

What the BDCP studies show and what the Delta needs now

Contra Costa Council Water Task Force

July 21, 2009



What the Studies show

- A Peripheral Canal alone would deliver *less* water not more
 - PC or dual delivers less when it is needed: 50% of the drier years
 - A large PC capacity is largely unused
- Estimated PC costs continue to rise, and will likely exceed \$10 billion
 - Finding the right way to get the best conveyance has not been done
 - A PC does not solve the key conflict: water supply vs. flows for fish
- The PC fight is hampering immediate actions that are needed now

Peripheral Canal Alone Exports Less Water

Bay Delta Conservation Plan Evaluation

Exports, pre-Wanger: 6 million acre-feet/year

Post-Wanger: 4.5 – 5 MAF/year

Peripheral Canal alone: 4.6 MAF/year

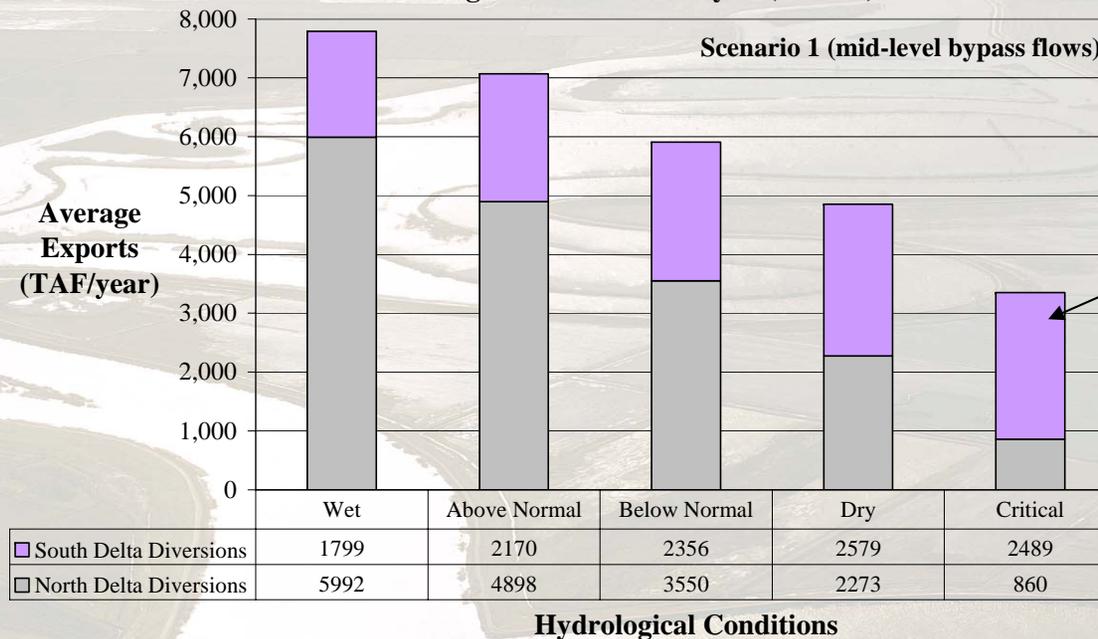
Dual Conveyance: 6 MAF/year

Why does Peripheral Canal Export Less Water?

- **Sacramento River water only!**
 - No water from the San Joaquin River, Mokelumne River or other rivers that flow to the Delta can be exported
- **Sacramento River flows required to protect fish in the river:**
 - Cannot dry up the river
 - Sacramento River carries less than 15,000 cfs 46% of the time
 - Minimum instream flow needed, (9,000 cfs to 15,000 cfs *plus* a percentage of the remainder): this limits what a PC can convey
 - The higher bypass flow conditions recommended by DFG have yet to be studied

Most of the water exported in drier years must still go through the Delta

Comparison of Water Supply Diversion Location for Different Hydrological Conditions
BDCP Modeling for DRERIP Analysis (1/11/09)



