Excerpt From Chapter 7 of Draft IID Plan
Agricultural Demand Management Section

Hand out for Demand Work Group- 12/8/190

7.1.1 Findings and Conclusions

The most cost-effective conservation measures have already been implemented, or will be implemented as part of the Definite Plan. Therefore, the conservation potential that is left is the most difficult and most costly. The water yield of some water conservation measures will not be known until the water conservation measures proposed for the QSA/Transfer Agreements have been implemented.

Achievable Systems Conservation and On-Farm Conservation. Of the potential water conservation projects only a limited amount of yield is achievable.

- System Conservation projects not currently planned for implementation as part of the QSA/Transfer Agreements and Definite Plan could provide a total of 40,400 acre-feet per year: 30,000 from full IID system automation; 8,000 from identified 'Not Built' projects; and 2,400 from additional seepage reduction. The cost for system conservation is estimated to be $471 per acre-foot for 10,400 acre-feet and $1,143 per acre-foot for 40,400 acre-feet.
    - The 30,000 acre feet from full IID systems automation may be available in the mid-term after 2020 but yields would be uncertain until such time as an operational history for the Definite Plan has been observed.
    - Of these, the 'Not Built' and Canal lining projects could be implemented in the near-term and provide 10,400 acre feet of water for MCI uses.
- Cost for on-farm conservation is estimated to range from $523 to $911 per acre foot and averaged $717 per acre-foot for about 60,000 acre-feet or potential yield. Either performance/result-based payment incentives and/or conservation practice payment incentives could be used to make it profitable for farmers to participate. The degree of participation that might occur is unknown. This level of uncertainty makes it hard to quantify firm yield of additional water that could be apportioned to MCI uses.

Infeasible Actions. Agricultural conservation actions determine not applicable or feasible include:

- Replacing concrete-lined canals with pipelines to reduce evaporation is a non-feasible option due to costs.
- Reduction in tilewater is not considered a conservation opportunity because of the leaching requirements in IID.

Fallowing. A well managed 'in valley' fallow program could provide water for new MCI uses but there are substantive political, economic, and environmental constraints that need to be addressed to ensure third-party effects and impacts are addressed.

- Starting in 2013 and continuing through 2017, fallowing will be needed on approximately 5 to 10 percent of the IID lands to conserve the 150,000 acre feet needed to meet interim QSA/Transfer and Salton Sea mitigation requirements. After 2018, the fallowing for the QSA/Transfer Agreement and Salton Sea mitigation will be discontinued. As a result, this could constrain additional fallowing for purposes of MCI supply prior to 2018. After that time, fallowing can could be implemented and the resulting water use savings would be easy to quantify and apportion to new MCI uses.
- IID develop programs and policies to accommodate 'in-valley' temporary or long-term fallowing
- The cost of water from fallowing could vary ($85 to $400) and yield is directly related to the amount of land available for fallowing either by willing growers or through IID's Western Farmlands. Costs for fallowing Western Farm Lands would be related to the cost of the bonds on the land.
- No IID or Imperial County policies were identified which would strictly prohibit fallowing for purposes of providing water for non-agricultural in valley uses, but there are significant political challenges and potential third-party and environmental effects which must be addressed if expansion of current fallowing program were to be considered.

Crop Selection and Yield Reduction. For eliminating one irrigation and one cutting on alfalfa, we might achieve 0.5 acre-feet per acre at a cost similar to water savings from fallowing ($200 per acre-foot). There is potential to conserve about 50,000 acre-feet per year from alfalfa because there are over 100,000 acres of alfalfa in the Valley. The amount potential water savings would be influenced by the payment for irrigation reduction offered. Such a program is would have high administrative overhead and would need to be closely monitored for compliance. This could be part of a longer term adaptive management strategy to be reconsidered one the Definite Plan has been implemented and there is an operational history with which to gage the success of the agricultural water conservation efforts.

Reclamation of Agricultural Drain Water. There is recoverable water from IID drains, or from the New or Alamo River that represents a significant and potentially useful source of water. There is a potential to readily recover 50,000 acre feet to meet IID plan objectives. Such water could have the potential to impact drain and riparian habitat and would require significant environmental review to evaluate impacts and mitigation requirements.

Managed Marsh Drain Water. There is an estimated 4,500 acre-feet per year of managed marsh outflows which should be better than typical IID drain water, but the recoverability, need for treatment and potential to use this water is not known and cannot be easily determined until there is an operational history. This water could be most easily recovered for agricultural use.

7.1.2 Recommendation

AWC 1) Proceed with implementation of the Definite Plan and Systems Conservation Plan program actions planned as part of the QSA/Transfer Agreements, evaluate the program once there is an operational history, and use and adaptive management strategy to plan additional measures for implementation once the success and effectiveness of the program can be measured after 2020.

AWC 2) Move forward to finance and construct the Canal Lining and 'Not-Build' QSA/Transfer Agreements Systems Conservation Projects as a near-term solution to provide measurable water for industrial use. These projects could be used to provide an up to 10,400 acre feet for future MCI uses. Aggressively develop a funding mechanism and policies that can be put in place to allow for use of this water for purposes of mitigating for the potentially significant impacts associated with increased industrial water demands for geothermal projects already in the Imperial County Planning queue.

AWC 3) Additional on-farm conservation beyond that already anticipated in the Definite Plan to meet QSA requirements should be set aside from further consideration as part of a IID Plan program or as a source for future MCI supplies and the proposed industrial water portfolio. Additional on-farm conservation should be part of a longer term adaptive management strategy to be reconsidered one the Definite Plan has been implemented and there is an operational history with which to gage the success of the agricultural water conservation efforts.

AWC 4) Review development of an In-Valley fallowing Program by expanding or modifying the current fallowing program. In developing the program there should be the full participation and input of all the stakeholders in the IID area. Fallowing for in-valley uses could provide a sure and cost effective method to reduce agricultural demands and apportion water to new industrial uses but only if a program can be designed that is fair; equitable; mitigates for any third-party and environmental effects; is voluntary and has the support of the farm community. This needs to be closely tied to the policy alternatives discussed in Chapter 9.