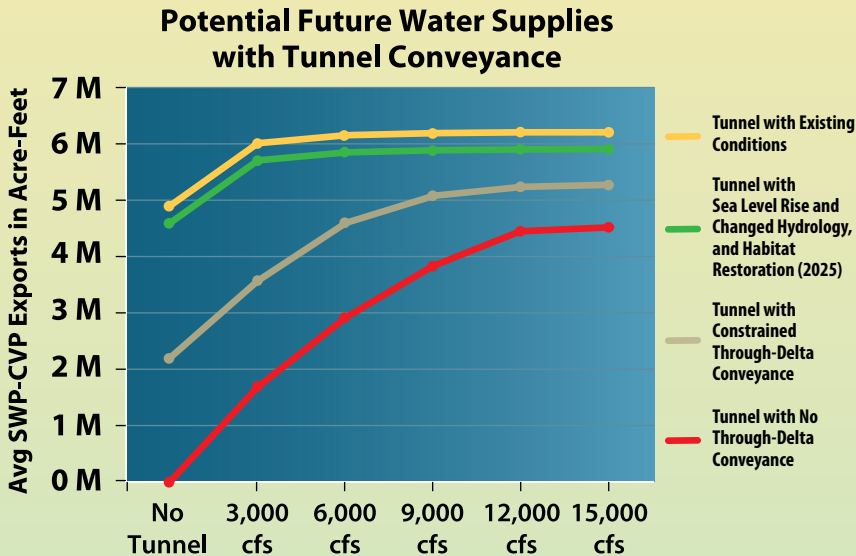


In developing the Bay Delta Conservation Plan (BDCP) potential sizes of a new water conveyance facility were evaluated according to a variety of important factors. These factors include: biological performance (flow patterns for fish), water supply, cost, in-Delta and export water quality; and future conditions. Those future conditions include climate change, seismic and other natural events, potential increased outflow requirements, and potential additional South Delta pumping constraints. Design capacities evaluated were 3,000, 6,000, 9,000, 12,000 and 15,000 cubic feet per second (cfs).

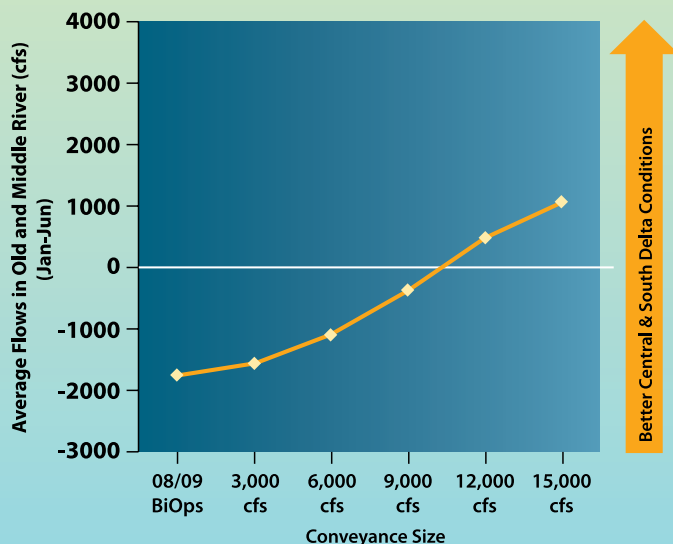
This preliminary evaluation assumed that tunnel facility sizes represent the maximum diversion capacity and would operate under the range of criteria currently under development by the BDCP for fisheries and water supply; each size uses two tunnels for reliability and assumes maximum gravity flow to limit power costs; and each 3,000 cfs size increment requires one additional intake.

Water Supply



- Tunnel sizes ranging between 3,000 and 15,000 cfs provide similar water supplies under existing conditions.
- Smaller tunnel sizes are more effective at providing water supplies under existing conditions and with a future of sea level rise and changed hydrology than in a future with constrained through-Delta conveyance or no through-Delta conveyance.
- Tunnel sizes between 9,000 - 15,000 cfs provide greater water supplies than smaller tunnels in a future where through Delta conveyance is constrained.
- Larger tunnel sizes better alleviate the water supply risk of a changing Delta.

Flows in Central Delta



- The existing pumping facilities in the southern Delta can create reverse flow conditions in the region that can conflict with fish migration patterns. A key benefit of new diversions and conveyance starting in the northern Delta is the ability to restore more natural flow patterns in the Central Delta while providing water supplies.
- Reverse flow conditions improve incrementally with each increase in tunnel size.

