

STATE OF NEVADA

BIENNIAL REPORT

OF THE

STATE ENGINEER

1905 = 1906

HENRY THURTELL

State Engineer of Nevada



CARSON CITY, NEVADA

STATE PRINTING OFFICE, : : : J. G. MCCARTHY, SUPERINTENDENT

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LETTER OF TRANSMITTAL.

CARSON CITY, NEVADA, December 31, 1906.

HON. JOHN SPARKS, *Governor of Nevada.*

SIR: As provided for in Section 8, Chapter IV, Statutes of 1903, I have the honor to submit the second biennial report of the work of this office, together with suggestions as to the amendment of existing laws and the enactment of new laws which I believe will work toward the betterment of irrigation conditions in this State.

Very respectfully yours,

HENRY THURTELL,
State Engineer.

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ACKNOWLEDGMENTS.

Acknowledgments are due to Mr. L. H. Taylor, Supervising Engineer of the Reclamation Service, and his principal assistants, for their readiness in furthering the work of this office; to the Southern Pacific Railroad Company for transportation furnished the State Engineer, Assistant State Engineer and the assistants in hydrography employed by this office. Acknowledgments are also due the San Pedro, Los Angeles and Salt Lake Railroad Company for transportation over its lines in Utah and Nevada, furnished the State Engineer and Assistant State Engineer; to the Tonopah and Goldfield Railroad Company for transportation furnished the State Engineer; to the Nevada Northern Railroad Company for transportation furnished the State Engineer; to the Virginia and Truckee Railroad Company for a half rate over its lines furnished the State Engineer.

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The work of the State Engineer's office has been of such a nature as to necessitate a very large amount of travel on the railroads and stages and the generous cooperation of the railroads of the State with the work of this office has materially reduced the expenses incident to such travel.

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In the work preliminary to the determination of water rights and in the preparation of necessary blanks much printing has been required. We wish to acknowledge the promptness and excellence of the work done by State Printer Andrew Maute and his assistant, Will U. Mackey.

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PROPERTY OF NEVADA STATE ENGINEER

REPORT OF STATE ENGINEER.

The primary purposes of the Act of 1903 creating the office of State Engineer was to provide a method by which the existing rights to water might be defined before conditions become any more acute than they are now among the water users of the State. It was clearly seen, at that time, that reclamation work by the United States Government could not proceed unless existing rights to the use of water on such streams as the Carson, Truckee, Walker, and Humboldt Rivers were ascertained.

The State Engineer was directed to cooperate with the Secretary of the Interior in all work of construction, operation, maintenance, and management of irrigation works constructed by the Secretary of the Interior in and for the benefit of Nevada and was in every way to facilitate the work of the Secretary of the Interior in carrying out the provisions of the Irrigation Act in the State of Nevada. Sections 9, 10, 11, 12, 13, and 14 outlining a method of procedure for the State Engineer, are given below:

"SEC. 9. Such State Engineer shall prepare for each stream in the State of Nevada a list of the appropriations of water according to priority, and in order to make such list he shall enclose to each person having a claim to the waters of such stream a blank form on which said claimant shall present in writing all the particulars showing the amounts and dates of appropriations to the use of waters of said stream to which he lays claim, the said statement to include the following:

"The name and address of the claimant.

"The nature of the use on which the claim for an appropriation is based.

"The time of the commencement of such use, and if distributing works are required.

"The date of beginning of survey.

"The date of beginning of construction.

"The date when completed.

"The date of beginning and completion of enlargements.

"The dimensions of the ditch as originally constructed and as enlarged.

"The date when water was first used for irrigation or other beneficial purposes, and, if used for irrigation, the amount of land reclaimed or irrigated the first year; the amount in subsequent years, with the dates of reclamation, and the amount of land such ditch is capable of irrigating. The character of the soil and the kind of crops cultivated, and such other facts as will show a compliance with the law in acquiring the appropriation and the rank of priority claimed.

"SEC. 10. Each of said claimants shall be required to certify to his statements under oath, and any officer authorized to administer oaths is hereby authorized to administer such oaths.

"SEC. 11. The failure of any claimant to make such a sworn statement within sixty days after notice that such statement is required by

the State Engineer shall be punishable as a misdemeanor on the complaint of the State Engineer or any of his assistants.

"SEC. 12. It shall be the duty of the State Engineer, or some qualified assistant, as soon as practicable, to make an examination of such stream and the works diverting therefrom, said examination to include the measurement of the discharge of said stream unless adequate proof is available from the measurements made by the United States Government, and of the carrying capacity of the various ditches and canals diverting water therefrom; an examination of the irrigated lands, and an approximate measurement of the lands irrigated, or susceptible of irrigation, from the various ditches and canals, which said observations and measurements shall be reduced to writing, and made a matter of record in his office, and it shall be the duty of the State Engineer to make or cause to be made a map or plat, on a scale of not less than one inch to the mile, showing with substantial accuracy the course of said stream, the location of each ditch or canal diverting water therefrom and the legal subdivisions of lands which have been irrigated, which are susceptible of irrigation from the ditches and canals already constructed. In performing such work the State Engineer or his assistant may avail himself of the works, records and information of the United States Geological Survey.

"SEC. 13. Within thirty days after the preparation of the list of priorities of appropriation of the use of waters of any stream it shall be the duty of the State Engineer to issue to each person, association, or corporation represented in such list a certificate to be signed by said State Engineer, setting forth the name and postoffice address of the appropriator, the priority number of such appropriation, the amount of water appropriated and amount of prior appropriations, and, if such appropriations be for irrigation, a description of the legal subdivisions of the lands to which said water is to be applied. And he shall also send such certified list, by registered mail, to the County Recorder of the county in which such appropriations shall have been made, as well as to the County Recorder of the county in which the waters appropriated are used, and it shall be the duty of said County Recorder within ten days after the receipt of such certificate to record the same in a book specially prepared and kept for that purpose, and the fee for such record shall be fixed by the Governor, and shall be allowed and paid by the Board of Examiners out of funds in the treasury applicable thereto.

"SEC. 14. Any party, or number of parties acting jointly, who may feel themselves aggrieved by the determination of the State Engineer may bring an action in any court having jurisdiction against such State Engineer and all persons having interests adverse to the party or parties bringing the action to have their respective rights determined. Such action must be brought within two years after the record of such list of priorities of appropriation has been recorded. Such action shall be tried as speedily as possible; and the Court is hereby authorized to employ a hydraulic engineer or other expert to examine and make report under oath upon any subject-matter in controversy, the cost of such employment to be equitably apportioned by the Court and charged against the parties to the suit as costs."

Pursuant to the directions contained in the above sections an arrangement was entered into with the officers of the Reclamation

Service, whereby it was agreed that some of the maps required by Section 12 should be made by the Reclamation Service, the office of the State Engineer sharing in the expense. Maps have been prepared and the State Engineer has been furnished with copies of the maps of the irrigated lands on the Carson River above the Lower Carson Reservoir site, comprising about thirty thousand acres of cultivated land. Maps have also been prepared of nearly all land watered by the Walker River comprising approximately fifty thousand acres of cultivated land. Maps have been furnished the State Engineer covering about thirty thousand acres of land watered by the Truckee River and about forty thousand acres watered by the Humboldt River. Maps were made by the State Engineer of the irrigated lands on the Muddy River in Lincoln County during the summer of 1906. These maps are absolutely indispensable to the task of preparing the list of priorities on the streams as directed in Sections 9, 10, 11, 12, 13, and 14. It was seen very early in the effort to comply with these sections that it was a work requiring the utmost care and patience on the part of the State Engineer in securing the information necessary. The report of my predecessor in office, Mr. A. E. Chandler, made December 31, 1904, concerning the determination of water rights on the Carson River, is in part as follows:

"The most important work of the State Engineer is the determination of the priority of water rights. Other duties, like the gaging of streams and the mapping of irrigated lands, are but preliminary to this. As no steps could be taken towards a determination until the surveys of the irrigated lands were completed, the work was not commenced until last August.

"Section 9 provides that the State Engineer, in order to make a list of the appropriations of water according to priority, 'shall enclose to each person having a claim to the waters of such stream a blank form on which said claimant shall present in writing all the particulars showing the amounts and dates of appropriations to the use of said stream to which he lays claim; the said statement to include the following. * * *' As these blanks could not be intelligently filled out without a map of the irrigated land, the State Engineer decided to personally visit every water user on the East and West Forks of the Carson River and assist him in making his 'proof of appropriation,' as the blank forms are called.

