A STATEMENT

OF THE PLANS AND PURPOSES
OF THE

Salt River Valley Water Users Association

AND EXPLANATIONS OF ITS

ARTICLES OF INCORPORATION

RELATIVE TO THE

NATIONAL IRRIGATION ACT.

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Phoenix, Arizona, May 25, 1903.

To the Honorable the Secretary of the Interior.

Sir: The Salt River Valley Water Users' Association, a corporation organized and existing under the laws of the Territory of Arizona, begs leave to submit herewith a statement of the purposes of its organization, and of the conditions that prompted the Association, and a presentation and an explanation of the methods adopted to accomplish those purposes.

The Association, as is above suggested, is a corporation organized under the laws of the Territory of Arizona. It has for its purpose, and its only purpose, the supply of water to its members who are bona fide holders and occupants of lands in the Salt River

Valley for the irrigation of those lands, at the actual cost of such service.

The plan of organization, and it will be shown it must so result in practice, excludes the possibility of pecuniary profit to its members or to any other person, directly or indirectly, from the operation of the Association, except that general benefit accruing from an effective conservation of the waters falling on the rain-shed tributary to the valley (a large part of which now runs off in floods), and the just and economical distribution of them to the settlers of the valley.

The history of irrigation in this valley begins with 1868 or 1869. There has since that time grown up and been practiced in the valley greatly diverse systems of irrigation, until at the present time there is almost inextricable confusion, sharp conflict, constant dispute, vexatious uncertainty, and consequent litigation. To adjust these variant conditions and, legally and practically speaking, conditions which cannot much longer exist with any continued hope of the prosperity of the settlers of the valley, to some uniform, consistent, certain and just system, it seemed to us, the only method was the voluntary association of the representatives of the variant and disputant interests, and the adoption of some certain, plain, uniform and simple but adequate plan for the accomplishment of that end.

As the settlers very earnestly desire the benefit of

the provisions of the Act of Congress 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 June 17, 1902, and commonly known as the "National Irrigation Act," the general principles relative to the appropriation, distribution and use of water for irrigation outlined in that Act, and in former Acts of Congress on that and kindred subjects, and in the expressions of policy found in official reports of the Honorable Secretary of the Interior, have been taken by us as controlling guides in formulating and adopting our plans. What we have conceived to be the policy of the Government relative to the appropriation and use of water for the reclamation of arid lands we have adopted, and if the plans of the Salt River Valley Water Users' Association shall be consummated, there will have been adopted and put in practice, there, a uniform, consistent, just and practical and adequate system, in lieu of the heretofore prevalent incongruous, complex, unjust, impracticable and uncertain variety of systems.

With this prefatory statement we wish now respectfully to call your attention to the following representations and explanations.

We have endeavored to be concise and accurate—if what we submit shall appear to be voluminous it must be attributed to the magnitude of the subject.

In the arrangement of our presentation of the matter we have consulted the convenience of the Secretary. To present the whole subject may involve repetition of matters already matters of record or within the knowledge of the Secretary, but we trust that the convenience of the compilation will justify apparent prolixity.

That part of Arizona within which is included the Salt River Valley, was acquired from the Republic of Mexico in 1848 by treaty generally known as the Treaty of Guadalupe Hidalgo.

Art. V. Treaty U. S. S. L., 9, pp. 929, 930.

The remainder of the territory now constituting the Territory of Arizona was acquired from the Republic of Mexico in 1853 under the provisions of what is commonly known as the Gadsden Treaty.

U. S. S. L.

The territory now constituting the Territory of Arizona was prior to 1864 a part of the organized Territory of New Mexico.

By Act of Congress entitled "An Act to provide "for a temporary Government for the Territory of "Arizona and for other purposes," approved February 24, 1863, that part of New Mexico situated west of a line running due south from the point where the southwest corner of the (then) Territory of Colorado joins the northern boundary of New Mexico to the south boundary of New Mexico, was erected into a temporary Government by the name of the Territory of Arizona.

U. S. S. L. 12, p. 664.

All legislative enactments of the Territories of New Mexico were extended to, and continued in force in, the new Territory of Arizona until they should be repealed or amended by future legislation. *Id.*

The first Legislature of the Territory of Arizona met and was organized on the 4th day of October, 1864.

Compiled Laws Arizona, 1864-1871.

One of the enactments of the first Legislature was that known as the "Bill of Rights." Article 22 of that Act is as follows:

> "All streams, lakes and ponds of water capable "of being used for the purpose of navigation or "irrigation are hereby declared to be public prop- "erty; and no individual or corporation shall "have the right to appropriate them exclusively "to their own private use except under such "equitable regulations and restrictions as the "Legislature shall provide for that purpose."
>
> Howell Code (1864).

This provision was brought forward in the several recompilations and revisions of the statutes of the Territory, since that time, and is now on our statute book.

Compiled Laws Arizona (1864-1871), 25.
Revised Statutes Arizona (1877).
Revised Statutes Arizona (1887), par. 2863.
Revised Statutes Arizona (1901), par. 22.

At the first session of the Legislature of the Territory (1864) there was enacted a law which we local-

ly denominate the "acequia (Spanish: Canal, ditch,) Law." This was substantially a rescript of a law theretofore enacted by the Legislature of New Mexico. By that law it is provided:

> "Section 1. All rivers, creeks and streams in "the Territory of Arizona are hereby declared "public and applicable to the purposes of irriga- "tion and mining as hereinafter provided."
>
> "Sec. 2. All rights in acequias or irrigating "canals, heretofore established shall not be dis- "turbed, nor shall the course of such acequias be "changed without the consent of the proprietors "of such established rights."
>
> "Sec. 3. All the inhabitants of this territory "who own or possess arable and irrigable lands "shall have the right to construct public or pri- "vate acequias and obtain the necessary water for "the same from any convenient river, creek or "stream of running water."

Sec. 4. Provides for rights of way over public lands.

Sec. 5 Prohibits obstruction to and interference with the flow of water.

Sec. 6. Gives mining reduction business a preference, but provides for compensation to the irrigator, if damaged.

Sec. 7. Similar provisions as to other mining operations.

Sec. 8. Prohibits foot-paths across fields.

Sec. 9. Provides that owners of land shall work on acequia whether they cultivate or not.

Sec. 10. Regulates ratio of work.

Sec. 11. Requires cattle to be herded from fields.

Sec. 12. Rights of way for community, or public, ditches.

Sec. 13. Provides for the election of overseers of public acequias.

Sec. 14. Manner of electing overseers.

Sec. 15. Provides for pay of overseers.

Sec. 16. Prescribes duties of the overseer.

Sec. 17. "During years when a scarcity of water shall "exist owners of fields shall have precedence of the "water for irrigation, according to the dates of their "respective titles or their occupation of the lands, "either by themselves or their grantors. The oldest "titles shall have preference always." (*Sic.*)

Sec. 18. Concerning work on acequia.

Sec. 19. Penalty against overseer, after having undertaken to serve, for misconduct.

Sec. 20. New election in event of removal of overseer.

Sec. 21. Penalty imposed on land owner for failure to furnish labor.

Sec. 22. Punishment for unauthorized interference with acequia.

Sec. 23. Disposition of fines and forfeitures collected.

Sec. 24. Appeal from prosecutions.

Sec. 25. "The regulations of acequias which have "been worked according to the laws and customs of "Sonora and the usages of the people of Arizona shall "remain as they were made and used up to this day, "and the provisions of this chapter shall be enforced "and observed from the day of its publication." (*Sic.*)

Sec. 26. Plants and trees growing on banks of ditch belong to land owners, etc.

Sec. 27. "Any person owning lands which may in- "clude a spring or stream of running water, or own- "ing lands on a river where there is not population "sufficient to form a public acequia may construct a "private acequia for his own use, subject to his own "regulations, provided it does not interfere with the "rights of others." (*Sic.*)

Howell Code (1864).
Comp. Laws (1864-1871), 501.
Comp. Laws (1877), 538.
Revised Statutes (1887), pars. 3199-3226.
Revised Statutes (1901), pars. 4174-4201.

In the revision of 1887 there is the following provision:

"The common law doctrine of riparian water rights "shall not obtain or be of any force or effect in this "Territory."

Revised Statutes Ariz. (1887), par. 3198.

This provision is carried forward into the Revised Statutes of 1901.

Revised Statutes Ariz. (1901), par. 3168.

By an Act of the Territorial Legislature approved 22d March, 1893, it is provided:

"Sec. 1. Whenever any storage reservoir shall be "constructed in the Territory of Arizona and water "stored therein for subsequent distribution for irriga- "tion or other useful purposes in times of shortage of "water, that the owners of such reservoirs and the "water stored therein shall have the right to make use "of the natural channels of streams in this territory "to conduct said waters to the place or places where "they shall desire to use the said waters or have them "used, and to divert the same from the said natural "channels at such places as shall be most convenient "for said purposes.

