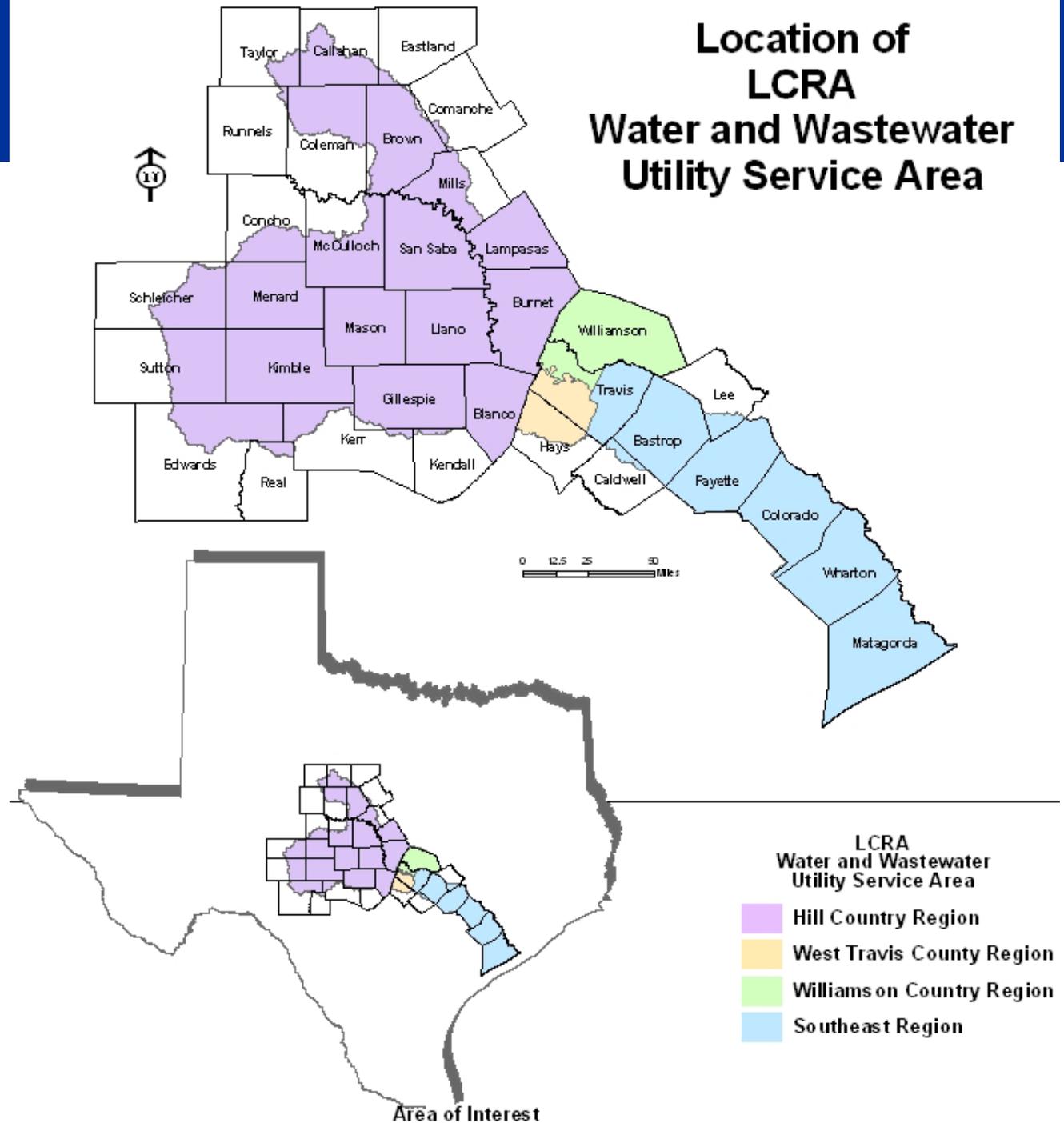


HB 1437: No net loss municipal interbasin transfer through agricultural water conservation

**Lower Colorado River Authority
Austin, TX
Stacy Pandey**

Location of LCRA Water and Wastewater Utility Service Area

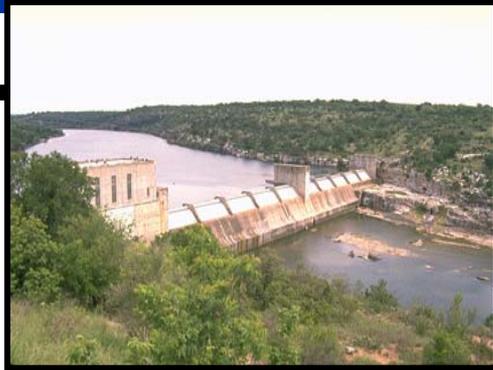


- LCRA
 Water and Wastewater
 Utility Service Area**
- Hill Country Region
 - West Travis County Region
 - Williamson Country Region
 - Southeast Region

