Green Bag Lunch

Water Education Course

October 23, 2008

Brought to you by…

Lorrie Reeves

City of Plano

Public Works Department

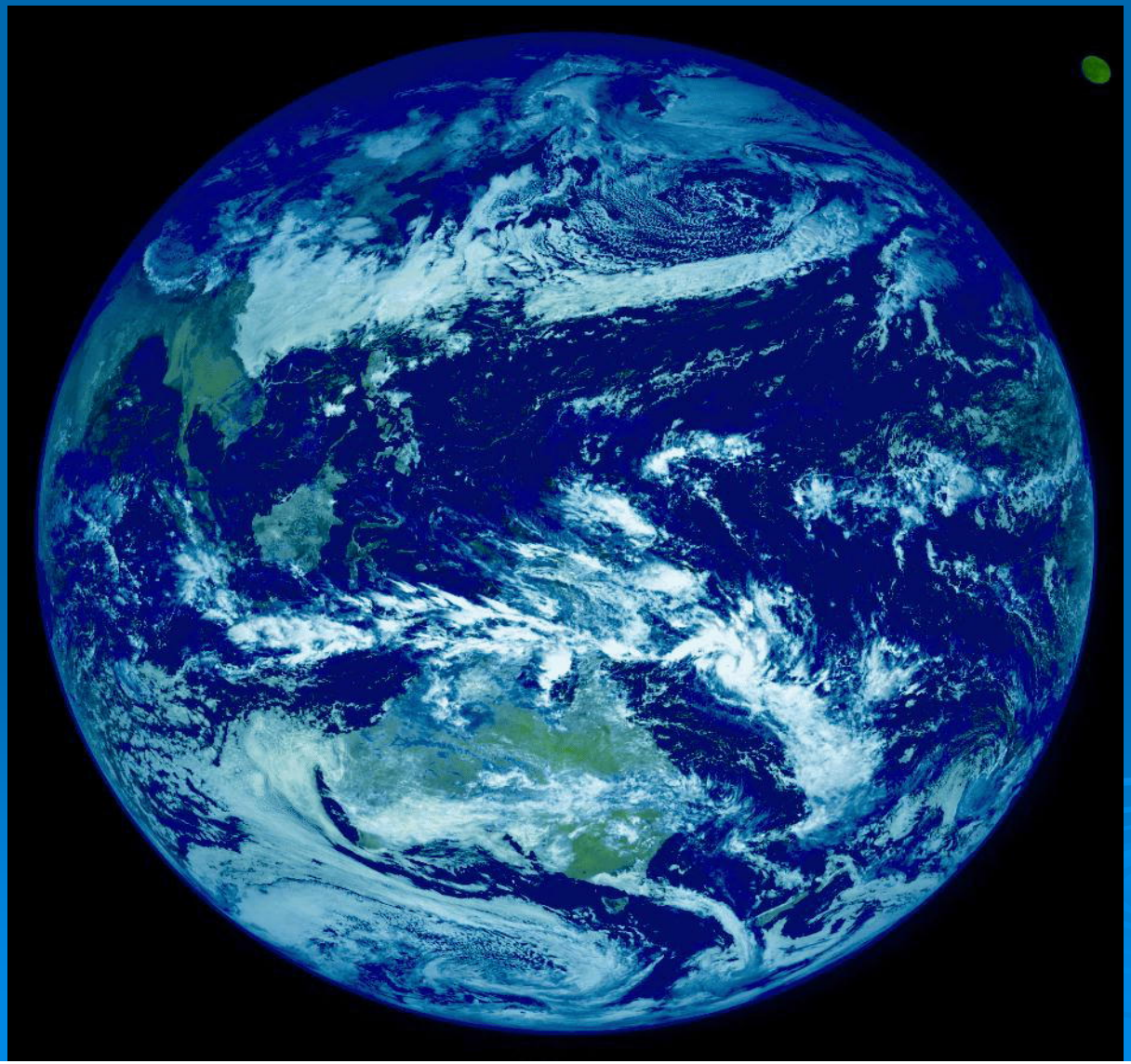
WATER

SUPPLY

&

PROTECTION

All the Water in the World



Two Flavors

