



DAM MAINTENANCE, REPAIR, REHABILITATION, AND UPGRADE

- FUNDING OPPORTUNITIES FOR WATERSHED PROGRAM SPONSORS
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- TSSWCB

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BACKGROUND

- 2,041 DAMS BUILT BY USDA-NRCS IN 150 WATERSHED PROJECTS IN TEXAS
- FIRST DAM BUILT IN 1948; LAST DAM BUILT IN 2008
- NRCS PAID FOR: PLANNING, DESIGN, AND CONSTRUCTION
- AFTER CONSTRUCTION LOCAL SPONSORS WERE RESPONSIBLE FOR OPERATION, MAINTENANCE, AND REPAIR OF THE DAMS
- AVERAGE ANNUAL BENEFITS OF WATERSHED PROJECTS IN TEXAS IS \$151 MILLION



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BACKGROUND

- LOCAL SPONSORS INCLUDE:
 - Soil & Water Conservation Districts (106)
 - Counties (86)
 - Cities (50)
 - Water Control & Improvement Districts (20)
 - Other (22)



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STATUS OF UPSTREAM WATERSHED DEVELOPMENT TEXAS

LEGEND

- Water Quality Improvement
- Water Quantity Improvement
- Water Quality & Quantity
- Not Feasible

BACKGROUND WATERSHED PROJECTS

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BENEFITS – ROADS & BRIDGES

Montague 89 Dams Cooke 56 Dams

Montague 283 Bridges Cooke 223 Bridges

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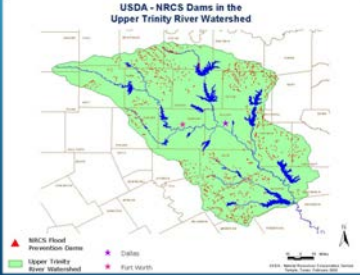
BENEFITS – ROADS & BRIDGES

| COUNTY | BRIDGE AND ROAD | TOTAL BENEFITS |
|----------|-------------------------|----------------|
| MONTAGUE | \$313,400 (283 BRIDGES) | \$2,269,200 |
| WISE | \$286,300 (396 BRIDGES) | \$2,365,600 |
| COLLIN | \$871,900 (485 BRIDGES) | \$4,178,000 |
| COOKE | \$330,900 (219 BRIDGES) | \$1,458,000 |
| COLEMAN | \$679,900 (795 BRIDGES) | \$3,381,600 |

No Upstream Dams

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BENEFITS – SEDIMENT STORAGE



USDA - NRCS Dams in the Upper Trinity River Watershed


▲ NRCS Flood Prevention Dams
■ Upper Trinity River Watershed
● Cities
★ Right-of-Way

905 WATERSHED PROGRAM DAMS UPSTREAM FROM WATER SUPPLY RESERVOIRS IN THE DALLAS/FORT WORTH AREA.

124,000 AC-FT OF SEDIMENT STORAGE CAPACITY.

570,000 AC-FT OF FLOOD STORAGE.

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PROBLEMS

- AS THE DAMS AGED, MAINTENANCE AND REPAIR COSTS BECAME MUCH MORE EXPENSIVE THAN ANYONE ANTICIPATED
- CURRENTLY, \$14 MILLION IS NEEDED TO GET CAUGHT UP ON MAINTENANCE
- 204 DAMS NEED REPAIR, ESTIMATED COST OF \$76 MILLION

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From 2010 to 2015, over 15 dams were overtopped in Navarro County

PROBLEMS

- STORM DAMAGE
- SOMETIMES FEDERAL EMERGENCY WATERSHED PROTECTION (EWP) FUNDING IS AVAILABLE

 - Federal 75%
 - State 23.75%
 - Sponsor 1.25%

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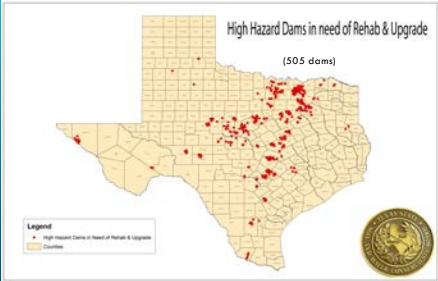