The Highland Lakes and Dams



Buchanan Dam



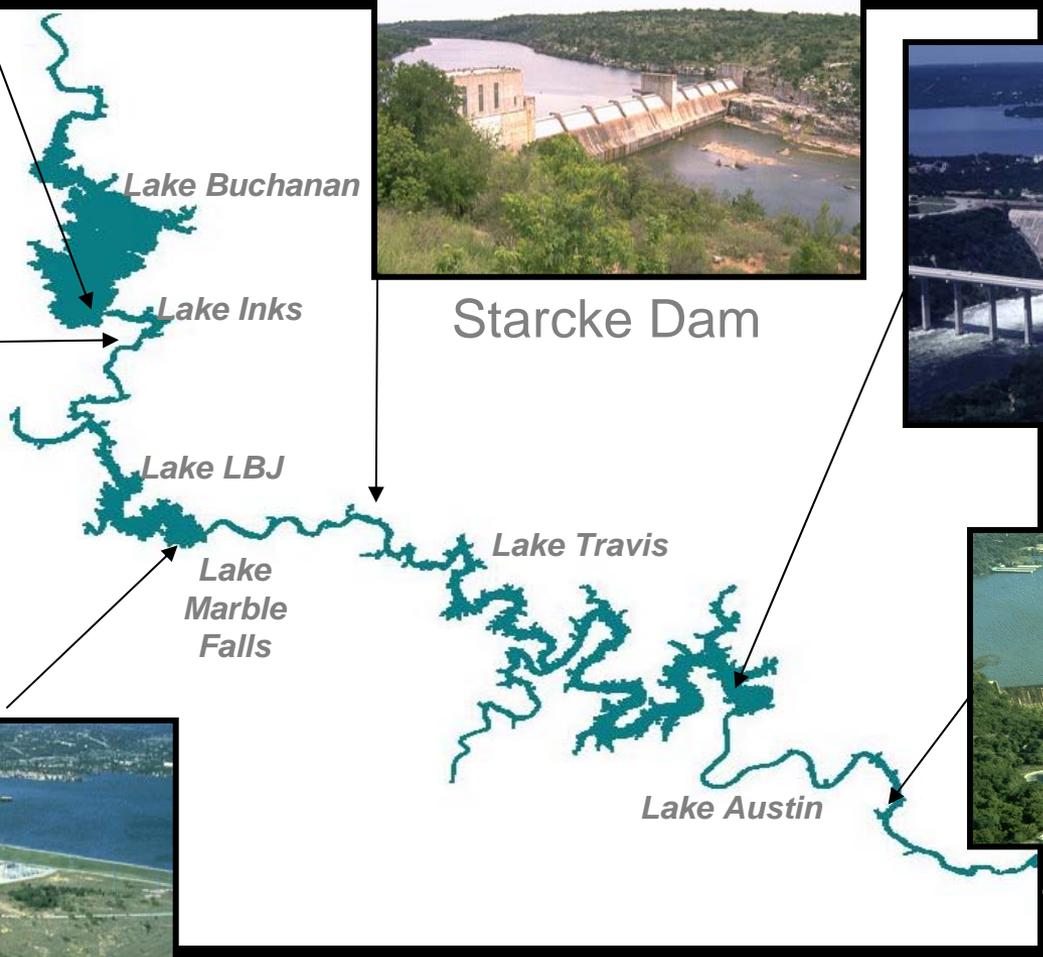
Starcke Dam



Mansfield Dam



Tom Miller Dam



Lake Buchanan

Lake Inks

Lake LBJ

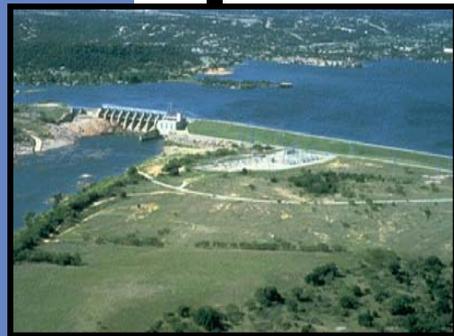
Lake Marble Falls

Lake Travis

Lake Austin

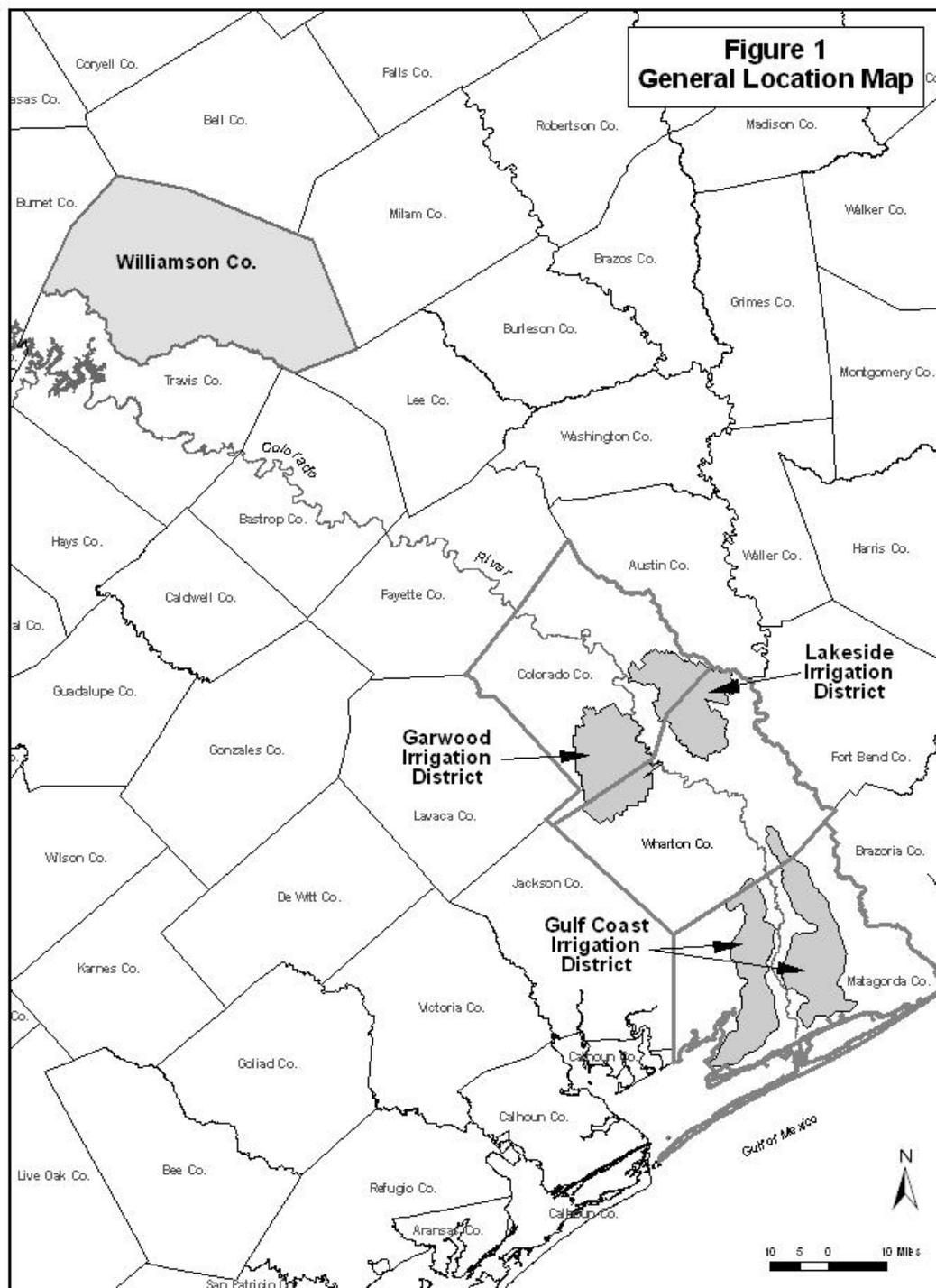


Inks Dam



Wirtz Dam

**Figure 1
General Location Map**

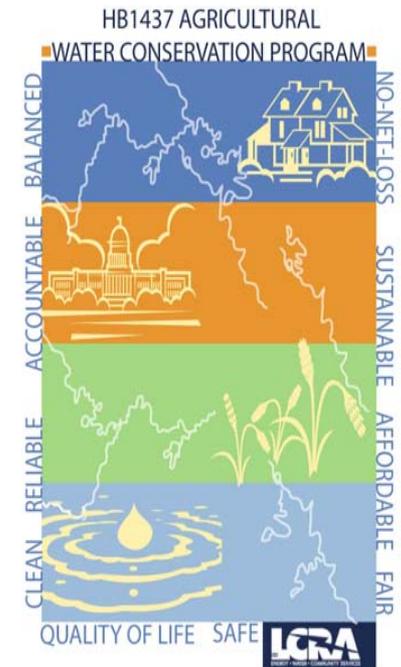


IRRIGATION OPERATIONS

- LCRA's Irrigation Districts own and maintain approximately 900 miles of canal systems.
- Across the three districts, LCRA irrigates around 50 to 55 thousand acres of rice crop per year.
- Rice is the primary crop irrigated, however row crops, aquaculture, pasture, duck ponds and industrial customers are also supplied water

CONTENTS

- Background
- HB 1437 Implementation Study (Program Plan)
- Demand Projections
- Grant Program & Policy Action
- Future Program Development
- Future Uncertainties



WHAT IS HB1437?

