



SERVING AGRICULTURE SINCE 1906

Water Quality Information for Management Plan

Sunnyside Valley Irrigation District (SVID) water that flows through an open canal, into either open or closed laterals before its delivery on-farm. SVID water is derived from the Cascade Mountains in the State of Washington, which is located west of the grower's land. The United States Bureau of Reclamation (USBR) Yakima Project maintains several storage dam and reservoirs for irrigation and flood control purposes. Five of these reservoirs, Kachess, Keechelus, Cle Elum, Bumping, and Rimrock provide storage water for SVID via the Yakima River. The combined storage water of these reservoirs is a total of roughly one million sixty-five-thousand-acre feet. SVID's irrigation water is derived from the Cascade Mountain's rain and snow pack eventual runoff to the Yakima River. The Sunnyside Dam is located at river mile 103.8 on the Yakima River and is SVID's legal point of diversion. Landowners within SVID's district boundary have water allotments. Water is not delivered until the yearly assessment is paid.

SVID operates and maintains the irrigation conveyance structures for the diverted Yakima River water. This water is not used or intended as a potable water source.

Historical usage and weather data is used to maximize irrigation efficiency for the land. SVID's daily water ordering system allows the grower control and flexibility in water usage and distribution. Irrigation application can be changed as conditions change. The grower complies with the Roza-Sunnyside Board of Joint Control (RSBOJC) policy of not allowing highly turbid on-farm runoff to the SVID drains, which discharges as agricultural return flow to the Yakima River. This method supports water conservation efforts in minimizing soil erosion and improving water quality by reducing sediment loading to the Yakima River.

The Sunnyside Valley Irrigation District has a pre-May 10, 1905 water rights, which are two-thirds senior or non-proratable rights, and one-third junior or proratable rights.

Irrigation agricultural return flow is directed to SVID drains, joint drains, and wasteways. The return flow may also infiltrate to groundwater. The surface water which does not infiltrate returns to the Yakima River.

Irrigation surface water is sampled and analyzed every three weeks 0.60 miles downstream from the Sunnyside Dam diversion location for the following parameters: Water Temperature, pH, Specific conductance, Dissolved Oxygen, Turbidity, Total Suspended Solids, *Fecal coliform* bacteria, *E. coli* bacteria, Total Nitrogen Species: Nitrate-Nitrite (inorganic form), Total Kjeldahl Nitrogen (organic form), Ammonia (seldomly), and Total Phosphorus. There are five additional



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milepost sites on the Sunnyside Canal (23.17, 37.10, 45.70, 52.63, and 59.30) where *E. coli* bacteria and Turbidity are sampled and analyzed on a monthly basis. In addition, Water Temperature, pH, and Specific Conductance are measured at the 23.17, 37.10, 52.63, and 59.30 locations. The RSBOJC Water Quality Laboratory, an accredited lab through the Department of Ecology and funded both by the Sunnyside Valley and Roza Irrigation Districts, performs all of the field sample collection and most of the sample analysis. The USBR Columbia-Pacific NW Regional Laboratory in Boise, Idaho performs the nutrient sample analysis of Nitrate-Nitrite, Total Kjeldahl Nitrogen, Ammonia, and Total Phosphorus. All laboratory results are retained on file by the Water Quality Department in both hard copy and electronic formats for the district's landowners, water users, growers, and/or general public.