



## **Future Municipal Water Supplies: From Planning to Implementation**

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Presented by:

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- Overview
  - Regional and State Water Planning.
  - Water Supply Strategies.
  - Permitting of Water Supply Projects.
  - Permitting Challenges.
  - Funding and Implementation.
  - 2011 Legislative Session.



- State Water Planning
  - 1950s drought drove the creation of the TWDB in 1957.
  - TWDB has prepared 8 state water plans.
    - Early plans focused on reservoir development.
    - Since the 1980s, plans have focused on water management and infrastructure development.
  - 1996 drought re-focused state water planning.
    - SB 1 passed in 1997 to create a bottom-up approach to water planning through the use of regional planning groups.



- Regional Water Planning
  - State divided into 16 regions.
  - Regional Water Planning Groups comprised of stakeholders with various interests, including municipal suppliers.
  - 50-year plans developed and revised every 5 years.
    - Future water supplies and demand based on population growth and projected industrial and steam electric demands.
    - Recommended and alternative water management strategies.



- Regional Water Planning (continued)
  - TWDB oversight, review, and consolidation.
  - Regional plans comprise State Water Plan.
  - Why is regional water planning important?
    - Consistency provision in TWC §11.134.
    - TWDB funding per TWC §16.053(j).





- Water Supply Strategies
  - Surface Water
    - 23 surface water basins in the state.
    - TCEQ-issued permit required.
  - Groundwater
    - Rule of capture governs.
    - Groundwater Conservation Districts created.
  - Conjunctive Use
    - Alternative supplies used to meet peak daily demand.
    - Water quality considerations.



- Water Supply Strategies (continued)
  - Reuse
    - Direct vs. indirect reuse.
    - Surface water-based vs. groundwater-based.
  - Conservation
    - Reduces overall water demands.
    - Use of water conservation plans.
  - Desalination
    - Significant treatment required.
    - Challenge of by-product disposal.



- Water Supply Strategies (continued)
  - ASR
    - TCEQ approval required.
    - Significant land requirements.
  - System Operations
    - Enhances the yield of water supplies.
    - TCEQ approval required if surface waters supplies involved.
  - Portfolio Management
    - Value of diversifying sources.
    - Need for emergency back-up supplies.



- Obtaining a Surface Water Right from TCEQ:
  - Unappropriated Water Must be Available.
  - Beneficial Use Requirement.
  - No Impairment of Existing Water Rights.
  - Not Harmful to the Public Welfare (social, economic, environmental).
  - Environmental Impacts Assessed.
  - Consistency with Regional and State Plans.
  - Conservation and Drought Contingency Plans.



- State Surface Water Permitting Challenges
  - Securing priority.
  - Environmental flows.
    - 1985 Legislation mandated that TCEQ assess the effects of a water right on aquatic environments, fish, wildlife, and water quality.
    - Senate Bill 3 mandated a bottom-up process via stakeholders, expert science teams, and TCEQ rulemaking.
  - Interbasin transfers.
    - “Junior rights provision”.
    - Undefined water conservation standard.
    - Enhanced notice requirements.
  - Four corners and permit amendments.
  - Protests and contested case hearing process.



- Groundwater Regulation
  - Areas outside of GCDs governed by the rule of capture.
    - Only limitations are wanton or wasteful use, subsidence, or malicious intent to harm a third party.
  - Groundwater Conservation Districts created by the Legislature or TCEQ.
    - Political subdivisions of the state.
    - General laws of TWC Chapter 36 govern.
  - 90% of groundwater withdrawals occur within a GCD.
  - 144 counties within a GCD.



- Groundwater Conservation Districts
  - Groundwater management plans and permitting.
    - TWDB approval.
    - Limit production based on tract size, aquifer characteristics, or service needs.
    - Preserve historical use.
    - Control rate and amount of withdrawal.
    - Managed depletion.
    - Groundwater transports out of GCD boundaries.
  - Planning through Groundwater Management Areas.
    - Desired future conditions of the aquifer.
    - Managed available groundwater.



- Federal Permitting of Water Supply Projects
  - Clean Water Act § 404.
    - Discharge of dredged or fill material into waters of the U.S.
    - Administered by USACE with EPA consultation (veto power).
    - Nationwide and individual permits issued.
    - Alternatives assessment required.
  - Clean Water Act § 401.
    - Certification of compliance with state water quality standards.
    - TCEQ tiered approach.
  - National Environmental Policy Act.
    - Driven by “major” federal action—ie, § 404 permit.
    - Requires an EA and possibly an EIS.



- Public Entity Financing
  - General obligation bonds.
  - Revenue bonds.
  - Certificates of obligation/double-barreled bonds.
  - Contract revenue bonds.
  - Bond anticipation notes.
  - Public property finance contractual obligations.
  - Commercial paper program.
  - Creation of a nonprofit corporation.



- TWDB Funding
  - Water Infrastructure Fund.
  - State Participation Fund.
  - Economically Distressed Areas Fund.
  - Agricultural Water Conservation Fund.
  - Drinking Water State Revolving Fund.
  - Rural Water Assistance Fund.
  - Clean Water State Revolving Fund.
  - State participation in regional water and wastewater facilities program.
  - Water and wastewater loan program.
  - Regional facility planning grant program.





- 2011 Legislative Session
  - SNRC interim charges:
    - Costs to the State for immediate and delayed SWP implementation.
    - Joint planning process for groundwater resources.
    - Implementation of water conservation and reuse projects.
  - HNRC interim charges:
    - Evaluate groundwater regulations and permitting.
    - Monitor effects of federal initiatives on SWP implementation.
    - Monitor on-going drought conditions and water conservation.
    - Evaluate model for investor-owned water utilities.
    - Monitor agencies and programs.



- For More Information:
  - [mrochelle@lglawfirm.com](mailto:mrochelle@lglawfirm.com)
  - “Future Municipal Water Supplies: From Planning to Implementation” (by Martin Rochelle and Michelle Smith, available at [www.lglawfirm.com](http://www.lglawfirm.com))
  - Essentials of Texas Water Resources (by the State Bar of Texas Environmental and Natural Resources Law Section).
    - Chapter 2 “Meeting Water Supply Needs: Planning, Permitting, and Implementation” by Martin Rochelle, Brad Castleberry and Michelle Smith.