A law passed by the Texas legislature in 1999 allowing the transfer of up to 25,000 acft/yr of water to Williamson County

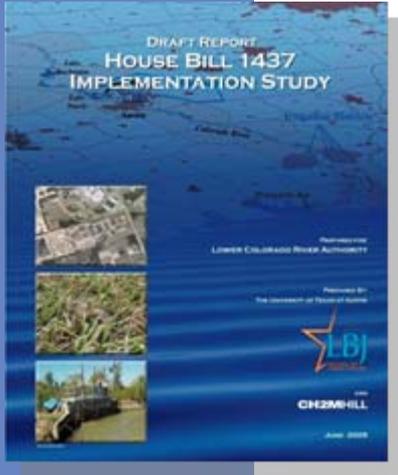


- Water transfer results in “no net loss” of water in the Colorado River Basin.
- Conservation surcharge
- An agriculture advisory committee oversight
- Mitigation funds used in three rice growing counties - Colorado, Wharton and Matagorda

Why is HB 1437 needed?

- **Water Supply Challenges**
 - **Williamson County's dramatic population growth**
 - **Water demands exceed the short-term water availability in the Brazos River Basin.**
 - **Water supplies are fully permitted**
- **Competing interests/needs in basin**
 - **Lower Basin rice producers**
 - **Environmental flow for bays/estuaries.**
 - **Municipal needs**
 - **Highland Lake recreation**
- **Opportunity to conserve water in Irrigation Districts but funding needed for improvements**

HB 1437 Implementation Study



- Developed definition for “no net loss”
- Developed 7 year plan to meet Williamson Co. water demands through conservation projects
- Established 25% conservation surcharge



No Net Loss Definition



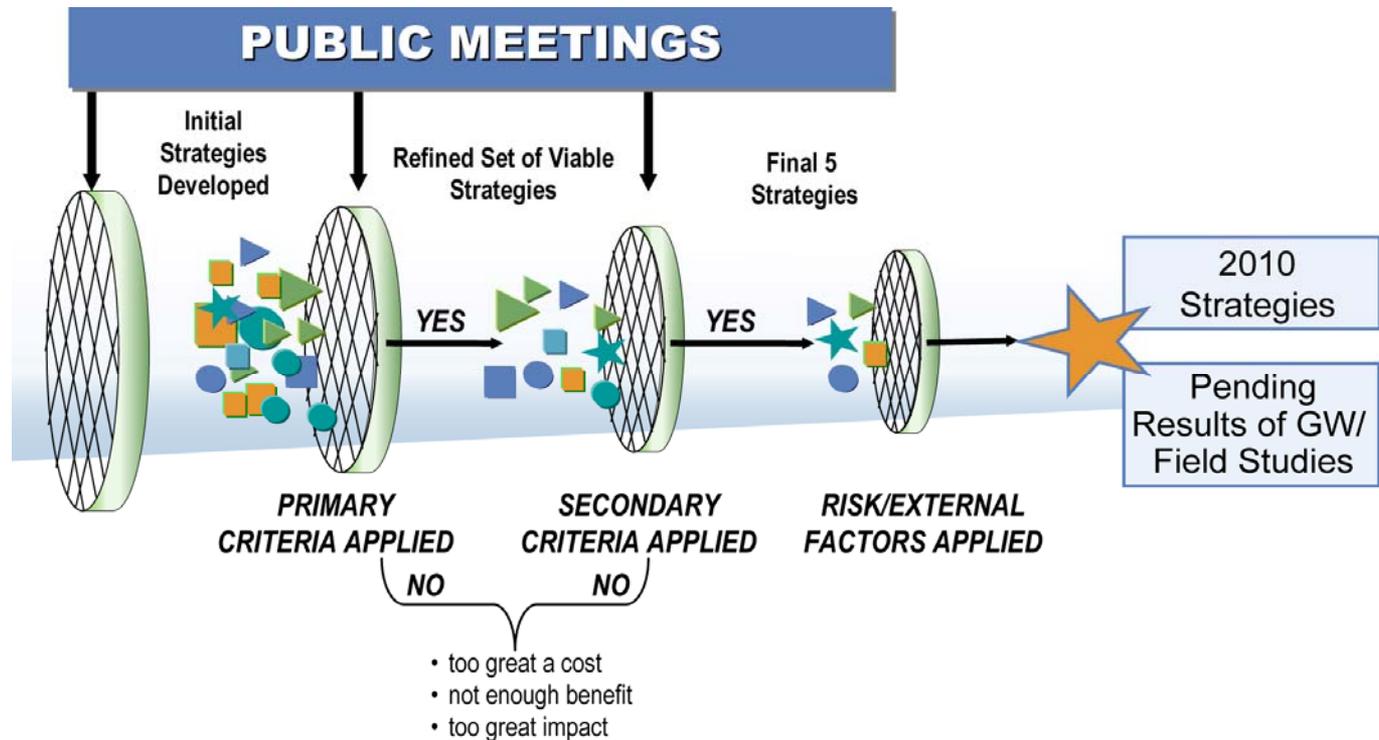
- Transferred Water \leq Conserved Water + Developed Water + Returned Water
 - Clear & technically sound procedures for measuring transferred and conserved water
 - Balancing over several years
 - Assuring water will be available during a drought



