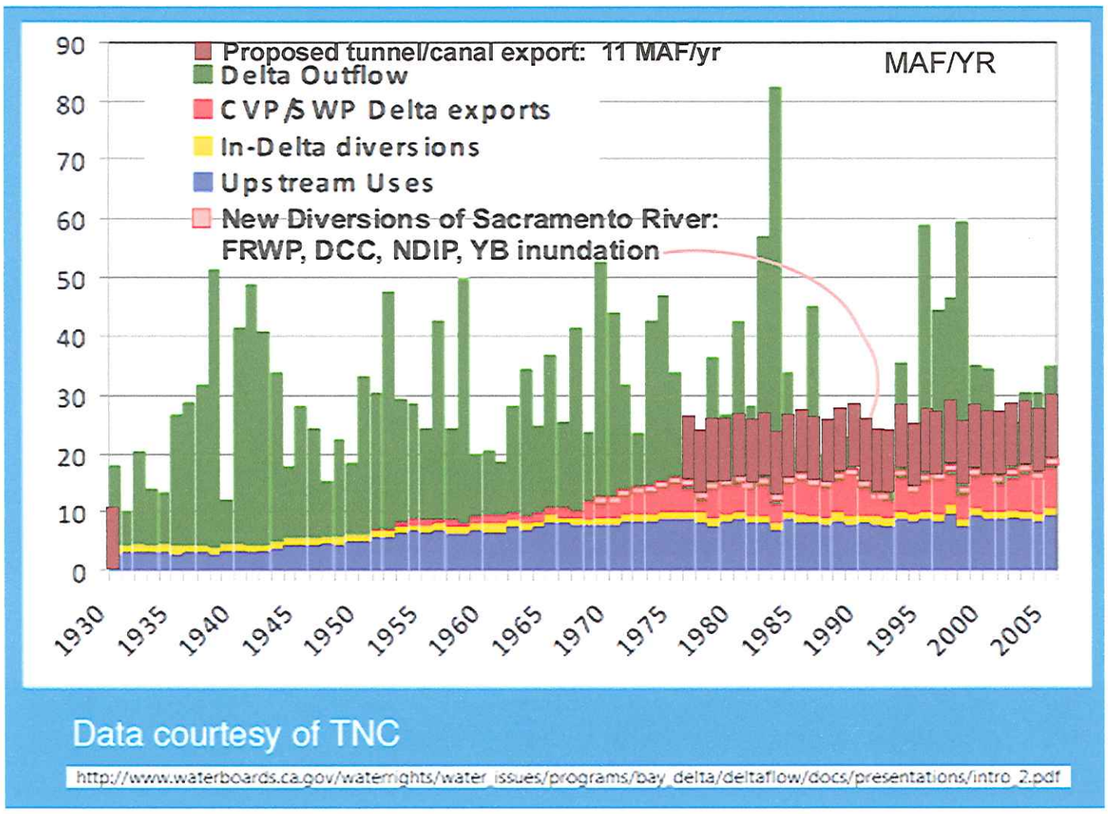
Impact of Freeport pumps on average Delta Outflow

Take a close look at the impact of the Freeport Regional Water Project: The new water intake facility and pumping plant—located on the Sacramento River upstream of Freeport—was built to pump diverted Sacramento River water through the new pipelines to other FRWP facilities. Eight vertical turbine pumps with 2,000-hp electric induction motors **has the capacity to pump up to 185 million gallons per day** of water. 1 mgd equals 3.069 acre feet per day. So Freeport pumps capacity totals 567.765 acre feet per day. (185 mgd x 3.069).
567.765 afd x 365 days equals 207,234.22 acre feet annually. Another way to calculate the water diversion is to use 1 million gallons per day equals 1,120 acre feet per year. So 185 mgd x 1,120 afy = 207,200 acre feet per year to be diverted from the Sacramento River. Add to this the plans to reoperate the Delta Cross Channel to divert more Sacramento River Water, and the seasonal inundation of the Yolo Bypass, which will divert even more Sacramento River water, thereby further reducing annual Delta outflows. In wet years, the Delta may have the capicity but in normal and dry years, clearly it will not. Given DWR past history of diverting water even in dry years, what will stop DWR from diverting to full new capaity even in dry years? Added to the two charts below (in pink) is the diversion of Freeport pumps, DDC reoperation and Yolo Bypass planned diversions, all ESTIMATES, to give an idea of what flow would have looked like in the Delta since 1975 had these facilities been built and in operation during these time frames. All combined, an additional million acre feet per year would be estimated to be diverted from the Sacramento River