"Sec. 2. That in the event that the use of the waters "which naturally flow in said natural channels shall "have been previously appropriated by others who "have acquired the prior right to the use of them, "then and in such case, the owners of such reservoirs "shall nevertheless have the right to make use of said "natural channels without diminishing the quantity "of water which naturally flows therein and the use "of which shall have been appropriated by others as "aforesaid. In cases where the parties interested "cannot agree upon the division of the water turned "into any natural channel from any storage reservoir "from the water naturally flowing therein and the use "of which shall have been previously appropriated by

"others, and if there be any difficulty in ascertaining "the several quantities to the use of which each party "shall be entitled, then all the waters flowing in any "natural channel shall be divided and distributed be- "tween the parties in interest in the manner following "to-wit: There shall be ascertained the quantity of "water which shall flow into said natural channel "from the storage reservoir and from that quantity "there (shall) be deducted one half of one per centum "for each one mile of length of the natural channel "through which said water shall flow before being "diverted therefrom and the owners of storage reser- "voirs and those acting by their permission shall have "the right to divert from the natural channel the "quantity of water which shall flow into the natural "channel from the storage reservoir after deducting "therefrom said per centum thereof, and said prior "appropriations of the waters naturally flowing in "said natural channels shall have the right to the use "of all the remainder."

Acts Legislature, 1893, p. 15.

This Act is carried forward to the present revision of our statute.

R. S. Ariz. (1901), pars. 4202-4203.

In the same year, 1893, the Territorial Legislature enacted as follows:

"Section 1. That any person or persons, company "or corporation shall have the right to appropriate "any of the unappropriated waters or the surplus or "flood waters in this Territory for delivery to con- "sumers, rental, milling, irrigation, mechanical, "domestic, stock or any other beneficial purpose, and "such person or persons, company or corporation for "the purpose of making such appropriation of waters "as herein specified, shall have the right to construct "and maintain reservoirs, dams, canals, ditches,

"flumes and any and all other necessary waterways. "And the person or persons, company or corporation "first appropriating water for the purposes herein "mentioned shall always have the better right to the "same.

"Sec. 2. Every person or persons, company or cor- "poration, who shall desire to appropriate any of the "waters of this territory for the uses and purposes "mentioned in Section 1 of this Act shall first post "at the place of diversion on the stream or streams as "the case may be, a notice of his, their or its appro- "priation of the amount of water by it or them "appropriated, and that they intend to build and "maintain a dam at a certain place, in said notice to "be designated, and in case of storage of water by "reservoir that they intend to construct and maintain "a reservoir at a place to be in said notice stated, and "that they intend to construct and maintain a canal "or canals, as the case may be, from the point of diver- "sion of said water to some terminal point to be men- "tioned in said notice, a copy of which shall be filed "and recorded in the office of the County Recorder in "which said dam, reservoir and canal is contemplated "to be constructed, and if said canal runs through "more than one county, then such notices shall be "filed and recorded in each county through which said "canal is to be constructed, and a copy of said notice "shall also be filed and recorded in the office of the "Secretary of the Territory. That said person or per- "sons, company or corporation after posting and fil- "ing their notice as herein provided, shall within a "reasonable time thereafter construct their dam or "dams, reservoir or reservoirs, canal or canals, as the "case may be, and shall after such construction use "reasonable diligence to maintain the same, for the "purposes in such notices specified, and on failure to "within a reasonable time after posting and filing "of such notice or notices as hereinabove provided to "construct such reservoir, dam or canal as in such

"notice specified or to use reasonable diligence after "such construction to maintain the same, shall be held "to work a forfeiture of such right to the water or "waters attempted to be appropriated.

"Sec. 3. All Acts and parts of Acts in conflict with "the provisions of this Act are hereby repealed.

"Sec. 4. This Act shall take effect and be in force "from and after its passage."

And this Act is carried forward to the present revision of our statutes.

R. S. Ariz., 1901, pars. 4169, 4170.

In the same year, 1893, the Territorial Legislature enacted the following:

Acts 1893, p. 132.

"No. 89. An Act

"To regulate canals and ditches built and maintained "for the purpose of conveying water to consummers "thereof for pay or hire.

"Be it enacted by the Legislative Assembly of the "Territory of Arizona:

"Sec. 1. All corporations, associations or individ- "uals, owning, managing or controlling any canals, "irrigating ditches, flumes, pipe lines or other means "for conveying water from any public stream in this "territory, on or to the lands of occupants for the "purpose of selling, hiring, or letting the same to such "occupants for pay or hire, shall not sell, hire, or let "more water than the said canals, ditches, flumes "or pipe lines may be estimated to carry at any one "time, whether such contract be made for measure, "time or acreage quantity.

"Sec. 2. Such persons, associations or corporations "as provided for in the preceding section, shall at "all times keep their ditches, canals, flumes or pipe "lines in good repair and condition, so as to carry the "full amount of water that such person, association

"specified in such contract, and a failure to deliver "to the persons contracted with, during the time "specified in such contract, and a failure to deliver "the quantity of water contracted for (when there be "sufficient in the stream or head) shall make such "persons, corporations or associations liable for all "such damages that may arise or be sustained by the "parties buying, hiring or renting water from said "carriers.

"Sec. 3. When any corporation, association or in-"dividual owning or controlling any canal, water "ditch, flume or pipe line, as in this Act provided, "shall permit their respective ways for carrying "water, or their dam, headgates or other appliances "for securing the water at the head, to get out of re-"pair or reduced in capacity by filling up or other-"wise, so that the same will not carry the amount of "water so contracted to be deliveded to the users "thereof, and shall not within a reasonable time re-"pair, cleanse or restore the same, then it shall be "lawful for such persons who have contracted and "paid for such water to enter in and upon said canal, "ditch, flume or line and make repairs, clean and "restore said premises at their own proper cost and "charge and the reasonable cost of such repairs, "cleansing and restoration shall be a lien on such "canal, ditch, flume or line, which lien may be fore-"closed as other liens upon real estate in any court of "competent jurisdiction, and the premises sold and "proceeds applied in payment of said claim and lien, "the surplus, if any, to be paid to the owner thereof; "provided, that written notices of the specific repairs "of cleansing and restoration to be done and the max-"imum cost thereof shall be served on such corpora-"tion or others owning or controlling such premises "at least six days before entering upon such premises "for the purpose of such repairs, cleansing and res-"toration; and if within said six days the corporation "or others owning or controlling such canal, ditch, "flume or line shall commence and with reasonable

"diligence prosecute such repairs, cleansing and res-
"toration, no such right of entry shall exist; provided
"further, that such repairs, cleansing and restora-
"tion, shall be reasonable in extent, method and cost
"and so made as to be of the most permanent benefit
"to the property; provided further that within thirty
"days after the completion of said work of repairs,
"cleansing and restoration, a notice under oath of a
"lien claimed under this act, stating the amount of
"the expenditure actually made in the work aforesaid,
"containing an itemized statement of the sums so ex-
"pended and the purpose for which each was ex-
"pended, and a statement of the facts upon which said
"lien is claimed, shall be filed in the office of the
"Register of Deeds of the county in which such work
"was done and recorded in a book kept by him for
"that purpose; and provided further, that such own-
"ers or managers of such waterways shall not be held
"liable under this act for any deficiency in the supply
"of water, which may be caused by any act of omission
"or commission over which they have no control, or
"that may be caused by flood, storms or drouth.

"Sec. 4. All acts and parts of acts in conflict with
"the provisions of this act are hereby repealed.

"Sec. 5. This act shall take effect and be in force
"from and after its passage."

This act is carried forward in our present revision.

R. S. Ariz., pars. 4171-4173.

In 1895 the Legislature enacted the following:

Acts 1895, p. 117.

"No. 81. An Act

"To prevent the unnecessary waste of water.

"Be it enacted by the Legislative Assembly of the
"Territory of Arizona.

"Section 1. Any person using water (during the
"season when there is a scarcity of water for irriga-

"tion), who wilfully waste the same, or wilfully or "knowingly allow the same to run to waste, to the "detriment or injury of any other person, shall be "deemed guilty of a misdemeanor and on conviction "thereof shall be fined in any sum not exceeding "twenty-five dollars.

"Sec. 2. This act shall take effect from and after "its passage."

This Act appears in the last revision of our statutes, 1901, in the Penal Code.

R. S. Ariz., 1901, Penal Code, p. 612.

An Act was passed by the Legislative Assembly and approved March 21, 1901, entitled "An Act to Amend Title Water and Water Rights of the Code Revision."

Section 1 of that act is:

"Section 1. That paragraph 3741 be amended so as to read as follows:" Then follows the purported amendment.

By some mistake in the preparation of the Revision of 1901, there is a confusion in the numbering of the paragraphs. Paragraph 3741 of the Revision as printed under official authority, has no reference to water or water rights and is not a part of that title. The Act above referred to is not printed in the body of the Revision, but in an appendix. The Revision went into effect, by the terms of the enactment, on the 1st September, 1901.

