Strengthening The Institutions Responsible for Border Sanitation

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Strengths

- New and/or Improved Wastewater Treatment Facilities
- Collection Systems Improvements
- Operator Training Programs

Challenges

- Protecting the Public Health
- Setting/Enforcing Environmental Regulations
- Meeting Permit Requirements
- Institutional Strengthening
Institutional Strengthening

- On the Border - New and improved Wastewater Treatment Facilities in the U.S. and Mexico since 2000 now treat 100’s of millions of gallons each day, 89% coverage
  - Juarez
  - Matamoros
  - Reynosa
  - Laredo and Nuevo Laredo
  - Del Rio
  - Eagle Pass
Institutional Strengthening

• On the Border - Collection Systems improvements have dramatically reduced untreated sewage overflows into the border waterways

  • Rio Grande/Rio Bravo and its tributaries
  • Colorado River/Rio Colorado
  • Tijuana River
Institutional Strengthening

- Operator Training Programs
  - Mandatory Training for California, Arizona, New Mexico and Texas
    - Administered by each State under the EPA Clean Water Act
  - Voluntary Training Program for Mexico
    - Administered by Sociedad Mexicana de Aguas, AC (SMAAC) and recognized by the States and CONAGUA
    - CSUS Program translated and used in the western part of Mexico
Examples of Training Successes and Challenges

- **Case 1** – Large Utility - transformation over 6 years in O & M Staff
- **Case 2** – Border Utility – transformation to more confidence, better protection of public health
- **Case 3** – issues specific to small systems – access to training, availability of qualified staff, pay scales
Other Successes

- Since 2001, Canada has mandatory treatment and operator training programs for all provinces.

- South America is making great progress:
  - Brazil has built new WWTP’s and has an operator training program in many states developed by the World Bank Institute.
  - Colombia is moving forward to build additional WWTP’s in Medellin, Bogota, other cities.
  - Venezuela and Argentina are also making good progress in collection and treatment.
Challenges

- Protecting the Public Health
  - This is the highest priority but funding is the major hurdle
  - Institutional strengthening is a key component for success
  - Appropriate level of Operations and Maintenance is critical to protect the assets once they are built
Challenges

- Setting / Enforcing Environmental Regulations is harder than it sounds
  - Setting rules is relatively easy
  - Enforcing them is the hard part
  - Finding the funding for enforcement is difficult

- How do you measure success?
  - Epidemic reduction / prevention
  - Measurement of parameters such as Biochemical Oxygen Demand and Total Suspended Solids
Challenges

- Meeting Federal and State Permit Requirements is a critical factor for Enforcement AND Protecting Public Health
  - BOD/DBO and TSS/SST is the most common measurement
  - COD/DQO may be more useful – quicker, less expensive, comparable results allows much faster response to problems
Opportunities

- Bi-National Cooperation of cities across the border from each other
- Cross-Border Assistance
- Knowledge Sharing
Observations

- Issues of funding for development and maintenance of programs and staff salaries
  - You cannot pay subsistence salaries and expect to hire professional level staff
  - You are competing with other industries for the highly qualified staff needed for these more sophisticated facilities
Observations

- Political will is lacking and sorely needed for municipalities to collect enough funds to operate and maintain facilities
  - Elected officials are not willing to make the tough decisions to raise taxes and/or rates
  - Public education is needed to help customers understand the cost of providing safe water and wastewater treatment to protect them
Observations

- Staff – in all cases, more personal confidence in ability to do the job
- More professionalism in trained staff
- Management – better protection of assets and the public health
Conclusions

- Major progress in the last 10 years, but much more needed
- Engagement of all parties needed for success
  - Management
  - Staff
  - Customers
  - Stakeholders
  - Regulators
  - Others?
Questions?