There can be no question about water. It is something we must have or we will perish. Life depends on water. In times of water shortages, a certain amount of reappraisal and re-examination occurs. In these times, the question must arise as to whether or not the government is as good a distributor of this vital commodity as it would like us to believe." (Colo. Springs Gazette Telegraph editorial, "Distribution of Water," 7-18-63)

NEW IDEAS IN THE WORLD OF WESTERN WATER: **Irrigating** machine manufactured at Longmont (Irrigation Motor & Pump Co.) provides a new approach to an old problem—how to efficiently distribute irrigation water without a lot of lateral ditches, waste water and tedious hand labor. **Self-propelled machine** straddles ditch or lateral, crawls automatically downditch, damming water flow and pumping from backwater behind a flexible rubber dam attached to machine. **Sprinkling reach**: 220 ft. each side of ditch. **Labor**: Under 2 man minutes per acre per irrigation. **Cost**: $20 to $50 per acre, depending on machine size. **Possibilities**: Irrigation of land too steep for irrigation by conventional methods.

... **Adaptable steel headgate** developed at Utah State U under U.S. Steel Corp. grant features three basic parts that can be assembled into a **variety of sizes and shapes**, "as easily as putting
a lawn chair together." Uses include diversion structures for directing streamflow from ditch to one or more laterals; check gates to dam water so it will flow from ditch onto land. Engineers claim the water control device "may become one of the greatest advances in irrigation since Mormon pioneers introduced the art in the West on a large scale." Available at Thompson Pipe & Steel Co., Denver.

Tow-move coupling used on Texas high plains enables sprinkler irrigator to move an entire lateral line (¼-mile long) without uncoupling the lengths of pipe. New steel subdrain pipe 46% more efficient than conventional pipe features smooth half-circle bottom with corrugated, overhanging perforated top. Rubber pillow tank may replace conventional bolted steel tank. Deflated, it can be packaged in a crate 14 feet long, 3 feet high, 3 feet wide, weight 2,300 pounds. Filled with water, it's 162 feet long, 49 feet wide, holds 420,000 gallons. Installation time: 200 man hours. Ideal for emergency municipal water storage.

Push-button faucets that draw water of any desired temperature are the latest thing for the home. Bank of solenoid valves located at hot water source automatically distributes variations of water temperature to meet pre-set requirements at any house fixture at the touch of a button. New tankless pressure system for multi-story buildings uses flow demand signals instead of pressure signals to regulate pump output.
Rubber-bottomed lake (6 acres) in Kansas prevents salt water (used in recovery of gas stored in underground caverns) from contaminating streams. . . Canal lining with bricks and wire fabric was found to be more feasible than concrete for a large Texas canal not long enough to justify slip forming equipment. . . Butyl rubber tube, (4 feet diameter, 875 feet long, costing $6,000) has successfully replaced a $30,000 steel bench flume on a Montana irrigation project. Original flume was plagued by seepage, washouts, mountain shifts. Rubber tubing appears safe from these hazards. Distribution: Watersaver Co., Denver.

New system of inverted wells used by Merced Irrigation District in California captures top soil water, directs it into inverted wells where it is retained in underground storage for later use. . . Pasteurized water for farm use is provided by an electric pasteurizer that takes pond water from a sand filter, heats it to 161 degrees for 15 seconds to kill germs. It handles 500 gallons per day, using 25 KWH. Big advantage over chlorination is sure and simple operation.

Water tunnel geology forecast problems may be helped by new prediction techniques being developed by U.S. Geological Survey for use by Colorado Highway Department on Straight Creek Tunnel bore. . . Detergent pollution problem may be helped by a new idea developed by a 17-year-old Fox Point, Wisconsin youth. He uses a new breaker material to trap the ABS in a fine, insoluble solid which settles out. Youth claims that one part per million of his material takes
out all the detergent.

