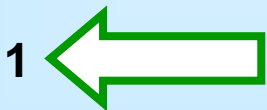




# Overview of the Implementation Plan Process for Copano Bay TMDL

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# Overview

- **What is “Total Maximum Daily Load”?**
  - Determines maximum amount (load) of pollutant that water body can receive and still maintain uses
  - Allocates load to sources in watershed
- **What is an “Implementation Plan (I-Plan)”?**
  - Detailed description of regulatory & voluntary management measures necessary to achieve the pollutant reductions identified in a TMDL.

# Overview

- ***Implementing Total Maximum Daily Loads in Texas: A Status Report July 2004 prepared by the Total Maximum Daily Load Section, Environmental Planning and Implementation Division, Office of Environmental Policy, Analysis, and Assessment, Texas Commission on Environmental Quality (page 1)***
- **An implementation plan (I-Plan) puts the TMDL into action by outlining the steps necessary to reduce pollutant loads through regulatory and voluntary activities.**
- **<http://www.tceq.state.tx.us/implementation/water/tmdl/tmdlprogram.html>**

# Overview

- **TMDLs and their implementation plans describe the actions that local, regional, and state organizations must take to reduce pollutants to levels established in TMDLs.**
- **(<http://www.tceq.state.tx.us/implementation/water/tmdl/tmdlprogram.html>)**

# Goal of a TMDL Project

**To restore water quality and associated designated uses**



[http://www.birdrockport.com/attractions\\_events.htm](http://www.birdrockport.com/attractions_events.htm)

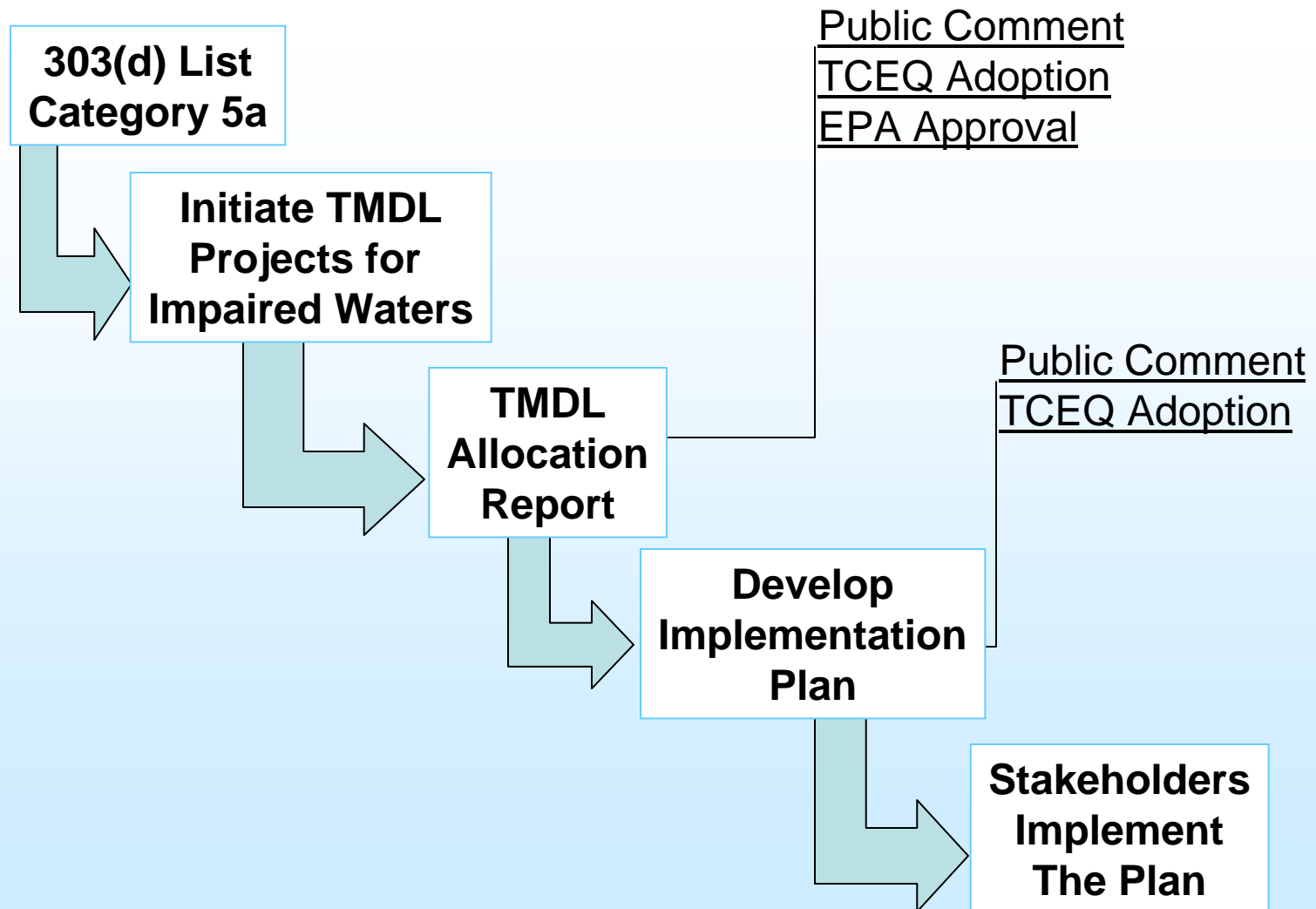
# Goal of an Implementation Plan

To develop steps necessary to achieve TMDL goals



[http://www.birdrockport.com/attractions\\_events.htm](http://www.birdrockport.com/attractions_events.htm)