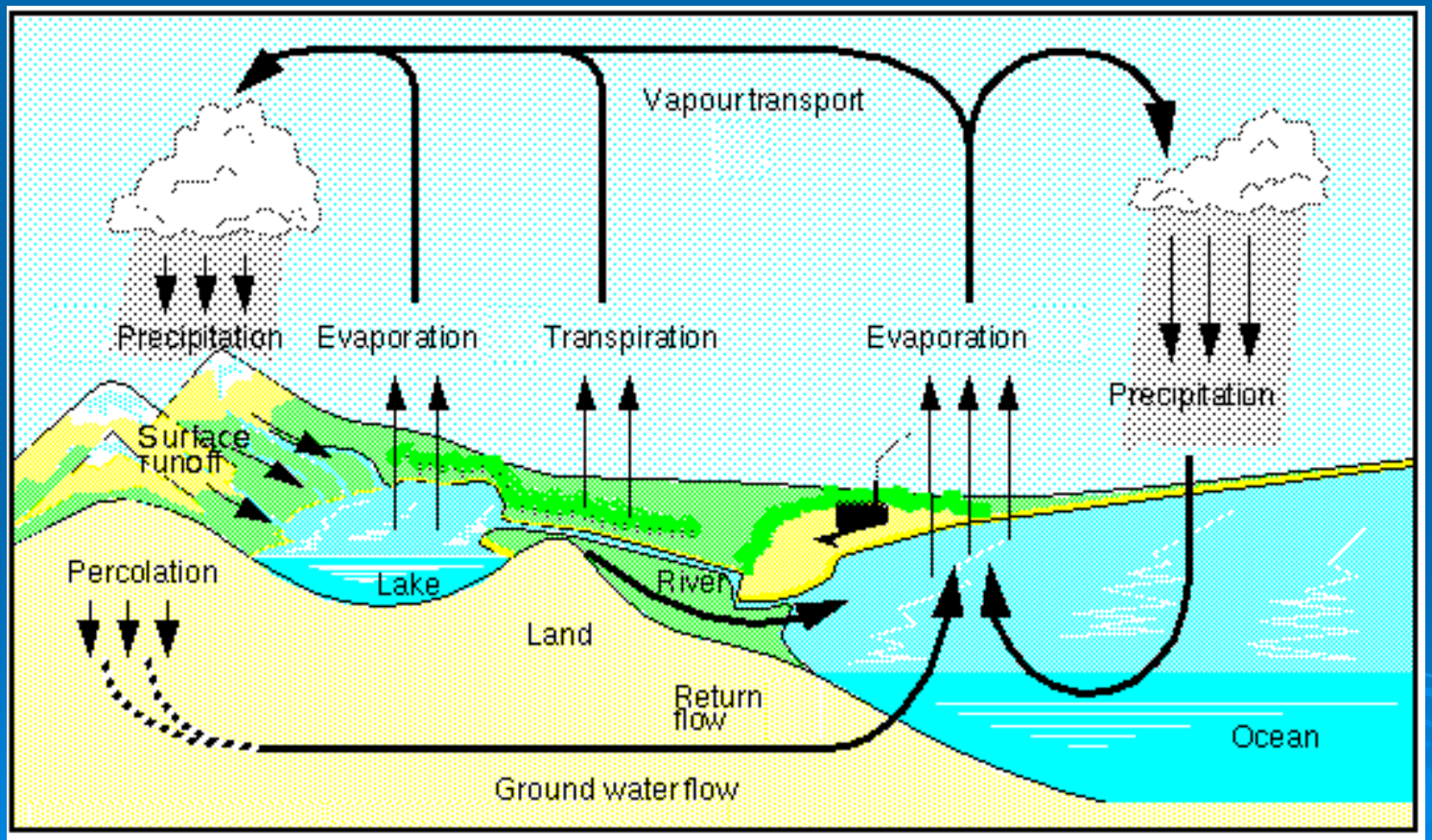
- Salt Water
  - 97%
- Fresh Water
  - 3%

Where the 3% Resides

- Polar Ice Caps
- Underground Aquifers
- Too Far Underground
- Contaminated ☹
- Can you guess how much is left?
- .003% (Much less than 1%)