- No Net Loss
- No Adverse Effects
- Reliable, Affordable, Sustainable

Replacement Strategies

- To meet demands, a total of 18 water replacement strategies were evaluated in a 2-step public process.



Strategies Selected in Study

- A combination of in-district and on-farm strategies were selected for plan development and include:
 - Balancing Reservoirs
 - Precision Land Leveling
 - Automated Check Structures and SCADA Control System
 - Conjunctive Use of Groundwater
 - Reduced 2nd crop
 - Any combination of the above

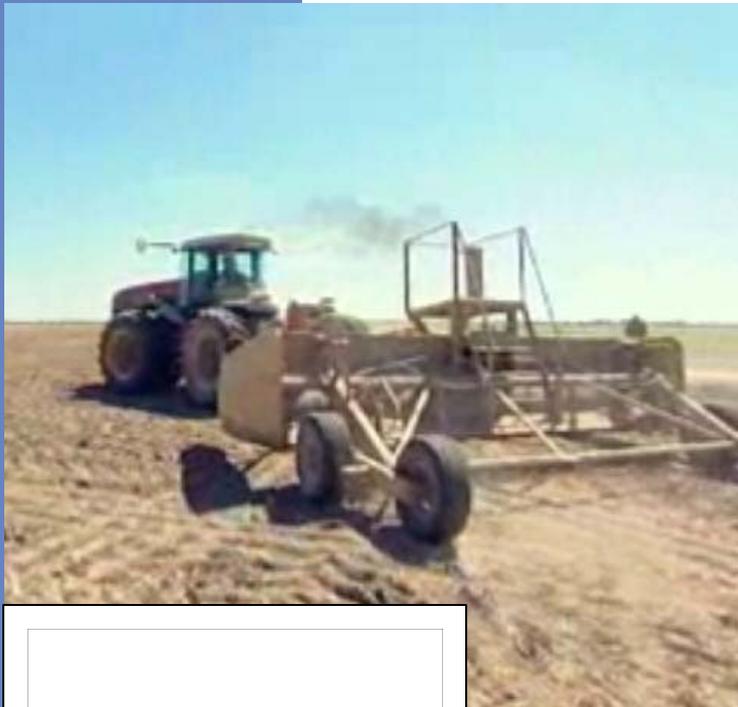


Figure 1: Motorless Automatic Flap Gate (photograph courtesy of ITRC)

Program Plan

- Goal: 3,500 acft/yr available for transfer by 2009
 - On-farm target 1500 acft/yr
 - 6,000 acres land leveling
 - In-district target 2,000 acft/yr
 - 8 check structures and SCADA system
 - Conservation measurement & monitoring program





- LCRA Board adopted application guidelines, eligibility rules & contract provisions for grants
- Interlocal agreement signed with NRCS
- Completed & distributed 2006 annual report