# The TMDL/I-Plan Process



# Watershed Approach



# I-Plan Timeline



- **Recruitment of Watershed Advisory Group**
  - Postings on the web
  - **Jun 2006 – Aug 2007**
- **Tracking of Membership – name and affiliation**
  - List #1 = **Aug 2006**
- **External Coordination**
  - What other groups are engaging in activities similar to the WAG?
  - List #1 = **Aug 2006**

# I-Plan Timeline



- **Copano Watershed Implementation Plan**
  - Draft = **Apr 2007** (or when TMDL Allocation Report is approved)
  - Final = **May 2007** (or when TMDL Allocation Report is approved)
- **Resource Identification and Grant Writing**
  - Grant summary Table #1 = **Dec 2006**
  - Grant summary Table #2 = **May 2007**
- **Outreach and Education**
  - Monthly e-mails = **Jun 2006 – Aug 2007**
  - Brochure = **Dec 2006**
  - Website materials = **Jun 2006 – Aug 2007**
  - Outreach materials = **Aug 2006, Nov 2006, May 2007**

# Recruitment of WAG

- **House Bill 2912**

- **Balanced representation**

- **Geography**
    - **Income levels**
    - **Ethnicity**
    - **Business**
    - **Government**
    - **Trade groups, associations, organizations**
    - **Consumer & public interest groups**
    - **Industries or occupations regulated or directly affected by TCEQ, and**
    - **Consumers of services provided either by TCEQ or by industries or occupations regulated by TCEQ**



# Recruitment of WAG

- **House Bill 2912**
  - **Balanced representation**
- **What areas are not currently represented?**
- **Who can fill these spots?**

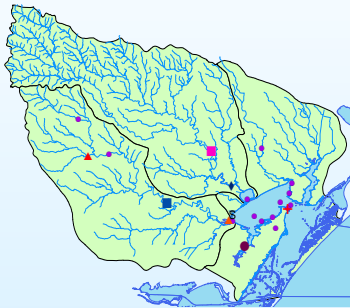


# Organization of WAG

## Subdivisions Needed?

Watershed Advisory Group

Work Groups



[www.crrw.utexas.edu/.../FinalReport.htm](http://www.crrw.utexas.edu/.../FinalReport.htm)

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Arroyo Colorado Steering Committee

Work Groups



[www.tceq.state.tx.us/.../water/tmdl/arroyo.html](http://www.tceq.state.tx.us/.../water/tmdl/arroyo.html)

Agricultural

Habitat Restoration

Education & Outreach

TMDL Monitoring

Wastewater Infrastructure

# Arroyo Colorado Example

- **Members**
  - Varied by group - 35 to 58 members
  - **Composition**
    - Diverse groups
- **Meeting frequency**
  - Varied by group - 2 to 5 months
- **\*Goals**
- **Action Plans**

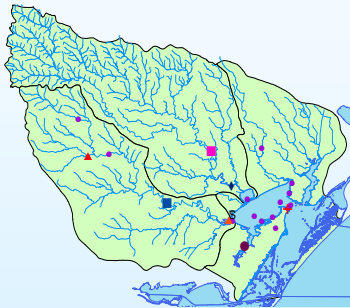
# Arroyo Colorado Work Group Goals

- **Agricultural**
  - Assess what agriculture can do
  - Assemble a plan of action
  
- **Habitat Restoration**
  - Restore/enhance fish and wildlife
  - Restore/enhance wetland habitats
  - Improve BOD and nutrient assimilation = reduce low dissolved oxygen problems
  
- **Education and Outreach**
  - Increase public awareness of water quality impairments
  - Educate public about importance of Arroyo Colorado
  - Inform public about ways they can participate to improve water quality
  
- **TMDL/Monitoring**
  - to advise the TCEQ and the Arroyo Colorado
  
- **Education Outreach**

# Organization of WAG Subdivisions Identification

Watershed Advisory Group

Work Groups



[www.cwrw.utexas.edu/.../FinalReport.htm](http://www.cwrw.utexas.edu/.../FinalReport.htm)

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# External Coordination

- **Other activities with similar goals to those of the WAG?**
  - **Groups or agencies**
    - Local
    - Regional
    - National



# Implementation Plan Development

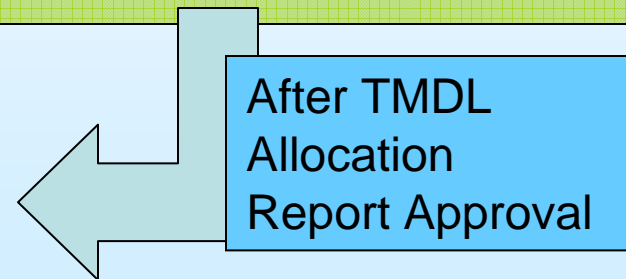
How shall we  
progress with  
the I-Plan while  
completing the  
TMDL  
Allocation  
Report?