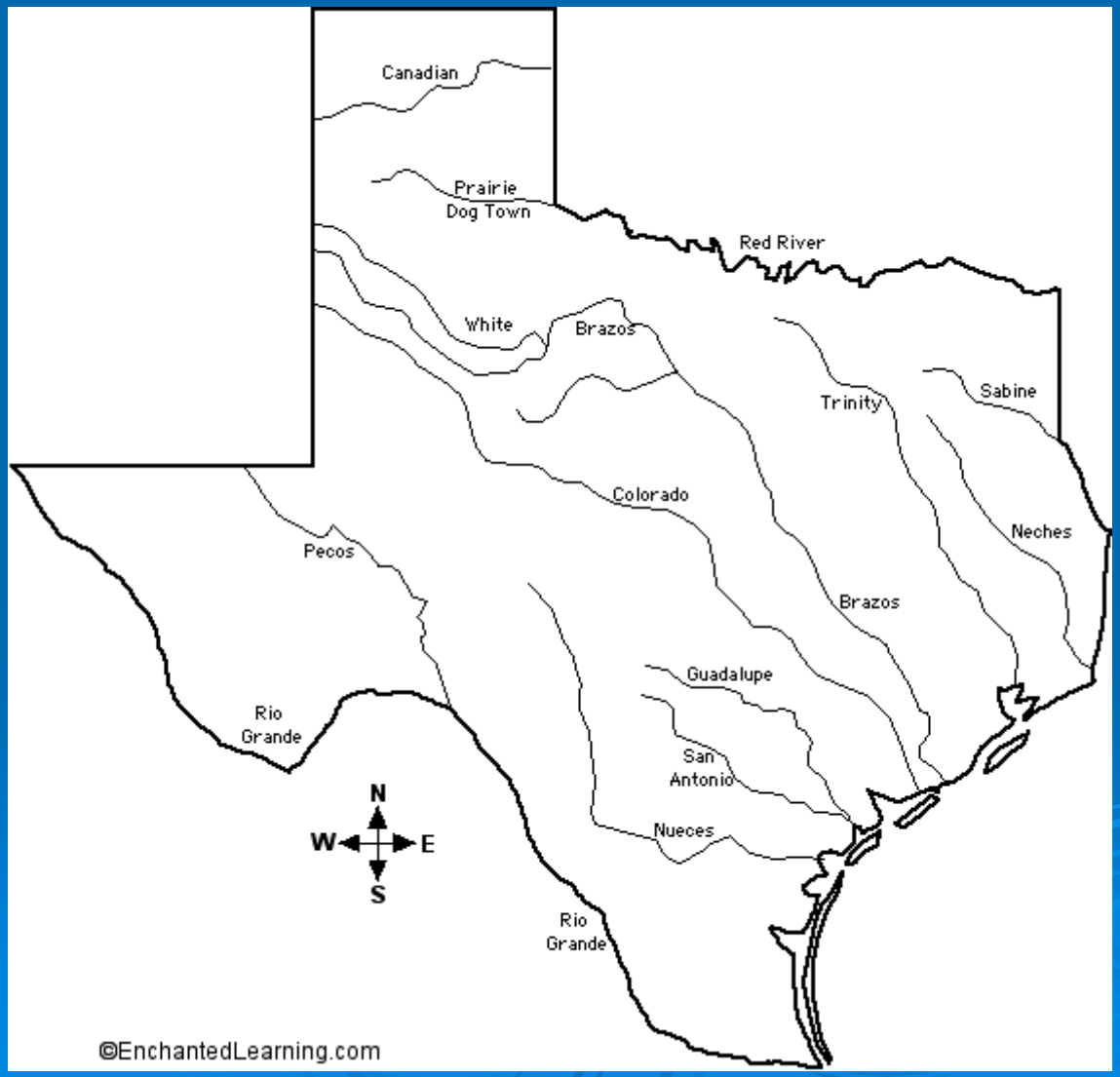
My Dear Watson…

The Elementary Travels of the Precious .003%



Courtesy Erich Roeckner, Max Planck Institute for Meteorology

Interstate Travel



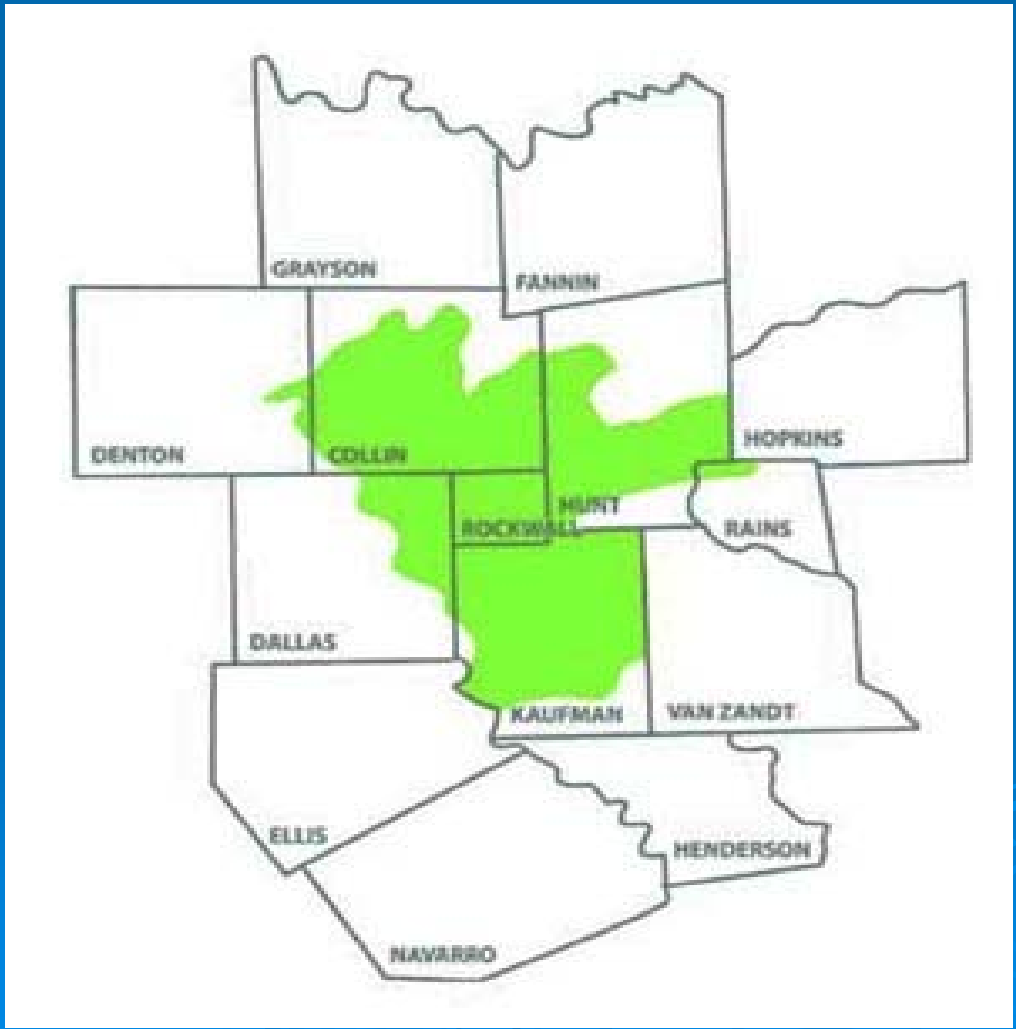
Travel Destinations

Lake Jim Chapman (Cooper)

Water Management

- Governor
- TCEQ (Water Rights Permitting Team)
- TWDB (Water Mgmt Assistance)
- Corps of Engineers
- State Representatives
- NTMWD
- Customers of NTMWD

Learning to Share



Resource "Partners"

Allen	**Plano**
Farmersville	**Princeton**
Forney	**Richardson**
Frisco	**Rockwall**
Garland	**Royse City**
McKinney	**Wylie**
Mesquite	**& 30 Customer Cities**