Application Guidelines

HB 1437 Agriculture
 Water Conservation Program

Spring 2007

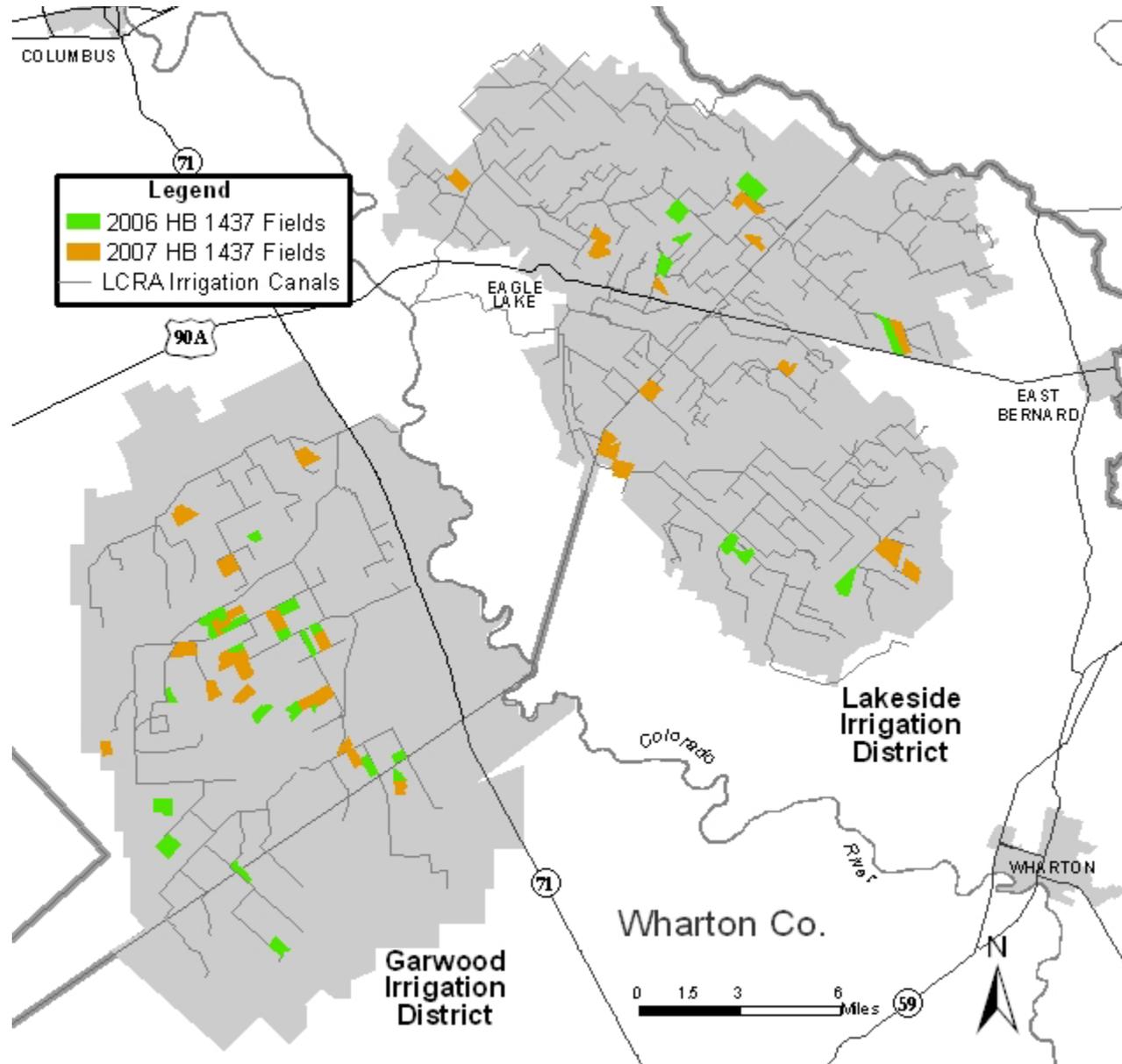
