"Continuing and increasing demands for more water than is available throughout the year make it imperative that the administration of Colorado's limited, meager water resources be made effective and efficient. The piecemeal legislation of nearly seventy-five years has created a mechanical monstrosity which even the ingenuity of competent state officials can no longer use to protect water users in the exercise of their lawful rights. The office of the State Engineer should take the leadership in providing for the formulation of adequate and modern administration procedures under the law, for the more effective operation of that office and related agencies. The legislature should cooperate with the State Engineer by appropriating funds for the purpose." From "Proposal for a Platform of a Colorado Water Congress", June 1958.

**Colorado Water Congress Newsletter**

Volume 2, No. 8  
August 27, 1959

The State Engineer of Colorado . . . middleman in complex water controversies . . . police officer on Colorado streams.

Is he the strong-armed administrator of the appropriation doctrine in Colorado, as intended by the 1879 Colorado General Assembly?

Or is he a traffic cop moving along Colorado's crowded 1959 waterways in an administrative Model-T, trying to enforce the law with a Justice of the Peace warrant in his hip pocket?

Your Water Congress believes the answer lies somewhere between these extremes. But there is more of the Model-T in the administrative machinery which the legislature has handed the State Engineer than many people realize.

The State Engineer's administrative machinery should be brought in step with the times . . . through legislation and through increased appropriations of money.

You don't get important legislation these days—legislation involving increased expenditures—unless it is strongly pushed, either by public opinion or by private lobby.

Your Water Congress is a legislative pusher for the water users of Colorado on non-controversial issues for which there can be state-wide water user support.

Put aside for now any thought of changing the Colorado appropriation doctrine, which provides:

"The right to divert the unappropriated waters of any natural stream to beneficial use shall never be denied. Priority of appropriation shall give the better right as between those using the water for the same purpose . . . "
It's far from perfect. It's not best suited technically to the conservation and efficient use of water. It doesn't provide for setting aside water to meet vital future needs. It confuses the status of surface appropriators as against well users pumping out of tributary aquifers. It doesn't limit the quantity of direct flow use. But it has to do.

Your Water Congress is talking about improving the administration of Colorado waters, not about improving their usefulness. It boils down to this: How much power to enforce peaceful exercise of lawful rights are the people of Colorado willing to put into the hands of the State Engineer? How much lawlessness do they think modern society can stand? Given the power to enforce lawful rights, to what extent will the State Engineer be allowed to exercise it through adequate appropriations of funds?

The administrative Model-T used by the State Engineer was, when it was created in 1879, a grudging retreat from violent personal enforcement of personal demands for water. That was the year the Colorado legislature set-up ten irrigation districts, nine of them in the South Platte Basin. It also established the system which is still in use of adjudicating water priorities within each district.

The Act of 1879 established a part-time Water Commissioner for each district, appointed by the Governor from recommendations by boards of county commissioners. Duties were not well defined. Powers were vague. No provision for coordination of priorities between districts on the same stream. No provision for handling non-irrigation uses.

In 1881, water districts were grouped into six water divisions, each consisting of all the water districts in each large river basin. The office of State Engineer was also established. The State Engineer was directed to measure water, measure ditch carrying capacities, supervise gaging installations, make annual reports and provide "general supervision over the water companies of the different water districts".

By 1886, Colorado's canal mileage and irrigation acreage were twice that of any other state. Her water laws were by far the most successful. Colorado leadership in water was firmly established. State Engineer Nettleton optimistically reported:
"The Water Commissioners generally are of the opinion that but little change in our present laws is required, as well as little need for additional legislation."

But his assistant, Professor Elwood Mead—later to become State Engineer of Wyoming and, in 1924, Commissioner of the Bureau of Reclamation (after whom Lake Mead is named)—was less optimistic. He complained about "radical defects in the law" and about "lack of precision or definiteness".

Water commissioners were having a rough time in 1886. One reported:

"I desire again to call your attention to the need of a more stringent law regarding headgates, so water commissioners can control the water running in ditches . . . Can you conceive anything more annoying than after working two hours to regulate the water by removing dams and within a half hour after the commissioner has gone, some one to slip up unseen and turn the water back into the ditch as before it was adjusted. You can see the amount of work the commissioner can do, and how little he can accomplish in the equitable distribution of water.