WATER LITIGATION: Blue River litigation is underway again. Suit has been brought in federal district court in Denver to settle several important issues. Western slope water interests seek to stop Denver Water Board from using Williams Fork Reservoir to replace water diverted by Denver from the Blue River to the eastern slope. Another objective of the litigation is to determine whether or not Denver has any rights to water stored in Green Mountain Reservoir. Western slopers also seek to prevent Denver from negotiating with the Bureau of Reclamation for purchase, or acquisition by exchange, of water stored in Green Mountain Reservoir.

Fish flow water rights decision by District Judge Darrow at Meeker will be appealed to Colorado Supreme Court by Colorado River Water Conservation District. Judge Darrow recently refused to grant CRWCD conditional decrees for water to be used to maintain specified minimum flows for fish in the South Fork of the White River. . . Widefield aquifer, south of Colorado Springs, is back in litigation again. Widefield Water Co. and the Venetucci Ranch have filed suit against Clear Spring Ranch, seeking to restrain Clear Spring from pumping water from the aquifer to the city of Colorado Springs. Other wells in this aquifer were involved in the Bender case, decided by Colorado Supreme Court in 1961. . . State Health Dep't has found Clear Creek Valley Water & Sanitation District to be in violation of the board's sewage effluent standards. District was given 90 days to present an acceptable pollution abate-
ment plan. Also called before the board: Fruitdale Sanitation District (Clear Creek, near Denver).

Unlawful use of water cases are causing problems in Colorado Springs. Recently a violator charged in municipal court that the city manager has no right to make laws relating to Colorado Springs. But the judge disagreed and fined the violator, an attorney, $25. Water department employees in Colorado Springs have been authorized to enter a premises with a uniformed policeman and turn off the water, in cases when a violator does not answer a knock on his door. CS water waste inspectors also have gone unannounced on private property at night to check on water waste. At least one irate Springs citizen takes "a dim view of an unidentified... armed man (armed with a baseball bat) prowling around in my back yard" looking for dripping faucets and watering violations. So does the El Paso County district attorney, Don Higby, in a recent opinion.

District Attorney Don Higby: "I do not feel that it is proper for city employees to go unannounced on private property, particularly during hours of darkness, for the purpose of enforcing the city ordinance on water restrictions and I will contact the city in an endeavor to procure the city's cooperation in this regard."

Case to test legality of shutting off water for violation of irrigation restrictions appears likely in Pueblo. Westminster has filed suit in district court seeking declaratory judgment against Northwest Water Corp. WM charges violation of water supply contract terms. Refusal to serve additional residential taps has brought Green Mountain Park Water & Sanitation District into
district court in Golden. Developer seeks $26,600 damages from GM due to inability to sell a home of this price without water. **Northside Water & Sanitation District** seeks $300,000 damages from GM for failure to grant taps following signing of distributor contract with Denver Water Board in 1961. Judge Priest ordered Green Mountain to grant six more taps, but required the Northside group to post $600 cash bond pending settlement of the litigation. **Collbran project** in western Colorado has been granted absolute decrees in district court at Grand Junction. **Orchard Mesa Irrigation District** litigation over internal management has reached the stage of preparation of briefs on points of law involved in the case. Court will decide later whether the case will go to trial. **South Suburban Water Users Committee** has appealed to Gov. Love for assistance in expedite consideration of its water problems by Colo. PUC.

