

Lower Granite Trap Operation with relation to ladder temperature and supplemental pumps



2014

Pro: No disruption of passage thru the fish ladder due to warm temperature

Con: Time periods when water temperatures did not support trap operation



Historic Trap Operation Timeframes

	Trap closed	Trap open	Trap closed	Trap open	Trap closed	Trap open	Days close
2013	10-Jul	23-Sep					74
2012	27-Jul	30-Jul	6-Aug	10-Aug	13-Aug	28-Aug	22
2011							0
2010	14-Aug	22-Aug					8
2009	21-Jul	18-Aug	2-Sep	6-Sep			32
2008	9-Aug	24-Aug					15
2007	12-Jul	14-Jul	24-Jul	1-Sep			41
2006	22-Jul	1-Sep					41
2005	29-Jul	5-Sep					39



2014

7/7	trap OOS due to cable failure
7/9	Auxiliary pumps 1,2 turned on
7/23	trap RTS after repair, but insufficient cool water to operate trap
8/1-8/6	emergency pumps installed - operational issues =can't operate aux pump 2-gassing; clogged fuel filter
8/7	trap begins operation 7-11 AM (65-67°F)
8/8 - 8/14	rental pumps operated 0500 - 1500 hrs
8/11	trap shuts down early due to warm temps
8/12	no trap operation due to warm water temps > 70°F, trap was operated on 13th, 14th
8/16	not operated 16th, 17th, 19th, 20th- trap operated 15th, 18th, 21st- then shut down (warm temps)
8/21	24 hr rental pump operation started-
8/22-8/29	trap not operating due to warm temps, rental pumps operating 24 hrs/day
8/30-8/31	trap operated 4 hrs/day; water temps have cooled
9/1	24 hr operation of adult trap with a 10% sample rate
9/11	Rental pump operation discontinued, auxiliary pump 1 still operating
9/17	auxiliary pump #1 shut off
9/24	entire PH OOS all day 0500-1700



Sept 24 Event

- Ground fault takes PH OOS
- No power to fish pumps so lower ladder channel/tailwater elevation differential was out of criteria at all fishway entrances
- Spilling incoming project flow to maintain pool elevation created unfavorable tailrace conditions
- Insufficient ladder passage to allow successful trapping