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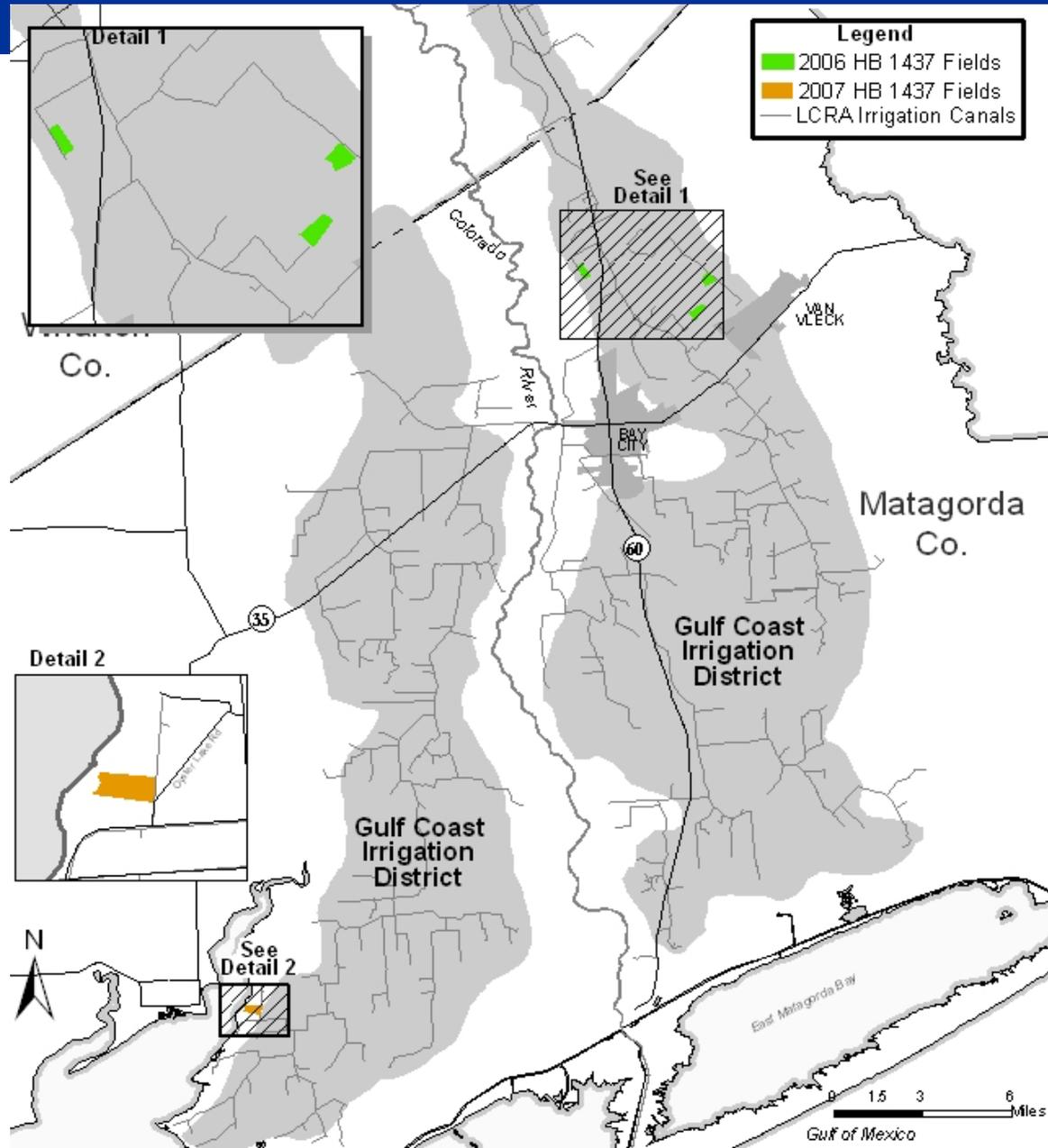
2006-2007 Grant Program Results

