



US Army Corps  
of Engineers  
Fort Worth District

# *Project Goal*

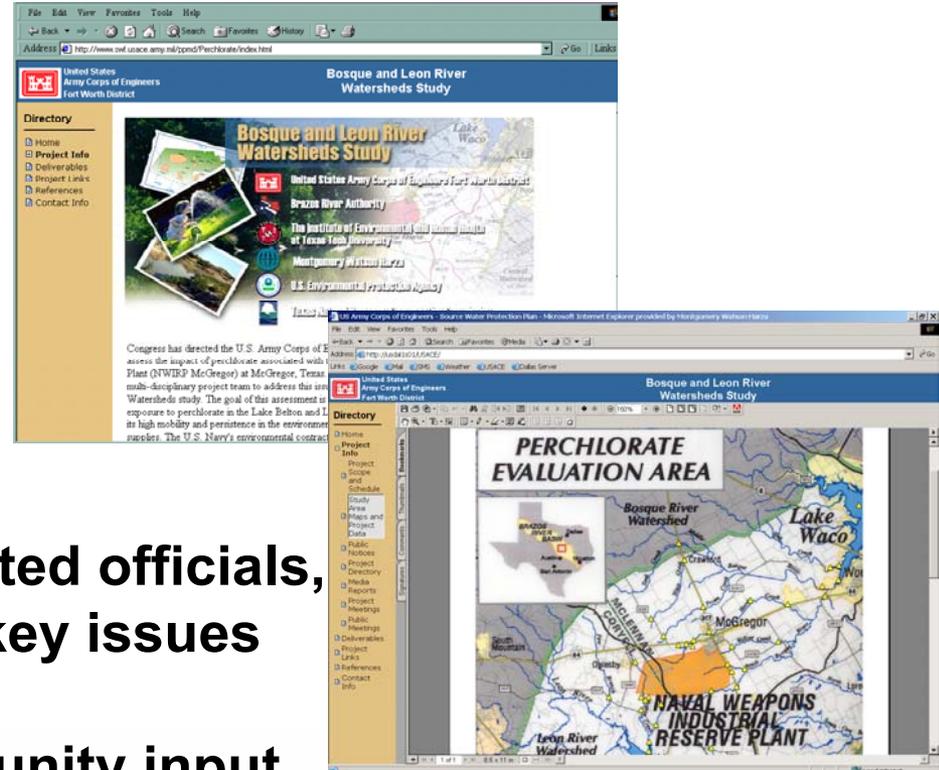
**Evaluate potential human and environmental exposure to perchlorate in the lakes Waco and Belton study area.**

*--- Project Team (February 2000)*



# Community Outreach

- Stakeholder interviews
- Community Relations Plan
- Stakeholder meetings
- Public meetings
- Briefings for elected official's
- Web site



[www.swf.usace.army.mil/ppmd/Perchlorate/index.html](http://www.swf.usace.army.mil/ppmd/Perchlorate/index.html)

## Benefits:

- Ensures that stakeholders, elected officials, and the public are informed of key issues and project progress.
- Provides opportunity for community input



# Community Outreach Website

[www.swf.usace.army.mil/ppmd/Perchlorate/index.html](http://www.swf.usace.army.mil/ppmd/Perchlorate/index.html)



The screenshot shows a web browser window displaying the website for the "Bosque and Leon River Watersheds Study". The browser's address bar shows the URL: <http://www.swf.usace.army.mil/ppmd/Perchlorate/index.html>. The website header includes the US Army Corps of Engineers logo and the text "United States Army Corps of Engineers Fort Worth District" and "Bosque and Leon River Watersheds Study".

**Directory**

- Home
- Project Info
- Deliverables
- Project Links
- References
- Contact Info

**Bosque and Leon River Watersheds Study**

United States Army Corps of Engineers Fort Worth District  
Brazos River Authority  
The Institute of Environmental and Human Health at Texas Tech University  
Montgomery Watson Harza  
U.S. Environmental Protection Agency  
Texas Natural Resource Conservation Commission

Congress has directed the U.S. Army Corps of Engineers Fort Worth District (USACE) to assess the impact of perchlorate associated with the former Naval Weapons Industrial Reserve Plant (NWIRP McGregor) at McGregor, Texas. The USACE has assembled an integrated, multi-disciplinary project team to address this issue as part of the Bosque and Leon River Watersheds study. The goal of this assessment is to evaluate potential human and environmental exposure to perchlorate in the Lake Belton and Lake Waco study area. Perchlorate, because of its high mobility and persistence in the environment, may pose an impact on local drinking water supplies. The U.S. Navy's environmental contractor has identified various levels of perchlorate.





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# *Objectives*

## Completed

- **Develop effective community relations plan.** ✓
- **Compile existing study area information.** ✓
- **Identify data gaps in existing information.** ✓
- **Define and Develop the Conceptual Study Model (CSM).** ✓
- **Based on data gaps, develop Field Sampling Plans.** ✓
- **Field Investigation to fill the key data gaps.** **In Progress**
- **Evaluate fate and transport pathways.** **In Progress**



# *Objectives (Cont'd)*

## Completed

- Evaluate potential environmental exposure to perchlorate in the study area. **In Progress**
- Evaluate potential human exposure to perchlorate in the study area. **In Progress**
- Assess exposure pathways to vegetation, fish, birds, mammals. **In Progress**
- Assess impact on amphibians, fish, and large and small mammals. **In Progress**
- Integrate data and assess ecological risk **In Progress**



# ***TCEQ Regulatory Perspective***

- **Drinking water**
  - No MCL
  - TCEQ Interim Action Level = 4 ppb
- **Groundwater**
  - 4 ppb *Residential*
  - 7 ppb *Commercial/ Industrial*
- **Surface water**
  - 4 ppb
- **No Federal MCL**





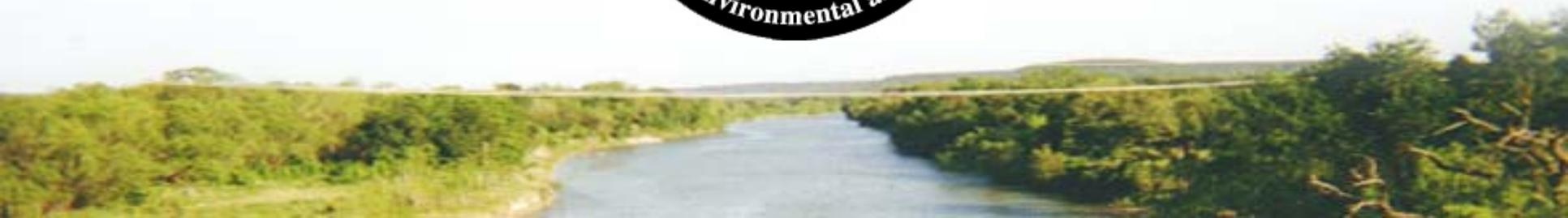
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# *Ecological Evaluation*

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# ***Ecological Objectives***

- **Identify Points and Pathways of Exposure**
- **Assess Impacts on Fish and Amphibians**
- **Assess Impacts on Mammals and Birds**
- **Model Long-Term Exposure and Effects**





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# *Points and Pathways of Exposure*

- **Water**
  - *varies with season*
- **Sediment**
  - *persistent*
- **Vegetation**
  - *perchlorate is present*
- **Fish**
  - *human exposure unlikely*





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# Perchlorate in Leaf Tissue

