



California Water Commission

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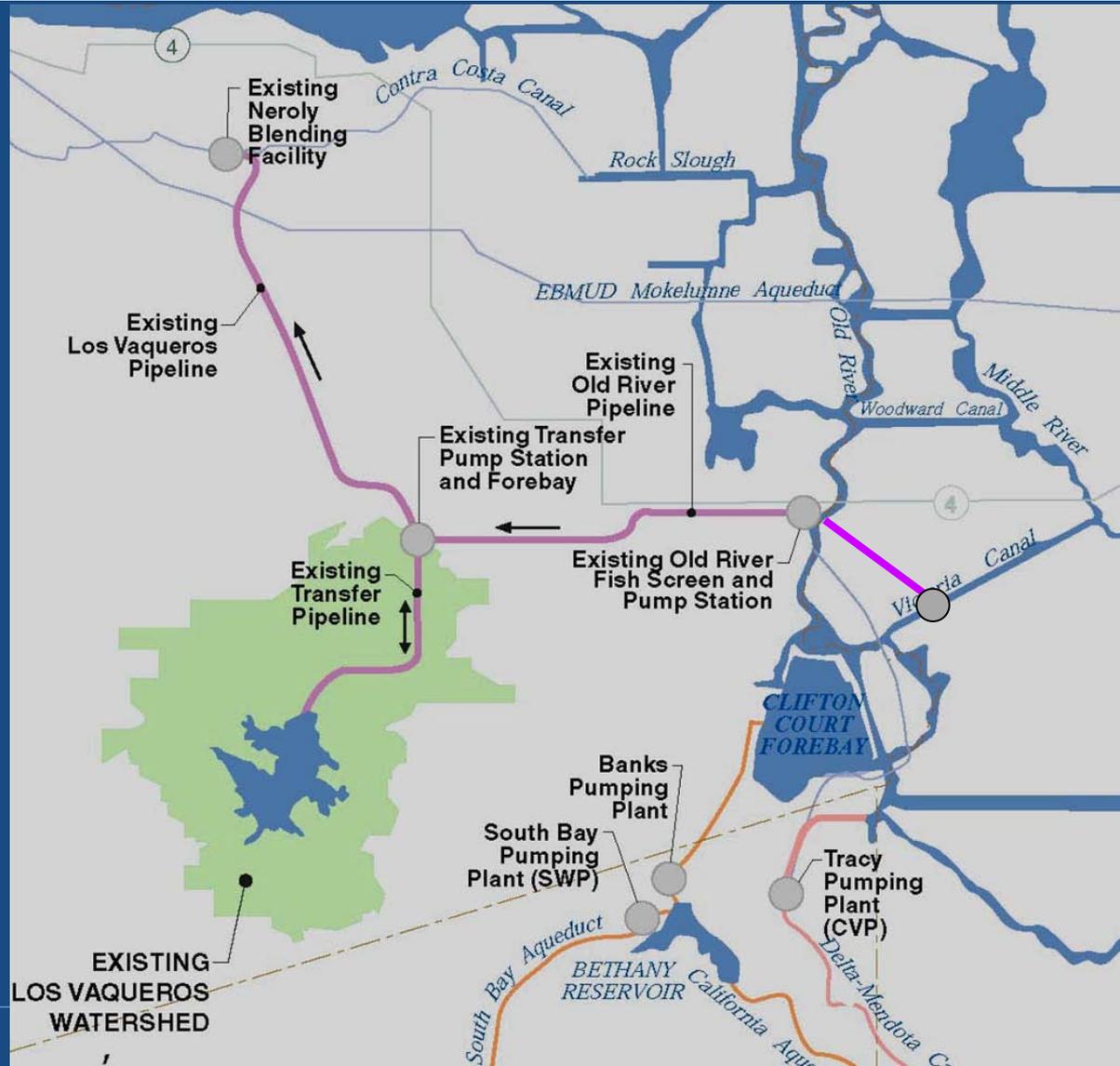
Los Vaqueros Project: Storage Purpose is Unique

- Primary Purpose is water quality, NOT water supply
- Not operated for water supply yield
- Fills when water quality is good
- Releases to:
 - Protect fisheries (no diversion period)
 - Water quality blending (high quality water all year)
 - Meet water demands in an emergency
- Other purposes:
 - Flood control
 - Recreation

Existing Los Vaqueros Project

Existing Operations:

- Intakes at Old River and Victoria Canal
- Water storage at Los Vaqueros Reservoir
- Blend reservoir water with Delta water to deliver high quality water year round



Existing Los Vaqueros Project

- Provides Emergency Storage
 - Protects against a catastrophe in the Delta
- Improves Water Quality
 - Changes the timing and location of diversions
 - Stores water for blending when Delta water quality is poor
- Enhances Delta Environment
 - State-of-the-art fish screens
 - Flexible timing and location of diversion
- Provides Watershed Resource Management
 - Protects Water Quality
 - Protects Sensitive Resources
 - Provides Appropriate Recreation
- Provides Flood Control Protection



Los Vaqueros Reservoir Expansion Potential Purposes

- Improve drought supplies and drinking water quality for CCWD & Bay Area water agencies
- Refuge supplies
- Dedicate yield to allow
 - Diversion shifts
 - Diversion reductions
- Emergency supplies



Assigning Value to Purposes

- Separable costs, remaining benefits
 - Game theory (validation)
- Alternatives and costs
- Easy example
 - Refuge supplies (cost of yield, alternatives)
- Harder examples
 - Flood control
 - Recreation
 - Environmental water (value of result? Cost of yield? Cost of alternative)



Benefit-to-Cost ratio

- All benefits
 - Water quality
 - Direct: cost of treatment
 - Indirect: longer life of appliances
 - Emergency supply
 - Risk (low probability times high cost)
 - Cost of alternatives
 - Fisheries
 - Fraction of yield
 - Fraction of cost separated from non-yield benefits
 - Recreation (seldom pays)

Related benefits

- Watershed values
 - Terrestrial species habitat values, Value of restricting use
- Incidental benefits (not asked for, just come with the project)
- Can be incorporated

Methodologies Exist



Methodologies Are not Simple or Inexpensive



But you can be successful

