GARY R. HERBERT
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Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Water Rights

KENT L. JONES
State Engineer/Division Director

April 5, 2017

Glendale Irrigation Co
PO BOX 202
Glendale, UT 84729

Orderville Irrigation Co.
PO Box 47
Orderville, UT 84758

Mt. Carmel Irrigation Company
PO Box 5566
Mt. Carmel, UT 84755

Subject: Automated Measurement

Dear East Fork Virgin River Irrigation Companies:

During our annual meeting for the East Fork of the Virgin River Distribution system, there was much discussion about fairness and transparency of water measurement concerning the three large diversions that use the majority of the water on the Distribution system. To accomplish this, everyone was in agreement that the time has come for automated measurement and reporting, and that it would be in everyone's best interest to do so. This would enable the water commissioner to equitably distribute water to all diversions on the system, save considerable time and mileage and assist in balancing the system on a more frequent basis.

The Division of Water Rights Staff that usually install these type of devices are currently over-committed with other projects for much of this coming season. By waiting for the Division to install these devices, this may delay installation for another year, maybe two.

Merlin Esplin (Chairman of the EFV Distribution System) and I met at the water users conference in St. George the week of March 21-22 and came across a suitable substitute that should work effectively for installation of automated measurement at all three diversions. Although I cannot make specific endorsements, these devices are cost competitive and are sourced locally from a company in St. George. The devices have the capability to connect to cellular service via a modem, whereby instantaneous readings would be available on the internet. Attached a "line sheet" about the product for your review.

Since the responsibility for measurement lies with the individual diverting the water, (State Law 73-5-4*) these devices would need to be purchased by the Irrigation companies and they would also pay for the annual subscription fees for the internet connection and web site access. As the Distribution Engineer on the system, I am willing to work with the individual diversions to insure the devices are installed and calibrated correctly.

The increased visibility of diversion data will only serve to enhance our efforts in fair and equitable distribution of water in your area. Everyone was in agreement this needed to be

done as soon as possible, since this enhancement will better enable the water commissioner to see when the stream runs short and help to balance the available water amongst all the diversions.

The Division has found that having data available to all the water users involved keeps everyone acting in a friendly and neighborly manner toward each other. Automated measurement is being implemented throughout the state and will further enhance system operations for both the water users and the Water Commissioner.

I would encourage your company to contact the vendor in the near term, and secure a device for your diversion measurement. Contact me when the equipment is available, and I will work to assist in installation and calibration of these devices. It would be nice to have these installed as soon as possible, and early in the season, so we can learn to work with them in both high and low water conditions. The data records will be created for each diversion, where it can be tracked and recorded for review.

I can be reached at (801) 538-7430 and at: MikeSilva@utah.gov

Sincerely,

Mike Silva

Mike Silva
Distribution Engineer, Field Services
Utah Division of Water Rights

Attachment (1)

cc: East Fork Virgin Water Commissioner: Mike Chamberlain
Nathan Moses, Regional Engineer, Cedar City
Merlin Esplin, East Fork Virgin Chairman
Distribution File East Fork Virgin River

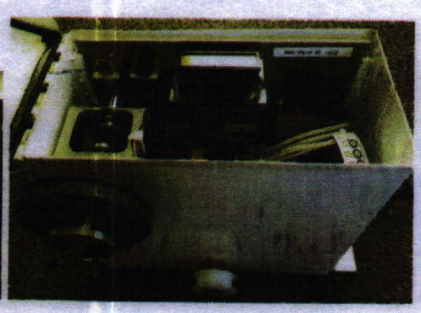
*** 73-5-4 Controlling works and measuring devices.**

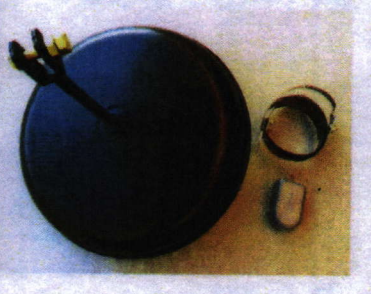
(1) To assist the state engineer or water commissioner in the regulation, distribution, and measurement of water, a person using water in this state, except as provided by Subsection (4), shall construct or install and maintain controlling works and a measuring device at:
(a) each location where water is diverted from a source; and
(b) any other location required by the state engineer.
(2) A person using water in this state shall make the controlling works and measuring device accessible to the state engineer or water commissioner.
(3) The state engineer shall approve the design of:
(a) the measuring device; and
(b) controlling works so that the state engineer or a water commissioner may regulate and lock the works.
(4) A person using water as an instream flow:
(a) shall install and maintain a measuring device or stream gauging station in the section of the stream within which the instream flow is maintained; and
(b) is not required to install controlling works unless the state engineer's order approving the application requires the installation because controlling works are necessary to achieve the purpose of the application.
(5) (a) An owner or manager of a reservoir shall construct and maintain a measuring device as directed by the state engineer to measure the inflow, storage content, and outflow from the reservoir.
(b) The state engineer shall approve the design and location of the measuring device.
(c) The owner or manager of a reservoir shall make the measuring device accessible to the state engineer or water commissioner.
(6) If a water user refuses or neglects to construct or install the controlling works or measuring device after 30 days' notice to do so by the state engineer, the state engineer may:
(a) forbid the use of water until the user complies with the state engineer's requirement; and
(b) commence enforcement proceedings authorized by Section 73-2-25. *--Amended by Chapter 311, 2008 General Session*

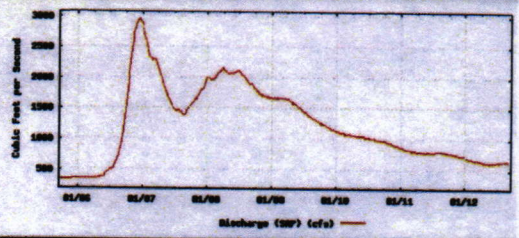
StoneFly Technology
PO Box 311
Saint George, UT 84771
435.673.3763, 435.652.8417 FAX

www.StoneFlyTech.com
info@StoneFlyTech.com

H101 Near-Real Time Water Measurement System
Float/Tape/Pulley Sensor







Sensor	7 days	Latest	High	Low	Updated
Stage ft		0.10	0.10	0.10	6 minutes ago
Flow cfs		0.67	0.69	0.66	6 minutes ago
Battery Voltage V		10.80	10.84	10.78	6 minutes ago
Potentiometer ft		4.61	4.61	4.61	6 minutes ago

Includes

- Sensor enclosure (ammo can)
- 10 inch pan float
- 10 foot SS tape and 2 SS end clips
- 1 lb lead weight
- 10 D-cell battery pack good for 6 months
- Cellular magnetic mount antenna w/10 foot coax
- Micro SCADA website with hourly updates (6 months)
- Cellular service within Verizon network (6 months)
- Initial remote configuration
- Desiccant packs and humidity card

Specifications

- Enclosure - 14 x 10.5 x 8.25 in
- Float - Weighted 3.5 lb, 10 x 4 in
- Tape - Punched SS, 10 feet or custom
- Pulley - 1 foot diameter
- Sensor - 10 turns, 10 ft max water change
- Cellular - Verizon network
- Power - 10 D-cells with 6-month life expectancy
- Accuracy - < 1% over full range
- LCD display - Stage and optionally flow (Parshall flumes only)
- End user stage calibration via clutch on pulley.
- Shipping weight - 20 lb

Price: **$1,999** Hardware and **$125** Yearly