"Meetings of all water users were first held in Gardnerville and Sheridan in order to explain the requirements of the new law. A few farmers at first failed to recognize the wisdom of the law, but, after discussing it fully, they agreed that it was a much needed measure and their only regret now is that it was not in operation in this State many years ago.

"All the 'proofs of appropriation' for the Upper Carson Valley are now in this office. In order to give each claimant an opportunity to examine the claim of every other claimant a brief abstract of the essential part of each claim will be published and a copy sent to each claimant. Thirty days will be allowed in which to file sworn statements of errors known to exist in any claim. It should be stated here that each farmer in making out his 'proof of appropriation,' knowing that his claim would be open to examination by all other claimants, did his best to secure definite information from old settlers and records. From the

friendly manner in which the different water users assisted each other in making out the proofs of appropriation, it is believed that all contests that may arise after publishing abstracts of claims will be quickly settled. After that time all the information necessary to the preparation of the list of priorities in the Upper Carson Valley will be on file in this office, and the work can be quickly finished."

The determination of all these rights on the Carson River, in Douglas, Ormsby, and Lyon Counties, has been made and the proper records have been entered in the State Engineer's office and the County Recorder's offices of the three counties named. This covered an area of approximately thirty thousand acres of land and affected about one hundred and fifty different users of water. Inasmuch as many of these users had claims that had different ages there were three hundred and seventy-six certificates written in the satisfaction of the different claims. Irrigation began upon the Carson River in the early fifties, and the tracing out the history of the use of water on the various parcels of land in that valley has been a work of more than usual difficulty. That this has been done with at least reasonable care and fidelity seems to be evidenced by the fact that not one of the one hundred and fifty users of water have up to this time taken an appeal from the decisions of the State Engineer. These priorities, as now listed, show the respective ages of the various rights and the quantities and particular legal subdivisions of land to which these rights attach. The results of these findings are too voluminous to be printed in this report, but are upon record in the State Engineer's office and in the various County Recorders' offices above referred to.

THE MUDDY RIVER.

The survey made by the State Engineer in the Muddy Valley in Lincoln County and subsequent work therein have resulted in a collection of all the claims to water upon the stream. These claims have been assembled in pamphlet form, published and a copy sent to every user of water on the stream. Sixty days were allowed for protests to any of the claims, and where such protests were made a careful examination and inquiry into such protested claim has been made, and the information so obtained is now on file in the State Engineer's office. At a very early date these determinations will be made and the results sent to the different users of water in the form of water certificates and to the office of the County Recorder of Lincoln County for suitable record.

This is a small valley of very fertile and productive land watered by the Muddy River. This river supplies between thirty-six and sixty second-feet of water, and is more than usually constant in flow. The land watered by this stream has very greatly increased in value by the building of the San Pedro, Los Angeles and Salt Lake Railroad, which crosses the Muddy Valley at Moapa. The climate is such as to permit the growing of semi-tropical fruits and other products, and the railroads afford transportation of these products to Salt Lake City and other northern points. The value of the water has, of course, increased very greatly by the coming of the railroad and the market opportunities afforded, and it seemed very much to the advantage of the entire community to have these rights to the use of water determined and defined before the stream became over-appropriated and the antago-

nisms naturally engendered by the resulting strife for water became acute. There are sixty-two different users of water on this stream and the claims to the use of water cover a little more than four thousand acres of the bottom land. This is without doubt the most valuable agricultural land in the entire State capable of producing and now producing figs, apricots, almonds, peanuts, and cotton, as well as many of the northern vegetables, forage crops, and grains.

THE HUMBOLDT RIVER.

Work has been begun in the collection of the proofs of the use of water on the Humboldt River. Maps are now in the State Engineer's office of the Lovelock Valley at the lower end of the Humboldt River, and these claims to water in this valley are being collected as fast as the information necessary so to do can be obtained. There are eighty-six different users of water in the Lovelock Valley. Many of these are non-residents, and it is very difficult to locate some of them and to get their claims properly made out and certified.

This is a valley of very productive land absolutely dependent for its fertility upon the water of the Humboldt River. The Humboldt River has its various sources largely in the Ruby Mountains and in what are known as the Independence Mountains in Elko County. These sources of supply are probably three hundred miles in an air line and six hundred miles by the channel of the river from Lovelock Valley. All along a large part of this distance are farms using water and ditches diverting water. Each of these users of water must take care of himself, and this he does by helping himself to water as liberally as the local conditions of the stream will permit, with little regard for his neighbor lower down. The result of this is that the farmers in Lovelock Valley get only what the upper appropriators cannot use, and each one lives in constant fear of having his water supply absolutely taken away.

It seems impossible to devise any just system of distribution of the water of the stream until the rights to the use of water upon lands now watered are fully determined. This is a work which, if done by a court, would require probably twenty years of time and a cost greater than the value of the lands involved.

This office should proceed with the work with all possible despatch consistent with its other work that will not admit of delay. It is a work that can not be done hurriedly by any person, even if furnished with the proper authority so to do. It is painstaking in its nature, and must be so done or not at all.

THE WALKER RIVER.

This is a stream to which the attention of the officers of the Reclamation Service was attracted two or three years ago. It offers one of the most feasible opportunities for storage and conservation of water in the entire State. The water of the West Walker River can be diverted in California and stored in a natural reservoir on the California-Nevada State line known as Alkali Lake. From this lake it can be diverted by a tunnel into the natural channel of the river and be used for the benefit of lands in Smith and Mason Valleys. These lands are now, however, largely in private ownership. The natural

flow of the river, except in flood time, is probably over-appropriated.

The rights to the use of this natural flow of the river are not now known. The Reclamation Service will not construct the reservoir except under guarantee from the settlers that the reservoir will benefit of sufficient sale of water to reimburse the Government for its expenditure and a guarantee also from the settlers that they will divide up their lands into tracts, not in excess of one hundred and sixty acres each, and sell within a specified time the surplus over and above one hundred and sixty acres of cultivated land, which each can retain for himself.

One of the chief difficulties in the consummation of such a plan is that no settler now knows how much of his land has a valid and sufficient water right from the natural flow of the river, and no person can estimate the equitable share of cost to be assessed to the different lands benefited by the building of the reservoir.

It seems absolutely certain that the construction of a storage reservoir on the Walker River by Government aid will not proceed until the rights of each farmer in and to the natural flow of the water of the river has been determined. It seems equally certain that it will be impossible for any collection of farmers representing any large proportion of the real users of the water to get together upon a plan for construction and an equitable sharing of uses and profits from storage without first having an actual determination and definition of their rights.

In June 1902, a suit was filed by Miller & Lux, who had purchased the Mason ranch at the lower end of Mason Valley, against all other users of water on the Walker River in Nevada and against T. B. Rickey in California. This suit was brought in order to secure a determination of the rights of Miller & Lux as against the other water users on this stream. The preparation for the hearing of this case has gone on steadily ever since, but it has never actually come to trial. The State Engineer has sought to bring about a settlement of the facts in controversy, without obliging each claimant to go to the great expense of producing his witnesses in court. To this end the attorneys for the different groups of interests were consulted and the views of each ascertained. Meetings were held by the farmers in Smith and Mason Valleys with the State Engineer, and very full and frank discussion was had of the plans proposed for settlement. The result of these public meetings and the consultations with the attorneys interested has been the drawing of a written agreement by which the matters in dispute, in so far as they affect Nevada users, are to be determined by the State Engineer in accordance with certain stipulations.

The stipulations provide for a court review of the evidence submitted to and findings made by the State Engineer. They also provide for corrections by the Court to the Engineer's findings and a court decree based upon such corrected findings. The stipulations have undergone many changes of form to satisfy the conflicting ideas of the different attorneys who are engaged in the case. These attorneys represent about one hundred and sixty different farmers in Nevada, who use water on probably forty thousand acres of land.

Following is printed a copy of the stipulations referred to that seem now to meet fairly satisfactorily the wishes of the different attorneys interested in the case:

[No. 731.]

IN THE CIRCUIT COURT OF THE UNITED STATES, NINTH CIRCUIT,
DISTRICT OF NEVADA.