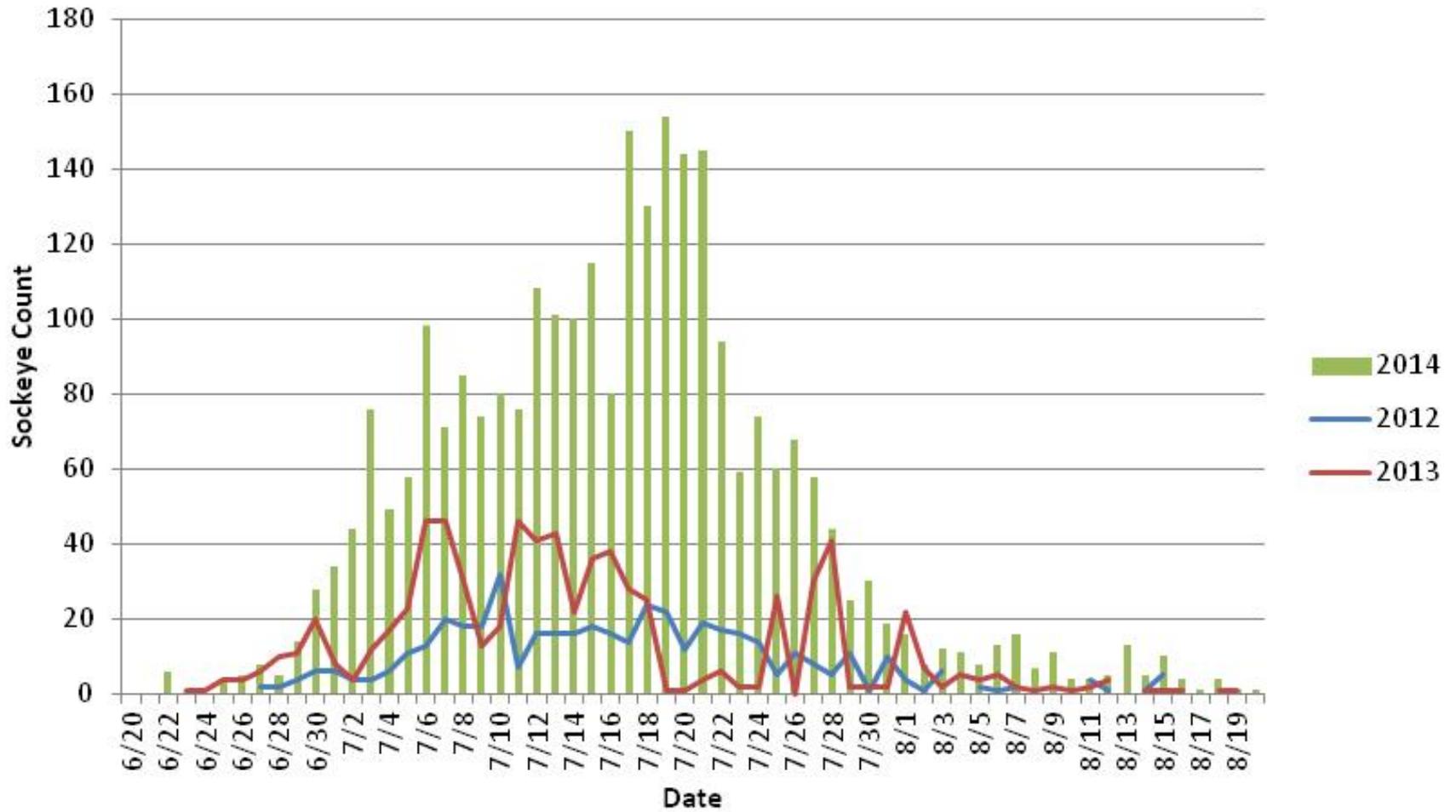


Ladder Passage Timing

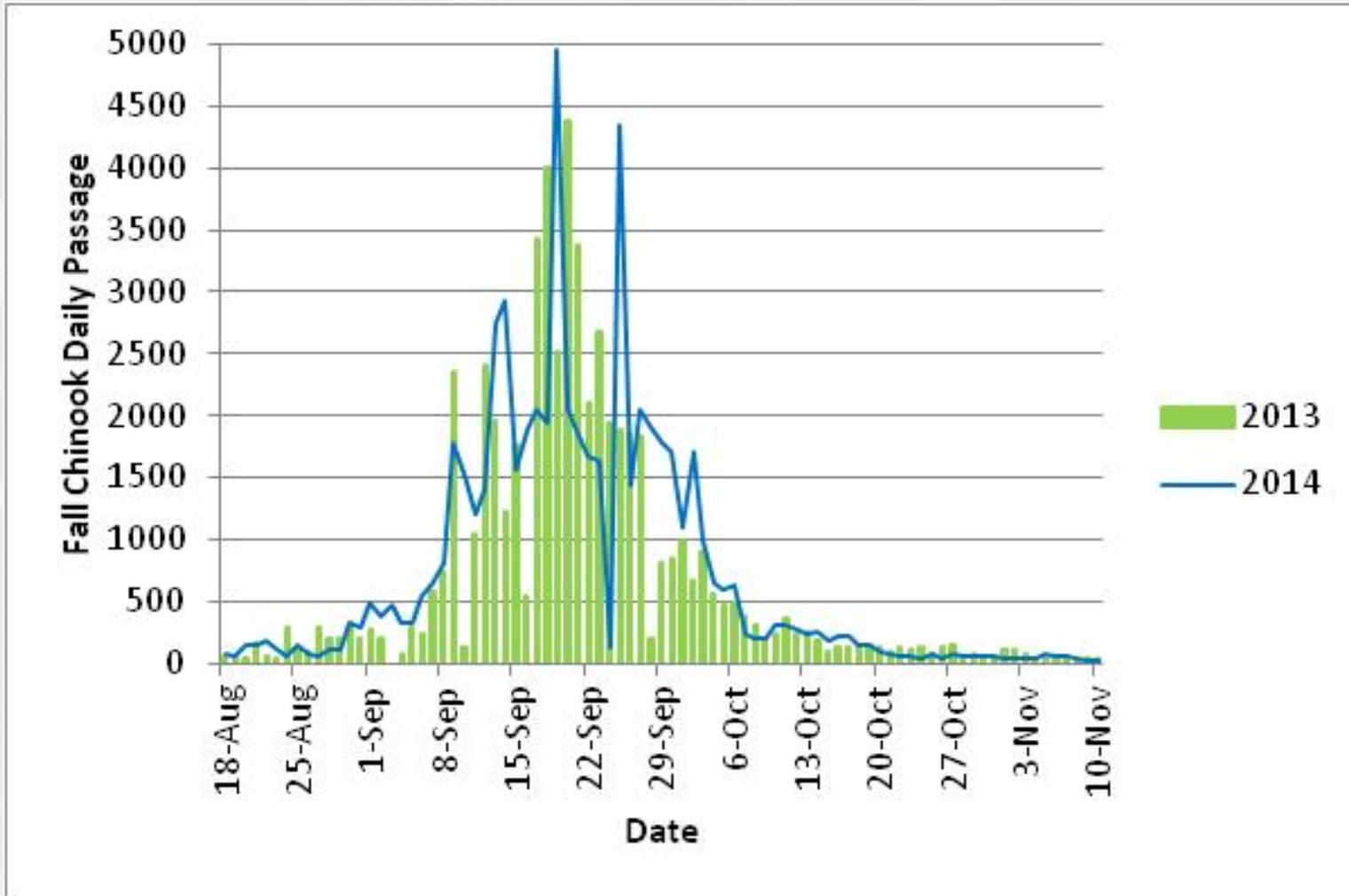
Determines trapping availability as fish move upstream thru adult fish ladder



Lower Granite Passage



Lower Granite Passage



Supplemental Pump Layout