**Texas ground water depletion suit** was appealed last month by the U.S. to the Circuit Court of Appeals. U.S. District Court decision last May sustained an irrigator's test case claim for federal income tax refund based on a cost depletion deduction for ground water depleted while irrigating agricultural crops. Incidentally, **High Plains Water District** (1628-15th Street, Lubbock, Texas) has published a free brochure entitled, "High Plains Water Depletion Case -- Its Effect on Me and My Community" --- **Fallbrook case** was erroneously reported in your July 29, 1963, Water Congress Newsletter to have been decided by U.S. Supreme Court. Decision was by U.S. District Court. Justice Dep't has appealed. **British Columbia**
was rocked this month by a 398-page decision by the province's supreme court. High court ruled that the provincial government's expropriation of B.C. Electric Co., a private utility, was illegal and that B.C. Hydro & Power Authority is no longer a legal entity. Decision caught B.C. Hydro well underway on a $780-million government power development on the Peace River. . . Twenty texas railroads have filed suit in federal court to block canalization of the Trinity River from Fort Worth to the Gulf. Railroads maintain that they as taxpayers will be compelled to help finance a project ($911-million) that will compete directly with them. . . Spanish civil court has found engineers guilty of rash imprudence in building a dam in northwest Spain that collapsed four years ago, taking 140 lives. Engineers received prison terms and fines . . . State power to prohibit strikes against public utilities was recently held invalid by U.S. Supreme Court in a Missouri case. Court found that state law conflicted with federal law on the subject and therefore could not stand under the supremacy clause of the constitution. . . Massachusetts Supreme Court has held that a town is not required to award a contract to the lowest bidder if local statutes give the town the right to reject any and all bids. . . Oregon attorney general has filed a complaint asking for a $2.3 million judgment against Idaho Power Co. for fish losses at the company's dam on the Snake River.

COLORADO CITIES AND TOWNS: Pueblo Water Board has hired a Denver cloud seeding firm (Atmospherics) for six months at a cost of about $14,000. Aircraft will be used. Pueblo Water Board is proposing November charter amendments which would increase board membership
from three to five and abolish the $100,000 limit on expenditures for water works projects without voter approval. Also set: November vote on general obligation water bond issue. . . Colorado Springs has purchased some water stored in Denver's Williams Fork Reservoir for replacement of CS's Blue River diversions. . . Denver, draining Williams Fork Reservoir for outlet repairs, seeks to store water in Green Mountain Reservoir by exchange for replacement use when needed to support Denver's Blue River diversions next year.

Manitou Springs city council has approved a controversial $750,000 bond issue for water system improvements. Manitou also changed its policy on water meter connections. . . Florence city council is plagued with delinquent water account problems totaling over $2,000. . . Rocky Ford will finance water system improvements with a $200,000 bond issue recently approved by city council. . . Loveland has joined the growing ranks of cities with lawn watering restrictions. . . So has Eagle. . . Estes Park has hired an engineer to study its water problems. . . Erie has completed lining repairs on the town's reservoir. . . Eads has established a water tap fee of $50. . . Berthoud has increased water tap fees from $60 to $100. . . Ordway will raise money for water system improvements by bond issue. . . Longmont has increased water tap fees by graduated scale based on pipe size. . . Colorado Springs will no longer approve water service in new areas or issue building permits until applicant has paid the tap fees.
Delta rural water ordinance requires that city council approve plans for new building outside the city before city water is furnished. . . Burlington is calling for water storage tank bids. . . Canon City has decided to take no action on a request to fluoridate the city water supply. This leaves door open for citizens to petition for putting the fluoridation question on the November ballot. . . Englewood's request to Denver Water Board for short term purchase of emergency raw water resulted in a $150 per acre foot price set by Denver, which Englewood rejected. . . Thornton city council has given preliminary approval to an ordinance authorizing water contracts with non-residents as same rates as resident customers. . . Fort Collins is seeking to contract with Interior Dep't for use of Colorado-Big Thompson project facilities to convey water to eastern Colorado from a ditch near Grand Lake.

COLORADO WATER ROUNDPUP: Well drilling business is booming in Colorado, due to drouth. One boomspot is Colorado Springs metropolitan area, where drillers estimate 500 new wells have been sunk in recent months. . . State advisory committee on weather control will be established by Gov. Love. Colorado legislature abolished the old, inactive weather control commission in 1962. . . New CSU hydraulics lab, recently dedicated, features one of the largest recirculating flumes in the nation (100 second feet capacity). . . U.S. Soil Conservation Service has spent $4.5 million in Colorado
since 1954 in planning watershed improvement programs, providing technical service and cost sharing. Latest: Completion of eight flood retarding dams and contract letting for three more flood retarding structures. . . Dolores and San Miguel rivers in western Colorado continue to be contaminated by tailing acids from Union Carbide's uranium mill at Uravan. . . Rio Grande, from Creede to South Fork was recently contaminated by mine tailing pond leakage caused by flash flood. Fish kill was heavy.