*The Pacific Live-Stock Company, a Corporation, Complainant, vs.
Thomas B. Rickey, et al., Defendants.*

STIPULATION AS TO TRIAL OF CAUSE.

For the purpose of more conveniently determining the issues of fact existing between the undersigned as parties to the above-entitled suit, we, the undersigned, do hereby stipulate and agree as follows:

1. The proofs concerning the appropriation and use of the water of Walker River by the undersigned parties to this suit are to be gathered by Henry Thurtell, the State Engineer of the State of Nevada, and his associates, in the manner defined by the Statutes of Nevada, 1903, Chapter 4, Sections 1 to 14, so far as said statute is applicable under this stipulation. The said Henry Thurtell shall then, from the evidence so obtained, determine the respective priorities and extent thereof upon the stream, and the respective quantities of land to which such priorities attach, and shall find the quantity of water in cubic feet per second to which each party hereto is entitled, and shall also find upon all questions pertaining to the use of the waters of said stream by the parties hereto, and by their predecessors in interest. Said proofs shall be assembled by him, printed in pamphlet form, together with his findings thereon, and a copy sent, either by mail in the usual manner or delivered personally, to each party to this stipulation. At any time within one hundred and twenty days after the said publication and delivery or mailing of said proofs, any of the parties hereto may file a protest against any finding or findings, stating in such protest wherein the findings are excessive or otherwise incorrect; and any finding or findings to which no such protest shall be filed shall be deemed allowed as of course. Such protests shall be heard by the said Henry Thurtell at times and places to be designated by him, upon reasonable notice to the parties involved in such protests and their solicitors. Upon the hearing of any protest, the claimant shall have the right and may be required to furnish additional testimony under oath concerning the contested findings, and the protestant shall be entitled to produce such evidence as may be relevant and competent; and all witnesses examined on such hearings shall be subject to cross-examination according to the rules of law, and all the testimony and proceedings shall be reported by a competent shorthand reporter.

2. When the proofs of appropriation and use shall have been so gathered, assembled, and published, and such protests made and heard as above prescribed, the said Henry Thurtell shall make such new, additional and corrected findings as the evidence and proofs require. He shall thereupon present to and file in this court his findings upon said issues in this suit, as between the parties hereto, together with the evidence so taken, and serve a copy thereof within five days after said findings have been presented to the Court upon each solicitor or firm of solicitors signing this stipulation.

3. The findings so made and filed shall be subject to review and correction by the Court upon exceptions filed; and, when the findings

are so settled by the Court, the final decree in this cause, so far as concerns the rights of the parties hereto as between themselves and their successors in interest, shall be based upon such findings and the law applicable thereto. Such exceptions shall be filed in said court within sixty days after such service.

4. The expenses of the hearing upon any protest before said Henry Thurtell, including the fees and mileage of witnesses, the fees of the shorthand reporter, and the costs of depositions used on such hearings, shall be deemed costs in this cause and be taxed as the Judge of this court may direct.

5. Should the said Henry Thurtell die, or cease to be the State Engineer, before the completion of said work, such part of the work theretofore completed may be used and adopted by his successor, if one is agreed to by all parties hereto, it being understood that his successor in said office shall not be entitled to proceed under this stipulation, except by consent of all parties hereto.

6. In making up his findings the said Henry Thurtell shall observe the following rules, which are hereby stipulated to be correct statements of the law applicable to this case:

(a) To constitute a valid appropriation there must be an actual diversion of the water from the stream and an actual application of the water to a beneficial use.

(b) The means employed in the diversion of the water and its application to use are immaterial, except that they must be such as to conduce to a reasonable and economical diversion and application, provided that all unused water shall be returned to the stream, where it is practicable.

(c) Every appropriator has the right to change at will the place and means of his diversion and carrying of the water, and the place and character of its use; and he does not thereby lose any priority of right which he may have acquired, except in so far as such change may be prejudicial to the rights of others previously acquired. For example, one who has appropriated water through a certain ditch may discontinue the use of that ditch, and carry the appropriated water through another ditch, heading at a different point on the stream, without losing his priority, except in so far as such change may deprive another person of a right acquired before the change. But, on the other hand, though one who has appropriated water to run a mill may afterwards use that water for irrigation, he cannot make that change so as to prejudice those who, before he commenced to irrigate, had acquired rights by appropriation. A change in the use of water is not necessarily an abandonment of the appropriation for the first use.

(d) A valid right of appropriation may be lost by abandonment. A mere failure to divert or use the water, however long continued, does not constitute abandonment, unless accompanied with the intent not to again use it. The intent to abandon may be inferred from circumstances, but should not be presumed except from clear evidence. But while mere non-user does not amount to abandonment, that fact is competent evidence on the question of abandonment, and if continued for an unreasonable period it may indicate an intention to abandon, and may warrant the deduction of the fact of abandonment. The presumption, however, is not conclusive and may be overcome by other satisfactory evidence. Mere non-user, if continued for five years or

more, may, however, result in a forfeiture of the right or render the right subservient to the prescriptive right of another.

(e) The notorious, peaceable, exclusive, adverse and continuous use under claim of right, by a user up the stream of water claimed to have been appropriated by another, at a point lower down on the stream, gives to such adverse user title to such water by limitation or prescription, but such adverse user must have continued without adverse interruption for a period of five years, or more, after such prior appropriator had obtained a complete right of action therefor against such upper adverse user.

(f) Where an appropriator of water has prosecuted the work of appropriation with reasonable diligence and brought it to completion within a reasonable time, his right of appropriation relates back to the time when the first step was taken to secure it; but if the work of appropriation is not prosecuted with reasonable diligence and brought to completion within a reasonable time, his right of appropriation does not relate back to the time when the work of appropriation was commenced, but is to be deemed to have been acquired only at the time the work of appropriation was completed and the water actually diverted from the stream and put to a beneficial use. The appropriator must have exercised that degree of diligence which will indicate the constancy and steadiness of purpose and labor usual with men engaged in like enterprises, who desire and intend a speedy accomplishment of their designs.

(g) All questions of fact, or law or equity, or procedure involved in this suit, not provided for in this stipulation, shall be determined by the Court upon application of any party hereto, and all proceedings upon such application, including the giving of notice, shall be had and taken in accordance with law and the rules of the court.

7. No party shall be entitled to present on the hearing of any protest any evidence other than through sworn witnesses or competent documentary evidence. No *ex parte* affidavit, or other *ex parte* statement, shall be received on such hearing except as against the person making the same, or his successor in interest. The said Henry Thurtell may, in his discretion, either admit or exclude offered evidence, subject to objection, to be stated at the times such evidence is offered, or certify to the court the question of the admissibility of any evidence objected to; and thereupon further proceedings upon the specific matter objected to, shall await the action of the court thereon. If the said Henry Thurtell shall improperly admit or reject any evidence objected to, the court, upon its review of the findings of the said Thurtell, shall admit such evidence, if the same ought to have been admitted, or exclude the same, if the same ought to have been excluded, and the court shall thereupon correct said findings, or make new findings, according to the facts and without returning the matter to said Henry Thurtell for any further action by him. None but legal evidence shall be admitted or considered on the hearing of the protest. Any witness previously examined by the said Thurtell shall be subject to cross-examination by any party to the protest, providing such witness at the time of the hearing of the protest is living and mentally competent.

8. The Government of the United States of America, may, at its option, become a party to the above-entitled suit and to this stipulation in the following manner, and within the time hereinafter specified:

Immediately upon the filing of this stipulation the Clerk of said court shall deliver in person to the United States Attorney for the District of Nevada a certified copy of this stipulation. If, within thirty days after said service of said certified copy, the Government of the United States of America shall, through its legally authorized officer or officers, file with the Clerk of this court a notice that it desires to become a party to this suit, and to this stipulation, and shall serve copies of said notice upon the solicitors for all the parties to this suit, then the Court may enter an order making the Government of the United States of America a party to this suit. Within thirty days after the making an entry of such order, the said Government shall file and serve upon the solicitors for all the parties to the suit, its pleading in this suit, which pleading need not be in any particular form, but which shall set forth, specially and particularly, what rights the said Government claims in or to the waters of said Walker River, and the basis and origin of the rights so claimed, and the times at which they respectively accrued; and such pleading shall be deemed sufficient to entitle said Government, in the most liberal manner possible, to the full and complete presentation of its cause of action or defense or equitable rights concerning the matters in controversy in this suit, or in anywise appertaining thereto, and to have the same adjudicated in and by the decree of the court in this suit.

