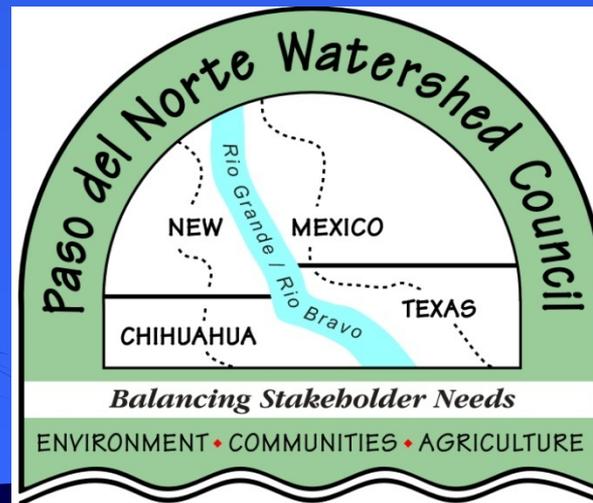


# Watershed Management – Activities and ideas from the Paso del Norte

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IBWC/CILA Water Summit  
27 September 2012



# Overview of Presentation

- ◆ Regional watershed management issues in the Paso del Norte,
- ◆ Brief history of the Paso del Norte Watershed Council,
- ◆ Review of major projects being advanced,
- ◆ Lessons learned and insights gained,
- ◆ Discussion of ideas for future consideration and
- ◆ Questions from audience



# Background of the Council

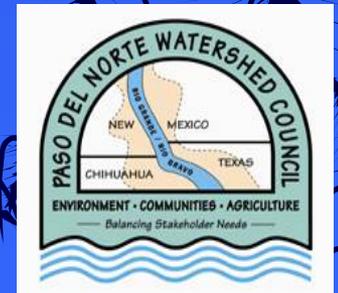
- ◆ New Mexico Texas Water Commission (NMTWC) developed out of long term Texas/New Mexico water conflict
  - NMTWC = settlement commission to resolve conflict
  - Commission advanced regional water planning → EP/LC Regional Sustainable Water Project
- ◆ Environmental concerns of project drove establishment of the Paso del Norte Watershed Council (PdNWC)
- ◆ Council convened in late 2000 to address these environmental concerns