District	Fields Leveled	Acres Leveled	Total Cost	HB 1437 Share
Garwood	48	3,475	\$847,641	\$251,871
Lakeside	31	2,533	\$697,873	\$209,362
Gulf Coast	4	266	\$44,680	\$13,404
Total	83	6,275	\$1,590,195	\$474,637

Fields leveled in 2006 & 2007



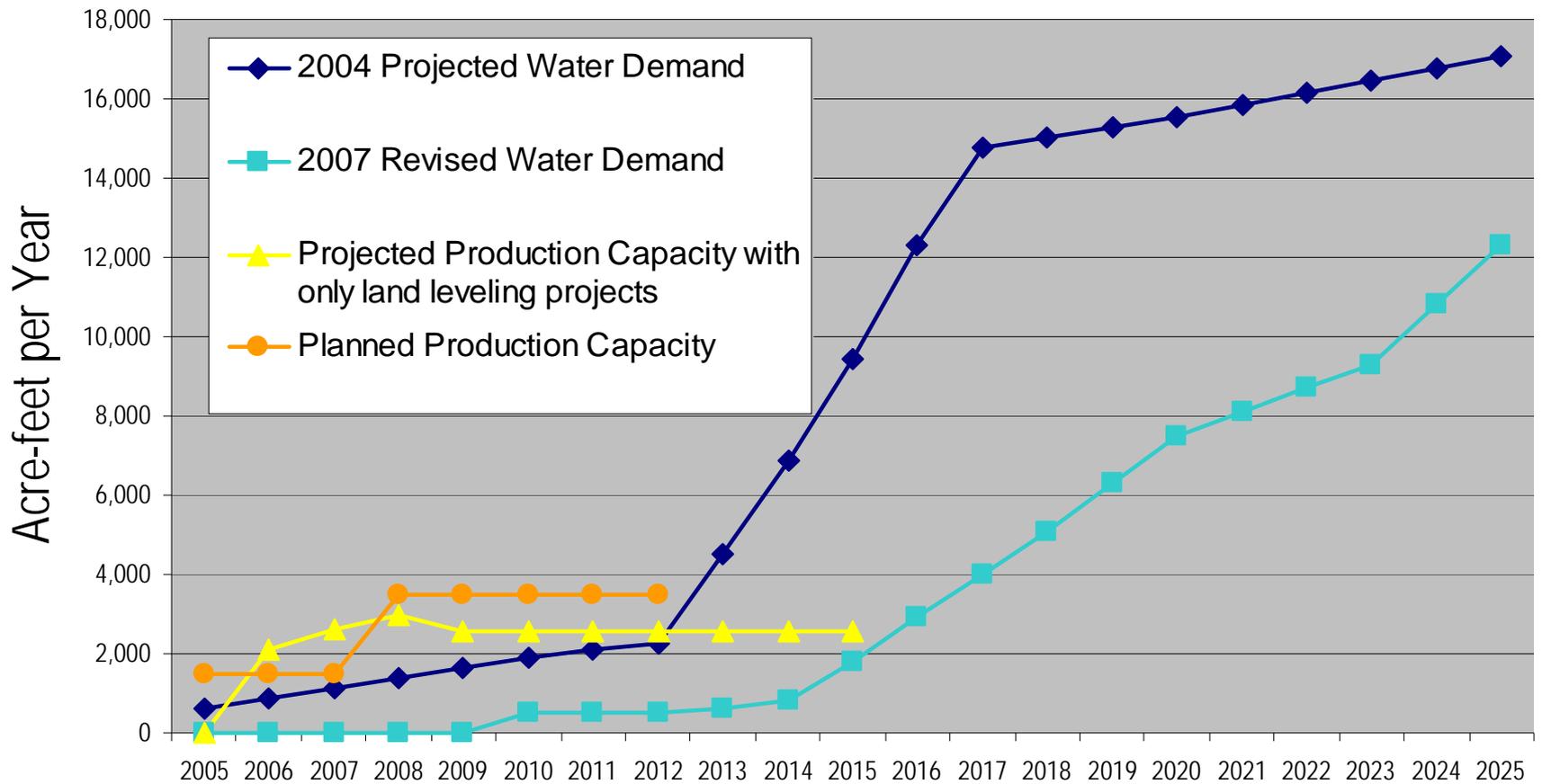
Fields Leveled in 2006 & 2007



No Net Loss Status

- Conserved volume
 - 2006- 2077 acft
 - 2007- 2629 acft
 - No transfer requests so far
- Methodology
 - 0.75 acft/acre conservation factor currently used based on field studies
 - Statistical comparison of Lakeside fields for 2006 supports this factor

New & Old Demand Projections compared with Production Capacity



2008 GRANTS



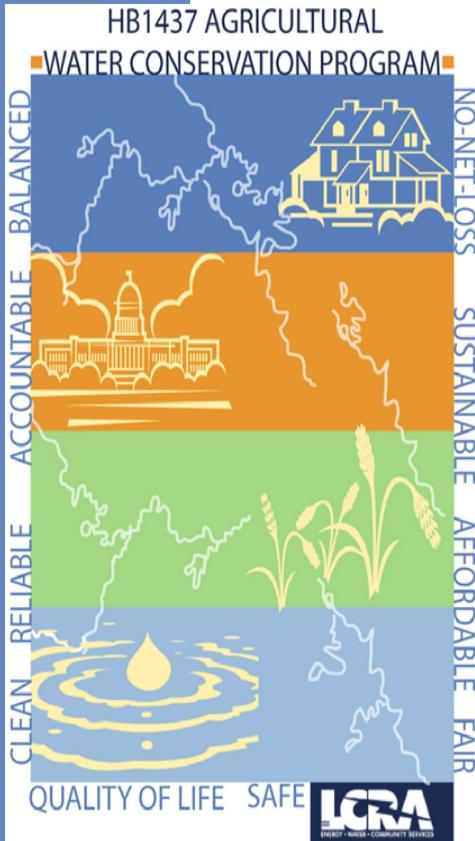
- LCRA is accepting applications for Spring 08 grant program.
- Awards given late April 2008
- Expect to level approx. 3,000-4,000 acres.
- See www.hb1437.com for details

- Conservation measuring/monitoring program
 - **Garwood measurement project**
 - **Continue data analysis comparing leveled to non-leveled fields in Lakeside for 2007**
 - **Finalize protocols for measuring and monitoring water use on improved fields.**
 - **Continue digitizing field shapes yearly to monitor fields in production**
- Program oversight and communication
 - **Review oversight roles of stakeholder groups**
 - **Reappoint Ag Advisory Committee**

Future Uncertainties

- **Long-term planning problematic**
 - **BRA contract short term (expires 2011)**
 - **Water Demand lower than expected short term**
- **EQIP funding**
 - **Continued 50% cost share funding dependent on federal reauthorization**
- **Ag Fund and Surcharge rate**
 - **By law minimum of 10%**
 - **Currently 25% - possible pressure from reduction from Williamson Co. customers**

Questions?



- www.hb1437.com
- Email:
stacy.pandey@lcra.org