9. This stipulation shall have no force or effect until signed by all parties to this suit, and their solicitors, except Thomas B. Rickey; provided, however, that the same may be put in force and become binding, as between the parties subscribing the same, if an endorsement to that effect be made hereon and signed by Isaac Frohman or Frank H. Short, and Cheney & Massey, and Mack & Farrington and George S. Green.

10. This stipulation is made subject to the approval of the court, and upon such approval it is agreed that the said court may enter an order appointing the said Henry Thurtell a special Master in Chancery in this suit, to take such testimony and evidence and perform such duties therein as are provided by the terms of this stipulation. The findings and decree made as in this stipulation provided shall have the same weight, force, and effect as would attach to the same if this suit had been tried altogether in accordance with the usual rules and methods of practice of said court.

11. Should complainant obtain judgment herein the same shall not be effective against the defendants signing this stipulation, unless this action is prosecuted against Thomas B. Rickey and his assigns to judgment upon the merits.

Witness our hands, this day of, 1906.

NEW APPROPRIATIONS.

Sections 23, 24, 25, 26, 27, and 28 of the Act of 1905 prescribe a method of securing new appropriations of water through applications to the State Engineer.

The statutes require the State Engineer to ascertain whether or not there is unappropriated water in the source of supply. To know this requires a knowledge at first hand of the conditions upon the stream and its use by other appropriators. Section 24 gives to any person interested the right to protest any application that he deems injurious

to his interests. It is then the duty of the State Engineer to give such protest due consideration, and to refuse the permit if it appears there is no unappropriated water in the source of supply.

I have assumed these sections of the law to mean just what is said, and whenever any protest has been made have made a personal examination of the stream conditions whenever not well known to me, have questioned water users, and have in some cases held hearings to determine the facts in controversy.

The recent mining development in Nevada has caused every little stream of water, however small, to be of great value, if not for irrigation, for mining, milling or domestic purposes.

Applications for new appropriations of water have been sent to the State Engineer's office from every corner of the State, and in the effort to inform himself concerning all disputed claims the Engineer has visited nearly every section that could be named within the boundaries of the State. There have been up to date of this report three hundred and twenty-two applications filed since May 1, 1905. These applications are here tabulated by months, showing the increase in activity in taking up water within recent months:

APPLICATIONS FOR APPROPRIATIONS OF WATER, 1905-1906.

1905.		1906.	
May	3	January	9
June	1	February	10
July	5	March	12
August	3	April	29
September	6	May	17
October	2	June	35
November	6	July	25
December	5	August	28
		September	20
Total for 1905	31	October	52
		November	32
		December	22
		Total for 1906	291

These applications have come from almost every county, the most activity being shown in Nye, White Pine, and Esmeralda Counties. Since May 1, 1905, there have been 112 applications for water rights in Nye County, 16 from Washoe, 4 from Ormsby, 5 from Douglas, 1 from Lyon, 57 from Esmeralda, 10 from Lincoln, 79 from White Pine, 4 from Lander, 14 from Churchill, 1 from Eureka, 12 from Elko, and 7 from Humboldt. Of the 322 applications received 42 have not been perfected, 44 have been refused, 106 have been allowed, and 130 are now under consideration. Fifty-four different applications have been protested by prior claimants, and three hearings have been held to take evidence concerning protested claims. Of these hearings one was held at Carson City, one at Ely, and one at Battle Mountain. In each case the point selected was the most convenient for the disputants.

The State Engineer has up to this time passed upon one hundred and fifty different applications and has made important modifications in many, has inserted provisions in some for the protection of prior users, and has exercised fully such authority as is given him by the statute in regard to new appropriations.

Up to this date but one appeal has been taken from his rulings, and this has not yet come to trial.

DISTRIBUTION OF WATER.

Early in the summer of 1905 the listing of the priorities upon the Carson River had been completed and it was apparent that the season was to be one of extraordinary scarcity of water. The Board of Irrigation passed a resolution to the effect that they would appoint Commissioners upon the Carson River in each Water District if requested to do so by a petition signed by five or more water users. The Board also divided the territory watered by the Carson River in Douglas, Ormsby, and Lyon Counties into four water districts:

Water District No. 1—Land watered by the East Carson River in Douglas County.

Water District No. 2—Land watered by the West Carson River in Douglas County.

Water District No. 3—Land watered by the Carson River in Ormsby County.

Water District No. 4—Land watered by the Carson River in Lyon County.

Water Commissioners were appointed by the Board of Irrigation in Districts 1, 2, and 4 during the season of scarcity of the summer of 1905. These men were nominated by the water users themselves and appointed by the Board of Irrigation. They were paid by the counties in which they served at the rate of \$4 per day for the time of actual service. These men rendered valuable and effective service to their districts by controlling the quantity of water taken into each ditch, keeping the stream in a limited number of ditches and allowing each a fairly good head of water when allowed any, instead of allowing the stream to be scattered through a large number of ditches without sufficient head in any to be effective to irrigate land.

Mr. William Dangberg and Mr. Geo. Springmeyer acted as Commissioners of Water District No. 1, Mr. Wallace Park as Commissioner of Water District No. 2, and Mr. Sam Stevenson in District No. 4.

During the summer of 1906 the entire State enjoyed a most unusual quantity of moisture, which resulted in an ample supply of water to all users, and it was not thought necessary to appoint Commissioners to distribute water, there being sufficient for all users.

GAGING OF STREAMS.

The Director of the Geological Survey appointed the State Engineer as District Hydrographer for Nevada, and in that capacity he has charge of all of the stream-gaging stations in the State for the Geological Survey.

No salary is paid him for such service, but his actual maintenance expenses when away from his office are paid by the United States Geological Survey. During 1905 and 1906 regular stream-gaging stations have been maintained on Nevada rivers and their tributaries as follows:

Truckee River Basin:

Donner Creek, at Donner Ice House, near Truckee, California.
Independence Creek, below Lake Independence, California.
Little Truckee River, near Boca, California.

Truckee River, below Lake Tahoe, California.
Truckee River, at Mystic, California.
Truckee River, at Vista, Nevada.

Carson River Basin:

West Carson River, at Woodfords, California.
East Carson River, at Rodenbahs, Nevada.
Carson River, near Empire, Nevada.

Walker River Basin:

West Walker River, near Coleville, California.
East Walker River, near Yerington, Nevada.
Walker River, near Wabuska, Nevada.

Humboldt River Basin:

South Fork Humboldt, at Mason Ranch, Nevada.
North Fork Humboldt, near Elburz, Nevada.
Humboldt River, at Palisade, Nevada.
Humboldt River, at Golconda, Nevada.
Humboldt River, at Oreana, Nevada.

Muddy River Basin:

Muddy River, near Moapa, Nevada.

Besides the measurements made at regular stations, in 1906 measurements were made by Mr. Leland Sparks, a field assistant of the United States Geological Survey, upon all the creeks tributary to the Truckee River during their season of excessive flow in May and June, 1906. All measurements made in 1905 have been published in Water Supply and Irrigation Paper No. 176. It is edited by Mr. M. C. Hinderlider, G. L. Swendsen, and Henry Thurtell, and published by the United States Geological Survey. The report for 1906 has not yet been prepared.

ASSISTANT STATE ENGINEERS.

B. E. Corlett served as Assistant State Engineer from January 1, 1905, to July 1, 1905.

Claude L. Smith served as Assistant State Engineer from July 1, 1905, to November 1, 1906.

Thomas A. Lotz served as such assistant from November 22, 1906, to the present time.

DISBURSEMENTS OF STATE ENGINEER'S OFFICE.

There was appropriated for the use of the State Engineer's office from January 1, 1905, to January 1, 1907, the sum of \$15,000. There is an unexpended balance of \$1,388.64. The State Engineer and Assistant State Engineer have had transportation free on nearly all the lines of railroad in this State. During the next two years, under the operation of the Rate Bill, these officers must pay fare, and the result will be an increased expenditure for that purpose. It is believed, however, that the office can be maintained during the coming two years for \$15,000, and an appropriation of that amount is asked for.

EXPENDITURES OF STATE ENGINEER DURING 1905 AND 1906.

