

## Technology Session Conclusions and Recommendations

- **Planning of new facilities – Establish treatment objectives first and determine which processes will aid in reaching the objectives. Then look at the technological alternatives before heading into implementation phase. In reviewing alternatives look at cost (energy cost, maintenance, operations), footprint, evaluate capability of personnel, and training needs to operate. Plan for future regulatory requirements. Treatment of industrial/non domestic waste, such as heavy metals. Sustainability of plant.**
- **Stay informed of continually emerging technology, such as forward osmosis that is currently being researched and a process that will reduce energy costs.**
- **Existing plants – continually look at ways to optimize and improve existing facilities through new technologies and methods to reduce operation and maintenance costs. Also, keeping existing infrastructure up to par with updated/new regulations.**
- **Further explore beneficial reuse of effluent (direct/indirect). Contending with social/public concerns and perceptions.**
- **Specific recommendations for the South Bay International Waste Water Treatment Plant SBIWWTP (Binational project) - Items to be explored**
  - Returning effluent to Mexico per Minute 283
  - Anaerobic digestion to reduce sludge volume
  - Cogeneration to offset power costs
- **Recommend standardization of treatment requirements (quality of effluent/sludge) along the border – same standards in the United States and Mexico.**
- **Reduce energy costs for water and wastewater treatment**
  - Identify operation change opportunities.
  - Conduct modeling of existing system to shave peaks.
  - Flow managements by using SCADA and offline/offline storage (allowing treatment to take place during off peak hours)
  - Reeducate staff on importance of energy savings and on methods to save energy costs.
  - Re-examine existing systems. Review Operation and Maintenance manuals to verify the system is operating at maximum efficiency.
  - Conduct feasibility studies.
  - Review alternative energy options (cogenerations, macrohydro, biogas, FOG (brown grease)).

- **Conduct Public and Stakeholder Outreach – Engages public and stakeholders, ask for ideas, have them share their views and get their support for projects.**
- **Triple Bottom Line Analysis – Looks at environmental, economic, and social impacts.**
- **Need to look at other options for providing drinking water for residents along the border outside of the centrally treated options. For residents outside the grid, in rural areas, need to look at treatment options per household. Providing centrally treated water to these areas is cost prohibitive.**
  - Need to determine how many people lack access to sanitation and treated water
  - Need community involvement for implementation of household water purification systems. Review treatment options.
  - Combine potable water treatments with sanitation and hygiene programs for the public.