However, reference to the Revised Statutes (1901) leads us to suppose that by paragraph 3741 of the Re-

vision is meant paragraph 4169 of the Revised Statutes.

The purported amendment consists in defining the purposes for which appropriations may be made to be "for beneficial use for irrigation, mining, or manufacturing purposes" instead of "for delivery to consumers, rental, milling, irrigation, mechanical, domestic, stock or any other beneficial use" as in paragraph 4169 of the Revised Statutes, as we have heretofore quoted.

See Acts of 1893, p. 132, Sec. 1, and ante of this statement, page

This same Act purports to amend paragraph 3743 of the Code Revision—as we have said of the first section, there is apparently a confusion of numbers. It probably is meant to amend paragraph 4171 of the Revised Statutes which we have heretofore quoted.

The purported amendment consists in defining the purposes of conveying water. The purpose stated to be "for the purpose of irrigating said lands" instead of "for the purpose of selling, hiring or letting the same," etc., as in paragraph 4171.

See Acts 1893, p. 132, Sec. 2, and ante of this statement, page

Like changes are attempted to be made in paragraphs 4172 and 4202.

See the Act, appendix A. R. S., 1901, p. 1484.

In the Penal Code, there are some provisions, concerning the stealing of water, etc. (Par. 493, Penal Code, R. S., 1901.)

Congress in 1866 enacted:

"Sec. 2339. Whenever by priority of possession, "rights to the use of water for mining, agricultural, "manufacturing or other purposes have vested and "accrued, and the same are recognized and acknowl- "edged by the local customs, laws and the decisions "of the courts, the possessors and owners of such vest- "ed rights shall be maintained and protected in the "same; and the right of way for the construction of "ditches and canals for the purposes herein specified "is acknowledged and confirmed.

"Sec. 2340. All patents granted or pre-emptions "allowed, shall be subject to any vested and accrued "water rights, or rights to ditches and reservoirs used "in connection with such water rights as may have "been acquired under or recognized by the preceding "section."

U. S. R. S., 1878, Secs. 2339,2340.

It may be noted here that these provisions have been held by the Supreme Court of the United States to be not only confirmatory of rights existing, but operate as a continuing grant of authority for the acquisition of subsequent rights under such "local customs, laws and the decisions of the courts."

See

Broder v. Milling Co., 101 U. S., 276.

Basey v. Gallagher, 20 Wall., 670.

Also

N. M. Co. v. Ferris, 2 Sawy., 176.

Beaver, etc., Rec. Co. v. Rec. Co., 40 Pac. Rep. (Colo.), 1866-1069.

And further that local statutory law as a source of

such rights will prevail over a local custom if there be a conflict.

Basey v. Gallagher, 20 Wall., 670.

Congress, March 3, 1877, enacted what we commonly denominate the "Desert Land Act." This Act provides for the sale of desert lands in certain States and Territories.

After providing that any citizen, etc., may purchase and reclaim desert lands, the first section of that Act proceeds as follows:

"*Provided, however*, that the rights to the use of "water by the person so conducting the same on or to "any tract of desert land of 640 acres, shall depend "upon bona fide prior appropriation; and such right "shall not exceed the amount of water actually appro- "priated, and necessarily used for the purpose of irri- "gation and reclamation; and all surplus water over "and above such actual appropriation and use, to- "gether with the water of all lakes, rivers and other "sources of water supply upon the public lands, and "not navigable, shall remain and be held free for the "appropriation and use of the public for irrigation, "mining and manufacturing purposes, subject to ex- "isting rights."

19 St., 277.

Sup. R. S., 1874-1891 (2d Ed.), 137.

There are other acts of our local Legislature and as well of Congress that relate, incidentally to canals, reservoirs, water, its appropriation, use, waste, etc., but none of them, we think, are, or attempt to be, definitive of the right or manner of appropriation, or the basis, measure or limit of the right, nor to any of the

subjects included in the consideration of this presentation, except the National Irrigation Act.

That Act we need not quote at length here, but will have occasion, from time to time,t o advert to it.

The Decisions of the Courts.

There have been a number of cases involving the use of water for irrigation decided by the Supreme Court of the Territory.

The following is a list of them in their chronological order:

Campbell v. Shivers, 1 Ariz., Rep., 161, S. C., 25 Pac. Rep., 540.

Clifford v. Larrien, 11 Pac. Rep., 397.

Hill v. Lenormand, 16 Pac. Rep., 266.

Gray v. Salt, R. V. C. Co., 12 Pac. Rep., 607.

Clough v. Wing, 17 Pac. Rep., 453.

Dyke v. Caldwell, 18 Pac. Rep., 276.

Oury v. Goodwin, 26 Pac. Rep., 376.

Austin v. Chandler, 42 Pac. Rep., 483.

Consolidated C. Co. v. Mesa C. Co., 53 Pac., 575.

Henshaw v. Salt R. V. C. Co., 54 Pac. Rep., 577.

Hunning v. Porter, 54 Pac. Rep., 584.

Miller v. Douglas, 60 Pac. Rep., 722.

Biggs v. Utah, etc., Co., 64 Pac. Rep., 494.

Slosser v. Salt, R. V. C. Co., 65 Pac. Rep., 332.

Wormser v. Arizona Canal Co., No. 708, District Court, Maricopa County.

U. S. v. Haggard et al., No. 19, District Court, Maricopa County.

The last two cases noted were decided in the District Court, and are not officially published. Much of the Wormser case is quoted in
and is known as the "Kibbey Decision,"a copy of which is submitted herewith.

A copy of the opinion of Chief Justice Kent, sitting as District Judge, in U. S. v. Haggard, is appended hereto.

The first case cited, that of Campbell v. Shivers is a decision of no point that would be a matter of peculiar interest in the consideration of our proposition. It is simply the application of the rule that possession and user for a period of 5 years gives the right, as between rival claimants to the same right.

The next case, that of Clifford v. Larrien (11 Pac., 397) is of some interest, in that it decides that the right of a water user to the use of the water appropriated by him, may be entirely distinct from the ownership or control of the means of carrying the water to the place of use.

In Clough v. Wing, 17 Pac., 454, the right of appropriation is recognized, the common law rule of riparian rights is denied application, and priority of rights in point of time of the several appropriations is practically asserted. Beneficial use is laid down as the basis and measure of the right of appropriation. The manner of initiating and consummating the water appropriation is also briefly discussed.

In Dyke v. Caldwell, 18 Pac., 276, the question was as to whether requisite diligence had been observed by one who sought to appropriate water, between the time of his initiating the right and its consummation by actual diversion and use.

In Austin v. Chandler, 42 Pac., 483, the question involved was as to the right of a subsequent appropriator to use the water of a prior appropriator for use for mechanical purposes, if after such use by the latter, the water were returned into the ditch of the prior appropriator above the place of his use, undiminished in quantity. As the prior appropriator was not injured, it was held that such intermediate use might be made.

In the case of the Consolidated Canal Co. v. Mesa Canal Co., 53 Pac., 575, no principles peculiar to irrigation law were decided.

In Henshaw v. Salt River Valley Co., 54 Pac., 577, the principal question involved was one of pleading. The cause of action was an alleged malfeasance of the directors of a Canal Company.

In Hunning v. Porter, 54 Pac., 584, it was decided that the right to the prior use of water for irrigation, acquired by priority of appropriation, was an absolute right.

In Miller v. Douglas, 60 Pac., 722, it was decided that where an appropriator of water entered upon the inclosure of another to change his point of diversion and continued to divert the water for six years, the

occupant of the enclosure was estopped by acquiescence from denying the appropriator's right, on the ground that he was a trespasser.

In Biggs v. Utah, etc., Co., 64 Pac., 494, the dispute was between various members of a ditch company; certain persons had constructed a ditch, by which they diverted water from Salt River, for the irrigation of 25 quarter sections of land. The Court held them to be, as among themselves, coappropriators and that, consequently, there was no priority among them. The interests of the several irrigators were represented by certificates, each representing one twenty-fifth interest in the ditch, making in all twenty-five shares. Subsequently there were added seven additional shares, making in all thirty-two. Still later each of these shares was divided into four, making, in the aggregate, one hundred and twenty-eight shares. A number of these shares were then sold to others than the original land owners and the water represented by such shares was used on new lands. It had been the practice of the company, from its organization to the time of the commencement of the suit, to, in times of scarcity, prorate the water amongst all the shareholders. The suit was by the shareholders owning the older lands to compel the delivery of water to them, in times of scarcity, before the newer lands were served. The Court denied the right of the plaintiffs to their priority. The Court held that inasmuch as they were coappropriators

there could be no priority, and that in any event the plaintiffs were estopped by their long acquiescence in the practice of prorating. The Court seems also to have held in this case, that the right to the use of water, appropriated from public sources, is not appurtenant to the land, but is the subject of transfer. This view, however, is modified by the statement of the Court, that this change of place of use cannot be made to affect the rights of other appropriators.

