of course, not dominantly in illustrations of the other class.

"Now I affirm that is not to be expected in the light of human experience in this land at least, that the establishment and conservation of great forest areas for the public good should be undertaken by private enterprise, and I also affirm my belief, as previously stated, that such work

is preëminently a public work, and hence one of the essential functions of government. It has not been recognized as such until recently perhaps, but that is merely because the conditions which make it such have only recently arisen and become acute. So in my judgment every act which is necessary to be done in successfully carrying on afforestation and reforestation, including the purchasing of the necessary lands, may properly be done by the state. My original opinion was that this might properly include the erection of saw mills and the manufacture of lumber out of the timber which under the rules of scientific forestry ought to be cut, but I yielded my opinion on this point, and I stand by the concession. I do think, however, that it covers every necessary and proper act up to and including the sale to third persons of standing timber which ought to be cut.

"I have not desired to argue out these propositions, but only to state them." (Northwestern Reporter, Vol. 151, No. 3, pp. 377-378, State vs. Donald.)

In the body of the opinion of the court, p. 83, it is further indicated, in regard to the state swamp lands, that the commissioners of public lands "have only such power as the legislature may see fit to delegate to them." Therefore under existing law the lands remaining under the charge of the state board of forestry include those which have been purchased for forestry lands, those which have been acquired as swamp lands, or through the sale of swamp lands and with the funds thus secured, the acquisition of other lands.

Since the school lands, other than the swamp lands, which have been under the control of the forestry commission, are small in amount, the segregated forest reserve with little diminution still remains under the state board of forestry.

The decision clearly indicates that all of the moneys which may arise from the operation of the swamp lands as a forest reserve belong to the school fund. The decision states that the disposition or use of these lands should have for a primary purpose the production of the school fund money, though doubtless this purpose "leaves a wide field for legislative discretion in respect to withholding the lands from sale and improving the same by reforestation or afforestation which will be referred to again hereafter."

It is therefore clear that it is possible for the state to retain the forest lands now possessed and acquire other lands and handle them substantially as a state forest reserve, and thus protect the future of the state in its supply of timber and in securing a uniform flow of streams.

LANDS

Recommendations regarding land in the report of two years ago are contained under the headings of Erosion, Weeds, and Drainage.

EROSION

The recommendation concerning erosion was as follows:

"1. That the agricultural college and the soil survey in coöperation prepare a bulletin upon soil erosion in the state which shall include the facts regarding the situation for the various types of soil, and shall indicate the particular steps which are to be taken to reduce the soil erosion to a minimum for each of the classes of soils and the various topographic districts."

This recommendation has not yet been acted upon by the agricultural college and the soil survey. It should be complied with as soon as feasible.

WEEDS

The recommendations of the third report concerning weeds are as follows:

"1. That the college of agriculture prepare a weed manual to contain illustrations and descriptions which will enable the easy identification of the more important noxious weeds of the state and the methods of their eradication; and that the state provide for the publication of a large edition of such manual at an expense of about \$2,500."

"2. That there be created a state officer to be known as the state weed commissioner who shall be an expert and who shall have authority to appoint and remove local weed inspectors, that such inspectors shall work under the direction of the State Weed Commissioner and that it shall be the general duty of the weed commissioner to direct a campaign for the eradication of the noxious weeds of the state."

"3. That the weed laws of the state be amended so as to name specifically the weeds which are noxious in the light of present knowledge, that such noxious weeds be declared to be a nuisance, and that the weed commissioner and his inspectors be given power to formulate and enforce regulations which shall require communities and individuals to eliminate noxious weeds from the lands for which they are responsible in the manner prescribed by the weed commissioner and his deputies."

"4. That the legislature make a sufficient appropriation to put into operation the above plan for the eradication of noxious weeds within the state."

The study of the weed situation by the College of Agriculture during the two past years has led the commission to modify its views of two years ago. Certain of the recommendations made at that time have been put into effect, but not along the precise lines indicated. It is probable that progress will be more rapidly made in solving the problem of the eradication of noxious weeds by a campaign of education and coöperation of the agricultural college and the farmers, rather than by the passage of drastic laws at the present time and the creation of a central officer with sufficient authority to enforce these laws.

DRAINAGE

Recommendations regarding drainage made by the commission two years ago were as follows:

"1. That the drainage laws be changed so as to reduce the unwarrantably great expense now attendant on the organization of drainage districts and the litigation connected therewith."

"2. That the present laws be amended to permit the acquisition from the state under suitable regulations, of more than 160 acres of marsh land by parties desiring to drain them, except such as are more valuable for other purposes than for agriculture."

"3. That a demonstration substation be located by the College of Agriculture upon a typical tract of marsh land to illustrate the most advantageous methods of increasing the productivity of wet lands."

Concerning the first recommendation a number of amendments were adopted to the drainage law with the purpose of lessening the cost of litigation in drainage organizations. In accordance with these amendments, the college of agriculture is required to report upon proposed drainage projects. Since the passage of this law the college has reported upon more than sixty proposed organizations and in many cases the recommendations of the college have been followed. No appropriation was made to the college of agriculture to perform the duty imposed upon it. In consequence this work has been done by the members of the staff of the soils department in connection with their work. On account of this situation it has not always been practicable to make examinations as promptly as desirable.

No action was taken by the legislature upon the second recommendation.

In regard to the third recommendation, the legislature did not take any action. In the meantime the college of agriculture has begun studies upon the best use of the wet lands in connection with the northern substations. This work may therefore be more economically accomplished by leaving it as an experimental project of the soils department, the work to be done in connection with the northern substations, which already exist or which are to be established, rather than the creation of an independent substation located with reference to study of marsh lands alone.

SURVEYS

The recommendations regarding surveys were as follows:

"1. That provision be made for the completion of the topographical survey of the state with the condition attached that the work be done through coöperation of the state and the United States geological surveys."

"2. That the legislature provide for an adequate study of problems relating to drainage and its effects upon floods by an appropriation for the purpose to the state geological survey."

Work under the first recommendation has been begun in consequence of an appropriation of \$4,000 by the legislature for a topographic survey. Coöperative arrangements were made with the United States Geological Survey, so that \$8,000 will be spent on topographic mapping within Wisconsin during the biennium. The work has been in the Superior, Ripon, and Neshkoro sheets.

The appropriation to continue the topographic work of the state should be continued.

No action has been taken under the second recommendation.

PEAT

The only recommendation concerning peat was as follows:

"1. That the state retain all large marshes owned by it, which contain twelve feet or more of good, clean peat, suitable for fuel and other purposes, until such time as the peat may be profitably extracted."

This recommendation needs no comment beyond that contained in the third report.

FISHERIES

The recommendations concerning fisheries were as follows:

"1. That the legislature establish by law the principles to be followed in the regulation of fishing in inland waters, and that the duty of issuing specific regulations be placed with the Fish Commission."

"2. That the Fish Commission be granted from the hunting and fishing license fund a sum sufficient to investigate the facts relating to fish in inland waters, so that such regulations may be properly and wisely formulated."

"3. That a similar investigation be made of the fish in outlying waters on which the commercial fisheries depend."

These recommendations were not acted upon by the legislature of 1913. They are again brought to the attention of the legislature.