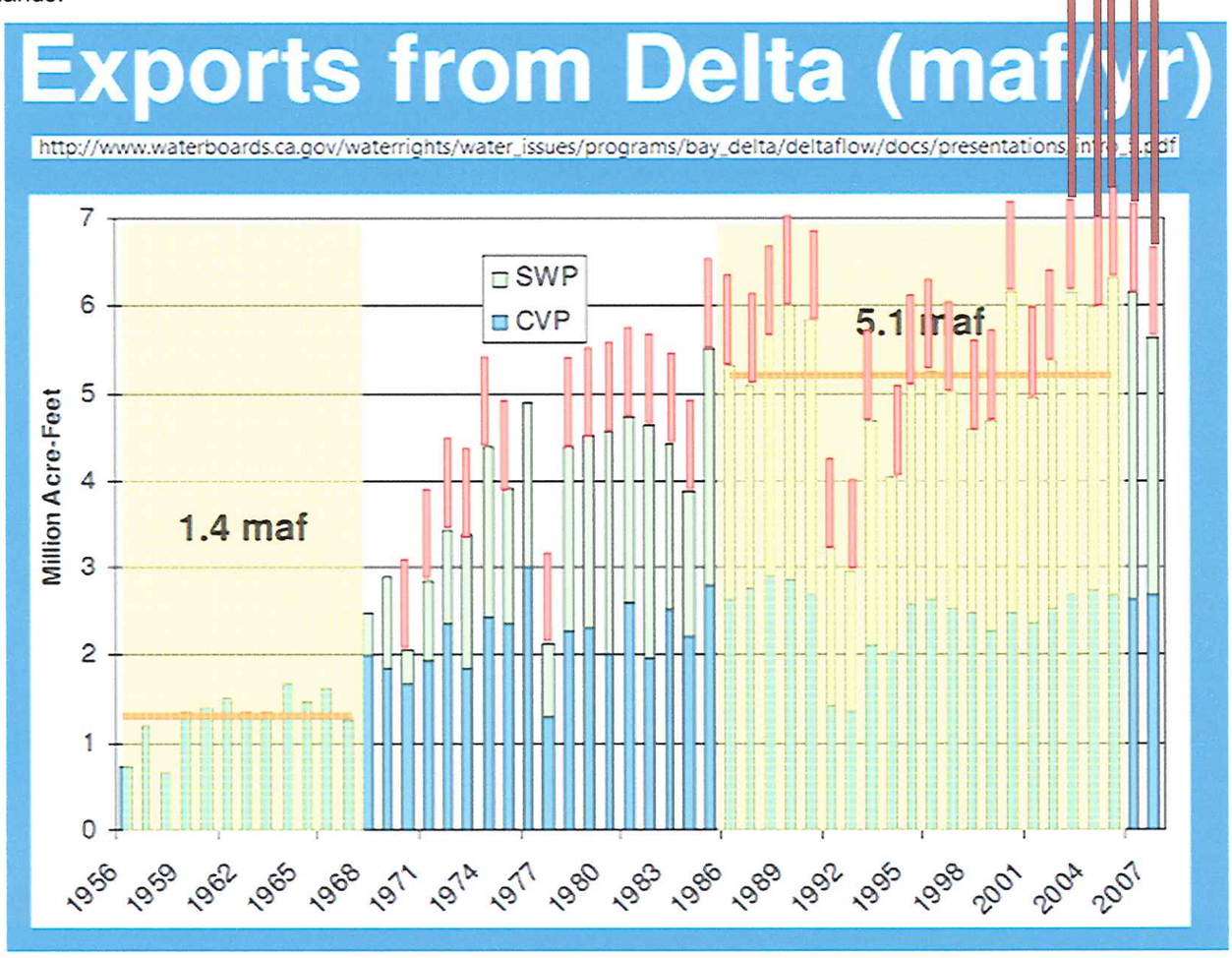
See PINK chart additions



Impact of proposed new 15,000 cfs tunnel or canal, added to the FRWP, DCC, YB and new surface storage plans possible under the "Interim Delta Plan"

See **BROWN** chart addition:
It is clear to see that if you apply the possible "Interim" actions with the proposed "Delta Plan" tunnel, and imagine the projects had been completed in 1975, many of the years since then there would have been ***no*** fresh water flow in the Delta, (the green bars) unless the tunnel/canal and pumps were Stopped.