In the case of Slosser v. Salt R. V. C. Co., 65 Pac., 332, the Supreme Court at its last session granted a petition for a rehearing.

We have not attempted to digest these cases and have gone no further than to merely indicate the subject of the decisions. As we shall hereafter state, whatever of uncertainty, or of conflict, there may be in the adjudication by our Courts, we attempt to reduce the whole system to a uniform basis.

The history of irrigation, in this valley, extends over a period of about thirty-five years last past.

Notwithstanding the existence of our Public Acequia law, there has never been, so far as we can recall, any ditches or canals constructed or operated under it, in this valley. The system of canals, if it may be called a system, is the result of mere spontaneous growth without any preconceived plan and without uniformity, either of theory or practice.

About 1868 a few settlers constructed a ditch on the

north side of Salt River and diverted the water therefrom upon some lands on the north side of the river and east of the present site of Phoenix. The statutory provisions for the operation of acequias, and for the regulation of the rights of irrigators, was ignored. The owners of the ditch were associated together, but without any particular formality, and without any particular rules for their government or the definition of their rights, among themselves. There being plenty of water for the use of all these earlier settlers, there could not and did not arise among them any conflict of claims, and hence there was no necessity for any definition of their rights to the use of water. The ditch was what is known in the country where irrigation is practiced as a "community ditch." It was, as its name implies, a community of interest, of right and of obligation amongst themselves. Each contributed to the construction and maintenance of the ditch and participated in its benefits in proportion to their shares in the community; the basis of that share being, generally, the proportionate part of land served by the ditch, owned by each. The estate in the ditch was probably that of one of cotenancy and the status of the cotenancy in the administration of its affairs was practically that of copartners. As the number of settlers increased, the interest of the several members of the community became to be represented by certificates; the certificates representing the interest of the holders in, not only the physical prop-

erty of the Association, as its dam, ditch, tools, and other property, but his relative as well as his actual right to the use of water. The management and administration of the affairs of the Association gradually approached the similitude of a corporation, but they did not, in fact, incorporate until later. These shares or interests in the community were not deemed to be appurtenant to any particular land and were held, in practice, to be assignable and the assignee might or might not use the water, which it was held to represent, and upon any lands, indifferently, or he might, upon his certificate, lease the water to any other person, whether he was a member of the Association or not, to be used by that other person upon any lands within the service limits of the ditch. Later, this voluntary Association was incorporated. The incorporators took stock in proportion to their interests in the old Association. There seemed to be no change in the practice by the corporation from that formerly prevalent with the Association. In the corporation each stockholder, as he had been in the Association, was deemed to be an owner of an aliquot part of the water diverted and carried by the ditch, and he might use that part upon lands of his own, or he might not use it at all, or he might lease it to others for use, on any lands which could be reached by the ditch or its laterals. In fact a large proportion of these shares of stock became latterly to be owned by persons who were not owners of land. Many of these

shares had been pledged to banks and other money lenders by the original owners as security for debts and upon default had been forfeited to the money lender. These shares, with their alleged incident rights, became the subject of common traffic.

This is a brief history of what was known as the old Swilling ditch.

The Salt River Valley Canal Company and the Maricopa Canal Company are corporations and are successors to the older Swilling Canal Company. These companies are incorporated under the laws of the Territory. They have fifty shares of stock each. For a while after their incorporation the practice was to consider that the ownership of each share entitled the holders of it to the one-fiftieth part of the water diverted and carried by the canal. These shares were never made appurtenant to any land and were, in practice, assignable as shares of stock in an ordinary corporation. The shares had incident to them the same rights as were incident to the shares in the older Association.

Later the Salt River Valley Canal Company made a provision whereby there were issued to the share owners for each share owned by them three "water rights." The greater portion of the share owners availed themselves of this provision. This, in effect, amounted to a segregation of any right to water in the canal from the ownership of the stock. The shareholder who availed himself of this provision retained,

by virtue of his stock, simply those rights that are incidental to the ownership of stock in ordinary corporations; that is, the right to hold corporate office, participate in the management of the corporate affairs, to have dividends, etc. The water right was evidenced by a deed made by the corporation to the holder (who might be either the shareholder or an assignee of the shareholder), and the "right" was expressly made appurtenant to and inseparable from the lands described in the deed. The extent of land to which a whole right was appurtenant was 80 acres; the estimated volume of water belonging to the "right" is thirty-three and a third miners' inches. (Note: It is commonly estimated in this valley that a miners' inch is the fortieth part of a cublic foot flow of water per second of time.) It has continued to be the practice, until within the past year or two, to lease the water right incident to the shares, in cases where the water rights had not been segregated from the shares. In many instances, where segregation was made, the shareholder had either no land or had not enough land to take up the water rights that were segregated; in such cases, until the shareholder could find a place to dispose of his right, the right was evidenced by a certificate and was what was called a "floating right;" that is, one which had not become attached to any particular piece of land. These "floating rights" became the subject of sale and lease and were used indifferently upon any lands, as the lessee or vendee might, from time to time, choose.

Most of these rights, under this canal, have become attached and are now appurtenant to designated lands. The shares of stock, from which the rights were not segregated, are the subject of lease or assignment and the "water rights" incident to them are still floating water rights.

What we have said of the Salt River Valley Canal Company is applicable to the Maricopa Canal Company.

Shortly after the beginning of the construction of the old Swilling ditch some settlers on the south side of the river began the construction of a ditch for the supply of lands in the vicinity of Tempe. This, too, was a community ditch and the number of users under it gradually increased. This ditch is now known as the Tempe Canal. It is a voluntary association of the water users, or rather of the shareholders. The interests of the shareholders are represented by one hundred and nine certificates. Each share is the evidence of the ownership of a one hundred and ninth part of the property of the company, and of the water diverted and carried by its canal. The affairs of the company are managed after the manner of a corporation, although the association is not incorporated. The shares are assignable and the water rights incident to them are floating and may be used indifferently upon any lands, within the limits of the canal system. The revenues of this company, necessary for operation and maintenance, are raised from assessments against

the shareholders. There is no cost to the water user who is also a shareholder, for service except this cost of operation and maintenance.

Intermediate between the time of the beginning of the Swilling Ditch and the Tempe the construction of the San Francisco Canal was begun. This has been practically a private ditch and is now nearly, if not quite all, owned by the Bartlett-Heard Cattle and Land Company, for the supply of their large holdings of lands.

About 1876 the Mesa Canal Company began its construction. It is a corporation with water rights incident to the ownership of its shares. The shares are not appurtenant to land and the water rights are floating. The cost of maintenance and operation is met by assessments against the shareholders.

Shortly after this the construction of the Grand Canal was begun. The Grand Canal Company is a corporation—there are no water rights incident to the shares of stock. The water right, under this canal, is represented by a deed from the company to the water users and the right is made appurtenant to land designated in the deed. An annual charge is made by the company for the service of water.

In 1877 the construction of the Utah Canal was begun. This is a community ditch, the interests of the members of the community being evidenced by shares of stock to which are incident water rights. The water rights are floating. The cost of operation

and maintenance is met by assessments against the shareholders.

The Arizona Canal is a corporation; the water rights are not incident to the ownership of stock. The water rights are evidenced by deeds made by the company to the land owners and are made appurtenant to the land described in the deed. A periodic charge is made to water users for service of water.

The Arizona Water Company owns and controls, directly or indirectly, the majority of the capital stock of the Grand Canal Company, the Maricopa Canal Company and the Salt River Valley Canal Company, and consequently controls and directs the management of their affairs.

The cross-cut canal is also controlled by the Arizona Water Company. This canal is a canal constructed from the Arizona Canal to intercept the Grand, the Maricopa and the Salt River Valley Canals for the purpose of supplying them with water, diverted by the Arizona Canal at a point higher up on the river than the older canals. Power has been developed on the cross-cut and otherwise by the Arizona Water Company, whereby electrical power is transmitted to Phoenix for lighting and motive power.

The Highland Canal is a corporation; the water rights are not incident to the ownership of stock but are evidenced by deeds from the corporation to the land owner and made appurtenant to the land named in the deed; a charge is made to the water user for service.

The Mesa Consolidated is a corporation, having a capital stock; water rights are not incident to the ownership of stock, but are evidenced by deeds of the corporation to the land owner and are made appurtenant to the lands described in the deed. A charge is made to the water user for service. Electrical power is developed by this company which is used for lighting and for pumping water.

It should be stated, here, because it was omitted before, that the Maricopa Canal Company and the Salt River Valley Canal Company make a periodic charge to the water users for the service.

The water rights under these various canals have a market value, varying from twelve dollars and a half per acre, upwards. In addition to payment for the water right the cost of service or the cost of operation and maintenance must be paid. These charges vary from two dollars and seventy-five cents per acre down to as little as, probably, seventy-five cents per acre.

