

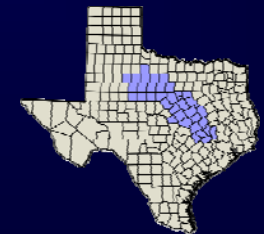
New Member Orientation Workshop

Overview of the Regional Water Planning Process

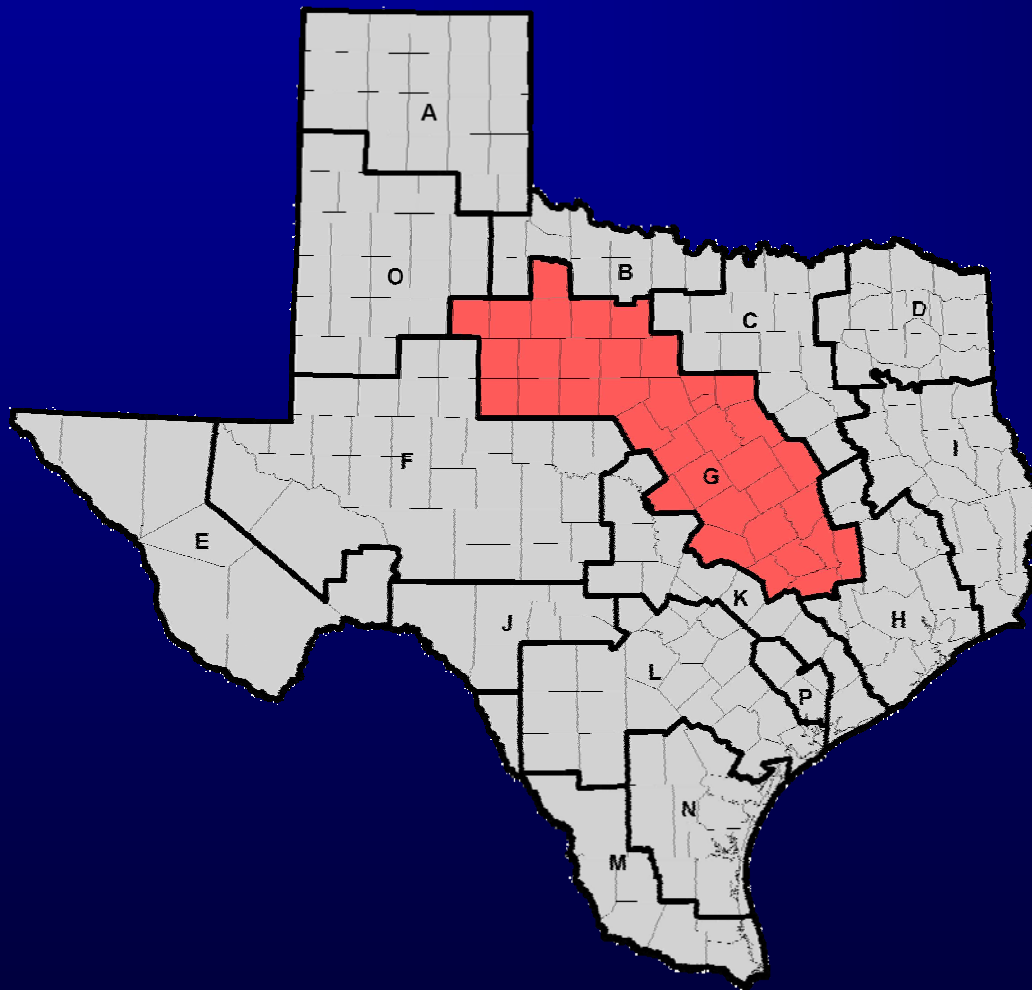
February 18, 2009



HDR



Regional Water Planning

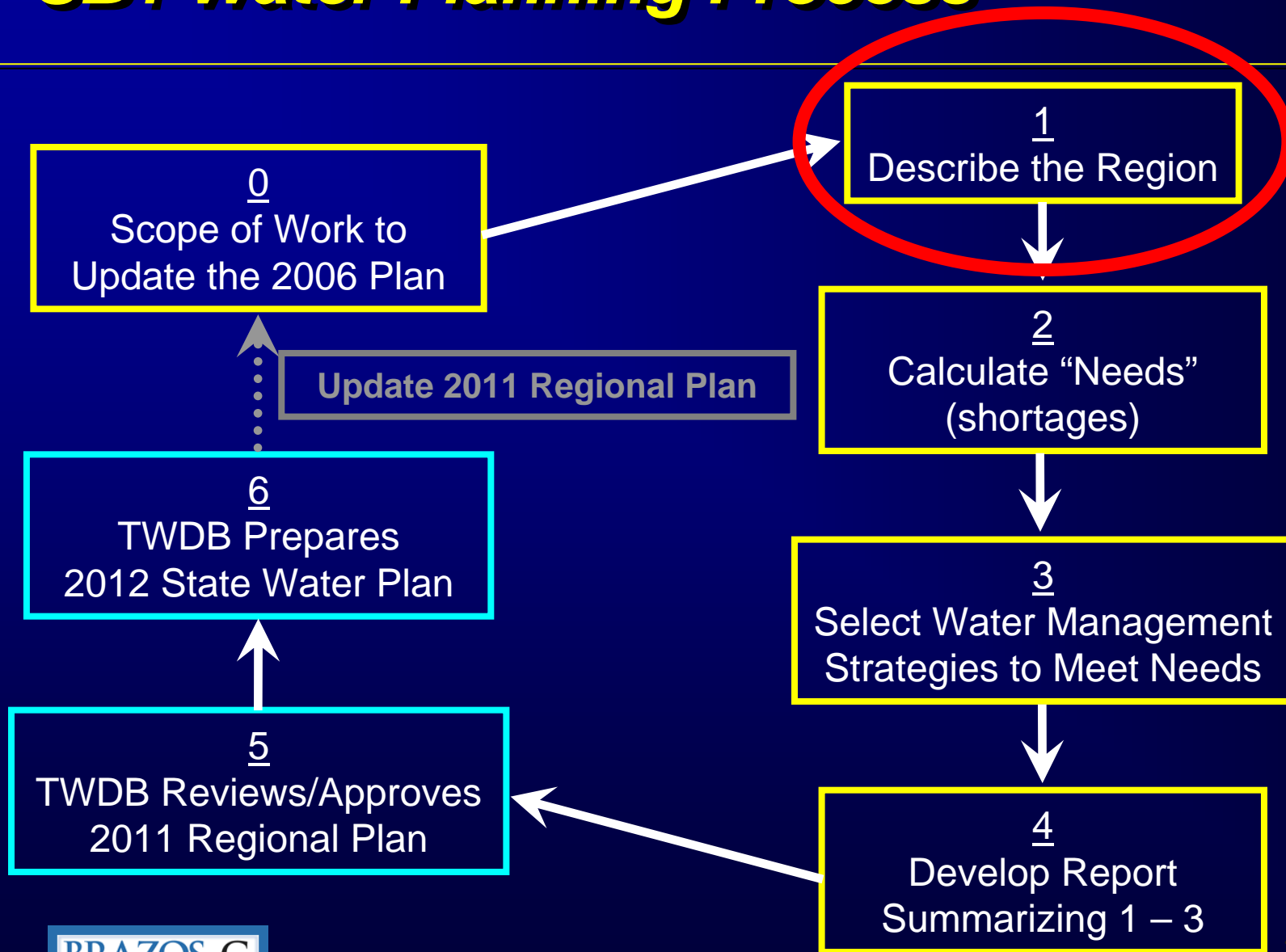


- Started by SB1 in 1997
- New requirements in SB2 in 2001
- 16 planning regions
- BRA is administrative agent for Region G
- HDR Engineering is technical consultant
 - Freese & Nichols
 - R.W. Harden
 - Fletcher Communications