# Paso del Norte Watershed Council Region of Interest



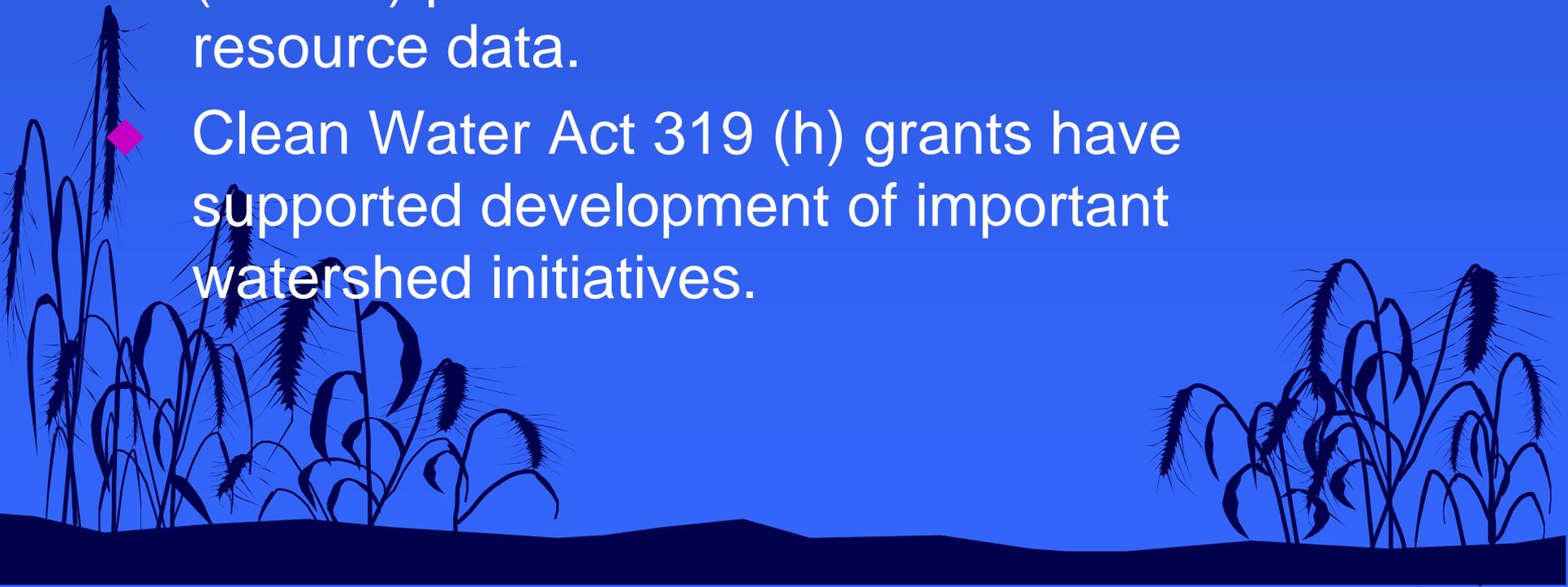
# Council's Mission

- ◆ PdNWC Mission - As an advisory body to the New Mexico/Texas Water Commission (NMTWC),
  - the Council investigates, develops, and recommends options for watershed planning and management,
  - exploring how water-related resources can best be balanced,
  - to benefit the Rio Grande ecosystem and the interests of all watershed stakeholders.
- ◆ NMTWC sunsetted in 2006, and the PdNWC has continued as a free standing NGO.



# Council's main accomplishments

- ◆ PdNWC serves as a forum for watershed management issues in the PdN region.
- ◆ Coordinated Database and GIS Project (CDGP) provides online access to water resource data.
- ◆ Clean Water Act 319 (h) grants have supported development of important watershed initiatives.



