Why Bats in Bridges?

- TxDOT is credited with beginning the Bats and Bridges Program in US
  - Mark Bloschock, engineer

- TxDOT Vision Statement ...enabling economic opportunity...
  - Congress Ave Bridge (AUS) direct effect $3.2 million in tourism
  - Waugh Bridge viewing platform (HOU)
  - Private bat watching locations generated $5.4 million 2011

- Insect control
  - Consume 2 million pounds of insect/night

- TxDOT Goal – Foster Stewardship protect natural resources
Conservation

- Benefits of wildlife habitat programs
  - Improved employee morale
  - Improved relationships with environmental groups, regulatory agencies, and community
  - Regulatory flexibility
  - Reduced permitting time = cost savings

- On site mitigation of impacts

- Positive
Bats are Under Threat

- Habitat Destruction
  - Vandalism of caves
  - Pesticides
  - Urbanization

- Disease – White-nosed Syndrome (WNS)
  - 90 -100% mortality
  - 4 species affected by WNS migrate to Texas
  - TPWD WNS Survey/Monitor

- Texas Conservation Action Plan
  - Transportation destroys habitat

- Bridges and Culverts Opportunity
Bridges

- 20 different species may use bridges
- 2,620 bridges possible bat friendly design (4.8%)
  - Concrete box girder – Multiple, single, or spread
  - Pre-stressed box girder – Multiple, single or spread
  - Pre-stressed concrete slab - full depth
- Habitat opportunities for 25 million bats
Artificial Structures

- **Waco District**
  - Lampasas and Salado Bridges I-35
  - Population estimated 5,000 and 10,000 bats/bridge
  - Replace lost habitat
  - $1,000/box
  - Bats are using boxes

- **Laredo District**
  - US 83 bat dome culvert
  - 2 foot high 10 foot wide
  - Environmental Achievement Award
Bats Removable

- Bats change roosts
- Migratory
- Tarkington Bayou
  - PVC and plastic sheathing, Armacel pipe wrap, Gorilla tape
  - Estimate $2.69/LF
  - Scaffolding and personnel < $2,000
  - Replaced with bat friendly bridge design
Can NRM Help You Develop A Plan?

- Assess Bridge Location
  - Determine Presence
- Develop Strategic Plan for Bat Bridges by District
  - Is there opportunity for public viewing?
  - Are bats in the area and is suitable habitat present?
  - Is the nearby area agricultural?
  - Opportunity for ecotourism?
Conclusion

- Economic Benefit to Community
- Reduce Permitting/Coordination Time
- Provides On-site Mitigation
- Achieves TxDOT Goal and Vision
- Build Positive Relations
- Proactive Planning