Interest Groups Represented

- ✓ **Public – Gary Newman**
- ✓ **Counties – Jon Burrows, Tim Fambrough, Mike Sutherland**
- ✓ **Municipalities – Tom Clark, Wiley Stem, Alva D. Cox, Tommy O'Brien**
- ✓ **Agriculture – Dale Spurgin, Wayne Wilson**
- ✓ **Industry – Randy Waclawczyk**
- ✓ **Environment – Sheril Smith**
- ✓ **Small Business – Gail Peek**
- ✓ **Electric Utilities/Power Generation – Scott Diermann**
- ✓ **River Authorities – Phil Ford**
- ✓ **Water Districts – Terry Kelley, Kathleen Webster**
- ✓ **Water Utilities – Charles Beseda**
- ✓ **Groundwater Conservation Districts – Mike McGuire**

SB1 Water Planning Process



SB1 Water Planning Process

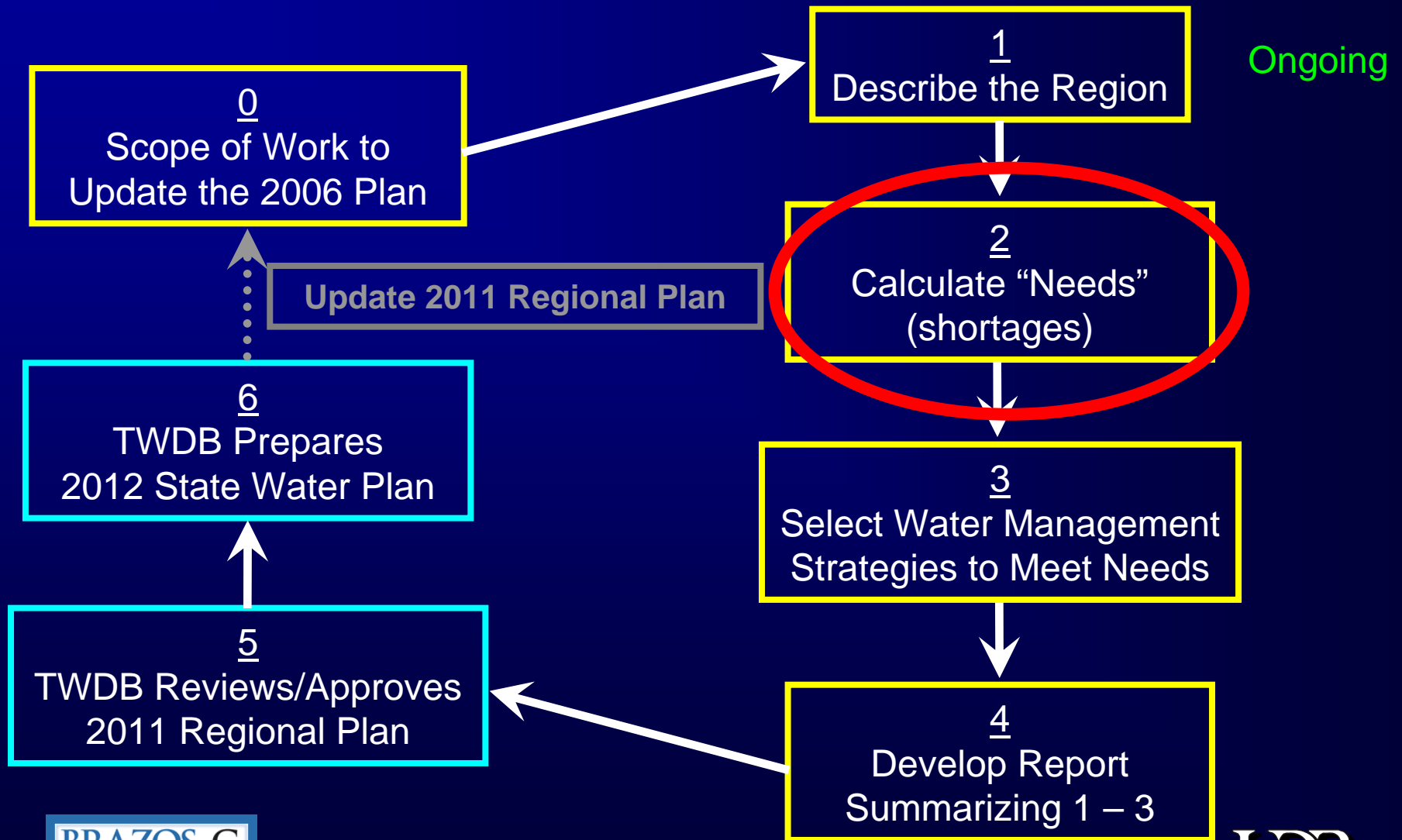
1
Describe the Region

Information Required:

Status: In progress

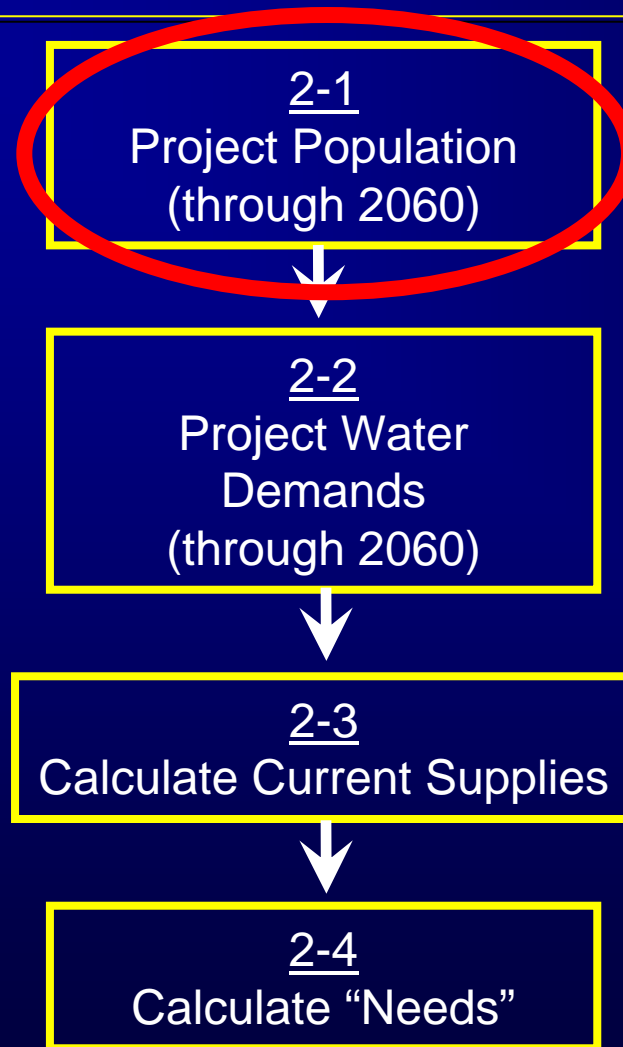
- ✓ **Wholesale water providers**
- ✓ **Current water use**
- ✓ **Identified water quality problems**
- ✓ **Sources of groundwater and surface water, including major springs**
- ✓ **Major demand centers**
- ✓ **Agricultural and natural resources**
- ✓ **Social and economic aspects of the regional water planning area, including information on current population and primary economic activities, including businesses dependent on natural water resources**
- ✓ **Initial assessment of current preparations for drought within the regional water planning area**
- ✓ **Summary of existing regional water plans, summary of recommendations in State water plan**
- ✓ **Summary of local water plans**
- ✓ **Identified threats to the agricultural and natural resources due to water quantity problems, or water quality problems related to water supply.**