" . . . Then a howl was set up that I was partial to this ditch. I was published in one of the Denver papers. I was bulldozed and my authority was denied in toto. They said, while the sheriff might shut their ditch down, I had no right to do so. They bullied me, threatened me with bodily harm, and with lawsuits. I made it plain that I would enforce the priority of the decrees if it took the sheriff and fifty men to enforce and carry out the law, even at the sacrifice of my life and every dollar I possessed . . . Then they resorted to opening their gates at night by stealth. I stopped this as far as was possible to do with poor headgates; my work was laborious. I often spent most of the night on the stream."

In 1887, division engineers were appointed. Their job: Coordinate priorities between districts. Supervise district water commissioners. Execute Colorado laws governing use of water, under supervision of the State Engineer.

In 1889, State Engineer Maxwell complained:

"While the law provides for the construction of flumes, there is no penalty affixed, hence enforcement is impracticable."

In 1891, Governor Cooper told the Colorado General Assembly:

" . . . No system of laws providing for state control of waters will be effective in practical operation unless ample and carefully-guarded power is reposed in the offices mainly charged with such control . . . Too great care cannot be given such regulations as relate to the police power over the waters of the State, lest on the one hand no efficient practical power is conferred, or lest on the other hand too strenuous regulations fall within either constitutional or equitable prohibition."
In 1896, State Engineer Sumner reported basic weaknesses in his administrative machinery:

"To a person familiar with the irrigation system of Colorado, and the manner in which the public waters of the state are distributed, the fact is apparent that the department entrusted with such distribution is not organized according to business principles, nor has it the authority to enforce equitable and lawful regulations, which are so necessary to a perfect system.

"The present system was originated years ago, when the demand upon the supply of water was much less, and when rights were less valuable than at present.

"Our constitution, laws and the decrees of the courts all make the beneficial use the important consideration in establishing rights to the use of the public waters of the state, and this being a fact, the inference is that the laws governing the supervision of the distribution should confer sufficient authority upon the officers in charge to enable them to ascertain to what extent under the decreed rights this water is actually required for the necessities of the land, and in times of scarcity be empowered to control and regulate the supply so that none is wasted or wrongfully used.

"Our laws in force are vague and indefinite and often subject to erroneous construction, and should be revised and made specific, clearly and concisely setting forth the duties of the division engineers and water commissioners, so that they may not be prevented, as at present, from acting in an impartial and fearless manner, and obstructed by threats of injunctions and personal suits, all of which tend to lower the efficiency of the service."

State Engineer Sumner tried to get his administrative machinery overhauled. He called a state-wide convention of water users. It adopted a strongly worded resolution to the legislature.

The 1896 resolution included this:

"... At present the state engineer occupies a somewhat anomalous position in the irrigation system. While it is true the laws place him at the head of the affairs, he does not in fact act in that capacity unless some ditch or canal owner, feeling aggrieved at some ruling of a water superintendent, appeals the case to the state engineer for his decision.

"The state engineer should be at the head of the irrigation department in fact as well as in name, and be empowered to act through the superintendents of irrigation (division engineers) and water commissioners, as the official head, in regulating the affairs, so that all rights shall be justly protected."

Many of the basic weaknesses pointed out in the 1896 resolution remain to this very day!
The creaking administrative machinery that caused Elwood Mead and the water commissioners to complain in 1886 . . . that disturbed State Engineer Maxwell and Governor Cooper in 1889-91 . . . that frustrated State Engineer Sumner in 1896 . . . is still sputtering and popping along in 1959.

The Colorado legislature has done some tinkering over the years. It passed laws providing for administration of water exchanges, laws requiring water users to maintain proper head gates and proper measuring devices, laws requiring water commissioners to shut down water wasters, laws providing penalties for interference with water commissioners' headgate adjustments. But there has been nothing resembling a major legislative overhaul.

Interpretation of the Colorado legislature's vague definition of the duties and powers of the State Engineer's office has had to be done by the courts. This process of court interpretation has tended to dilute the police power exercised by the State Engineer's office.

Today there are 70 water districts. Each has a Water Commissioner, recommended by the boards of county commissioners in water district and appointed by the Governor. Almost all are part-time, per-diem employees, now under state civil service. Some have one or more deputy commissioners.

The Water Commissioner's job: Divide the waters in the streams of his water district among the various water users according to their priorities . . . Supervise the installation of headgates and wasteways . . . Keep the streams clear of unauthorized dams and obstructions . . . Maintain beneficial use of water, without waste . . . Submit reports of streamflows, diversions, storage, etc. to the Division Engineer.