# Copano Watershed Implementation Plan

## Develop:

- **Project Summary**
- **Brochure**
- **Education/Outreach**
- **Potential Actions by Subgroups**
- **Potential Grant Opportunities**
- **Draft Report**
- **Final Report**



# Resource Identification and Grant Writing

- Can we identify any potential sources for grant opportunities?

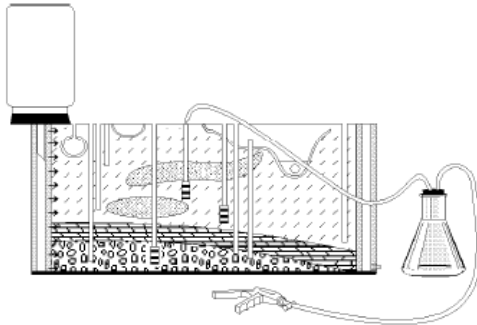


# Outreach and Education

- **Who are the target audiences?**
- **What message, based on the goals and audience(s) should be communicated?**
- **What materials do we want to generate?**
- **How do we want to distribute these materials?**

**GROUNDWATER FLOW DEMONSTRATION MODEL**

**ACTIVITIES FOR GRADES 6-12**



by  
 Dr. Kitt Farrell-Poe  
 Extension Environmental Engineer  
 Utah State University Extension  
 October 1997



**MEET THE AIR POLLUTION GREMLINS**

**Soy Diferente (Different).** Although I'm invisible by myself, when I get together with other pollutants we can form smog. I'm caused by a combination of sunlight and chemicals. In cities, these chemicals come mainly from automobile exhausts, industrial smokestacks, and power plants. If there is enough of me, I can hurt plants and make it hard to breathe.

**My name is Nasty Nitrogen Dioxide.** You can tell who I am because of my yellow-brown color. I'm caused by both power plants, and other large industries. If enough of me escapes into the air, I can cause a smelly brown haze that shuts out the sunlight. I can also damage plants and make them turn brown.

**I'm Smoky Sulfur Dioxide.** I come out of the smokestacks of power plants and factories and whenever coal and fuel oil are burned. If there is enough of me, I can hurt your nose and lungs, and make leaves turn yellow, and make the air hazy.

**I'm Pucky Particulate.** A small particle of smog or dust in the air. I am so small that you can't see me unless I am traveling on the wind with many other particles. I can soil clothes, build brown smog, and whenever I get into the lungs of people and animals.

**My name is Cranky Carbon Monoxide.** You can't see or smell me, but I can be dangerous. I can prevent whatever food you breathe without enough air and come mainly from automobile exhausts. If there is enough of me in one place, I can make people feel dizzy or give them headaches.

FOR MORE INFORMATION ON ENVIRONMENTAL EDUCATION, CALL THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AT 512/306-3125.

**CONOZCA A LOS GREMLINS DE LA CONTAMINACIÓN ATMOSFÉRICA**

**Soy Diferente de los otros.** Aunque voy solo invisible por mí mismo, cuando me juntamos con otros contaminantes podemos formar smog. Soy producido por la combinación de luz solar y químicos. En las ciudades, estos químicos provienen principalmente del escape de los autos, las chimeneas industriales y termoelectricidad. Hay suficiente de mí para que me vean como una neblina amarilla, y que el aire se ponga hazy.

**Me llaman Diferente.** Aunque voy solo invisible por mí mismo, cuando me juntamos con otros contaminantes podemos formar smog. Soy producido por la combinación de luz solar y químicos. En las ciudades, estos químicos provienen principalmente del escape de los autos, las chimeneas industriales y termoelectricidad. Hay suficiente de mí para que me vean como una neblina amarilla, y que el aire se ponga hazy.

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PARA MÁS INFORMACIÓN ACERCA DE EDUCACIÓN AMBIENTAL, PUEDE LLAMAR A LA COMISIÓN DE CALIDAD AMBIENTAL DE TEXAS AL 512/306-3125.

# Next Activities

- Organize Subgroups
- At least one summer meeting by each subgroup to:
  - Involve additional interested stakeholders (not restricted by size at subgroup level)
  - Draft benefits statement to community and environment by each subgroup for brochure
  - Identify other groups with similar goals and their activities
  - Draft presentation of subgroup goals and objectives for Fall meeting

# Please Turn in Your Question Cards!

- If you need any additional information
- If you have any information that will assist in Implementation Plan process
- If you know of a stakeholder group that is not represented
- If you have any suggestions for meeting place for October meeting



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