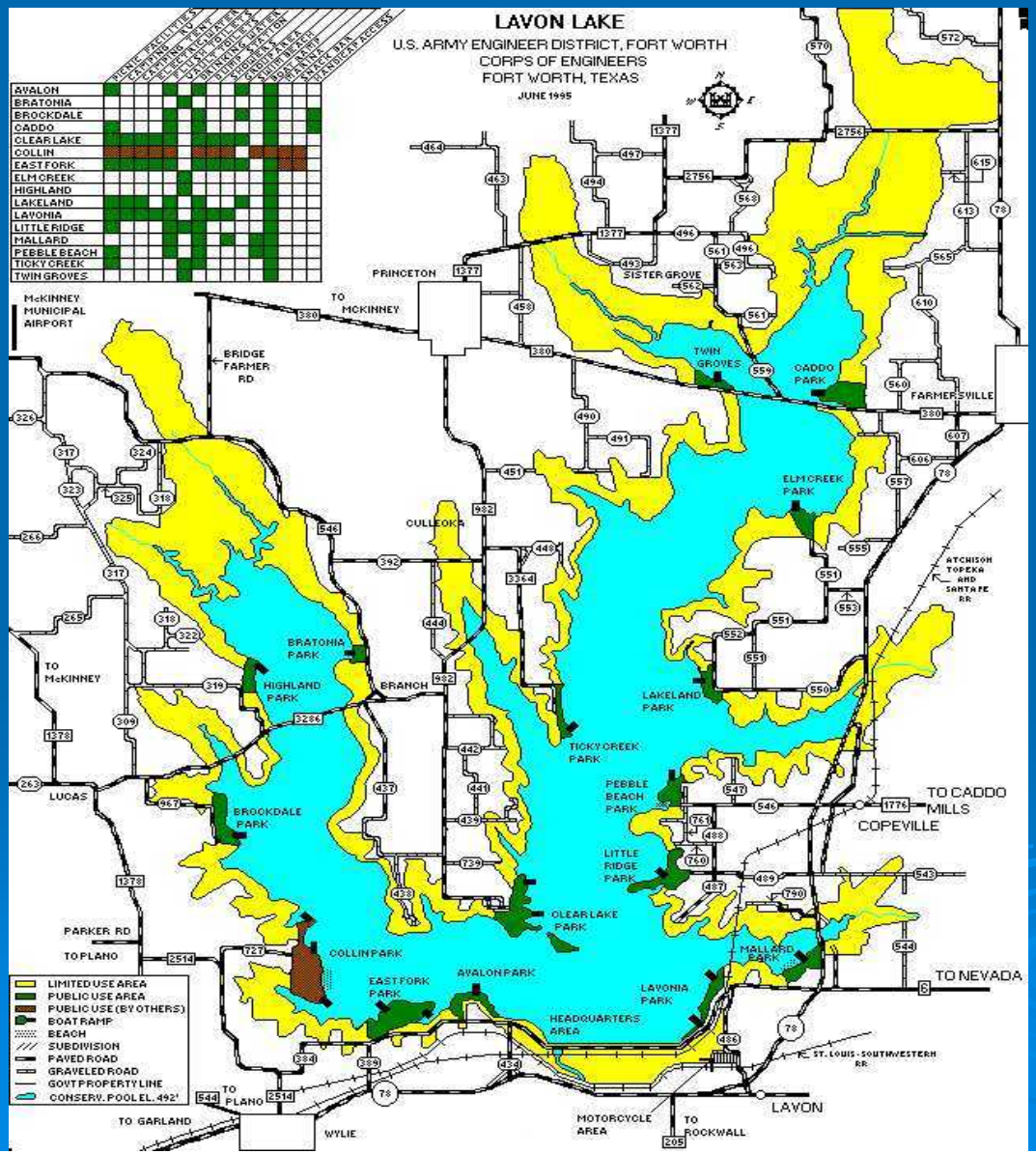
More than 1.5 Million People

Local Weather

Lake Lavon August 2006

White Rock Creek – February 2007

Rain Watch


LAVON LAKE
U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS
JUNE 1995
AVALON
BRATONIA
BROCKDALE
CADDO
CLEAR LAKE
COLLIN
EAST FORK
ELM CREEK
HIGHLAND
LAKELAND
LAVONIA
LITTLE RIDGE
MALLARD
PEBBLE BEACH
TICKY CREEK
TWIN GROVES
McKINNEY MUNICIPAL AIRPORT
PRINCETON
TO McKINNEY
BRIDGE FARMER RD
SISTER GROVE
TWIN GROVES
CADDO PARK
FARMERSVILLE
ELM CREEK PARK
CULLEOKA
BRATONIA PARK
HIGHLAND PARK
BRANCH
LAKELAND PARK
TICKY CREEK PARK
PEBBLE BEACH PARK
LITTLE RIDGE PARK
BROCKDALE PARK
LUCAS
TO CADDO MILLS
COPEVILLE
CLEAR LAKE PARK
PARKER RD
TO PLANO
COLLIN PARK
MALLARD PARK
TO NEVADA
EAST FORK PARK
AVALON PARK
LAVONIA PARK
HEADQUARTERS AREA
ATCHISON TOPEKA AND SANTA FE RR
ST. LOUIS-SOUTHWESTERN RR
LIMITED USE AREA
PUBLIC USE AREA
PUBLIC USE (BY OTHERS)
BOAT RAMP
BEACH
SUBDIVISION
PAVED ROAD
GRAVELED ROAD
GOVT PROPERTY LINE
CONSERV. POOL EL. 492'
TO GARLAND
WYLIE
TO PLANO
MOTORCYCLE AREA
TO ROCKWALL
LAVON

Lake Texoma

Kingston
TEXOMA STATE PARK
CATFISH BAY MARINA
JOHNSON CREEK
WILLOW SPRINGS RESORT & MARINA
ALBERTA CREEK RESORT
LAKESIDE
WASHITA POINT
ROADS END
PLATTER FLATS
SOLDIER CREEK RESORT & MARINA
CANEY CREEK
BRIAR CREEK
BUNCOMBE CREEK R.A.
TEXOMA CHRISTIAN CAMP
BUNCOMBE CREEK RESORT & MARINA
ROCK CREEK
STATE GAME MANAGEMENT AREA
PRESTON POINT
THE INN AT PRESTON BEND
PRESTON BEND REC AREA
SUNSET CAMP
LITTLE MINERAL MARINA & RESORT
BURNS FLAT
NORTH ISLAND
ISLAND VIEW
LIGHTHOUSE MARINA
SEA-DOO
CEDAR BAYOU MARINA
JUNIPER POINT
CEDAR MILLS MARINA
THOUSAND TRAILS
TREASURE ISLAND
GRANDPAPPY POINT MARINA
DENISON DAM
WALNUT CREEK RESORT
MILL CREEK MARINA & RESORT
EISENHOWER YACHT CLUB
DAM SITE AREA
TEXOMA LUTHERAN CAMP
EISENHOWER STATE PARK
RESIDENT OFFICE
BIG MINERAL CAMP
PARADISE COVE
LAKE RANDELL
FLOWING WELLS RESORT
Powell
Shay Cut Off
Shay
Enos
Willis
Gordonville
Fink
New Woodville
McBride
Cartwright
Overlook
House Creek
Briar
Buncombe Creek
Rock Creek
Enos Road
Caney Creek
Sandy Creek
Soldier Creek
Rooster Creek
McGehlin Creek
Mill Creek
Scott Branch
Little Mineral Creek
Sand Creek
32
70
70A
70B
99
377
901
120
406
996
75
75A
84

Our Water Account

- Lake Lavon 104,000
- Lake Texoma 93,900
- Lake Chapman 57,214

  255,114 acre ft.