Months.	Field and office.	Livery and forage.	Transportation.	Services.
1905.				
January	\$62.55	\$8.50	\$25.85	\$300.00
February	103.60	53.55	4.00	300.00
March	58.90	54.75	16.15	375.00
April	161.15	23.25	77.06	300.00
May	347.20	148.00	58.20	300.00
June	90.45	184.60	36.95	300.00
July	82.10	196.70	46.60	300.00
August	202.35	178.60	27.50	300.00
September	72.39	92.25	13.50	300.00
October	156.75	182.34	69.75	300.00
November	59.62	135.25	40.10	300.00
December	73.55	142.15	31.05	300.00
Totals for 1905	\$1,470.61	\$1,399.94	\$446.70	\$3,675.00
1906.				
January	\$80.35	\$59.10	\$21.45	\$300.00
February	53.95	54.25	100.00	300.00
March	88.60	60.75	96.20	344.00
April	48.40	53.00	79.65	312.00
May	66.05	78.75	68.70	313.80
June	97.92	119.75	79.85	300.00
July	82.30	46.00	98.70	300.00
August	73.75	101.95	87.85	300.00
September	111.55	12.00	94.10	300.00
October	57.30	24.00	68.90	300.00
November	53.95	12.00	29.00	230.00
December	616.04	80.50	64.70	300.00
Totals for 1906	\$1,430.16	\$702.05	\$387.10	\$3,599.80
Appropriation for 1905 and 1906				\$15,000.00
Expended				13,611.36
Unexpended				\$1,388.64

SPECIAL INVESTIGATIONS CONCERNING USE OF WATER.

The Legislature of 1905 made an appropriation of \$2,000 to be used by Elwood Mead, Chief of Irrigation and Drainage Investigations of the Department of Agriculture. It was agreed that the Department of Agriculture should supply an equal amount, and that \$4,000 would thereby become available for use in Nevada for special investigations. Mr. Mead appointed Mr. Gordon H. True of Reno as agent for the U. S. Department of Agriculture in charge of these investigations in Nevada. The report of Professor True concerning this work is somewhat voluminous in its nature and would require too much space to be printed in this report.

The following résumé of the work, written by Professor True, in the nature of an introduction to his report, will give an idea of its nature and scope:

IRRIGATION BOARD, STATE OF NEVADA, HENRY THURTELL, *State Engineer,*
Secretary.

MY DEAR SIR: As Agent of the U. S. Department of Agriculture in charge of Irrigation and Drainage Investigations in Nevada, I have the honor to report to you the results of investigations authorized by Act of Legislature "to provide for the measurement of water used on irrigated areas, the determination of losses from irrigating ditches and the remedies therefor,

and the study of the best methods for distributing and using water in growing crops in the State of Nevada, in cooperation with the United States Department of Agriculture and the Nevada Experiment Station." The work here reported was carried on during the irrigating seasons of 1904, 1905, and 1906. It consists in part of measurements of water used on irrigated areas in the Truckee, the Upper Carson, Lovelock, Mason, and Clover Valleys.

In the Truckee Valley these measurements were all made on the farm of the Nevada Agricultural Experiment Station where different methods of irrigation were used, and different amounts of water were applied to the same crop for the purpose of studying the effect upon crop growth and yield. In the other valleys measurements were made of the water used by farmers in their regular farm operations. These studies of the present practice in irrigation give a foundation upon which to base future investigations looking toward improvements in method and increased economy in the use of irrigation water.

Studies of seepage have been made in the Lovelock, Carson, Truckee, and Mason Valleys. For the purpose of observing the fluctuation of soil water as a result of seepage in each of these valleys weekly, and later monthly, measurements of the depth to soil water were made. On the Station Farm a well was sunk in which daily, and at times more frequent, readings were made.

Measurements of loss by seepage have been made in Lovelock, Mason, and Carson Valleys.

In addition a special report has been prepared on irrigation conditions in Mason Valley.

During the summer of 1905 Albert E. Wright was employed as Field Assistant. The past season George F. West of Yerington has worked in that capacity.

The results of the work of the past three seasons * * * have been reported to the United States Department of Agriculture, and are to be presented with detailed comment in a bulletin of the Nevada Agricultural Experiment Station.

REQUESTS CONCERNING NEW LEGISLATION.

There are certain defects in the existing irrigation law that should be remedied at the coming session of the Legislature.

A penalty should be prescribed for the offenses designated as misdemeanors in the Acts of the Legislatures of 1903 and 1905 concerning irrigation.

The salary of the Assistant State Engineer should be made at least \$1,800 per year. It is impossible to fill the position acceptably with a man who is paid but \$1,200 per annum and who must provide his own subsistence.

Also the law should be so changed as to allow the State Engineer to expend more than \$500 per year for services. This amount could well be made \$1,000 per year.

The sum of \$15,000 should be appropriated to carry on the work of this office during 1907 and 1908.

IRRIGATION ACT OF 1903,

AS AMENDED AND SUPPLEMENTED IN 1905.

THE IRRIGATION ACT.

An Act providing for the coopération of the State of Nevada with the Secretary of the Interior of the United States in the construction and administration of irrigation works for the reclamation of arid lands in the State of Nevada, for the measurement, appropriation and distribution of water, determination of water rights, preserving and certifying records thereof, creating officers for the enforcement hereof, defining the tenure of office, powers and duties and fixing their compensation; providing for penalties for infringements hereof, and enacting a standard measure of water, and conferring upon the Secretary of the Interior such rights and powers under the laws of Nevada as are necessary to enable him to carry out and execute an Act of the Congress of the United States, approved June 17, 1902, entitled "An Act appropriating the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands."

[Approved February 16, 1903; amended and approved March 1, 1905.]

WHEREAS, The Congress of the United States did by an Act approved June 17, 1902, enact the following law:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: That all moneys received from the sale and disposal of public lands in Arizona, California, Colorado, Idaho, Kansas, Montana, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington and Wyoming, beginning with the fiscal year ending June thirtieth, nineteen hundred and one, including the surplus of fees and commissions in excess of allowance to registers and receivers, and excepting the five per centum of the proceeds of the sales of public lands in the above States set aside by the law for educational and other purposes, shall be, and the same are hereby reserved, set aside and appropriated as a special fund in the Treasury to be known as the "reclamation fund," to be used in the examination and survey for and the construction and maintenance of irrigation works for the storage, diversion, and development of waters for the reclamation of arid and semi-arid lands in the said States and Territories, and for the payment of all other expenditures provided for in this Act; *provided*, that in case the receipts from the sale and disposal of public lands other than those realized from the sale and disposal of lands referred to in this section are insufficient to meet the requirements for the support of agricultural colleges in the several States and Territories, under the Act of August thirtieth, eighteen hundred and ninety, entitled "An Act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanical arts, estab-

lished under the provisions of an Act of Congress approved July second, eighteen hundred and sixty-two," the deficiency, if any, in the sum necessary for the support of said colleges shall be provided for from any moneys in the Treasury not otherwise appropriated.

Sec. 2. That the Secretary of the Interior is hereby authorized and directed to make examinations and surveys for, and to locate and construct, as herein provided, irrigation works for the storage, diversion, and development of waters, including artesian wells, and to report to Congress at the beginning of each regular session as to the results of, such examinations and surveys, giving estimates of cost of all contemplated works, the quantity and location of the lands which can be irrigated therefrom, and all tracts relative to the practicability of each irrigation project; also the cost of works in process of construction as well as of those which have been completed.

Sec. 3. That the Secretary of the Interior shall, before giving the public notice provided for in section four of this Act, withdraw from public entry the lands required for any irrigation works contemplated under the provisions of this Act, and shall restore to public entry any of the lands so withdrawn when, in his judgment, such lands are not required for the purpose of this Act; and the Secretary of the Interior is hereby authorized, at or immediately prior to the time of beginning the surveys for any contemplated irrigation works, to withdraw from entry, except under the homestead laws, any public lands believed to be susceptible of irrigation from said works; *provided*, that all lands entered and entries made under the homestead laws within areas so withdrawn during such withdrawal shall be subject to all the provisions, limitations, charges, terms, and conditions of this Act; that said surveys shall be prosecuted diligently to completion, and upon completion thereof, and of the necessary maps, plans, and estimates of cost, the Secretary of the Interior shall determine whether or not said project is practicable or advisable, and if determined to be impracticable or unadvisable, he shall thereupon restore said lands to entry; that public lands which it is proposed to irrigate by means of any contemplated works shall be subject to entry only under the provisions of the homestead laws in tracts of not less than forty or more than one hundred and sixty acres, and shall be subject to the limitations, charges, terms and conditions herein provided; *provided*, that the commutation provisions of the homestead laws shall not apply to entries made under this Act.