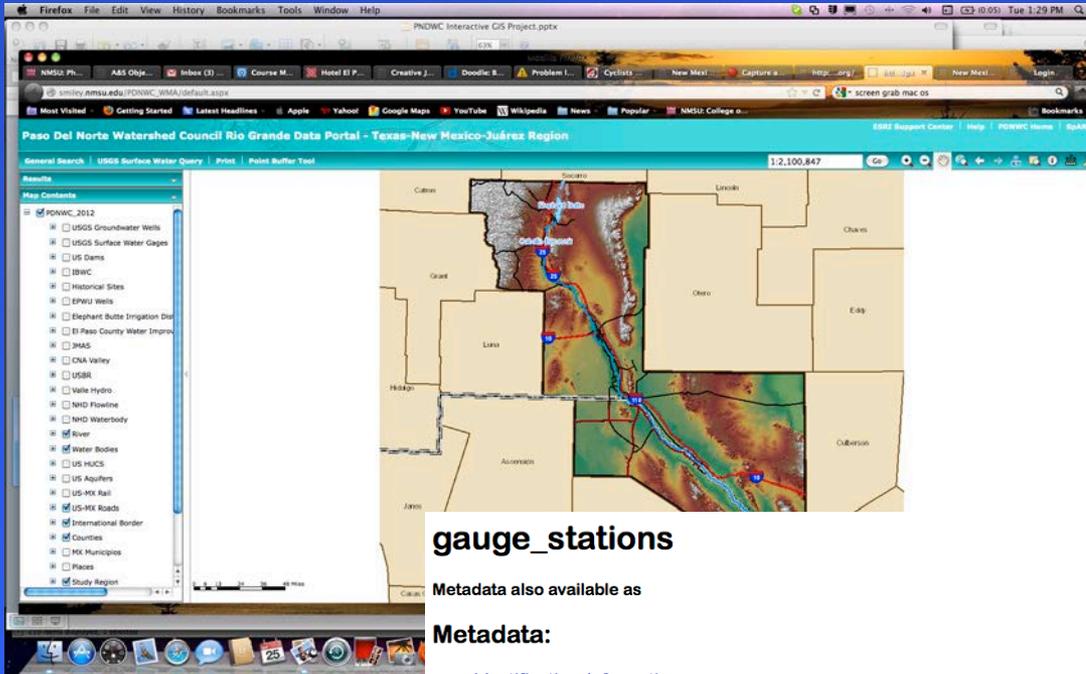
# PdNWC as a regional watershed forum

- ◆ Council enjoys broad representation from academia; federal, state, and local governmental units; NGOs; and tribal gov'ts.
- ◆ Regular meetings provide open and lively forum for important issues.
- ◆ Council has addressed specific issues with “action letters” to relevant stakeholders.
- ◆ Binational component is evident, yet also faces obstacles.
- ◆ Council also successful at advancing specific projects.

# Coordinated Database & GIS Project

- ◆ Historically, large numbers of agencies collected wide range of water resource data.
- ◆ Access to data lacked much coordination.
- ◆ Goal of the Project is to provide coordinated access to wide range of data via web-based access and GIS interface.
  - Project facilitates greater sharing of data among both providers and end users.
  - Overall goal is to enhance water resource management via regional approach in the PdN region.

# Components of PDNWC CDGP



## gauge\_stations

Metadata also available as

### Metadata:

- [Identification Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

### Identification Information:

#### Citation:

#### Citation Information:

**Originator:** TAES Texas A&M

**Publication Date:** 2004

**Publication Time:** Unknown

**Title:** gauge\_stations

**Geospatial Data Presentation Form:** vector digital data

**Online Linkage:**

\\ELPASO-CTR\USR\SHARE\Sheng-Hydro\GH-Field\_Work\gauge\_stations.shp

#### Description:

**Abstract:** EPCWID #1 gauge stations

**Purpose:** field identification and verification

**Time Period of Content:**

**Time Period Information:**

**Single Date/Time:**

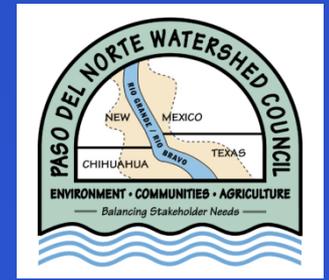
**Calendar Date:** 2004



# Outcomes of the Project

- ◆ Functional Web portal providing access to range of geo-spatial water resource data;
- ◆ Establishment of active user community that share data & collaborate on research projects;
- ◆ Foundation for advanced modeling activities that examine operation of Rio Grande Project:
  - Actively working with the USACE on URGWOM,
  - Active interest in groundwater/surface water interactions, and
  - Outcomes of modeling work served on site.

