

Sunnyside Canal Improvement Project Update

9/15/2009

The Sunnyside Canal Improvement Project (SCIP) is the result of a settlement agreement between the United States Bureau of Reclamation (Reclamation), Washington State Department of Ecology (WDOE), Yakama Nation and Sunnyside Division Board of Control (SDBOC) in the Yakima Basin Water Rights Adjudication. Under the agreement, Sunnyside will reduce its annual diversion by 19,450 acre-feet (two-thirds) to benefit in stream flows and will retain 9,712 acre-feet (one-third) annually to improve the availability of water supplies for irrigation. The project is expected to cost about \$32.6 million, in year 2000 dollars, over a 9-year period. Reclamation funds will cover 65% of total project costs with WDOE and SDBOC each picking up 17.5%. Sunnyside Valley Irrigation District (SVID) is the operating entity for SDBOC.

Some of the major components of this project include:

- ▶ Replacement of 30 existing check drop structures with fully automated, electrically powered gates used to maintain a consistent water elevation in the canal for deliveries of irrigation water. The new gates will be overshot dual-leaf Langemann gates. These gates hinge at the base and in the middle so the leading edge of the gate rises and falls in a vertical plane.
- ▶ A Supervisory Control and Data Acquisition (SCADA) system communicating between the central office and all automated control sites which will help coordinate the flow of water throughout the 60-mile Sunnyside Canal. System water elevation and flow can be remotely sensed and controlled from any site with internet access.
- ▶ Addition of three Re-Regulation Reservoirs placed northeast of Prosser, north of Granger and another north of Sunnyside. These reservoirs will each have a capacity between 300 and 500 acre-feet each with a maximum depth of about 25 feet.

Prior to 2004 automated gates were retrofitted to the 2.93, 36.84, and 59.31 existing concrete check structures. The check number represents the distance from the Yakima River head works in miles. New gates and check structures were installed at 21.34, 40.38, 45.70, and 48.27 during the 2005/2006 winter construction season. New gates and check structures were installed at 43.65, 50.76, 52.63, 55.21, and 57.55 during the 2006/2007 winter construction season. New gates and check structures were installed at 23.17, 25.77, 28.09, 30.25, 31.25, and 33.75 during the 2008/2009 winter construction season. New gates and check structures will be installed at 14.27, 15.40, 16.95, 18.06, and 19.77 during the 2009/2010 winter construction season.

New SCADA software and hardware has been installed in the Sunnyside office. SVID can now access data and make flow changes from any remote site with internet access including the Upper and Lower end O&M offices. The communication system from the field to the

Sunnyside office is currently transitioning from cellular technology to spread spectrum radios.

On November 15th 2004 Reclamation, WDOE, Yakama Nation, SDBOC, and many others held the groundbreaking ceremonies on the M.P. 59.29 Re-Regulating Reservoir, near Pioneer Road. The Sunnyside Canal Improvement Project 59.29 Re-Regulating Reservoir first fill was on Monday July 11, 2005. Construction of the 23.7 Re-Regulation Reservoir north of Granger, near Punkin Center, was completed August 2008. Design work for the third Re-Regulation Reservoir, 37.10 near SR 241, is in progress with an anticipated completion date of July 15, 2011. The normal operating level of these reservoirs will be half full to leave room for excess water and to provide additional water when needed to meet irrigation demand.

The full Sunnyside Canal Improvement Project will be complete about 2013.

M.P. 23.7 Re-Regulation Reservoir facts

- Engineer: CH2M-Hill, Inc (Prime), Huibregtse Louman Associates, and Conley Engineering, Inc.
- Contractor: Tapani Underground, Inc. Battle Ground, WA
- Bid Price: \$5.18 Million
- Total final Price including land, engineering, and admin: about \$7.0 million
- Capacity of Reservoir: 500 acre-feet
- Maximum Depth of Reservoir: 31 feet
- Area Utilized for Reservoir: 30 acres
- Maximum Pumping Capacity (Out of Reservoir): 50 cfs
Four @ 100hp each
- Maximum Gravity Intake into the Reservoir: 70 cfs

M.P. 59.29 Re-Regulation Reservoir facts

- Engineer: CH2M-Hill, Inc (Prime), Huibregtse Louman Associates, and Conley Engineering, Inc.
- Contractor: Tri-State Contractors, Inc. Portland, OR
- Bid Price: \$4.77 Million
- Total final Price including land, engineering, and admin.: about \$6.5 Million
- Capacity of Reservoir: 300 acre-feet
- Maximum Depth of Reservoir: 25 feet
- Area Utilized for Reservoir: 25 acres
- Maximum Pumping Capacity (Out of Reservoir): 30 cfs
Four @ 100hp each
- Maximum Gravity Intake into the Reservoir: 40 cfs

SUNNYSIDE VALLEY IRRIGATION DISTRICT
 SUNNYSIDE, WASHINGTON 98944

SUNNYSIDE CANAL CHECK STRUCTURES

DATE: 04/01/07
 SCALE: 1"=20000'

DRAWN BY: DMF
 APPROVED BY: DS