Sec. 4. That upon the determination by the Secretary of the Interior that any irrigation project is practicable, he may cause to be let contracts for the construction of the same, in such portions or sections as it may be practicable to construct and complete as parts of the whole project, providing the necessary funds for such portions or sections are available in the reclamation fund, and thereupon he shall give public notice of the lands irrigable under such project, and limit of area per entry, which limit shall represent the acreage which, in the opinion of the Secretary, may be reasonably required for the support of a family upon the lands in question; also of the charges which shall be made per acre upon said entries, and upon lands in private ownership which may be irrigated by the waters of the said irrigation project; and the number of annual installments, not exceeding ten, in which said charges shall be paid and the time when such payments shall commence. The

said charges shall be determined with a view of returning to the reclamation fund the estimated cost of construction of the project, and shall be apportioned equitably; *provided*, that, in all construction work, eight hours shall constitute a day's work, and no Mongolian labor shall be employed thereon.

Sec. 5. That the entryman upon lands to be irrigated by such works shall, in addition to compliance with the homestead laws, reclaim at least one-half of the total irrigable area of his entry for agricultural purposes, and before receiving patent for the land covered by his entry shall pay to the Government the charges apportioned against such tract, as provided in section four. No right to the use of water for land in private ownership shall be sold for a tract exceeding one hundred and sixty acres to any one land owner, and no such sale shall be made to any land owner, unless he be an actual bona fide resident on such land, or occupant thereof residing in the neighborhood of said land, and no such right shall permanently attach until all payments therefor are made. The annual installments shall be paid to the receiver of the local land office of the district in which the land is situated, and a failure to make any two payments when due shall render the entry subject to cancellation, with the forfeiture of all rights under this Act, as well as of any moneys already paid thereon. All moneys received from the above sources shall be paid into the reclamation fund. Registers and receivers shall be allowed the usual commissions on all moneys paid for lands entered under this Act.

Sec. 6. That the Secretary of the Interior is hereby authorized and directed to use the reclamation fund for the operation and maintenance of all reservoirs and irrigation works constructed under the provisions of this Act; *provided*, that when the payments required by this Act are made for the major portion of the lands irrigated from the waters of any of the works herein provided for, then the management and operation of such irrigation works shall pass to the owners of the lands irrigated thereby, to be maintained at their expense under such form of organization and under such rules and regulations as may be acceptable to the Secretary of the Interior; *provided*, that the title to and the management and operation of the reservoirs and the works necessary for their protection and operation shall remain in the Government until otherwise provided by Congress.

Sec. 7. That where in carrying out the provisions of this Act it becomes necessary to acquire any rights or property, the Secretary of the Interior is hereby authorized to acquire the same for the United States by purchase or by condemnation under judicial process, and to pay from the reclamation fund the sums which may be needed for that purpose, and it shall be the duty of the Attorney-General of the United States upon every application of the Secretary of the Interior under this Act, to cause proceedings to be commenced for condemnation within thirty days from the receipt of the application at the Department of Justice.

Sec. 8. That nothing in this Act shall be construed as affecting or intending to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions

of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State or of the Federal Government or of any land owner, appropriator, or user of water in, to, or from any interstate stream of the waters thereof; *provided*, that the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right.

Sec 9. That it is hereby declared to be the duty of the Secretary of the Interior in carrying out the provisions of this Act, so far as the same may be practicable and subject to the existence of feasible irrigation projects, to expend the major portion of the funds arising from the sale of public lands within each State and Territory hereinbefore named for the benefit of arid and semi-arid lands within the limits of such State or Territory; *provided*, that the Secretary may temporarily use such portion of said funds for the benefit of arid or semi-arid lands in any particular State or Territory hereinbefore named as he may deem advisable, but when so used the excess shall be restored to the fund as soon as practicable, to the end that ultimately, and in any event, within each ten-year period after the passage of this Act, the expenditures for the benefit of the said States and Territories, shall be equalized according to the proportions and subject to the conditions as to practicability and feasibility aforesaid.

Sec. 10. That the Secretary of the Interior is hereby authorized to perform any and all acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying the provisions of this Act into full force and effect. And

WHEREAS, The Secretary of the Interior of the United States, acting by and through the United States Geological Survey, has entered upon the examination, survey and location of irrigation works on the Truckee, Carson, Walker and Humboldt Rivers, in the State of Nevada, as provided for in Section 2 of said Act, and is or soon will be prepared to let contracts for the same as provided in Section 4 of said Act; and

WHEREAS, A sum approximating ten million dollars is now collected in a special fund in the Treasury of the United States, known as the "Reclamation Fund" referred to in Section 1 of said Act, and is applicable to the construction and maintenance of irrigation works for the reclamation of arid and semi-arid lands in the arid and semi-arid States and Territories, and it is desirable that a portion thereof be immediately applied to the construction, maintenance and operation of irrigation works in and for the State of Nevada; and

WHEREAS, It is estimated by the United States Geological Survey that the waters of the Truckee River now irrigating only forty-two thousand (42,000) acres of land in Nevada can, by conservation and economical use, be made to supply two hundred and eighty thousand (280,000) acres; and the Carson River now irrigating in Nevada only fifty thousand (50,000) acres can, by conservation and economical use, be made to supply one hundred and seventy-five thousand (175,000) acres; and that the waters of the Walker River now irrigating forty thousand (40,000) acres in Nevada can, by conservation and economical use, be made to supply two hundred thousand (200,000) acres; and that the waters of the Humboldt River now irrigating in whole or in part three hundred thousand (300,000) acres can, by conservation and eco-

nomical use, be made to supply seven hundred and fifty thousand (750,000) acres; thus increasing the total irrigated area of the aforesaid rivers from four hundred and thirty-two thousand (432,000) acres to one million four hundred and five thousand (1,405,000) acres of land in the State of Nevada; thus vastly increasing its population and wealth; and

WHEREAS, Similar work of examination, survey and location is being done in other arid and semi-arid States and Territories, and each and every of said States and Territories is applying to the Secretary of the Interior for the immediate commencement of work of construction; and

WHEREAS, It is within the discretion of the Secretary of the Interior to expend the whole or any part of said fund in any arid or semi-arid State or Territory; and

WHEREAS, It is understood to be the disposition of the Secretary of the Interior to commence work immediately upon such irrigation projects as are feasible and along the lines of least resistance, and which are located in such States and Territories, as indicate by their laws and the action of their public officers the best spirit of coöperation and helpfulness; and

WHEREAS, In Section 6 of said Act, the Secretary of the Interior is authorized to use the said reclamation fund for the operation and maintenance of all reservoirs and irrigation works constructed under the provisions of said Act; *provided*, that when the payments required thereby are made for the major portion of the lands irrigated from the waters of any of the works therein provided for, then the management and operation of such irrigation works shall pass to the owners of the lands irrigated thereby, to be maintained at their expense under such form of organization and under such rules and regulations as may be acceptable to the Secretary of the Interior; *provided*, that the title to and the management and operation of the reservoirs and the works necessary for their protection and operation shall remain in the Government of the United States until otherwise provided by Congress; and

WHEREAS, It is deemed advisable by the State of Nevada that during the period of the construction of such works in or for the State of Nevada by the Federal Government, and during the operation, management and maintenance thereof by the Federal Government, unity of control of the river on which such works are constructed is essential; and it is desirable that such unity of control be exercised by the Secretary of the Interior until the management, operation and maintenance of such works shall pass to the owners of the lands irrigated thereby, as provided in Section 6 of said Act; and

WHEREAS, It may become necessary for the Secretary of the Interior in carrying out the provisions of said Act to proceed to condemn rights or property in the State of Nevada, and it is desirable that every facility should be given to the Secretary of the Interior for the speedy adjudication of such proceedings in the courts of Nevada; and