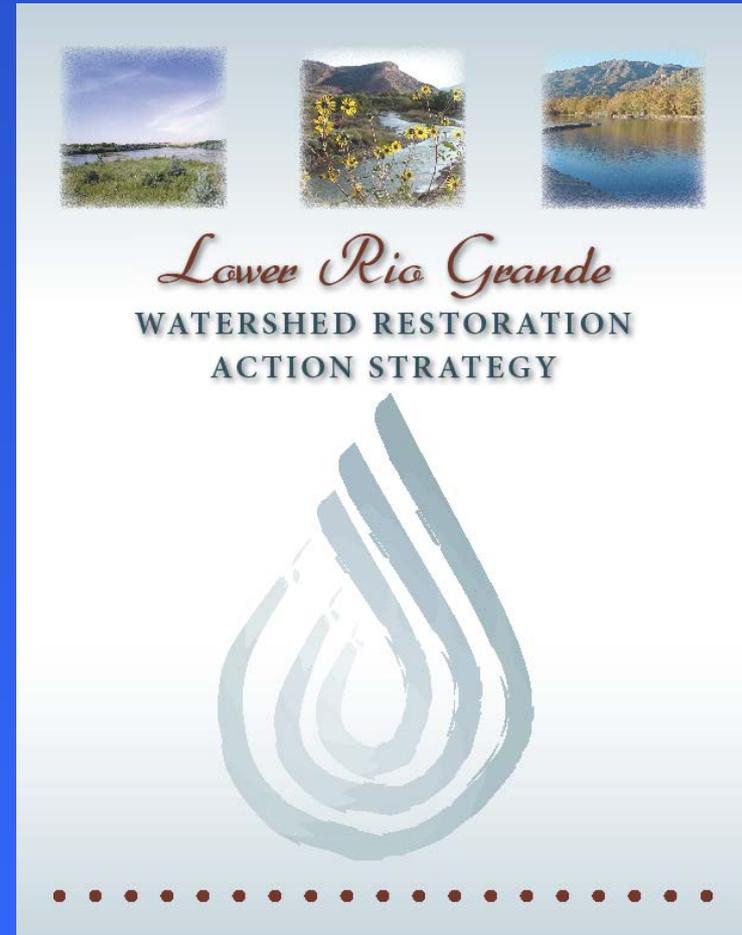
# CWA 319(h) Water Quality Grant



- NMED 303(d)/305(b) water quality impairment reported in 2004.
- EPA-approved Total Maximum Daily Load for *E. coli* in two reaches of the lower Rio Grande.
- CWA 319(h) funding can help address non-point source pollution.
  - Water quality data and biological analyses,
  - Stakeholder outreach and coordination, and
  - Cooperators: PdNWC, NMDA, NMED, WWF, U.S. FWS, NMSU, TTU, SWEC, EBID, regional stakeholders, many others.

# EPA 319(h) Project Outcomes

- First Product: Watershed Restoration Action Strategy (WRAS)
- WRAS recommends Best Management Practices (BMP's) aimed at non-point source pollution abatement in the Paso del Norte watershed
  - EPA approval received in 2009
  - Foundation for future 319 project

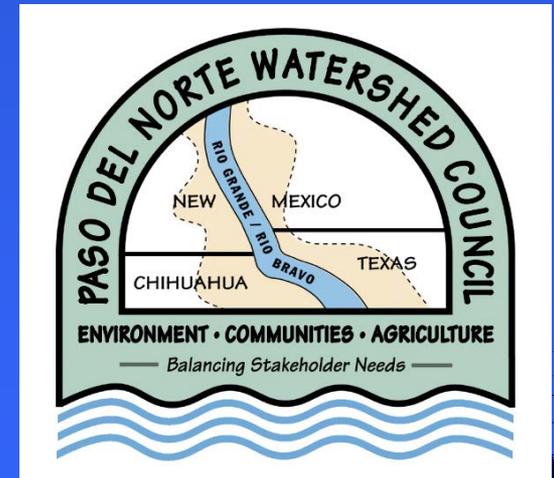


# EPA 319(h) WRAS Recommendations

- Recommendations include
  - BMP's for pathogen abatement
  - Extensive recommendations from regional watershed stakeholders
- Analyses concluded that optimal geographical locations for BMP's are unknown until further data can be collected and analyzed
- Final WRAS document provided foundation for second 319 grant to develop watershed based plan

# Second EPA 319(h) Water Quality Grant

- Additional funding was pursued for the continuance of the WRAS, filling data gaps, estimating BMP load reductions, and maintaining stakeholder outreach. Specifics:
  - Monitoring and water quality data analyses
  - Development and implementation of BMPs.