SB1 Water Planning Process



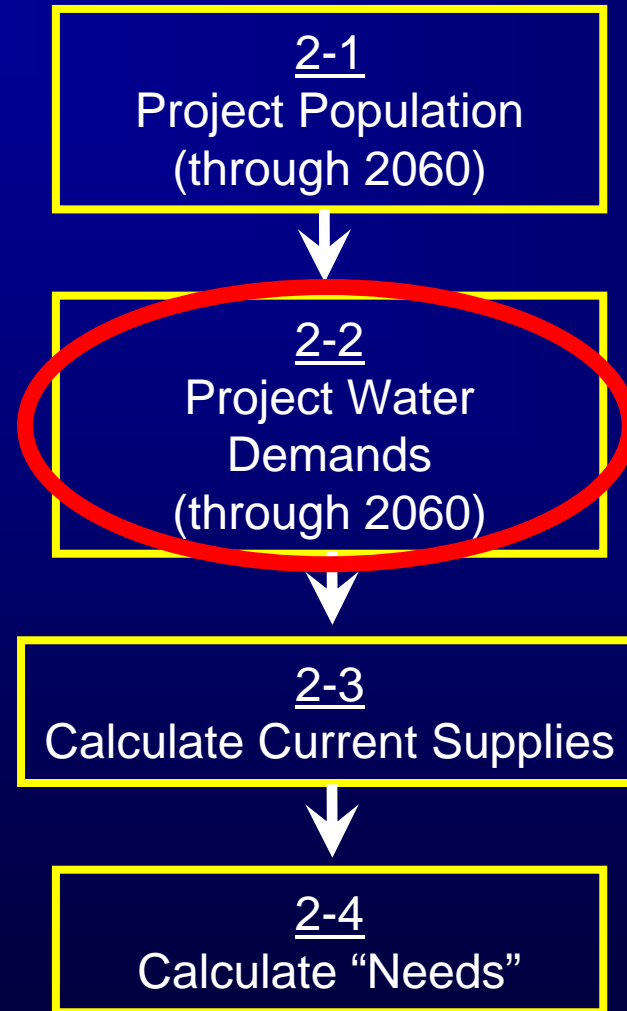
SB1 Water Planning Process

2
Calculate "Needs"
(shortages)



SB1 Water Planning Process

2
Calculate "Needs"
(shortages)



Status: In Progress

SB1 Water Planning Process

2
Calculate "Needs"
(shortages)

2-2