PROBLEMS

- MOST OF THE DAMS ORIGINALLY BUILT IN RURAL AREAS AS "LOW HAZARD"
- URBAN DEVELOPMENT AROUND THE DAMS AND DOWNSTREAM HAS RESULTED IN OVER 500 DAMS BEING RECLASSIFIED TO "HIGH HAZARD", BUT THESE DAMS DO NOT MEET HIGH HAZARD CRITERIA
- ABOUT 20 DAMS PER YEAR ARE BEING RECLASSIFIED TO "HIGH" BECAUSE OF URBAN DEVELOPMENT
- CURRENT COST TO UPGRADE 500 DAMS IS ABOUT \$1.5 BILLION

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PROBLEMS



High Hazard Dams in need of Rehab & Upgrade
(505 dams)

Legend
 • High Hazard Dams in Need of Rehab & Upgrade
 • Counties

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SOLUTIONS

- FEDERAL DAM REHABILITATION PROGRAM (NRCS)
- FIRST FUNDING TO TEXAS IN 2002
- 27 DAMS HAVE BEEN REHABILITATED AND UPGRADED SINCE 2002
- 10 DAMS CURRENTLY IN DESIGN AND CONSTRUCTION
- LOCAL SPONSOR FUNDING 35%

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SOLUTIONS

- TEXAS STATE SOIL AND WATER CONSERVATION BOARD (TSSWCB) FIRST RECEIVED FUNDING TO ASSIST SPONSORS WITH MAINTENANCE AND REPAIR IN 2010
- AVERAGE ANNUAL FUNDING OF ABOUT \$7 MILLION
- COST SHARE RATES:
 - Maintenance – 90% State, 10% Sponsor
 - Repair, Upgrade – 95% State, 5% Sponsor
 - Federal Rehab – 65% NRCS, 33.25% State, 1.75% Sponsor
- AVERAGE COSTS PER DAM:
 - \$400,000 for repair
 - \$4,000,000 for rehabilitation or upgrade

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SOLUTIONS

- ON JUNE 6, 2019, TSSWCB RECEIVED A SUPPLEMENTAL APPROPRIATION FROM THE ECONOMIC STABILIZATION FUND (ESF) FOR DAM INFRASTRUCTURE PROJECTS:
- \$150 MILLION
- BASED ON A FLOOD CONTROL PLAN DEVELOPED BY TSSWCB
- ALL FUNDS MUST BE OBLIGATED IN CONTRACTS BY JUNE 5, 2021

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SOLUTIONS

- CONTAINED IN THE ESF FLOOD CONTROL PLAN:
 - 50 dam repairs
 - 33 dam rehabilitations or upgrade
- SOME PROJECTS CANCELLED BY SPONSORS
 - (lack of funds)
- SOME PROJECTS FEDERALLY FUNDED FOR REHAB PLANNING
 - (will not be ready for construction by 2021)
- APPLICATIONS FOR ADDITIONAL PROJECTS:
 - 18 dam repairs
 - 13 dam upgrades

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PROCEDURES

- SOIL AND WATER CONSERVATION DISTRICTS AND OTHER LOCAL SPONSORS MAY APPLY FOR FUNDING FOR DAM MAINTENANCE, REPAIR, REHAB, AND UPGRADE
- APPLICATION FORMS AND INSTRUCTIONS ARE ON THE TSSWCB WEB:
 - <https://www.tsswcb.texas.gov/programs/flood-control-program>
 - All sponsors responsible for the dam must sign the applications



WORK IN PROGRESS

- 18 DAM REPAIRS WILL BE CONTRACTED FOR CONSTRUCTION IN THE NEXT FEW MONTHS
- DESIGN WORK WILL BEGIN ON ADDITIONAL 48 DAM REPAIRS
- 13 FEDERAL REHAB PROJECTS ARE IN VARIOUS STAGES OF PLANNING, DESIGN, AND CONSTRUCTION
- 9 NEW FEDERAL DAM REHAB PLANNING STARTS IN 2019
- DESIGNS ARE UNDERWAY ON 20 STATE FUNDED DAM UPGRADES
- \$5 MILLION STATE FUNDS ALSO AVAILABLE FOR DAM MAINTENANCE



QUESTIONS?