The various canal systems, we have mentioned, are depicted on the map that accompanies these statements.

Assuming that conditions could be made to prevail which would make the provisions of the National Irrigation Act applicable to our local situation, the water users, last August, publicly called a mass meeting of citizens. This meeting, after being duly advertised, and being well attended by representa-

tive water users from under the various canals in the valley, appointed a committee, from amongst themselves, known as the Water Storage Conference Committee, consisting of twenty-six (26) members. The membership of the committee was apportioned amongst the water users located under the several canals. Subsequently, and at a meeting of this Conference Committee, held on the 4th day of September, 1902, at Phoenix, certain suggestions were made to it by Joseph H. Kibbey, Esq., a local attorney, concerning the applicability of the provisions of the National Irrigation Act to the local situation, and the outlines of plans to secure the aid of the Government in the construction of the Tonto Reservoir (Salt River Reservoir). These suggestions were printed in a local newspaper, and also in pamphlet form, which were distributed amongst the water users. A copy of the pamphlet containing the suggestions of Mr. Kibbey is appended hereto, and is designated by its title. Afterwards this conference committee appointed an executive committee of eleven of its members, fairly representative of the interests under the various canals.

This executive committee had numerous and protracted meetings and formulated a report, embodying in general terms the plans for bringing about the conditions that the National Irrigation Act contemplated to make its provisions applicable.

This report was submitted by the executive com-

mittee to a well advertised and largely attended mass meeting of the water users, by which it was enthusiastically approved and the executive committee was directed and empowered to prepare Articles of Incorporation. The report of the executive committee was printed in a newspaper, and was also printed in a pamphlet with an address of Mr. George H. Maxwell, which were circulated amongst the people. A copy of this pamphlet is appended to this statement.

The executive committee began its labors in September, 1902, and finally completed the draft of the Articles and submitted them to the conference committee in February, 1903, and this report was approved but not without objection.

The committee, in the preparation of the Articles, kept in view these principles, believing them to be those and those only on which the people could unite and at the same time accord with the spirit of the National Irrigation Act, viz.:

1st. The association of all, or practically all, of those who have vested rights to the use of water from the Salt and Verde Rivers, for irrigation.

2d. That the admitted vested rights are:

(a) That the basis of an appropriation of water from public sources, for irrigation, is the ownership, or the initiation, in good faith, of a right to acquire title under the public land laws, and occupancy

thereunder, of land capable of irrigation from such sources.

(b) That the measure and limit of such an appropriation is the beneficial use of the water for the irrigation of the land owned or occupied by the appropriator.

(c) That the right is inseparably appurtenant to the land for which the appropriation was made.

(d) That the rights are severally prior, relatively, in point of time, as in fact the appropriations were initiated.

3d. That the waters of the Salt and Verde which may be said to have been appropriated, should be under the same rules of distribution and use as those which may be conserved by means of the Government's works.

4th. That, subject to the right of priority, the rules for the distribution and use of water, whether as it would natrally flow if the Government works had not been constructed, or whether stored or developed by the Government, should be uniform amongst all water users, and subjects to the approval of the Secretary of the Interior.

5th. That as the relative value of the vested water rights among the several owners have never been ascrtained, and as it is impracticable to do so, that the proportionate cost to water users, independent of existing rights, of the Government works, should be equal.

6th. That the cost of operation, maintenance and repair should be equally imposed on all shareholders, whether they make constant use of the water or not.

7th. That the powers of administration (that is: of maintenance, operation, repair, distribution, regulation of use, etc.), should be centralized in the association.

8th. That the exercise of these powers should be as nearly under the immediate supervision and direction of the people as possible, subject to rules and regulations approved by the Secretary of the Interior.

9th. That the powers of the association should be so distributed, among its agencies, as to impose a maximum of responsibility and a minimum of peculiar personal benefit possibly resultant from malfeasance.

10th. That ample security should be afforded the Government for the reimbursement to it of the cost incurred by it in the construction of its works.

It may be stated, generally, that the framers of the articles of incorporation did not particularly concern themselves in speculation as to what the law actually is, locally, as to the acquisition of water rights, or of their nature or extent. If there be any vested rights in the use of water growing out of custom, local legislation or the decision of our courts, that are inconsistent with the principles we have as-

sumed, it was and is the purpose of the framers of the Articles that they should be voluntarily abrogated and abandoned by the adoption of those principles we have herein enumerated. This effectually disposes of the disputes among the water users, reduces the system to one of uniformity, definiteness and consistency with the principles enunciated in the National Irrigation Act.

All of the principles concerning the acquisition of water rights, their extent and the measure and limit of appropriation of water, and the appurtenancy of right to the soil, which we have adopted, are mentioned in the National Irrigation Act and are taken therefrom. The priority of rights amongst claimants is not mentioned in the Act, but we have assumed that it is, under our laws a vested right, and therefore one that is preserved from interference in the operation of the National Irrigation Act, and we felt that it was a right in the abandonment of which it would be almost impossible to secure even practical unanimity of the water users. Hence we have incorporated in the articles of incorporation the provisions that the right of priority should not be interfered with. To this we will further advert in another place.

As a matter of fact there has been no adjudication in the valley fixing the order of priority amongst the various water users. The principle itself is fairly established by the decisions of the courts, but it has not been specifically applied.

The articles of incorporation do not go further than to establish the principle of the existence of rights of prior appropriators; the matter of making specific application of the principle amongst the shareholders is left either to future agreement or adjudication. The fact that the relative rights of the individual shareholders, so far as affected by priority of appropriation, have not been established does not, we respectfully submit, affect in anywise, either the purpose or the operation of the Association. The rights of priority are individual rights of the shareholders, to be settled amongst themselves; and whatever that settlement may ultimately be, it does not affect the relation of the shareholder, either to the Association or to the Government, or of the Association itself to the Government. To this we will again advert.

We beg leave to submit herewith a copy of the Articles of Incorporation of the Salt River Valley Water Users Association, and to call to your attention the several provisions embodying the principles upon which we have assumed the water system, when completed, shall be based, and the provisions for making them effective.

The pamphlet herewith submitted containing the Articles, is indicated by its title page.

Reference to our territorial corporation law shows its comprehensiveness, and the absence of restrictions and limitations, and particularly in the manner of procedure.

It needs no further comment than, that it authorizes corporations for this purpose, and leaves to the incorporators to determine what powers it will assume, the manner of their exercise, the agencies by which they shall be exercised, the rights of the shareholders amongst themselves, etc.

Articles I, II and III of the Articles of Incorporation are formal requisities of the statute, and are self explanatory.

Article IV is a specific statement of the objects of the Association.

Section I, of Article IV, specifies the objects of the Association to be; to do any act to procure water for the use of its shareholders for irrigation, and the acquisition of means for that purpose.

Section 2, of Article IV, specifically authorizes the Association to enter into any agreement with the Government to secure the construction by it of irrigation works; to secure to it payment therefor; and distribute the water according to the rules and regulations adopted or approved by the Government. It is intended by this to authorize the Association to comply with any conditions that may be imposed by the Government upon which it will construct the irrigation works. It will be noted that the Association may make any agreement with the Government for the collection and payment to it of any and all moneys which may be due the Government for rights

issued by the Government. That there may be assurance that the Association may effectively do this, it will be noted by reference to Section 1, of Article XIII, that revenues of the Association are to be raised by assessment against the shareholders. By Section 4, of Article XIII, the payment of dues to the Government is specifically made the subject of assessment; and Section 6, of Article XIII, makes those assessments a lien upon the land of the shareholder. This indirectly, but effectually, pledges the land to the Government for the reimbursement to it of the cost of the irrigation works.

Section 3, of Article IV, defines the territory over which the operation of the Association is proposed to extend. It will be noted that the last clause of this section provides for the extension of this territory to any other lands to which the Secretary of the Interior may issue rights. A map is herewith submitted to show the territorial extent of the proposed Reservoir District. The map's title indicates it.

Article V relates to the capital stock, its division into shares, and the rights of shareholders to the use of water, the transfer of shares, etc.

Section 1 of this Article (V) fixes the capital stock at $3,750,000, divided into 250,000 shares of the par value of $15 per share.

Taking into consideration the best data available concerning the water supply of both the Verde and Salt Rivers, from year to year for a series of years, it

has been estimated that with the water storage afforded by the proposed Tonto Dam, and by the development of subterranean sources, there could be obtained a supply of water sufficient for the proper irrigation of from 180,000 to 200,000 acres of land within the Reservoir District. From our best information we have estimated the cost of the storage works contemplated at $2,700,000. These figures are merely approximate. Taking the number of acres capable of irrigation from water obtainable from the natural unobstructed and unregulated flow of the river, from stored surplus water and the subterranean sources combined, to be not more than 180,000, and the cost of the works to be as much as $2,700,000, the cost, per acre, would be just $15. As a sum about $15 per acre seems to have been generally thought to be the cost of the reservoir and other works, it was thought proper by the framers of the articles, to take that as the estimate, and consequently, the value of a share. If it were found that more than 180,000 acres could be supplied, the aggregate of the capital stock would appear, nominally, greater than the estimated cost; but, nevertheless, the actual cost per acre for the construction of the Government's works, would still be the cost of each share.