Project Water
Demands
(through 2060)

✓Municipal

- Per-capita use (GPCD) based on 2000 Census and reported water use
- GPCD reduced based on increased use of efficient plumbing fixtures

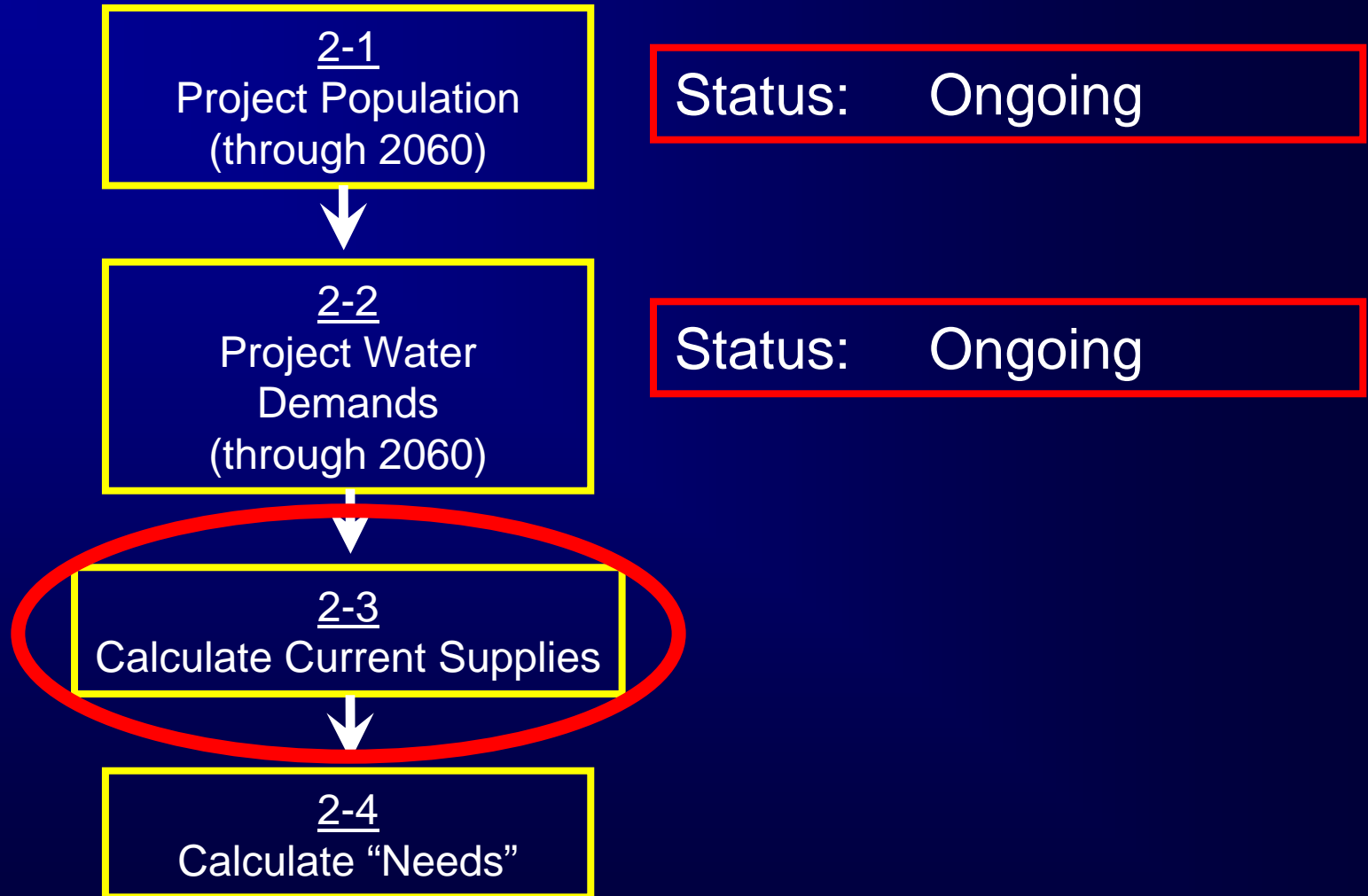
$$\text{Demand} = \text{GPCD} \times \text{Population}$$