WHEREAS, It is expressly declared by Section 8 of said Act, that nothing therein shall be construed as in any way interfering with the laws of any State or Territory relating to control, appropriation, use, distribution of water used in irrigation, or any vested right acquired thereunder; and

WHEREAS, It is the purpose of the Secretary of the Interior not to impair or injure vested rights, but on the contrary to confirm the same, and to provide by storage such an abundance of water as to make such vested rights more full, certain and assured in their beneficial operation than at present; and

WHEREAS, It is essential that the Secretary of the Interior, before proceeding to actual construction on any river in Nevada, shall be informed as to the extent of the present actual appropriation and beneficial use of water by existing communities, in order that the Secretary of the Interior may be informed as to what quantity of water will be necessary to fully supply existing uses, and what quantity of water will be available for the supply of new lands and new uses; and

WHEREAS, It is the desire of the State of Nevada to cooperate in every way with the Secretary of the Interior in the construction, operation, management and maintenance of irrigation works in the State of Nevada under said Act; and it is to the interest of the State of Nevada that every inducement should be held out to the Secretary of the Interior by cooperative and helpful State legislation to enter upon the work of construction, operation, management and maintenance as aforesaid; now, therefore

The People of the State of Nevada, represented in Senate and Assembly, do enact as follows:

SECTION 1. All natural water courses and natural lakes, and the waters thereof which are not held in private ownership, belong to the public, and are subject to appropriation for a beneficial use, and the right to the use of water so appropriated for irrigation shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right; the use of all water now appropriated, or that may hereafter be appropriated, is hereby declared to be a public use.

SEC. 2. [*Repealed, Stats. 1905, Chap. XLVI.*]

SEC. 3. The office of State Engineer is hereby created. He shall be appointed by the Governor, and shall receive a salary not exceeding twenty-four hundred (\$2,400) dollars per annum, payable in equal monthly installments by the State Treasurer upon warrants drawn by the State Controller. He shall keep his office at the State Capitol. No person shall be appointed as such State Engineer who does not have such training in hydraulic engineering and such practical skill and experience as shall fit him for the position. He shall hold his office at the pleasure of the Governor, but his successor shall, in all cases, have the foregoing qualifications. *As amended, Stats. 1905.*

SEC. 4. Before entering upon the duties of his office the State Engineer shall take and subscribe an official oath such as is provided by law for such officers before some officer authorized by the law of the State to administer oaths, and shall file with the Secretary of State said oath and his official bond in the penal sum of five thousand dollars, with not less than two sureties, to be approved by the Governor of the State, and conditioned for the faithful discharge of his official duties, and for the delivery to his successor, or other person appointed by the Governor to receive the same, all moneys, books and other property

belonging to the State then in his hands, and under his control, or with which he may be chargeable as such officer.

SEC. 5. The State Engineer shall perform such duties as are prescribed herein. He shall become conversant with the State and the needs of the State as to irrigation matters, and in his reports to the Governor he shall make such suggestions as to the amendment of existing laws, or the enactment of new laws, as his information and experience shall suggest; and he shall keep in his office full and proper records of his work, observations and calculations; all of which shall be the property of the State. He shall cooperate with the Secretary of the Interior in all work of construction, operation, maintenance and management of irrigation works constructed by the Secretary of the Interior in and for the benefit of Nevada, under an Act of Congress of the United States, approved June 17, 1902, entitled "An Act appropriating the receipts from the sale and disposal of public lands in certain States and Territories to the construction of irrigation works for the reclamation of arid lands," and shall in every way facilitate the work of the Secretary of the Interior in carrying out the provisions of said Act in the State of Nevada.

SEC. 6. The State Engineer shall have the power to employ an assistant engineer at an expense not to exceed \$1,200 per annum, and to employ other assistants at a total additional expense not to exceed \$500 per annum; such assistant engineer and such additional assistants to be paid out of any money appropriated for that purpose, on the certificate of the State Engineer and the approval of the State Board of Examiners. He may also appoint as assistant engineers and as additional assistants such persons in the service of the United States Geological Survey as may be designated by the Secretary of the Interior or the Director of the United States Geological Survey; but such assistant engineers and such additional assistants shall be entitled to no pay from the State of Nevada.

SEC. 7. When the State Engineer, or his assistant engineer, is called away from his office he shall be entitled to his actual traveling expenses, which shall be paid out of any money appropriated for that purpose, on the certificate of said State Engineer approved by the State Board of Examiners.

SEC. 8. The State Engineer shall prepare and render to the Governor, biennially, and oftener if required, full and true reports of his work, touching all the matters and duties devolving upon him by virtue of his office, which report shall be delivered to the Governor on or before the 31st day of December of the year preceding the regular session of the Legislature.

SEC. 9. Such State Engineer shall prepare for each stream in the State of Nevada a list of the appropriations of water according to priority, and in order to make such list, he shall enclose to each person having a claim to the waters of such stream a blank form on which said claimant shall present in writing all the particulars showing the amounts and dates of appropriations to the use of water of said stream to which he lays claim; the said statement to include the following:

The name and address of the claimant.

The nature of the use on which the claim for an appropriation is based.

The time of the commencement of such use, and if distributing works are required.

The date of beginning of survey.

The date of beginning of construction.

The date when completed.

The date of beginning and completion of enlargements.

The dimensions of the ditch as originally constructed and as enlarged.

The date when water was first used for irrigation or other beneficial purposes, and if used for irrigation, the amount of land reclaimed or irrigated the first year; the amount in subsequent years, with the dates of reclamation, and the amount of land such ditch is capable of irrigating. The character of the soil and the kind of crops cultivated, and such other facts as will show a compliance with the law in acquiring the appropriation and the rank of priority claimed.

SEC. 10. Each of said claimants shall be required to certify to his statements under oath, and any officer authorized to administer oaths is hereby authorized to administer such oaths.

SEC. 11. The failure of any claimant to make such a sworn statement within sixty days after notice that such statement is required by the State Engineer, shall be punishable as a misdemeanor on the complaint of the State Engineer or any of his assistants.

SEC. 12. It shall be the duty of the State Engineer, or some qualified assistant, as soon as practicable, to make an examination of such stream and the works diverting therefrom, said examination to include the measurement of the discharge of said stream unless adequate proof is available from the measurements made by the United States Government, and of the carrying capacity of the various ditches and canals diverting water therefrom; an examination of the irrigated lands, and an approximate measurement of the lands irrigated, or susceptible of irrigation, from the various ditches and canals, which said observations and measurements shall be reduced to writing, and made a matter of record in his office, and it shall be the duty of the State Engineer to make or cause to be made a map or plat, on a scale of not less than one inch to the mile, showing with substantial accuracy, the course of said stream, the location of each ditch or canal diverting water therefrom and the legal subdivisions of lands which have been irrigated, or which are susceptible of irrigation from the ditches and canals already constructed. In performing such work the State Engineer or his assistant may avail himself of the works, records and information of the United States Geological Survey.

SEC. 13. Within thirty days after the preparation of the list of priorities of appropriation of the use of waters of any stream, it shall be the duty of the State Engineer to issue to each person, association or corporation, represented in such list, a certificate to be signed by said State Engineer, setting forth the name and postoffice address of the appropriator, the priority number of such appropriation, the amount of water appropriated and amount of prior appropriations, and if such appropriations be for irrigation, a description of the legal subdivisions of the lands to which said water is to be applied. And he shall also send such certified list, by registered mail, to the County Recorder of the county in which such appropriations shall have been made, as well as to the County Recorder of the county in which the waters appropri-

ated are used, and it shall be the duty of said County Recorder, within ten days after the receipt of such certificate, to record the same in a book specially prepared and kept for that purpose, and the fee for such record shall be fixed by the Governor, and shall be allowed and paid by the Board of Examiners out of funds in the treasury applicable thereto.

SEC. 14. Any party, or number of parties acting jointly, who may feel themselves aggrieved by the determination of the State Engineer, may bring an action in any court having jurisdiction against such State Engineer and all persons having interests adverse to the party or parties bringing the action to have their respective rights determined. Such action must be brought within two years after the record of such list of priorities of appropriation has been recorded. Such action shall be tried as speedily as possible; and the Court is hereby authorized to employ a hydraulic engineer or other expert to examine and make report under oath upon any subject-matter in controversy, the cost of such employment to be equitably apportioned by the Court and charged against the parties to the suit as costs.