# 319 (h) Watershed Based Plan (WBP)

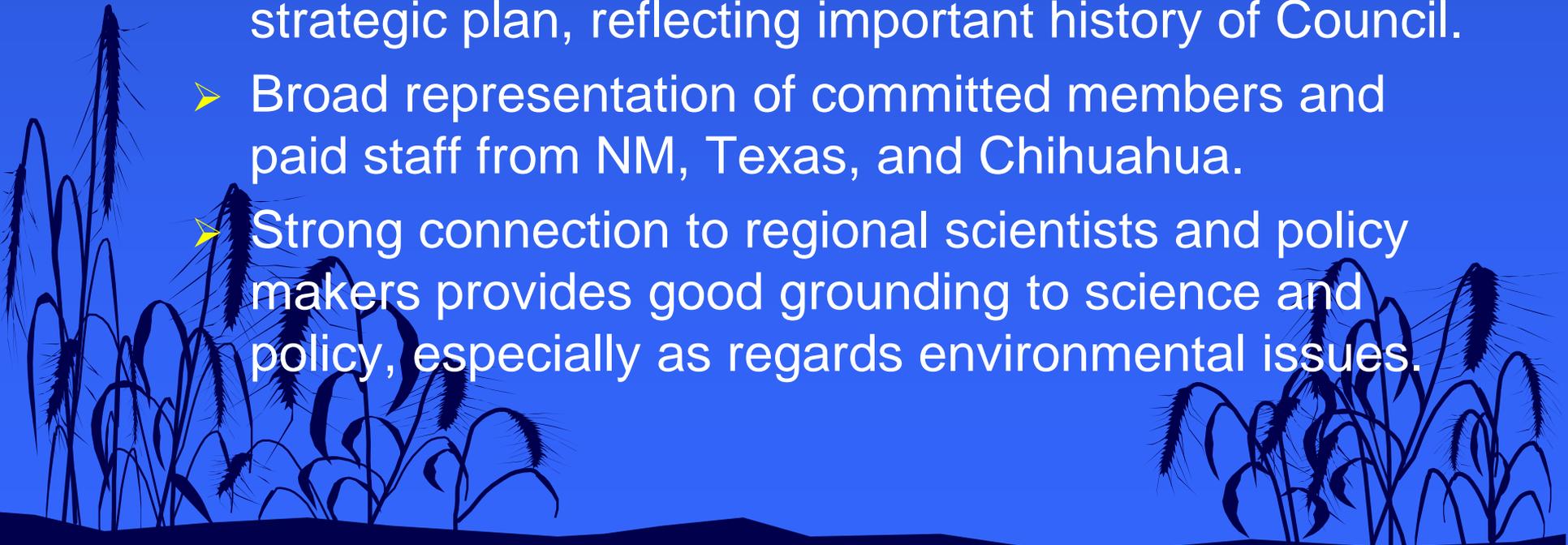
- ◆ PdNWC Clean Water Committee developed second successful 319 (h) grant application.
- ◆ Brian Hanson, 319 (h) grant watershed coordinator, spearheaded development of plan.
- ◆ WBP = “a general blueprint for comprehensive, watershed-wide restoration program. It provides a nonregulatory, stakeholder driven, voluntary approach to improve water quality within a designated watershed (PdNWC WBP Flier, [www.pdnwc.org](http://www.pdnwc.org))

# 319 (h) Watershed Based Plan (WBP)

- ◆ Components of work done to develop the plan include
  - Water quality sampling of drains, tributaries and the main stem of the river,
  - Modeling of flow rates and water quality,
  - Source tracking of e. coli found in water samples among tributaries, and
  - Compilation of overall plan incorporating the results of above, including best management practices for wastewater treatment and stormwater management.

# Insights from PdNWC experience

- ◆ Success of PdNWC reflects many elements
  - Very strong financial support from many agencies over last 10 years funded several projects.
  - Mission & goals are clearly articulated in bylaws and strategic plan, reflecting important history of Council.
  - Broad representation of committed members and paid staff from NM, Texas, and Chihuahua.
  - Strong connection to regional scientists and policy makers provides good grounding to science and policy, especially as regards environmental issues.