75% of dry year supplies must go through the South Delta

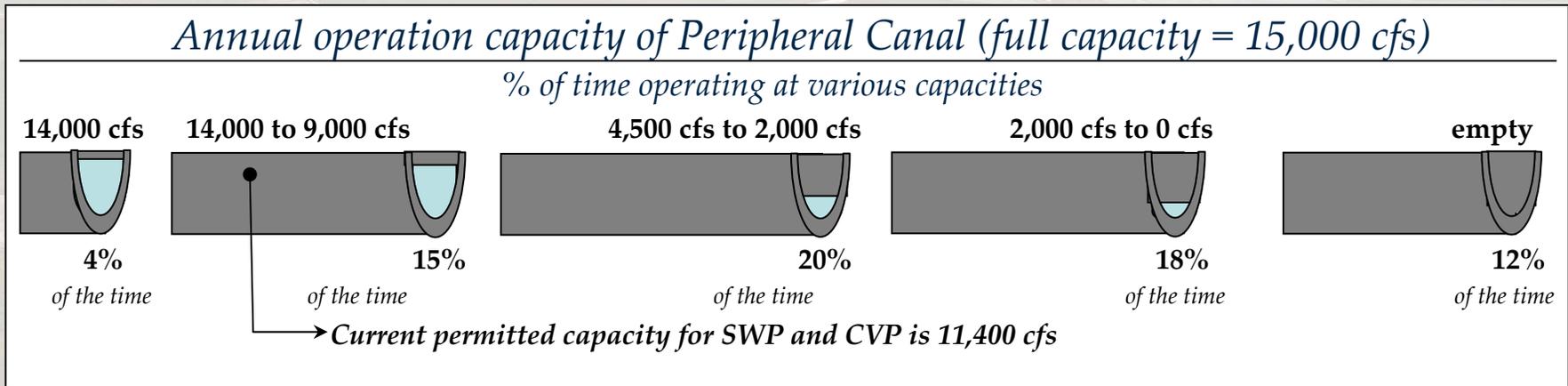
Dry year average is no more than current conditions!

In the driest years, most of the water must come from the south Delta (same as now) because there is so little water in the Sacramento River

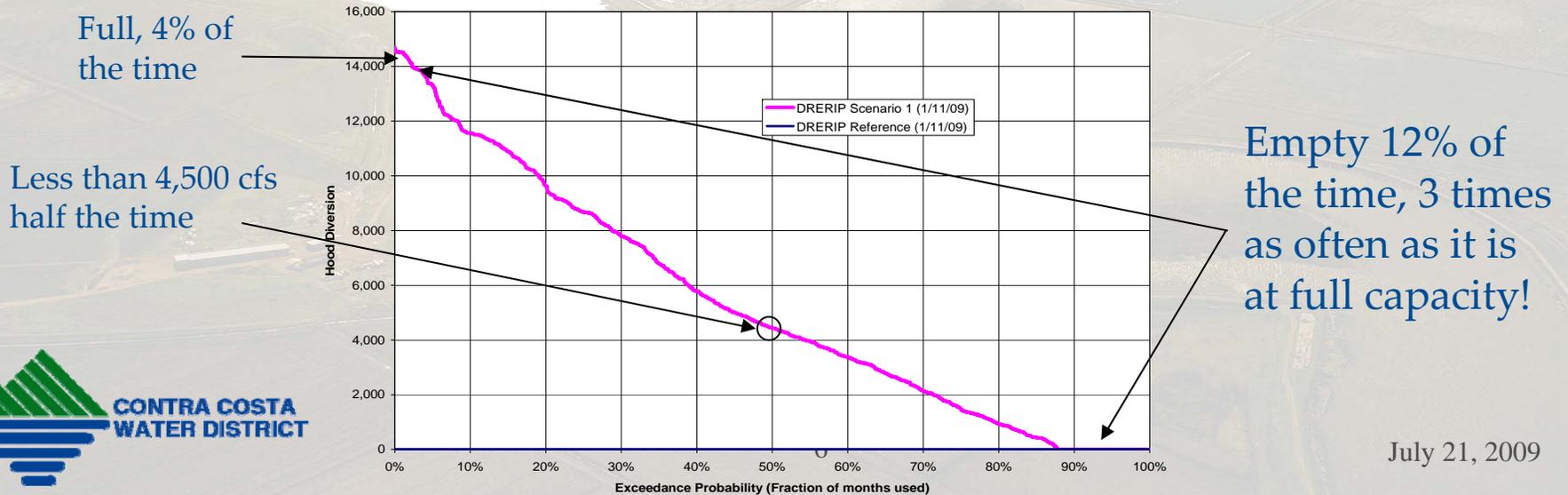
Note: DFG recommended higher Bypass flows not yet considered

A Large Peripheral Canal would be largely unused:

Half the time, the canal carries less than 4,500 cfs! 12% of the time it is empty!