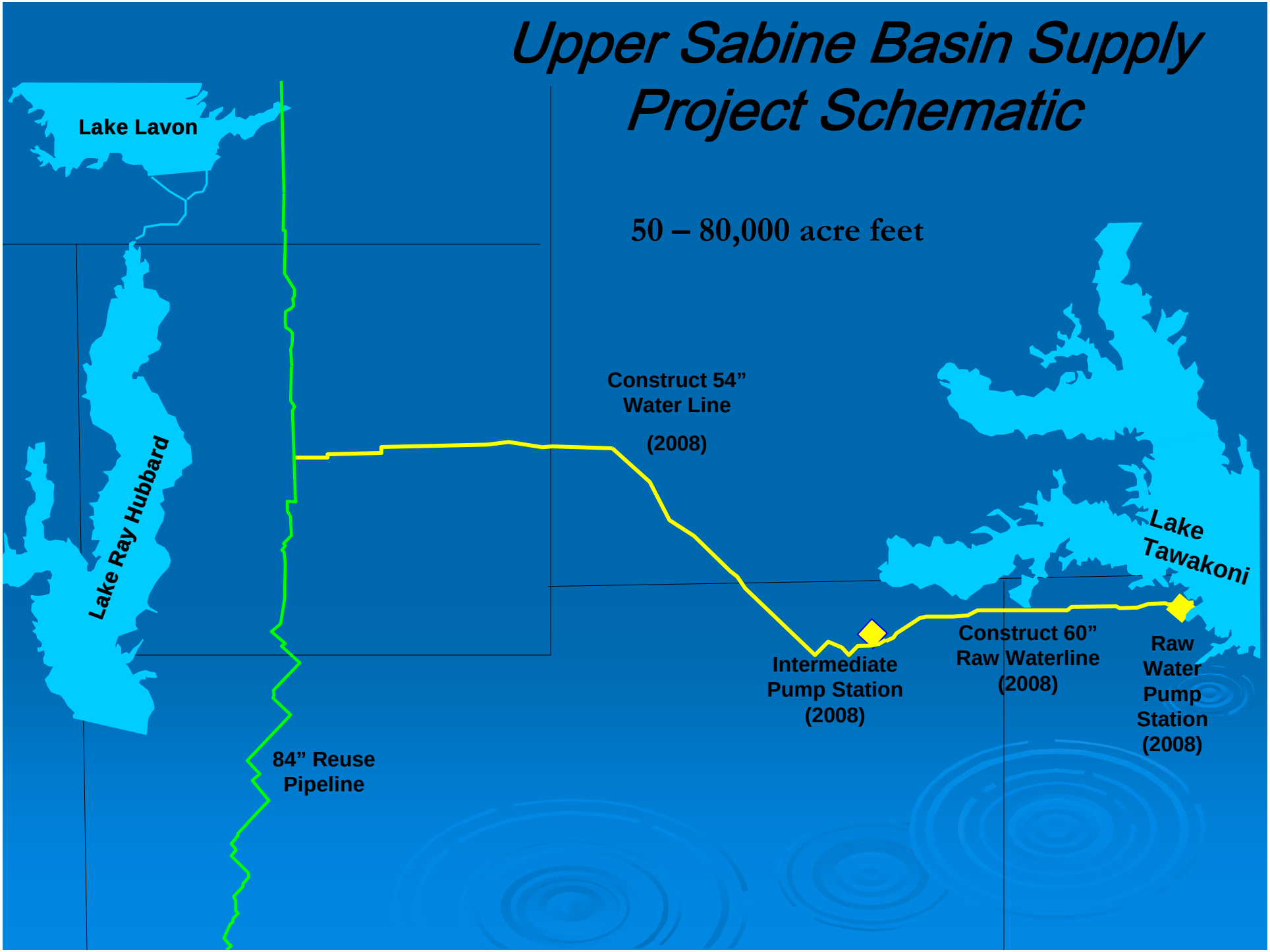
- East Fork Reuse 102,000
- Tawakoni 80,000 acre ft.

  182,000 more

- Total Available 437,114 acre ft.*

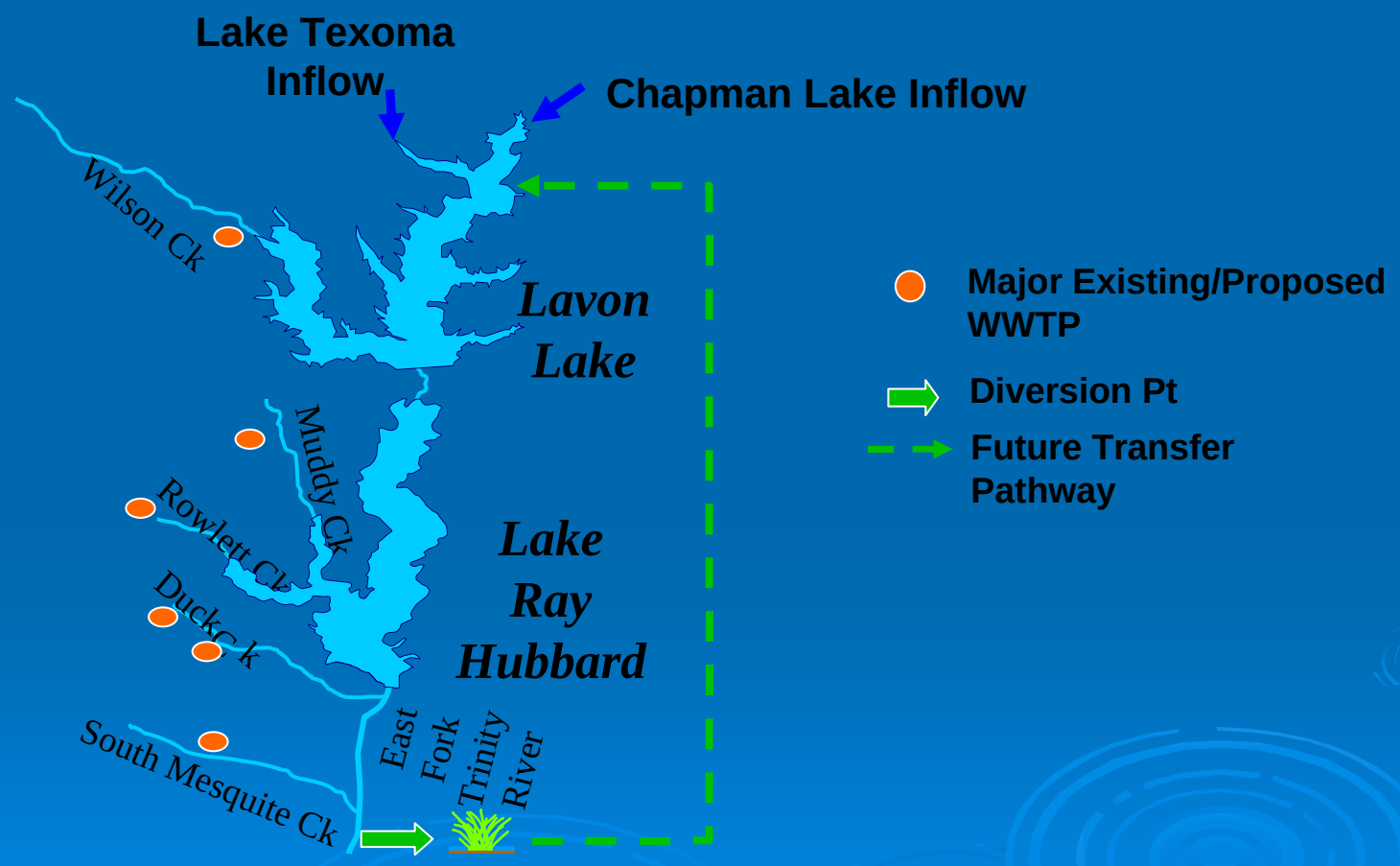
*(142.4 Billion Gallons)