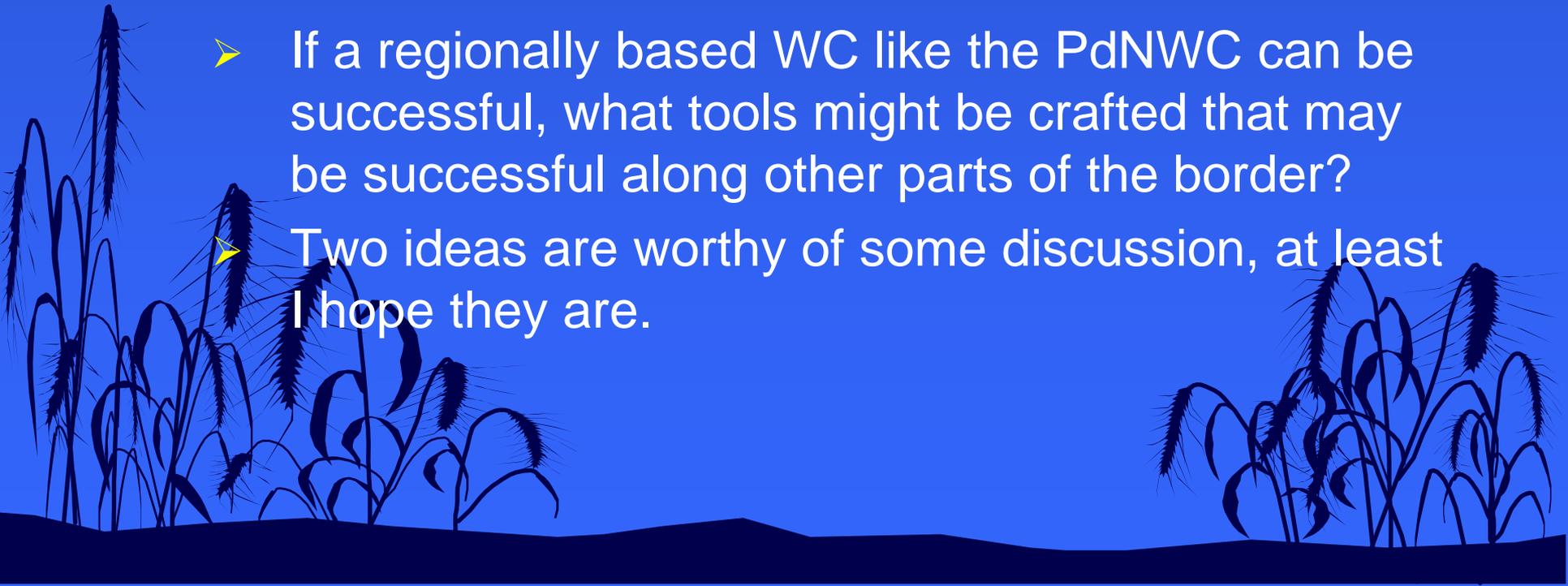


# Future work of Council

- ◆ Executive Committee recognizes that some stakeholders are not at the table and are committed to fill the gaps.
- ◆ Draft Watershed Based Plan to be finalized and shared with key stakeholders.
- ◆ Long term goal is to implement recommendations of WBP to improve ecological health of the watershed.
- ◆ Continued work to secure funds to support Council projects.
- ◆ Strong commitment of members to continue to serve as key watershed forum in the region.

# Ideas for broader discussion

- ◆ What of a broader perspective that is larger than the PDN?
- ◆ Previous research with folks from the Utton Center, SDSU, and Steve Mumme generated some ideas:
  - If a regionally based WC like the PdNWC can be successful, what tools might be crafted that may be successful along other parts of the border?
  - Two ideas are worthy of some discussion, at least I hope they are.



# Ideas for broader discussion

- ◆ 2006 White Paper with Utton Center staff offered idea of science based basin advisory board
  - Consistent with recommendations from the 2005 IBWC/CILA Summit and much previous research.
  - Such boards have been very successful on the US-Canada border through mechanisms of the IJC.
  - Intent of such a board would be to lay the groundwork for coordination of binational efforts for integrated watershed management.
  - One potential idea = Existing USIBWC Citizens Forum could be expanded to be binational in nature.
  - We welcome discussion on other models.

# Ideas for broader discussion

- ◆ IBWC/CILA establish sections on their websites to house data & information about key basins.
  - Much good work done in Tijuana, San Pedro, Santa Cruz and Rio Grande.
  - IBWC/CILA are ideally suited to provide a portal function.
  - Many researchers at regional universities can provide content and insight into serving project data.
  - The participant list for the Summit is a great tool to start looking for participation.

Any questions? Algunas preguntas?