In Section 2, of Article V, it is provided that those only who initiate a reservoir right can become shareholders; and that, at the rate of one acre per share. This was prompted by several considerations. The

Irrigation Act provides for an association of the owners of lands irrigated by the Government (Irrigation Act, Section 6). This we deemed to be exclusive of any others; and we further deemed it unwise to associate those together whose interests might be so diverse as to eventually disrupt the Association. Again, to admit others than holders of rights from the Government might make a speculative or monopolistic combination possible.

Section 3 of this Article (V) was designed to eliminate from membership those subscribers who purposely or negligently failed to promptly initiate, and thereafter perfect, their Government rights, and those, in the event a greater number of shares are subscribed for than may be authorized by the Secretary of the Interior, to whom shares may not be allotted, as provided in Sections 12 and 13 of this Article (V). This is a forfeiture clause and its intent is that the Association may exclude certain subscribers, for delinquency, but not that the delinquents may voluntarily suffer the forfeiture and escape the liability. Those to whom shares have not been allotted under the provisions of sections 12 and 13, of Article V, of course, escape further liability, as their failure to secure Government rights is not because of any default of theirs, but by operation of the selection provided for in sections 12 and 13. In other words, they receiving nothing in the allotment are not further bound.

Section 4 of Article V provides for cancellation of forfeited stock. If a land owner should by non-payment to the Government of installments of cost price of the irrigation works, and incur the penalty of forfeiture and the Association should enforce its right of forfeiture, then it would happen that there would be water in excess of the needs of the shareholders, because the number of shareholders is diminished. With the consent of the Secretary another land owner, the owner of that or other land, under the provisions of this section (4), may subscribe for stock equal to, and in lieu of, that forfeited. This provides a method of keeping the membership full and up to the limit fixed by the Secretary of the Interior.

Section 5 of Article V declares, generally, the right of the shareholder to have water delivered to him for the irrigation of his land. These rights are more specifically stated in the subsequent sections, 6 and 7.

Section 6 (Art. V) defines the right of the shareholder to stored or developed water. This is, in terms, made a proportionate amount of the stored and developed water. This in practice would be difficult of ascertainment, and likely to be inequitable, if it were possible of accomplishment, under the peculiar conditions existing in this valley.

The shareholders of this Association, or practically all, now have water rights. The amount of water to which they are entitled, however, varies from that to which the oldest water right owner is entitled (which,

while not capable of exact computation, may be said to be nearly sufficient for the proper irrigation of his land) to that to which the last water appropriator is entitled, which in ordinary years is of little importance. Hence to allow to the older water right owner his equal part of the stored water (and developed water) would be to allow him an amount in excess of the "measure and limit" prescribed by the National Irrigation Act; and, on the other hand, to allow only an equal part to the owner of the later right would still leave him short of that "measure and limit." So to adjust this apparent incongruity the provision is made in the next section (7), that the whole amount of water actually delivered, from all sources, shall not exceed the amount necessary for the proper irrigation of shareholders' lands. In other words the whole amount of water to which a shareholder may be entitled, from all sources, shall not exceed the "measure and limit" prescribed by the National Irrigation Act; that is "beneficial use."

Section 7, of Article V, defines whatever right to the use of water the shareholder has now, and makes that right an incident to his ownership of shares in the Association.

Sections 6 and 7 together, then, become definitive of the extent of the water rights of the shareholders.

If the amount of water available from all sources shall be sufficient to properly irrigate the number of acres of land which the Secretary of the Interior shall

estimate can be irrigated therefrom, then all distinctions between the rights of the shareholders cease and become of no importance; for the amount of water delivered under the provisions of section 6, plus that delivered under the provisions of section 7, just equal the "measure and limit" to which any shareholder is entitled and of which he could make use.

If this condition can be made to prevail, then the priority of right ceases to be important, for the application of the rule of priorities in times of insufficiency of supply affects, after all, only the quantum of water to which the user is entitled—it is more or less as fixed by the order of his priority and the amount of deficit in the supply. If, however, by reason of miscalculation or by unanticipated conditions, the number of acres of land estimated to be capable of irrigation should be fixed too high then this deficit will occur, and the distinction between the older and the newer right becomes of practical importance as affecting the quantity of water to which they may be entitled. It will be noted that Article XIV provides that the right of the shareholder to the prior use of the natural flow of the Salt and Verde Rivers shall not be affected nor interfered with. If, then, there be nothing but "natural flow," or in other words no stored or developed water for distribution, these articles of incorporation provide that the natural flow shall be distributed amongst those who have heretofore appropriated it in the order of their priorities of

appropriation. The older right owner insists upon this, and the new right owner concedes it, in these articles of incorporation.

Section 7 of Article V makes every right that the shareholder has, whether acquired before he became a member, or by reason of his becoming a member, or from the Government, and the identical shares of the stock of this Association, evidential of those rights, inseparably and perpetually appurtenant to his designated land. This is the rule prescribed by the National Irrigation Act for rights acquired from the Government, and its extension to hitherto acquired rights of the members of the Association, whatever may have been, heretofore, the rule as to them, is acceded to by the articles of incorporation. The provisions making the water appurtenant to the land are specific and devised to prevent, by any evasion or indirection, its segregation.

See Sections 9 and 10 (Art. V).

We above called attention to the amount of the capital stock, the number of shares, and the reason for fixing them, as they appear, in the 1st Section of this Article.

Section 11 of this Article (V), provides that no payments for the capital stock shall be required except by the payment to the Government, by the shareholder, of such sums as may be due to it, from time to time, in reimbursement to it of the cost of the construction of the proposed reservoir and other irriga-

tion works. As the shareholder has one share of stock for each acre of land for which he has initiated rights to the use of water under the provisions of the National Irrigation Act, the amount of his liability on account of capital stock is the proportion that the number of his shares (and, consequently, acres of land) bears to the whole number of shares issued, which is the whole number of acres estimated by the Secretary of the Interior to be capable of irrigation from all sources. Fifteen dollars, as before suggested, is the estimated cost per share (or acre) ; but whether it prove to be more or less, its payment to the Government pays for the stock. There is no chance that there can be an excess of liability, against the shareholder on this account, over and above the cost per acre of the works constructed by the Government, for the payment of that cost (per acre) discharges the liability on account of capital stock, nor can the liability be discharged, if the cost should exceed the estimate, because the stock is not paid up until the cost of the works are repaid to the Government. The liability of the stockholder, on this account, by this provision, adjusts itself to the actual cost of the reservoir.

If the actual cost per acre shall be found to be less than $15, the liability on account of capital stock is nevertheless discharged by the payment of that cost—if it should exceed the estimate of $15 the obligation of the shareholder continues until the payment of the price in excess of that sum.

As the entire purpose of the Association is to acquire water and the means of its distribution, for its shareholders at actual cost, and every notion of investment for profit is excluded, so every method of raising funds provided in the articles is limited to the necessities for that purpose. Hence, while the capital stock is fixed at a definite sum, divided into a definite number of shares of a stated par value each, yet the method of determining (by the Secretary of the Interior) the number of shares to be issued as provided in Sections 12, 13 and 14 of this Article (V), and the manner of paying for the capital stock prescribed by Section 11, now under consideration, will, in its operation, result in making the capital stock equal to the actual cost of the reservoir; and the liability of the shareholder therefor, the proportion of that cost that the number of shares issued to him bears to the whole number of shares, whether that be more or less than the nominal liability fixed by Section 1. The provisions, in their operation, make their own adjustment to this end.

Under our law, as our articles of incorporation are framed, there can be no further liability, present or contingent, on account of capital stock, than as we have explained.

Sections 12, 13 and 14 of this Article (V) are designed, as they disclose upon reading, to limit the number of shares, that may be issued, to the number of acres that the Secretary of the Interior may deter-

mine to be capable of irrigation from present sources of supply and from the increased supply made available by the contemplated reservoir and development of subterranean sources.

No greater calamity can happen to a community dependent upon the artificial application of water to the soil for its productiveness, than the attempt to, or in fact, to distribute the available water supply over too great an extent of land. Whenever the supply of water to any given piece of land falls below that necessary for its proper irrigation, disaster must necessarily result. A growing crop will certainly be more or less damaged, and it may be wholly lost; and the damage or loss is increased 10 or 20 fold if the land be in fruit or vines. And if this deficiency be general throughout the community the damage and loss is multiplied by the number of that community.

While the loss of a crop of grain, or a cutting of hay might be occasionally borne, the loss of an orchard or a vineyard, representing the investments of years of labor and of large capital, cannot, if it be general, be borne by the community, or if it be isolated, by the individual.