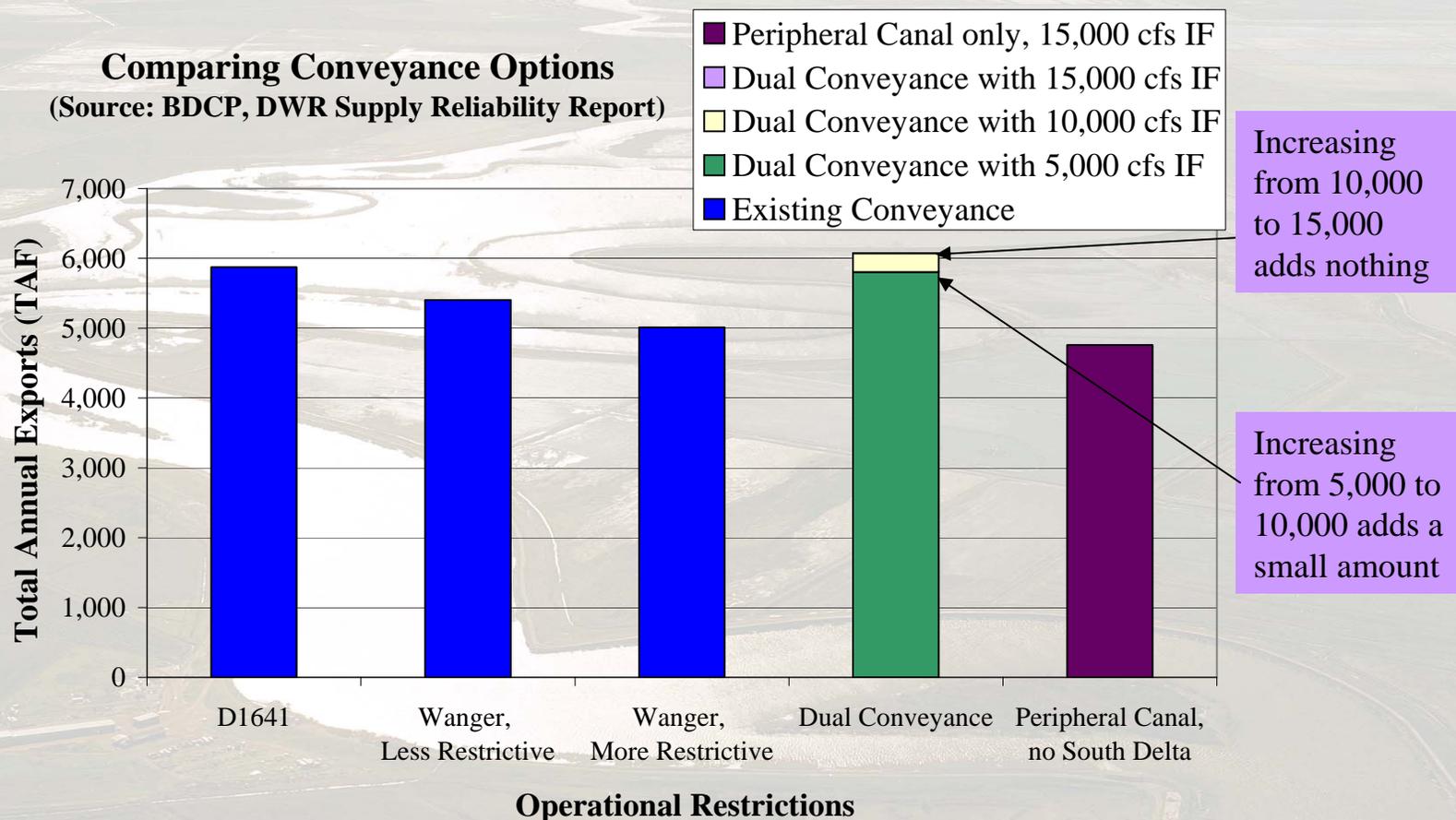


Hood Diversion Use



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BDCP Studies show a 5,000 cfs pipeline provides nearly the same water supply as a 15,000 canal



Past Cost Estimates Were Too Low

- DWR's \$4.2 billion estimate in *2007 dollars* for earth canal left out many needed features (it would have been flooded!).
- MWD's \$5.1 billion estimate (*2007 dollars*) is really \$8.4 billion at mid-point of construction (the true cost).