- ✓Manufacturing
- ✓Steam Electric
- ✓Mining
- ✓Irrigation
- ✓Livestock

Developed through TWDB
Contractors & Staff

SB1 Water Planning Process

2
Calculate "Needs"
(shortages)



SB1 Water Planning Process

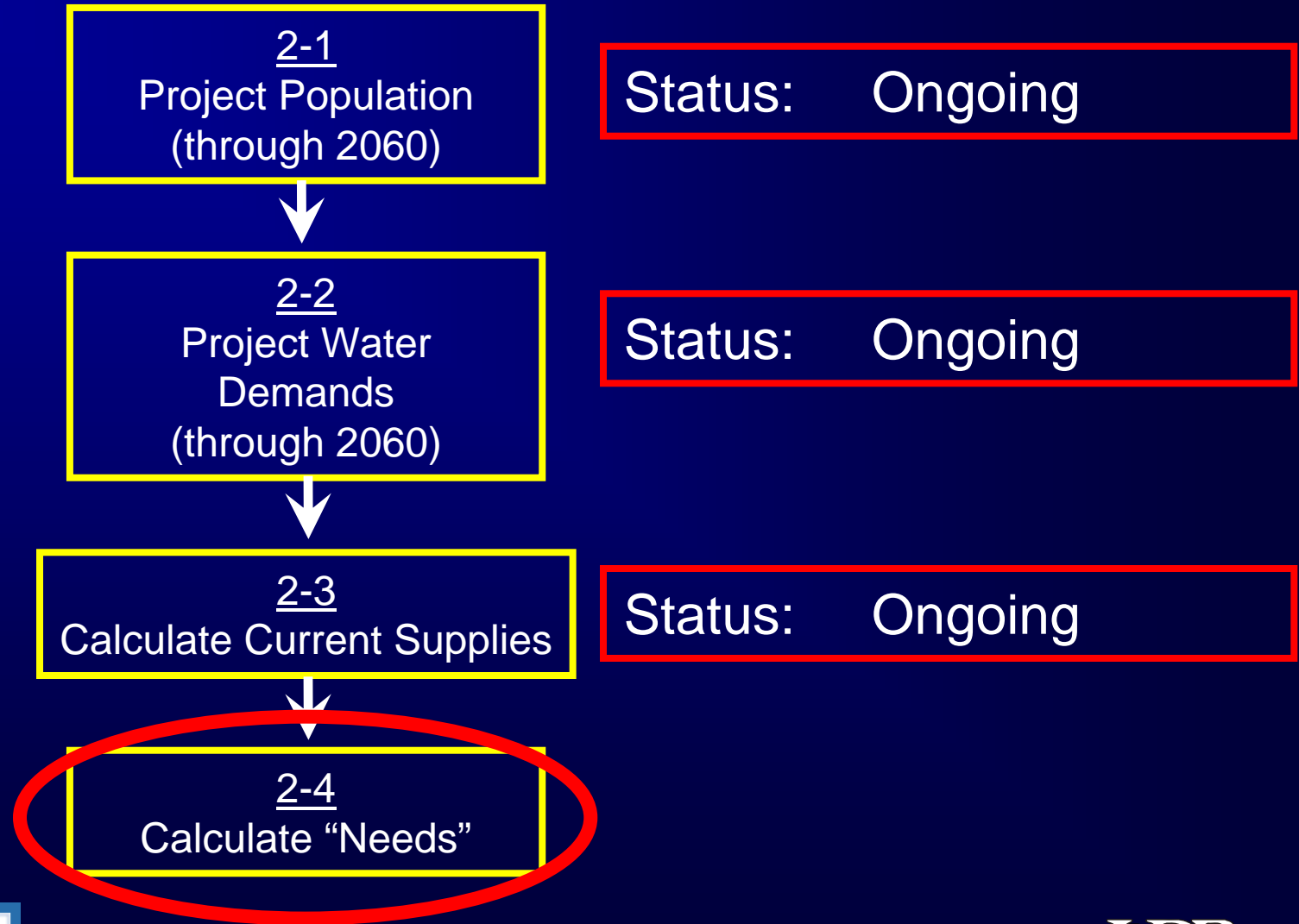
2
Calculate "Needs"
(shortages)