Upper Sabine Basin Supply Project Schematic

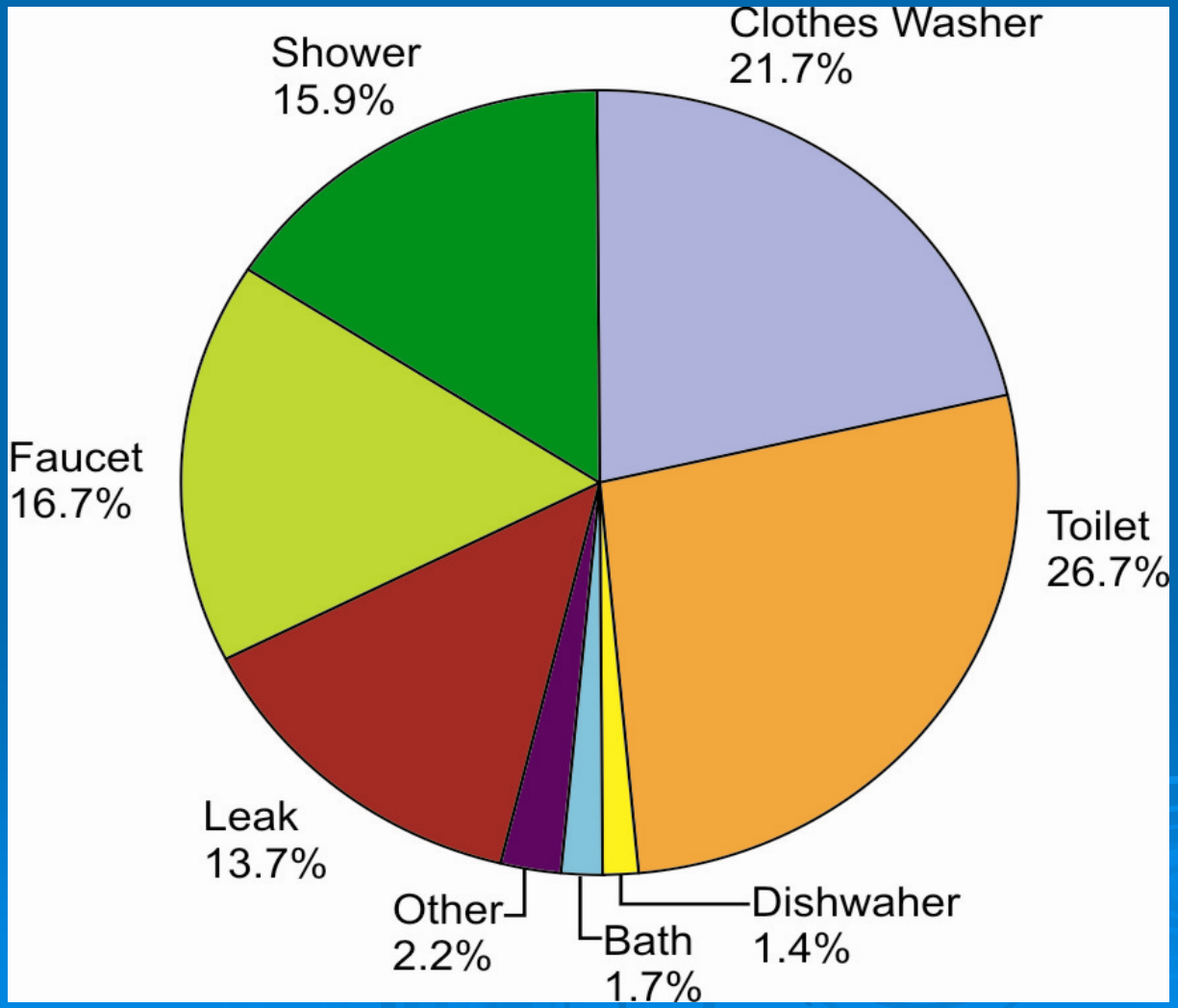


East Fork Reuse

(102,000 ac. ft)