SEC. 15. The Water Commissioners hereafter provided shall make apportionment of the waters of such stream according to the list of priorities recorded as aforesaid, unless such list be corrected by the judgment of some court having jurisdiction of the subject-matter.

SEC. 16. Within sixty days from the passage of this Act, it shall be the duty of the County Recorder in each of the counties of this State to prepare a full and complete transcript of all the claims and appropriations of water now on file in their respective offices, and to transmit the same, without delay, to the State Engineer by express or registered mail. It shall also be the duty of the Clerk of each District Court in the State, within thirty days of the passage of this Act, to transmit to the State Engineer, in like manner, certified copies of all decrees of said District Courts affecting water rights on file in the offices of the said Clerks of the said District Courts of the State. The State Engineer shall also obtain copies of all decrees of the United States Court for the District of Nevada affecting water rights. Said Recorders and said Clerks of the said State District Courts shall receive, in compensation for their services in the preparation of said transcripts and copies, twelve and one-half cents per folio, which shall be paid by the county in which such court is situated; and the same allowance shall be made for certified copies of decrees of the United States Court for the District of Nevada, and shall be paid out of the State Treasury.

SEC. 17. The State Engineer shall be a member of the State Board of Irrigation created by an Act of the Legislature of the State of Nevada, approved March 16, 1901, entitled "An Act to provide for the measurement of streams, the survey of reservoir sites, the determination of irrigation possibilities, and for the best methods of controlling and utilizing the water resources of the State of Nevada in cooperation with the United States Geological Survey and the United States Department of Agriculture, and the Nevada Experiment Station." The said State Engineer shall be the Secretary of said Board of Irrigation and shall keep the records thereof in his office.

SEC. 18. The said Board of Irrigation shall divide the State of Nevada into such water divisions or water districts as seem to it advisable, and may change the same from time to time. It may appoint

Water Commissioners, whose duty it shall be to measure and divide amongst the appropriators the water of such streams according to priority of right and the amount to which each is entitled. It may make such rules and regulations as to it shall seem advisable for the proper and economical administration of the waters of such streams, and may fix penalties for the violation of such rules and regulations. *As amended, Stats. 1905, Chap. XLVI.*

SEC. 19. The Board of Irrigation shall determine the number and compensation of the Water Commissioners appointed under this Act, and said Water Commissioners shall be and act under the direction of the State Engineer. The compensation of said Water Commissioners shall be paid, upon the approval of the Board of Irrigation, by the county in which the work of such Commissioners is performed, in the same manner as other county bills are presented and allowed.

SEC. 20. Any person interfering with, obstructing or resisting the State Engineer, Assistant State Engineer, or any Water Commissioner, in the performance of his duty or duties as prescribed by this Act, or by the rules or regulations adopted by the Board of Irrigation, shall be deemed guilty of a misdemeanor.

SEC. 21. The Secretary of the Interior is hereby authorized and empowered to institute proceedings in any of the courts of the State of Nevada, for the condemnation of any rights or property deemed by him to be necessary for any of the works to be constructed by him or under his direction under the said Act of Congress of June 17, 1902, or necessary to carry out the provisions of said Act. Such proceedings shall be expedited by said courts as rapidly as possible.

SEC. 22. The sum of fifteen thousand dollars is hereby appropriated for the purpose of carrying out the provisions of this Act.

SEC. 23. Any person, association or corporation desiring to appropriate any of the public waters shall before performing any work in connection with such appropriation make an application to the State Engineer for permission to make the same. Said application shall set forth the name and postoffice address of the applicant, the source from which said appropriation shall be made, the amount thereof, location of proposed works in connection therewith, the time required for their completion, said time to include the period required for construction of ditches or other works and the time at which the application of the water to beneficial use shall be made, which time shall be limited to that required for completion of the work when prosecuted with diligence, the purpose for which the appropriation is desired, and if for irrigation a description of the land to be irrigated and the area thereof, and any additional facts required by the State Engineer. On receipt of this application, which shall be of a form prescribed by the State Engineer and to be furnished by him without cost to the applicant, it shall be his duty to make a record thereof in his office, and to carefully examine the same to ascertain whether it sets forth all facts necessary to determine the nature and amount of the proposed appropriation. If the application be defective it shall be the duty of the State Engineer to return the same to the applicant for correction, and sixty days shall be allowed for the refile thereof. If refiled, corrected in proper form, within such time, the application shall, upon being accepted, take priority as of date of original filing, subject to compliance with the further

provisions of the law and the regulations thereunder. *Added, Stats. 1905, Chap. XLVI.*

SEC. 24. If not corrected as required, no further proceedings shall be had on such application, but when filed in compliance with this Act, the State Engineer shall at once at the expense of the applicant, to be paid in advance, publish in some newspaper having a general circulation within the boundaries of the river system or water system or water source from which said appropriation is to be made, a notice of the application, showing by whom made; the quantity of water sought to be appropriated; the stream from which the appropriation is to be made, and at what point on the stream; the use for which it is to be appropriated, and by what means; which notice shall be published once a week for four weeks. Any person, corporation or association interested may, at any time within thirty days after completion of the publication of said notice, file with the State Engineer a written protest against the granting of said application, stating the reasons therefor, which shall be duly considered by said Engineer. He may, in his discretion, hear evidence in support of or against such application, and shall take such action thereon as he may deem proper and just. *Added, Stats. 1905, Chap. XLVI.*

SEC. 25. If there is unappropriated water in the source of supply named and the appropriation is not detrimental to the public welfare, the State Engineer shall approve the same by endorsement thereon, shall make a record of such endorsement in his office and return the same so endorsed to the applicant, who shall, on receipt thereof, be authorized to take such measures as may be necessary to perfect such appropriation; *provided, however,* that the State Engineer may approve an application for a less amount of water or a shorter period of time for perfecting the appropriation than that named in the application; *and provided further,* that an applicant feeling himself aggrieved by the endorsement made upon his application may bring action in any court having jurisdiction against the State Engineer to compel him to modify such endorsement. Such action must be brought within sixty days after date of the endorsement complained of. If there is no unappropriated water in the source of supply the State Engineer shall refuse such appropriation and the party making the application shall not prosecute work in connection therewith so long as such refusal shall be in force, under penalty of being deemed guilty of, and punished for, misdemeanor. *Added, Stats. 1905, Chap. XLVI.*

SEC. 26. Upon approval of an application the applicant shall send to the State Engineer within six months thereafter a map on a scale of not less than two inches to the mile, showing the location of the works necessary to perfect the appropriation, the source of appropriation, and if for irrigation, the land upon which the water is to be applied, which map shall be filed in his office. *Added, Stats. 1905, Chap. XLVI.*

SEC. 27. Upon satisfactory proof being made to the State Engineer that any application to appropriate water has been perfected in accordance with the provisions of this Act, said State Engineer shall issue to the applicant a certificate setting forth the name of the appropriator, date, source, purpose and amount of the appropriation, and if for irrigation, a description of the land to be irrigated, which certificate shall within thirty days after its issuance be recorded in the county in which

the point of diversion of the appropriation is, as well as in the county where the water is used, in books specially kept for that purpose, and the fee for such records shall be one dollar (\$1) payable by the party in whose favor the certificate is issued. The priority of such appropriation shall date from the filing of the application in the State Engineer's office. *Added, Stats. 1905, Chap. XLVI.*

SEC. 28. All water used in this State for irrigation purposes shall remain appurtenant to the land upon which it is used; *provided*, that if for any reason it should at any time become impracticable to beneficially or economically use water for the irrigation of any land to which the right of use of the same is appurtenant, said right may be severed from said land, and simultaneously transferred, and become appurtenant to other land, without losing priority of right theretofore established, if such change can be made without detriment to existing rights, on the approval of an application of the owner to the State Engineer. Before the approval of such application the applicant must give notice thereof by publication once a week for four weeks in a newspaper of general circulation in the stream system in which the tracts of land are located, in the form required by the State Engineer. Upon the receipt of the proofs of publication, the State Engineer shall render his decision thereon in writing. Any party interested in the same source of water supply may bring appropriate action in the District Court of the county in which the land is located, for a review of such decision. *Added, Stats. 1905, Chap. XLVI.*

SEC. 29. All Acts and parts of Acts inconsistent with the provisions of this Act are hereby repealed.

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