# State of Idaho
# DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR


April 21, 1994

Chuck Helman
Watermaster, District 47-O
PO Box 2391
Rock Creek Road
Hansen, ID 83334

Re: Measuring Device Information

Dear Chuck:

Enclosed is some information regarding in-line pipe meters and submerged orifices. The Flow Research Corporation (FRC) transducer TR400 is an example of an impeller meter that can be permanently installed in a pipe line. The TR500 is a unit that can be temporarily inserted and withdrawn from the pipe. This latter transducer can be used as a portable meter to provide spot check or periodic measurements. The downside of using the TR500 as a portable unit is that it will take some time to set the unit up and obtain a measurement (perhaps a half hour per measurement). The permanent meter is preferable since you can quickly obtain a measurement and also obtain total volume used. Both transducers can be connected to a flow display unit like the FL9901 which can display both instantaneous flow (cfs or gpm) and total volume. The FL9901 is battery operated unit and does not require a continuous power source (i.e.; an electrical power supply and connection). You will note that I have shown current prices for these components. I obtained prices from an FRC representative in Salt Lake City. You will see that the transducer and display unit can be purchased together for under $600.

I have also included some information on in-line propeller meters. These meters are acceptable but some irrigators report maintenance and operation problems. The impeller meters have an advantage of being less intrusive than the propeller meters and may have better maintenance records. Like everything else, all meters require periodic maintenance.

There are a number of companies that manufacturer and sell the impeller type pipe flow meter shown in the attached brochures. There are probably several retail dealers in the Twin Falls area that could give you additional information.

I included the submerged orifice information to help you with some ideas about measuring the diversions to the sump ponds and instream pumps. Don't hesitate to call me if you have further questions or need help obtaining additional information.

Sincerely,

Tim Luke
Water Allocations