Indoor Water Use

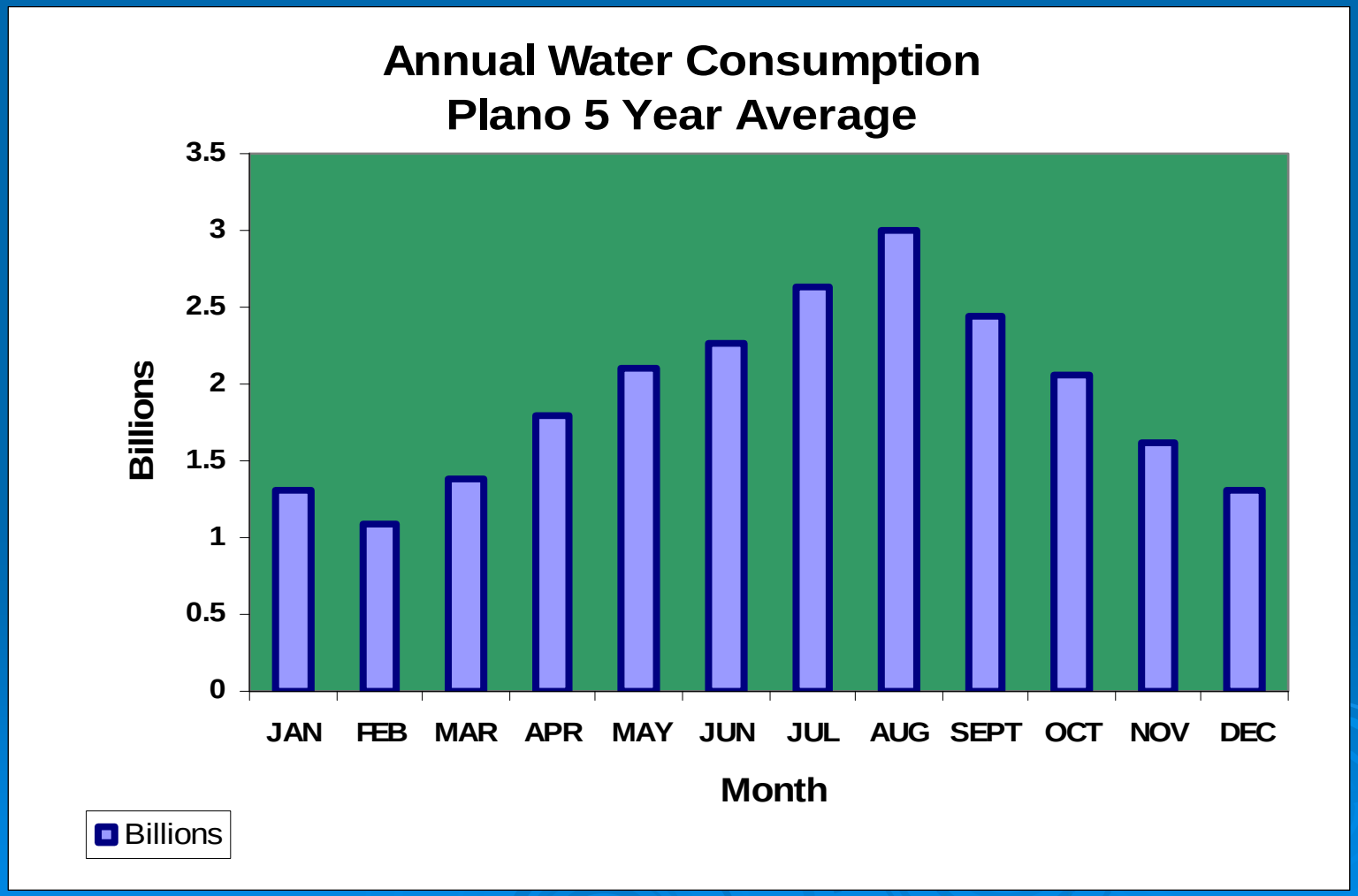


Outdoor Water Use

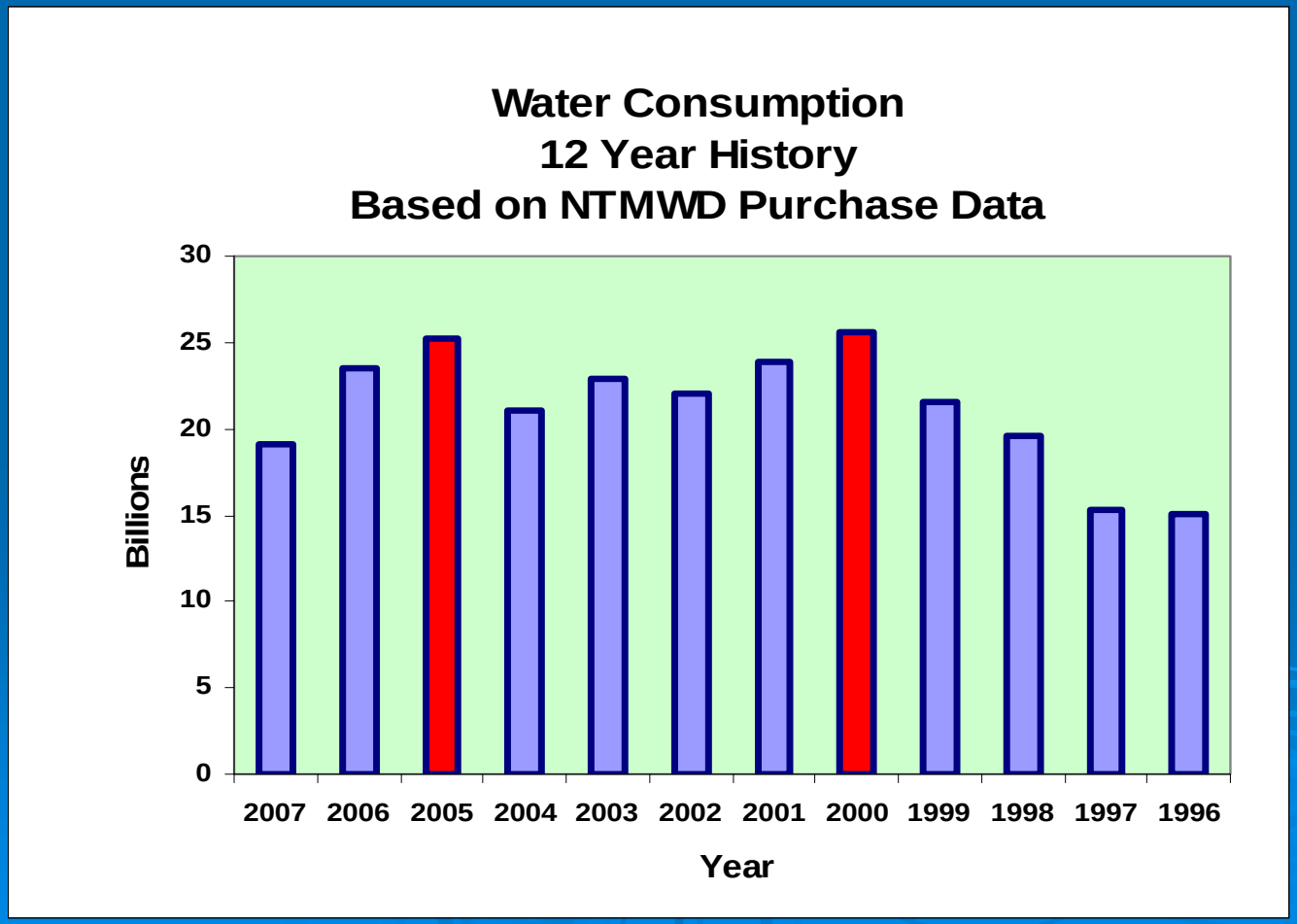
Irrigation

Pools

OUTDOOR USE


Annual Water Consumption
Plano 5 Year Average
3.5
3
2.5
2
1.5
1
0.5
0
Billions
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEPT
OCT
NOV
DEC
Month
Billions

The Right Direction (Plano)



NORTH TEXAS MUNICIPAL WATER DISTRICT

FINDING NEW WATER

A NATURAL SOLUTION