But that still does not include:

- Seismic safety so it can be repaired after earthquake
 - Costs for land severance
 - Repairing drainage and irrigation on the islands it crosses
 - Costs for island levee upgrades to protect canal
- **Actual costs in *2025 dollars* will be closer to \$10 to \$12 billion**



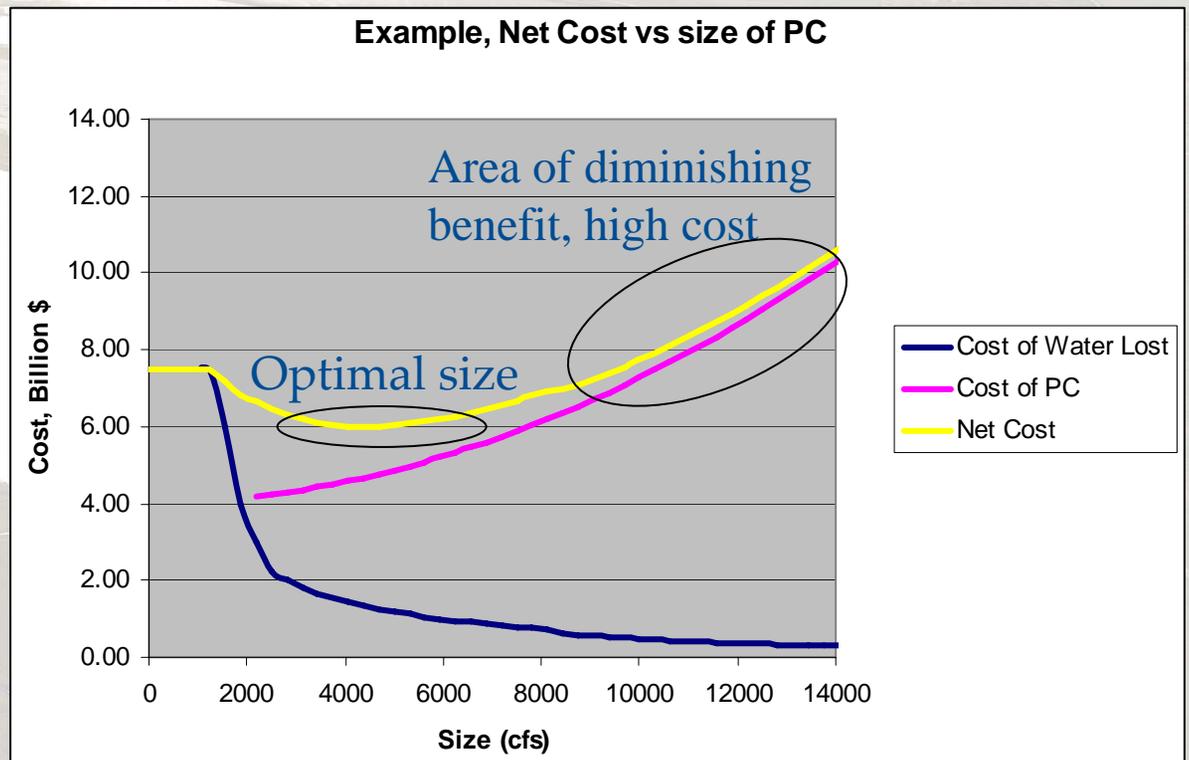
Delays = even more costs

- Large facility will take 5 years longer to build than a 5,000 cfs pipeline because of land acquisition and mitigation
- Estimated PC costs continue to rise, and will likely exceed \$10 billion for 15,000 cfs (mid-point construction-what must be financed)

Finding the optimal conveyance has not been done

Optimal Size Evaluation

- Water supply improves greatly with small facility, reducing cost of “lost water”
- Benefits of capacity diminish rapidly as size increases
- Costs and schedule increase with size
 - Mid-point construction:
 - 5,000 cfs at 2018
 - 15,000 cfs at 2023
- SWP Historically:
 - Cost estimates - low
 - Water promises - high



Environmental problems yet to be addressed

It takes a river to make an estuary:

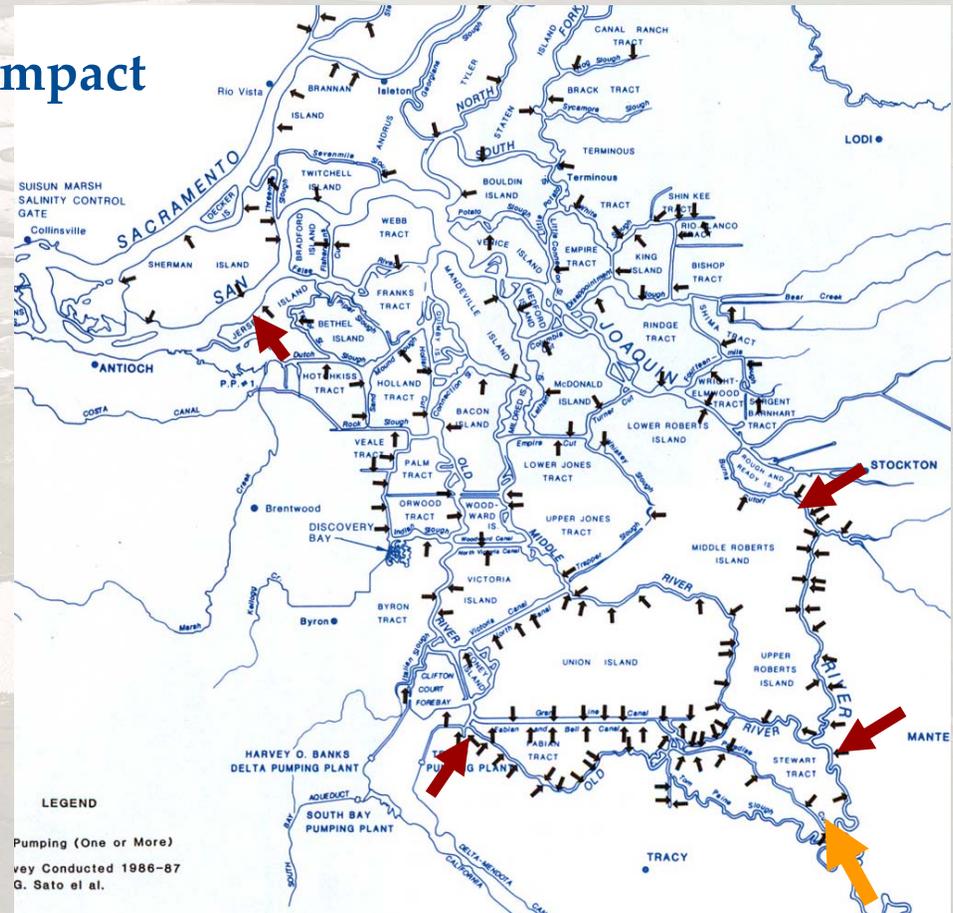
Tidal flows combined with low San Joaquin River flows make a stagnant, warm, polluted region in the South Delta.

A PC worsens the problem

South Delta diversions reduce the impact

South Delta “flows”:

- San Joaquin River
(largely drainage and wastewater)
- Urban wastewater
(Stockton, Manteca, Tracy...)
- Ag drainage



BDCP studies show “variable salinity” is difficult to attain without serious conflicts:

- Increasing salinity to reduce Egeria (water weed) takes 5 to 6 months of zero Delta outflow
- When flows are reduced to that level they will harm salmon
- Corbicula (overbite clam) will thrive under those conditions
- If only done in very dry years, it could be 25 years or more between “treatments”

The key water conflict remains

Freshwater flows are needed to protect fisheries

- Salmon flows for migration
- Spring flows for estuarine species
- Fall salinity for estuarine species

Meeting needs of fisheries will require reduced water supplies

Inactivity on key issues has worsened water supply reliability

Implementation of Immediate Actions would have reduced the water supply impacts of the delta smelt actions during the last two years

- Flow control gates (2-Gates) would have limited entrainment of delta smelt into the South Delta: permitting for this project has finally started
- Fish screens at Clifton Court Forebay would have reduced salvage and prevented the shutdown of facilities at the end of May 2009 due to take limits: CUWA proposal to start

The Need for Fish Screens

Fish screens provide benefits in the near-term

Operations this year:

- This year exports were reduced because of take starting mid-May
 - SLDMWA estimates more than 200 TAF lost since then
- 2,500 cfs fish screens at Clifton Court Forebay would have protected fish from all export pumping and eliminated take in May and June
- Screens could eliminate the water supply impacts of take limits

Immediate Actions Still Needed

- BDCP implementation 10 to 15 years away
- Fisheries status remains poor
- Other stressors (pollution, invasive species, etc.) not being addressed
- Lawsuits continue to increase (over 20 active)
- Water supplies will remain unreliable