There are 7 water divisions. Each has a full-time Division Engineer, appointed under state civil service. His job: Execute the laws of the state relative to the distribution of water . . . Supervise and control the activities of water commissioners within his division.

Riding herd on the Division Engineers is the State Engineer. He has general supervisory control over the public waters in Colorado. He and his deputies and assistants also: Oversee the construction and operating condition of all non-federal
dams in Colorado. Accept filings of contemplated water projects. Measure and maintain records of streamflows, diversions, storage.

The State Engineer can't oversee the construction and operating condition of all non-federal dams in Colorado. This takes time and money, and the State Engineer isn't staffed to keep up with this job. The big, well-financed dams are well-engineered and require little inspection by the State Engineer. But there are many small dams being constructed by small agencies and by individuals who, through ignorance or financial limitations, tend to skimp here and there on a dam. Everyone should be required by the State Engineer to conform to adequate safety standards. A few hundred acre feet impounded behind a small dam is enough to create a death-dealing, property-damaging wall of water. Plus costly litigation.

An earthfill dam in Colorado needs maintenance. This takes money. Sometimes reservoirs remain empty for years, either through abandonment or unavailability of water. Cracks develop, the dam deteriorates. These old dams are sometimes re-activated. Land developers may call upon them to do a job they were never intended to do... hold more water or carry storage over through winter months. The strong hand of the State Engineer is needed to protect the public interest in the safety of these dams.

In this case the State Engineer's hand is tied by legislative financial strings. There are other strings. Put yourself in the position of a Water Commissioner, a Division Engineer or the State Engineer, who is generally assumed to have police power over water in Colorado but who has many strings attached to its actual use.

Here's a legal string: A Water Commissioner can arrest a violator and take him before a justice of the peace or county court. But to obtain a conviction he needs the support of the local District Attorney and Justice of the Peace. This support may be withheld for political or personal reasons. Remember: The Water Commissioner is generally a part-time employee with no water administration training who, although under civil service, is nevertheless politically appointed.
Suppose the Water Commissioner does obtain a conviction. The penalty for this "misdemeanor" is a fine up to a maximum of $500 a day. It's sometimes profitable nowadays to pay $500 for the right to steal water.

Here's another legal string: A Water Commissioner or Division Engineer can object to use of water which is not in accordance with decrees. But suppose he is handed a fast restraining order. Then he can't intervene directly. The state water official has to wait until the injured water users intervene and take the initiative. This takes time . . . time enough for water to be used and gone. This takes money . . . money enough to discourage legal efforts by the small water user.

Note this: A Water Commissioner is, in effect, enforcing the decrees of a court. Yet he is not an officer of the court, interference with whom would constitute contempt of court. The Colorado legislature considered changing this in 1957. The bill passed the House but died in the Senate Water Committee.

Here's a formidable string: A Water Commissioner has theoretical power to shut the headgates of holders of junior decrees in his district at times when the seniors are not satisfied. But what if water is taken without any decree from a well located a few feet from the river . . . a well that apparently takes water away from the decreed water rights? Does the Water Commissioner have any power or duty to investigate and, if proper, to shut down this well "headgate"? If so, how does he determine if the rights of seniors are being wrongfully injured? Could an untrained, part-time employee make the required scientific determination?

Another string: The holder of a water right in Colorado normally has a right to take as much water as he needs, up to his decreed rate of flow, when the water is available under his date of priority. But what does he need? The state water administration officials have no right to go on the land to see what is happening.

Here's a practical string: Water in Colorado is, by law, supposed to be applied to beneficial use and not wasted in times of shortage. Water Commissioners have authority to go below a headgate to determine whether or not water is being wasted. If water is being wasted, it is the Water Commissioner's duty to shut down the headgate to the extent of the waste or wrongful use.
But Colorado Water Commissioners rarely go below a headgate. They haven't time! Injured water users are unlikely to know about another user's waste. If they suspect waste, the land owner can require a court order authorizing entry upon his land. It is impracticable for a small water user to obtain a court order to check on another user's waste. Besides: What constitutes waste?

Here's an 1896 string: A small appropriator high on a small tributary to a big river is junior to a senior appropriator located 100 miles below on the big river. Should the small junior have to shut down for the downstream senior, even though the bypassed water obviously wouldn't help the senior user? The Division Engineer has no clear judicial power, or power based upon technical judgment. He has only executive power which requires him to administer decrees in the manner provided by law. There is no plain authority for administration in the public interest. In practice, state water officials often look the other way. But each small departure from established law . . . even though apparently justified . . . weakens the water law enforcement officer's general position.