We do not presume to outline to the Secretary of the Interior the rules that should govern the estimate to be made by him of the number of acres of land in this valley that can be supplied with water from all sources, present and contemplated; but we feel justified, in view of the importance of the subject, to make some suggestions for his consideration.

The elements to be taken into consideration in determining the number of acres of land in the Salt River Valley that can be irrigated with its natural flow and heretofore accustomed supply and from the added supply made available by the contemplated Governmental works, are very numerous, and are variable within large limits.

The supply is dependent, of course, primarily on the amount of rainfall upon the shed tributary to the valley. This is variable, not only with the different seasons of the year, but varies from year to year. This variation in no small degree depends on the changing conditions through the water shed by the denudation of the forests and other vegetable growth. This operates possibly to diminish the amount of rainfall—it does accelerate the delivery of the rainfall to the water courses and its consequent rapid accumulation in floods beyond the capacity of the ditches to carry them or present need of use, and their consequent waste. This waste will, in a measure, be prevented by the storage reservoir; but only a portion of the rain shed drains into the reservoir. This denudation seems to be progressing, with its consequent increase of waste water.

That the supply of water that can be made available is variable is obvious.

To take the rain fall of any given year as the basis of supply would be hazardous. To take the average of a series of years would be a nearer approach to

safety, but it is still not reliable; for 2 or 3 successive years of deficiency of supply below the average would be ruinous to perennial growths, although the average of the whole series might remain undisturbed. The supply, we would suggest, ought to be estimated to be the supply that there may probably be made available, under the most unfavorable conditions, at the time of need for its use.

The elements to be considered for the determination of the needs for water are also numerous, complex and variable.

In this valley there are several qualities of soil, requiring varying quantities of water for the same character of crop. Different crops require different quantities of water.

The difference of the season of the year during which crops are grown greatly modifies the needs of the soil for irrigation as affected by, among other things, evaporation which increases, of course, with aridity. Some crops grow during the greater part of the year—others require water only a part of the year. Some are grown when the supply of water is the least and the loss by evaporation the greatest—others when the supply of water is abundant and the loss by evaporation is at or near the minimum.

In practice, in this valley, hitherto, the greatest part of the products of the soil are those grown and matured while the supply of water was fairly abundant and the loss by evaporation comparatively

slight; but the possibilities of soil and climate are such that the productiveness can be enormously enhanced by the growth of vines and trees, which require water when the supply, heretofore, has been at the minimum and the loss by evaporation the greatest.

Regularity and certainty of supply are important elements to be considered. If water can be supplied to meet the wants of plants, promptly, as the demand arises the aggregate quantity applied to the soil need be greatly less than where the supply is irregular and uncertain.

In this valley the uncertainty and irregularity of the supply results in the application of much larger quantities of water than are necessary to promote vegetable growth. When water is plentiful the practice is to flood the lands, and this may be, and generally is, at a time when plant life is practically dormant. Of this water so supplied, some is absorbed by the soil and retained for the future use of the plant growth, but for the greater part it is lost by evaporation and wasted. The practice has other objectionable features.

The methods of cultivation and irrigation, too, are important considerations—some methods of both cultivation and irrigation being extremely wasteful of water.

One of the purposes of the association will be to compel the adoption and practice of economic

methods of cultivation and irrigation of the soil, and as well of the carriage and distribution of water to the place of use.

Certainty of water supply is probably the chief element that can promote the prosperity of our people, by inspiring confidence, by encouragement to effort, and by prospective certainty of profitable results. Uncertainty of water supply can but have the opposite effect. The product of a less extent of land with a certainty of water supply to meet its needs will inevitably exceed that of a considerably greater extent of land with an uncertain water supply.

Safety then suggests that the estimate of water that may be available should be so made that its quantity will always be determinable with reasonable certainty in advance of the necessity for its use, and that the estimate of the amount of land that may be irrigated be so fixed that the supply for its necessities may, with like reasonable certainty, be counted upon.

The fault of nearly all irrigating enterprises has been in making the estimate of the supply of water and of its duty, too high. The result has been discouraging and often ruinous. If the estimates should, in the future, prove too small, and a surplus of water be found available, no evil results follow, for the surplus can never, under the conditions prevailing here, exceed, or ever nearly equal, the de-

mands for it. Dealing with a surplus presents no difficulties—indeed it would be a pleasant prospect. On the other hand there is no easy remedy for a deficit, if there be any remedy at all.

It will be noted from what we have said that the matter of the extent of land which shall be covered by water from all sources is left to the determination of the Secretary of the Interior and can not be extended without his express approval. And it will also be noted that the rules and regulations for the distribution and use of water which are to prevail over the entire extent of land covered by the proposed operation of the association are to be such as the Secretary of the Interior shall approve.

Article VI provides for the distribution of the powers of the Association amongst its various agencies.

These are the

Council,
Board of Governors,
Local Boards of water Commissioners and
Certain officers.

This Association will have from 2,000 to 3,000 individual shareholders—perhaps as the diminution in size of holdings continues, as it is desirable that it should, a much larger number. It is wholly impracticable that so large a number of people should meet and attempt the transaction of business. For many reasons, obvious enough, it was not thought de-

sirable to introduce into the plan of this Association the practice usually prevalent with the management of corporate affairs; that is, the delegation of authority by proxy, by many shareholders, to a few to act at a stockholders meeting.

These considerations led us to practically delegate the legislative powers of the shareholders to a council to consist of a number small enough for convenience, promptness and efficiency and yet large enough to be representative of all the shareholders, and dispense with the impracticable (in this instance) stockholders meeting. The council consists of 30 members, three from each of ten districts into which the lands within the operations of the Association is to be divided. The term of office of the councilman is 3 years, and the terms are made to expire so that one-third of the whole number (1 in each district) are to be elected each year.

Councilmen must be shareholders of the district they represent and be elected by the shareholders of those districts respectively.

The council is required to meet at least once in each year and special meetings are provided for.

The councilmen serve without compensation and are ineligible to any office in the Association to which any emoluments are attached for at least two years after the expiration of his term of office as councilman. This inhibition does not apply to members of the first council, as it was deemed, inasmuch

as the affairs of the Association were yet in the formative state, it might be desirable to elect some to office who, by reason of their knowledge and experience acquired during the formative period, were best qualified for the office.

(See Sec. 12, Article VI.)

Section 13 of this Article (VI) confers general legislative powers on the council. The council is limited, however, by the provision that it shall pass no by-laws that shall conflict with any rule or regulation of the Secretary of the Interior for the administration of water from the reservoir.

This limitation is by its terms confined to the rules of the Secretary of the Interior relative to the distribution and use of water from the reservoir or other works constructed by the Government or in the construction of which it aided, and used in the supplying the shareholders with water.

As the water, to be supplied by works constructed by the Government, and the water now subject of appropriation, is all to be either impounded in the reservoir or finally distributed through ways for distribution under the control of the association, and practically no distinction observed between the two classes, it is intended that the rules and regulations for the distribution and use of all water, whatever its source, to which the shareholders are entitled, shall be uniform and constitute one system regardless of any distinction, subject, of course, to the one

vested right of priority of right in the natural flow which is reserved. These rules and regulations must then, of course, be subject to the approval of the Secretary of the Interior.

It is not contended that there can be any priority of right of use of water which has not heretofore been appropriated. Whatever water is made available for use by the Government works and which has hertofore been allowed to waste unappropriated is subject to the rules of the Secretary of the Interior.

Whatever rules the Secretary may make, from time to time, for the use of that water, must prevail. It must be assumed too that they will be satisfactory to the Association and for the sake of uniformity those rules will be adopted by the Association so that the distribution and use of all the waters available for use by the shareholders will be uniform, and the rules will be those approved by the Secretary of the Interior.

The theory on which the framers of these Articles have proceeded is, that all the water in addition to that which is now available for use by the water users of this valley, and actually appropriated, which the Government, by its works makes available, and as well that so heretofore appropriated, constitute a common stock for the use of the shareholders.

It is almost impossible to ascertain what amount of this common stock has, in fact, been heretofore appropriated by the water users (shareholders), and

consequently the additional amount that may be made available by the Government is indeterminable.

In fact the amount of water heretofore appropriated in this valley has never been established either by adjudication or by any agreement. (Note. —In the Wormser case referred to in an earlier part of this statement the court undertook to find the *time* of appropriations of water for lands in the valley, but not the *extent* of the several appropriations. It would appear that appropriations had been made agregating an amount largely in excess of actual use. This is due to the fact that lands for which even only an occasional use during flood time were taken into consideration as having some rights. The statement that the amount of water appropriated has never been adjudicated is not affected by the Wormser case. K.) It is an unknown quantity—until that can be known and established the additional quantity made available by the Government works must remain unknown and unestablished. But it must be assumed that the storage of water that heretofore ran to waste, and the regulation of the admission to the soil of water hertofore wastefully applied to it, and other savings due to better and more economical service, will increase the common stock. And, as such common stock, we have accounted it the subject of common use, with equal benefit to all, and therefore, subject to common rules for its use and distribution.