1 maf planned to be diverted from the Sacramento River using a combination of Freeport pumps, DDC reoperation & Mokelumnke dredging, Yolo Bypass annual inundation and additiona surface storage added to the above chart in **PINK** below. Add the 11 maf/yr diverted by the planned tunnel or canal of the "Delta Plan" and the destruction of the freshwater Delta will be assured. It takes just one irrigation cycle using to much saltwater to destroy good, productive Delta farm lands!



Impact of a new, additional tunnel or canal, if built, and in additiona to the "central canal" completed as part of the interim plan:

New Tunnel of 15,000 cfs equates to the following gallons and acre feet per year:

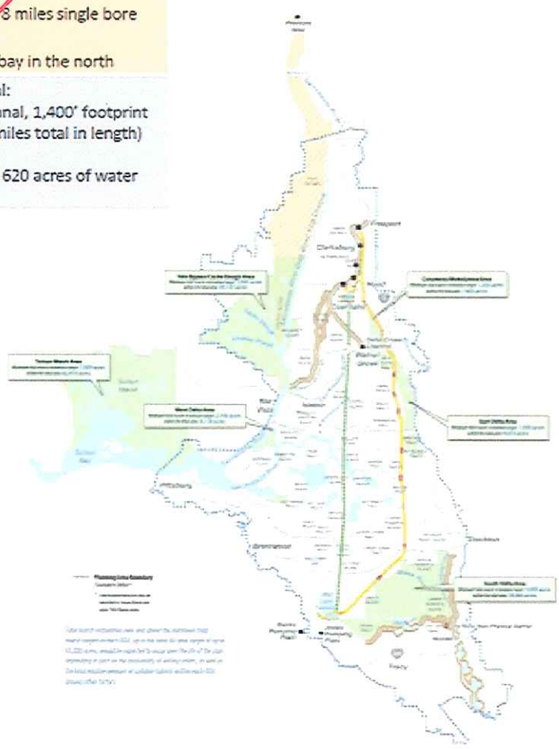
15,000 cfs x 646,320 gallons = 96,948,000 gallons per day (rounded 10 million gallons per day)

15,000 x 1.98 acre feet per day = 29,700 total acre feet per day x 365 days = 10,840,500 acre feet per year!!!
(Rounded 11 million acre feet per year)

Potential Conveyance

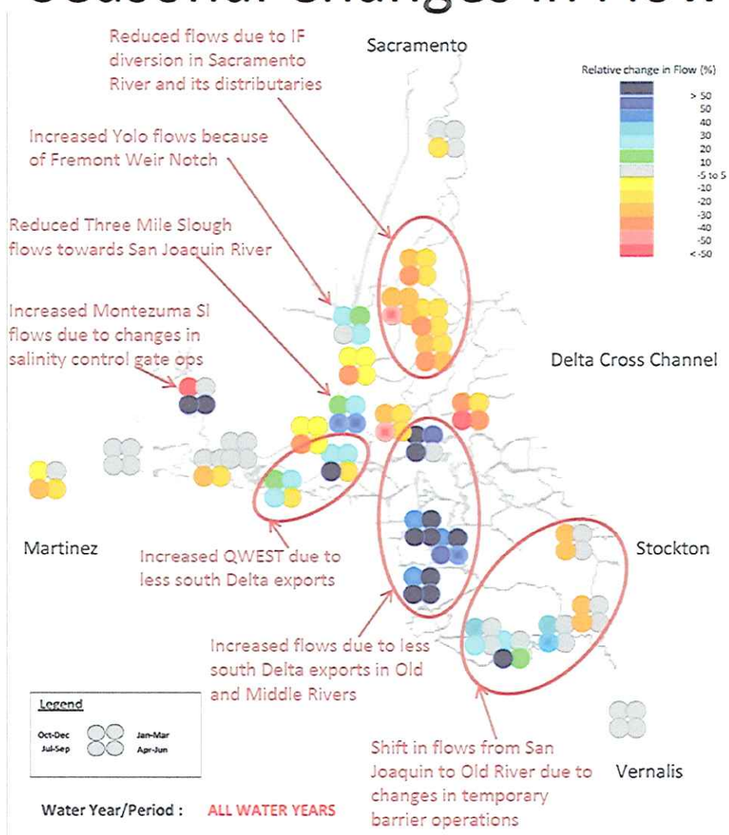
15,000 cfs Tunnel:
- 35 miles twin bore 33' ID, +/- 150' deep
- Intake tunnel 8 miles single bore 25' – 33' ID
- 750 acre forebay in the north