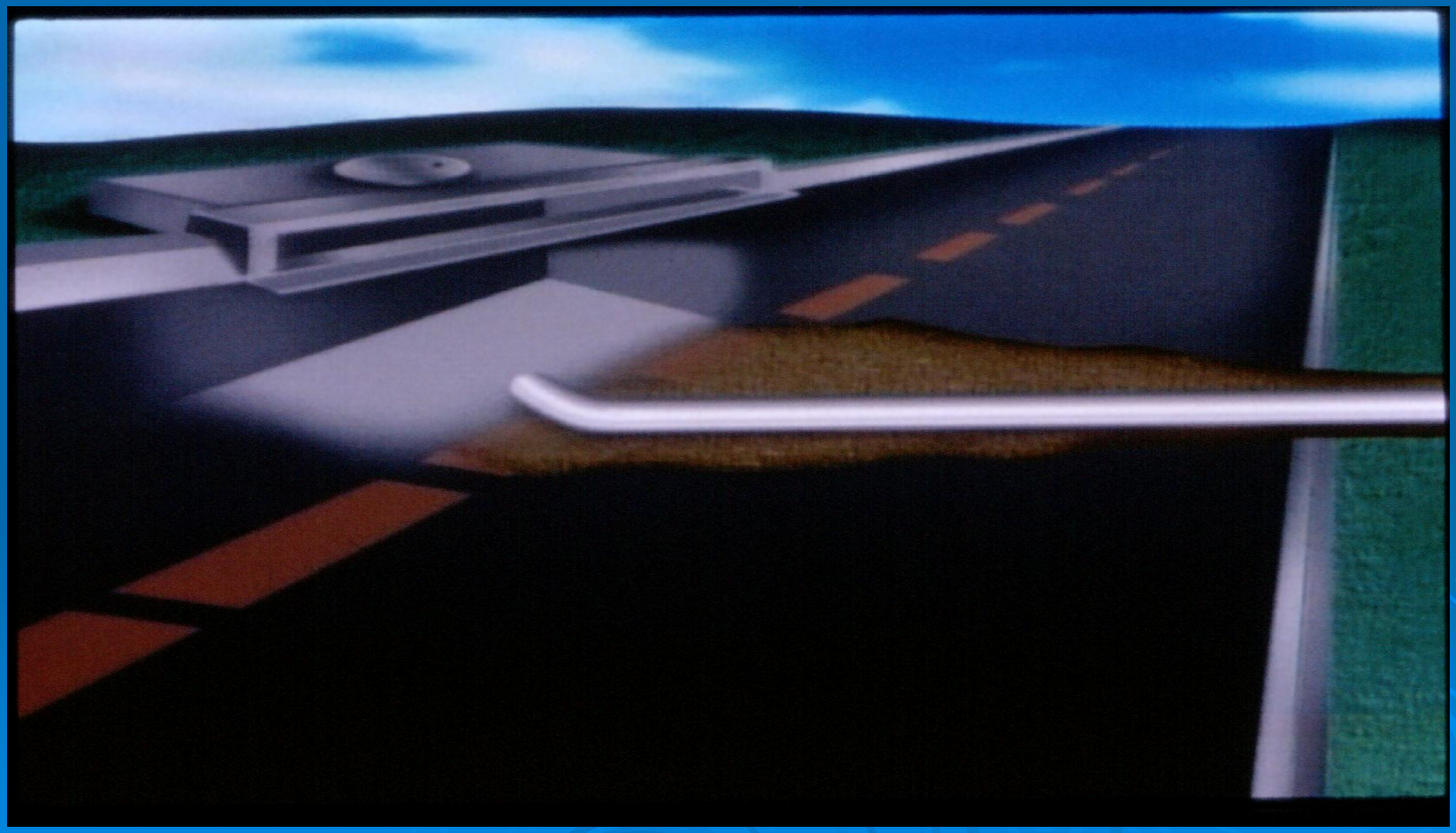
Where the 3% Resides

- Polar Ice Caps
- Underground Aquifers
- Too Far Underground
- Contaminated ☹

Urban Water Cycle

Permit and Plan Required

Pollution Super Highway



Plano Creek Outfall

“Enviroscape”

Things you can do…

- Use the right plants for Texas
- Learn to water them correctly
- Use water saving devices indoors
- Protect the Storm Drain System
- Never release anything outside

We're All In This Together