Governor's forum at Steamboat Springs brought suggestions for a constitutional amendment permitting local levels of government to levy taxes on property held by agencies like Denver Water Board and Colorado Game, Fish & Parks Dep't. Similar meeting at Alamosa stressed need to ask legislature for water law recodification study funds. Local spokesmen at Alamosa strongly condemned the proposed federal closed basin drain project, which is Colorado Water Conservation Board's answer to Colorado's Rio Grande compact problems. Instead, they urged break-the-compact efforts. Colorado, now over 700,000 acre feet in debt to New Mexico and Texas, faces a probably interstate lawsuit involving enforcement of compact terms. . . John Martin Reservoir permanent pool for fish is being pushed again by sportsmen's groups. . . Relationship between sunspot activity and dry weather cycles hasn't yet been established, reports Dr. Walter Orr Roberts, director of National Center for Atmospheric Research, Boulder.
Dr. Roberts: "Unfortunately the current dry weather conditions cannot be explained in terms of any known relationship between sunspot activity.

"We are continuing our research on possible relationships, but I do not think there is anything in this research to suggest an explanation of the current dry situation.

"Clearly, additional fundamental research is needed before we can get to the bottom of this extremely important and very perplexing problem. It is a principal objective of NCAR to attempt to get to the fundamental understanding of these questions. Unfortunately the present state of research leaves us far short of this goal." (Letter to Colorado Water Congress Newsletter editor, 6-14-63.)

Water law study has been granted $29,000 by Resources for the Future, Inc., a Ford Foundation agency. Participants: Willis H. Ellis, Denver U faculty member; Ray Moses, Boulder attorney; Frank Trelease, Wyoming U law dean. Study will cover long-range water needs of the Rocky Mountain Empire and will indicate the general direction in which the law should develop to meet these needs. Separate phases of the project will deal with change in point of diversion and development of law for underground water. . . . Narrows Dam project water pledges have almost reached the 100,000 acre foot mark set as the amount of pledged supplemental usage needed to justify repayment of irrigation features of the proposed reclamation project. Assumed irrigation water purchase price: $5 an acre foot. Colorado Water Conservation Board is attempting to raise $25,000 for continuation of USBR studies of
Narrows project this fiscal year. Cities and ditch companies are helping with fund contributions. Richard T. Eckles, state purchaser, has been named coordinator of natural resources by Gov. Love.

Child drowning in City Ditch, owned and operated by Denver Water Board, appears likely to result in introduction of ditch covering legislation in the 1964 legislative session. Another child drowning occurred recently in Bostwick Park irrigation ditch, near Montrose. Quick thinking mother at Fruita saved her infant son this summer after he was swept into and through an 80-foot-long irrigation pipe.

Another danger: Electricution, by lifting well digging pipe into overhead high tension wires. This killed a Colorado Springs man recently. Also watch out for lifting sprinkler irrigation pipe into high tension wires. It's usually fatal! Fountain River bed vegetation will be investigated by U.S. Corps of Engineers to determine whether it is a menace to the community. Arkansas River Valley study, financed by $80,742 federal grant plus $40,371 in state planning dep't funds, will include aerial mapping and a study of land use facilities. Possible effects of radioactive fallout in high altitude areas will be researched by Colorado U's Institute of Arctic and Alpine Research, under a 2-year, $85,000 grant by Atomic Energy Commission. South Platte River pollution sources and water quality from headwaters to the Nebraska line maybe studied by U.S. Dep't of Health, Education & Welfare. Gov. Love has requested the study.