Did you know about this string: The State Engineer and his Division Engineers do not have clear authority to shift Water Commissioners from one place to another. A Water Commissioner for one district generally isn't authorized to step across the district line to help out in another water district. Water Commissioners can't be concentrated quickly in critical areas in the same manner that a Chief of Police would marshall his men to handle difficult situations. Water Commissioners can't be transferred readily when it appears that they are being influenced by local friendships.

These are some of the strings that have tied the administrative hands of Colorado's state engineers for many years. There are many more! A smart water lawyer can often find enough strings . . . if he really works at it . . . to virtually tie the administrative hands of Colorado's water law enforcement officers on specific controversies.
These internal Colorado strings are a tremendous administrative burden. But on top of all this is the problem of federal encroachment on state water rights. This is a serious problem in all 17 western states. It is a serious problem in Colorado today and it directly affects the authority and police power of the State Engineer.

Consider this: Present-day traffic officers couldn't possibly cope with modern highway traffic problems with administrative machinery set up for Model-T days. Likewise, present-day water traffic officers shouldn't be expected to cope with modern water traffic problems with Model-T administrative machinery.

Times have changed! Water diversion traffic along Colorado waterways has increased immeasurably since 1896. In addition to simple, in-basin, seasonal agricultural diversions there are large, complex trans-basin diversions involving compacts, federal operation and year-around municipal use. In addition to simple headgates there are undecreed pumps taking water from streambeds. In addition to small reservoirs there are many large reservoirs with controversial evaporation and seepage problems. The changing times have twisted and turned the concepts of water use in Colorado.

How much financial gas has the Colorado legislature put into the State Engineer's administrative machinery? In 1920, annual appropriations amounted to $49,000 excluding Water Commissioners' salaries and expenses which came from county funds. This was 5 cents per capita per year. In 1940, these appropriations amounted to $68,358 or 6 cents per capita per year. In 1959, total appropriations to the State Engineer amounted to $570,000. Take out the Water Commissioners' funds (now paid by the state) for comparison purposes and the 1959 appropriations are $225,000. Correct for inflation and the 1959 appropriation is about $109,000 in terms of 1940 purchasing power . . . or 6½ cents per Colorado per year.

In other words, the office of State Engineer is receiving today the same small allotment of financial gas that it received prior to important changes in complexity of its administrative problems.

It appears to your Water Congress that this is not enough money!

* * *
WATER NEWS ROUNDUP: The proposed start on Curecanti has been eliminated by the joint conference committee. **NRA impression:** Curecanti and the other Senate-proposed new reclamation start (Yellowtail Dam in Montana) were eliminated in order to avoid a presidential veto of the entire 1960 public works appropriation bill. **Water Congress appraisal:** Both were large projects which would have been the second "new start" in Colorado and Montana. No western state was allowed two new starts on public works projects. Colorado's start: The Smith Fork participating project.

Changes in key bureau of reclamation personnel are following in the wake of the recent change in commissioners. **R. J. Walter, Jr.,** director of the Denver regional office is being replaced. **John Spencer,** with a background in regional irrigation operations, is acting director. The new regional director at Sacramento, California, will be **H. P. (Pat) Dugan.** As assistant chief development engineer, he has been J. R. Riter's right-hand man. He is particularly familiar with Colorado river problems. He assisted Riter on engineering committee work for the Upper Colorado River Compact. He testified as an expert Arizona witness in the Arizona v. California lawsuit on the controversial concept of "virgin flow". This was part of the major battle over definition of beneficial consumptive use.

Los Angeles County has formed a new district for underground water recharge. Heavy withdrawals from the groundwater basin have exceeded the recharge rate. Result: Lowering of the water table to critical levels. **Note this:** COLORADO RIVER WATER will be purchased from the Metropolitan Water District and used in the recharge program! How many different ways are they going to figure out to use Colorado River water in excess of their entitlement under their own limitation act?

Your Water Congress is being highly effective in little-publicized efforts to protect the interests of Colorado water users in the proposed wilderness legislation. Chairman John Barnard, Jr., has spent several weeks on Capitol Hill on this mission, under Colorado Water Congress sponsorship. Colorado leadership in achieving essential amendments to the proposed Wilderness Bill has been outstanding. Read about it in your next Newsletter.