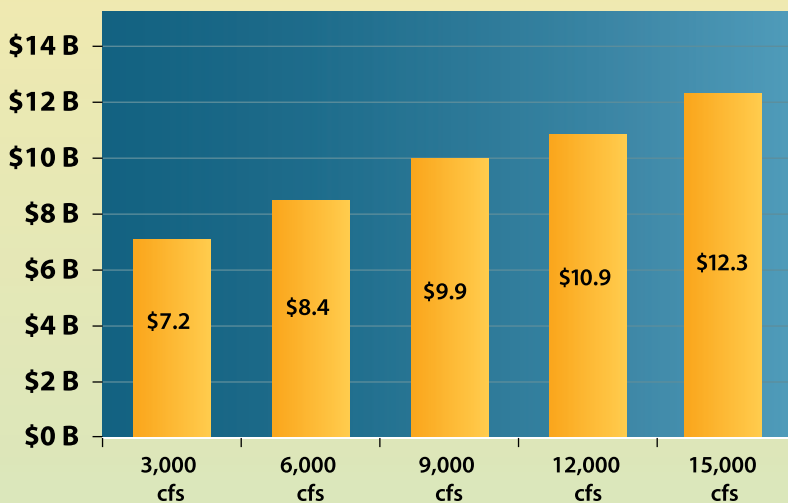
PRELIMINARY EVALUATION OF CONVEYANCE SIZING

Water Quality

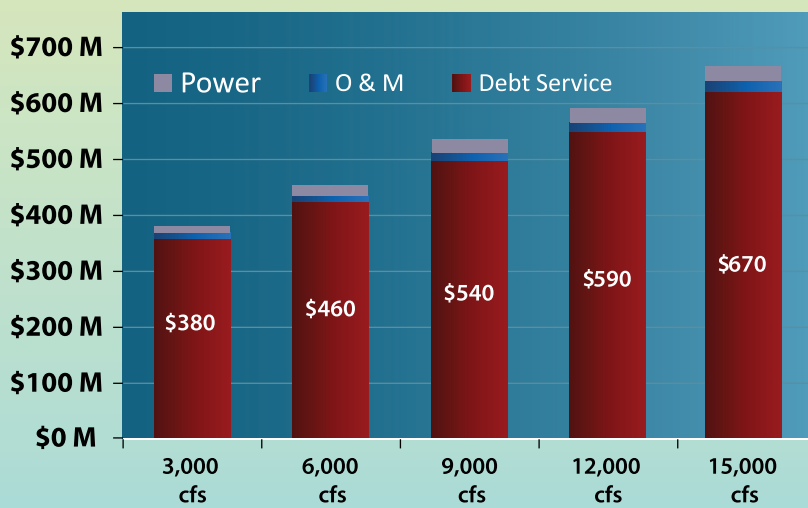
- Export water quality improves by about 5% when tunnel size is increased from 3,000 cfs to 6,000 cfs; then gradually by another 5% with an increase from 6,000 cfs to 15,000 cfs.
- While still meeting water quality standards for salinity, in-Delta water quality measured at Emmaton worsens gradually by about 10% when tunnel capacity increases from 3,000 cfs to 15,000 cfs. The decline is similar if water exports from the southern Delta are further constrained in the future. At Jersey Point, water quality worsens gradually by about 5% as tunnel sizes increase. Water quality remains about the same across tunnel sizes under future scenarios when water exports from the southern Delta are further constrained.

Cost

**Tunnel Conveyance
Estimated Capital Costs**



**New Delta Conveyance
Total Annual Costs**



- Physical tunnel sizes and intakes range between two 18-foot tunnels with 1 intake (3,000 cfs) and two 33-foot tunnels with 5 intakes (15,000 cfs), based on design specifications.

- Cost of a 3,000 cfs tunnel is estimated at \$7.2 billion, slightly more than half of the cost of the largest tunnel under consideration.

- Construction of a 3,000 cfs tunnel could cost three-times more per cfs capacity than a 15,000 cfs tunnel (\$2.4 million and \$0.8 million respectively).

- The cost per acre-foot of incremental water supply varies with size and is lower with smaller sized conveyance under existing hydrology.

The information provided in this document is preliminary and does not represent the entirety of the evaluation. To see the complete presentation provided to the BDCP Steering Committee about the preliminary evaluation of tunnel sizing, please visit: www.baydeltaconservationplan.com. The preliminary tunnel sizing evaluation will be used to help determine the size of the proposed facility to be included in the draft conservation plan. An environmental review of alternatives to the draft conservation plan under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) will include a variety of conveyance sizes among other approaches to meeting the BDCP's purpose.