15,000 cfs Canal:
- 40 miles of canal, 1,400' footprint
- 4 tunnels (2 miles total in length)
- 8 siphons
- Forebay with 620 acres of water surface area



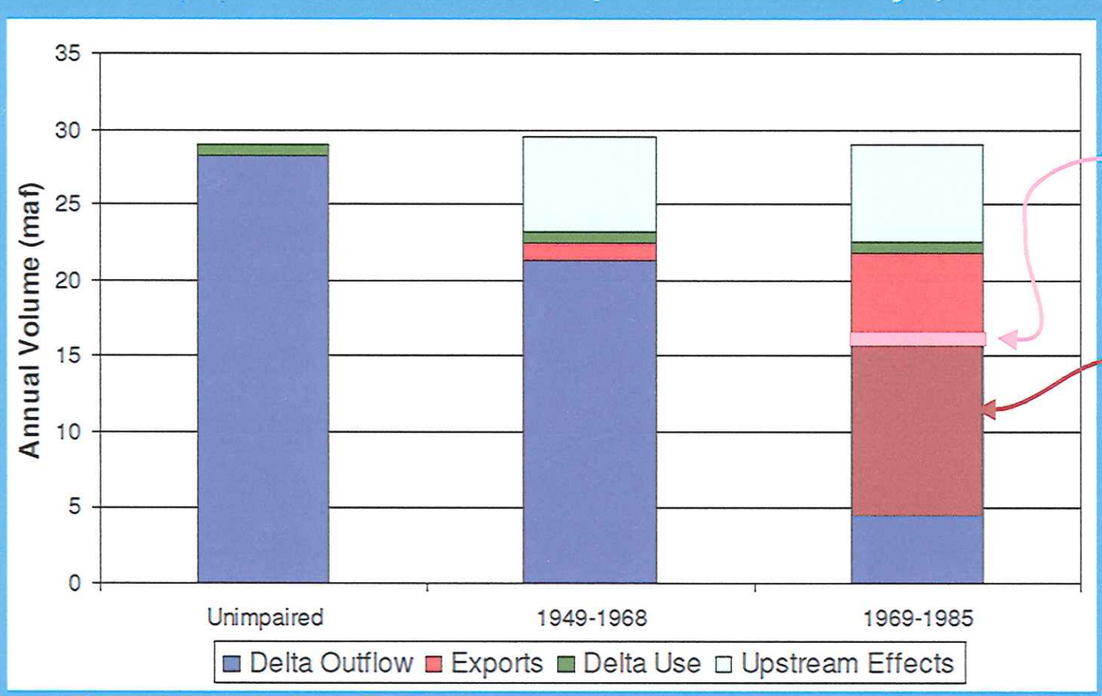
http://baydeltaconservationplan.com/Lists/Calendar/Attachments/112/6.17.10 SC Presentation Modeling Update.pdf

Seasonal Changes in Flow



http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/presentations/intro_2.pdf

Total Delta Impairments
(upstream and exports in maf/yr)



Added to the chart:
1 maf of diversion from the Sacramento River, combining the Freeport pumps, DCC and Mokelumnke River revisions planned, new surface storage and annual Yolo Bypass inundation plans.

Added to chart:
11 million acre feet per year diverted from the Sacramento River, if the new canal or tunnel gets built, which would leave less that 5 million acre feet per year for in-Delta and environmental use on an AVERAGE year. Low rain years there would be no fresh water left in the Delta!

Submitted to DSC 8-26-2010 by N. Suard, Snug Harbor Resorts, LLC in opposition to DWR plans to excessively reduce freshwater flow in the Delta, including Steamboat and Sutter Sloughs.