

Platte River Recovery Implementation Program

Initial State Project - Colorado

Tamarack I Recharge Project

Source: Unappropriated water *Score:* 10,000 AFY *Operations started:* 2007

Mechanism: Recharge & retiming

History

The Tamarack I groundwater recharge project was Colorado's initial state project for the Program. Development of the project began with the initiation of negotiations for the Platte River Cooperative Agreement in 1994. Colorado applied for water rights in 1996 and 1998; a final decree was issued in 2012. Tamarack I consists of both dedicated project facilities and excess credits leased from private recharge projects, most of which were constructed between 1997 and 2014.

Operations

Located along the last 35 miles of the South Platte River upstream of the Colorado-Nebraska state line, Tamarack I diverts from the river to recharge ponds when there are flows in excess of U.S. Fish and Wildlife Service (USFWS) targets at Grand Island, Nebraska and there is simultaneously no call on the South Platte River in Colorado. The sandy soils of northeastern Colorado allow the ponded water to seep into the underlying alluvial aquifer and migrate back to the South Platte River at rates that are much higher than other Program recharge projects in central Nebraska.

Tamarack I includes 16 dedicated riverside wells at the Tamarack State Wildlife Area near Crook, Colorado and the Heyborne project lift station between Ovid and Julesburg. Together, these dedicated projects deliver



Tamarack Recharge Area #2

water to 10 recharge ponds. In addition, recharge credits are leased from 10 private wells and from the Petersen and Settler canals near Julesburg, which deliver water to about 60 recharge ponds. Diversions to Tamarack I facilities are highest in December and January, and most credits for shortage reductions occur between February and May. About 40% of Tamarack I recharge credits are attributable to dedicated projects and 60% to private recharge projects.

Yield and Score

Tamarack I is credited with a score of 10,000 AF. As shown in Table 1, gross accretions from Tamarack I averaged 18,960 AFY over 2008-2017. The average operational credit for shortage reduction is 8,020 AFY at the Colorado-Nebraska state line. This yield is less than the negotiated score due to the lesser availability of divertible winter flows during the First Increment since 2007 compared to the 1947-1994 OPSTUDY hydrology used for the scoring. At Grand Island, the Tamarack I shortage reduction credits average 7,080 AFY.

Financials

Reductions in shortages to USFWS target flows resulting from Tamarack I are credited to the Program at no cost. Through the South Platte Water Related Activities Program (SPWRAP), Colorado water users pay for the project O&M costs and recharge credit leases.



Tamarack Recharge Area #6



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Table 1: Tamarack I Accounting (all values in AF, rounded to the nearest 10)

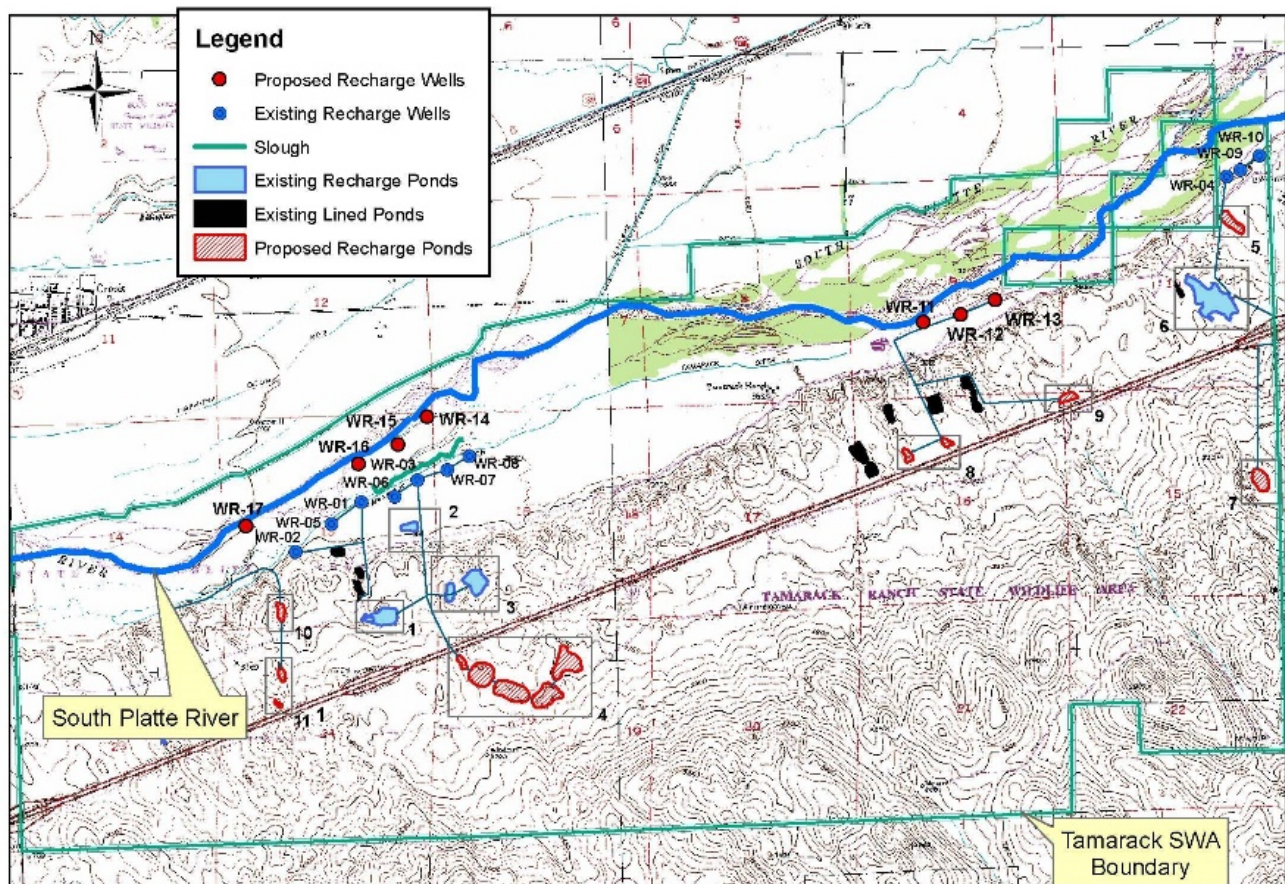
Irrigation Year ¹	Tamarack 1 Net Diversions ²	Tamarack 1 Total Accretions at State Line	Tamarack 1 Credits for Shortage Reduction at State Line	Tamarack 1 Credits Routed to Grand Island
2007	10,600	4,110	3,290	2,850
2008	14,540	10,890	6,760	6,020
2009	1,460	7,570	6,590	5,600
2010	13,430	16,200	7,290	6,670
2011	30,730	26,230	2,740	2,470
2012	10,230	24,000	9,210	8,030
2013	10,500	12,330	6,600	5,590
2014	10,130	17,130	12,930	10,770
2015	15,710	24,390	11,080	10,230
2016	20,090	25,970	8,400	7,690
2017	11,960	24,860	8,620	7,730
Average, 2008-2017³	13,880	18,960	8,020	7,080

¹ An irrigation year runs from November 1 of the previous year through October 31 of the current year. The irrigation year is used here for consistency with reporting by the State of Colorado.

² Calculated as Gross Pumping - Recharge Pond Evaporation - Accretions at State Line

³ The Program began January 2007. Calculated average values exclude the incomplete Irrigation Year 2007.

Note: This table is based on the best available accounting data to date. Minor modifications may be made in the future.



Tamarack I facilities at Tamarack State Wildlife Area (Photo, Map Credits: Vail 2012, Halstead 2012)