It is upon this theory, and upon this theory only, that it can be estimated that 200,000 acres (tentatively it does not matter what the exact number may be) of land can be irrigated, and that the Government may authorize the issue of reservoir rights for that number of acres and the Association issue its shares with their incident rights at the ratio of one share for the like number of acres. Neither the water conserved by the Government nor that heretofore appropriated by the water users alone, is sufficient to adequately irrigate 200,000 acres of land—but combined they are. The relative proportion between the two has been ignored for it is unimportant under the plans proposed. And the plan proposed renders unnecessary the difficult, if not impossible, task of ascertaining this proportion.

It is upon this theory, too, that the water users propose the combination, and authorize the Association (by Sec. 2 of Art. IV), to enter into any contract with the Government to secure its action or aid in the construction of the reservoir and assume such conditions as the Government may impose therefor.

So that the plan in its ultimate operation must, in practice, conform to the rules and regulations of the Secretary of the Interior and those rules and regulations are a limitation upon the powers of the council to make, amend or repeal by-laws.

Article VII prescribes the qualification of electors. As was suggested before, the proxy feature of cor-

porations is eliminated. The shareholders must cast their ballots in person at the polling places provided for that purpose.

Article VIII defines the powers of the Board of Governors. They are, generally, analogous to those of the Board of Directors in ordinary practice. The members are elective. There are 11 members, one from each of the ten council districts, and the president is one by virtue of his office.

The compensation of the members is fixed by the council, as well as are the salaries of the other officers.

Regular meetings of the Board are provided for and special meetings may be called. The Board of Governors has the immediate management of the affairs of the Association.

Article IX is designed to secure to the water users (shareholders) as much of the local control of the various canal systems as is consistent with the absolute and paramount control of the Association itself.

It is obvious that rules concerning the use of water and its distribution to enforce economy in its use are necessary. Others are necessary to secure to the individual shareholder full enjoyment of his right and at the same time limit him to that. It is of common observation that where the observance of a rule requiring active effort, or expenditure of money, and having for its only object the preservation of the rights of a distant neighbor, and the enforcement of that rule, is left with the one upon whom it is imposed the rule usually fails of observance.

As the successful operation of the business of the Association depends upon the establishment and the enforcement of these rules to secure to each of the shareholders the fullest enjoyment of his rights, and that, too, without discrimination being either permitted or practiced, so that all may have the common benefit, and that the rights of some may not be infringed by the laxity of others, the establishment of these rules and their enforcement cannot be safely delegated to subordinate associations or divisions whose active interest is limited by the bounds of the local district.

This Article (IX) has gone as far in the direction of local control, as distinguished from the centralized control of the Association, as we deem consistent with safety.

To carry out the purposes of the Government, the Association must be cohesive, the powers must be adequate to enforce the rights of all its members and it must have the means of the exercise of its powers.

To vest local boards with any of these powers to the exclusion of the central Association necessarily renders the Association weak, insufficient and practically useless. It would promote discord, strife and disputes if there should exist or there should thereafter arise differences in interest. And if there be no difference in interest, as there should not be, or none can arise, the reason for taking away from the central Association the powers necessary to its effective

existence disappears. To this subject we will again advert.

Article X relates to the powers of the various officers. They are those usually incident to such officers and we think need no special comment or explanation.

Article XI provides that the council may create offices, and provides for their incumbency and compensation.

Article XII provides for the removal from office of incumbents for causes enumerated.

Article XIII. To this article we have had occasion heretofore to advert.

Section 1 of this Article (XIII) states the source of revenue of the Association. It has no other.

Section 2 confers upon the council the powers to make and enforce by-laws for the enforcement, etc., of assessments.

Section 3 (Article XIII) provides that the assessments for the ordinary cost of operation, maintenance and repair of the works of the Association or of those with the maintenance of which it is charged, shall be *equally* assessed against all the shareholders in proportion to the number of shares held by them respectively.

As we have before said, we have proceeded on the theory that the water to be distributed by the Association is a common stock of the shareholder, to which they have equal right to resort, and from which they

will derive a common and equal benefit. It might under certain circumstances be that the actual cost of service to the various shareholders should vary and not be equal. As the benefit is common and equal it is desirable and equitable that the cost should be. That it might, in fact, be unequal is true, but we know of no rules by which to measure the inequality, nor any in practice that fairly approach it.

With the purposes of the Association accomplished we would have the owners of 200,000 acres of land in this valley, taking water from a common source, with an equal right to it, taking of it in proportion to the number of shares held by them and deriving a common benefit from it. If each individual land owner was required to supply and maintain for himself his own separate means of diversion of water from the common source and its conveyance to his land, we might approximate the cost to each, and hence the relative cost. We might then take into consideration the distance of carriage as the chief element in the difference in cost, and that the relative cost would be in proportion to this distance. That the owners at the sources of supply would pay little or nothing, the owner a mile away the cost of the construction and maintenance of a new ditch, the one ten miles away ten times as much, etc., etc.

That there would be a diminution of cost to all if they united in the construction and maintenance of one ditch for common use is probable. But we do not

believe that the cost of either construction or maintenance of one ditch for common use is probable. But we do believe that the cost of either construction or maintenance would thereafter be apportioned among the users according to their respective distances from the common source. The more equitable rule is not that each shall have his proportionate part of the benefit of the diminished cost but it shall be equalized if the cost is not increased to any.

Equality of assessment for operation may seem, if considered alone, arbitrary and possibly not equitable. But it is certain and definite. If the rule were that the cost were to be apportioned equitably, it would become uncertain, and dependent upon discretion with no rules to guide the discretion and hence arbitrary. Being both, uncertain and arbitrary and varying it would become inequitable.

With conditions so nearly identical in this valley there is no good reason why the cost of the delivery of water under the varying existing systems should not nearly approach equality.

That differences do exist is due to causes that will disappear when the Association is in operation. The chief cause of difference is that the number of users under the several canals are not equally proportionate to the magnitude of the canals—some of the larger canals having fewer users, who bear the cost, than there are under some of the older but smaller canals.

It may be confidently expected that when the canals

are all under one management that the facilities for maintenance, operation and repair will be so increased, and be so much more efficient that the cost of service to all will be reduced.

But aside from the impracticability of any rule other than that of equality of assessment for maintenance, operation and repair, there is another and more important consideration that leads us to avoid the uncertainty of any other than that of equality.

If "equitable" assessments were prescribed, the matter is at large to be determined from year to year by different boards with differing views as to what would be equitable.

One board might think it inequitable to assess a shareholder who does not use water during a given year—and possibly with some show of reason. But the Association thinks otherwise. The Association deems it just that the non-user should bear his equal share of cost of maintenance, operation and repair. Otherwise the burden upon users might be unjustly increased by the mere default of the non-users. The Association is of the further opinion that the indirect penalty involved in the requirement of the payment of an assessment by a non-user will discourage unproductive holdings. Again, if by unfortunate chance the supply of water become insufficient for all, in that event as in the case of voluntary non-users, the cost of operation, maintenance and repair is not lessened, yet some board, not governed by any

rule, might deem it equitable to assess the shareholders who receive less, less and the shareholders who receive more water, more, introducing again an element of uncertainty and most probably of injustice. Taking these all into consideration, the equality of assessment for maintenance, operation and repair seems to the association the most desirable rule to adopt. Hence its adoption.

Section 4 of this Article (XIII), taken in connection with Sec. 2, of Article V, authorizes the assessment of the cost of the reservoir and other works constructed by the Government.

Section 6 of this Article makes all assessments a lien on the land—we have before shown that this operates in favor of the Government under the provisions of Section 2, of Article V, and Section 4, of this Article.

Section 6, as we have noted, makes the assessments a lien on the land. It needs no argument to show that the power of assessment is a useless one unless it can be enforced. The suggestion that the lien might be made on the stock is inconsistent with, and *subversive of, the whole plan of association. One of the essential features of the plan is the inseparable appurtenance of the stock (and its incident rights) to the land.* This is, too, one of the cardinal principles of the National Irrigation Act. To make the stock alone subject to a lien and to enforce the lien by a sale is at once to work a segregation of the

water (incident to the stock) and the land. It, in short, opens the door to the worst evils against which we have attempted to guard.

Section 7, of this Article, inhibits the expenditure, by the Association, of a sum exceeding $50,000 or the creation of a debt for that amount in any one year, except for maintenance, operation and repair, except with the consent of two-thirds of the shareholders.

Article XIV, we have adverted to.

Article XV, is self-explanatory, and so of Article XVI.

The statutory limit is the one fixed by Article XVII.

Articles XVIII, XIX and XX are self-explanatory.

Jos. H. Keeler.