2-3
Calculate Current Supplies

- ✓ Groundwater Availability (14 aquifer systems in Brazos G)
 - House Bill 1763 Process – Managed Available Groundwater
 - Limit supply to well capacities
- ✓ Surface Water Availability
 - TCEQ Brazos WAM Run 3 w/Brazos G modifications
 - Firm yields for reservoirs greater than 1,000 acre-feet capacity
 - Safe yields for reservoirs upstream of Possum Kingdom Reservoir
- ✓ Apportion Groundwater and Surface Water to WUGs

SB1 Water Planning Process

2
Calculate "Needs"
(shortages)



SB1 Water Planning Process

2
Calculate "Needs"
(shortages)

2-4
Calculate "Needs"

Need = Supply minus Demand

✓Need determined for each WUG for each decade

SB1 Water Planning Process

2
Calculate "Needs"
(shortages)

2-1
Project Population
(through 2060)

Status: Ongoing



2-2
Project Water
Demands
(through 2060)

Status: Ongoing



2-3
Calculate Current Supplies

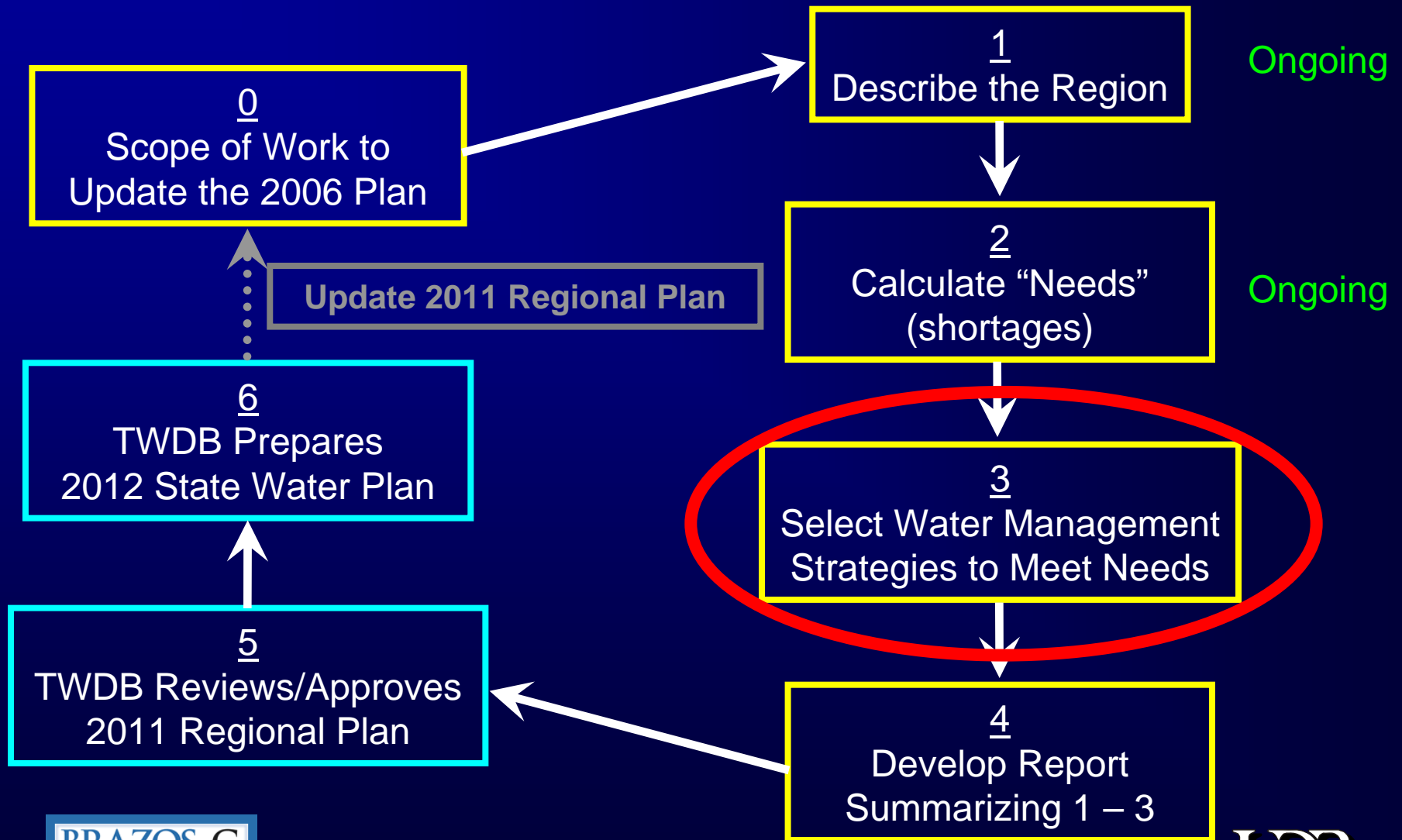
Status: Ongoing



2-4
Calculate "Needs"

Status: Not Started

SB1 Water Planning Process



SB1 Water Planning Process

3
Select Water Management Strategies to Meet Needs

- Scope of Work
- Public Meeting

3-1
Identify Potential Water Management Strategies

Status: Complete

3-2
Evaluate Potential Water Management Strategies

SB1 Water Planning Process

3
Select Water Management
Strategies to Meet Needs

3-2
Evaluate Potential
Water Management
Strategies

- ✓ Water Conservation – **Must be considered for each need**
- ✓ Increased Groundwater Development
- ✓ New Reservoirs (on and off-channel)
- ✓ New Diversions
- ✓ Wastewater Reuse
- ✓ Desalination
- ✓ Aquifer Storage and Recovery
- ✓ Groundwater/Surface Water Conjunctive Use
- ✓ Upper Basin Salt Control
- ✓ Enhance Reservoir Yields
- ✓ Interconnection of Regional and Community Water Systems
- ✓ Brush Control
- ✓ Weather Modification
- ✓ Other Measures

SB1 Water Planning Process

3
Select Water Management Strategies to Meet Needs

- Scope of Work
- Public Meeting

3-1
Identify Potential Water Management Strategies

Status: Complete

3-2
Evaluate Potential Water Management Strategies

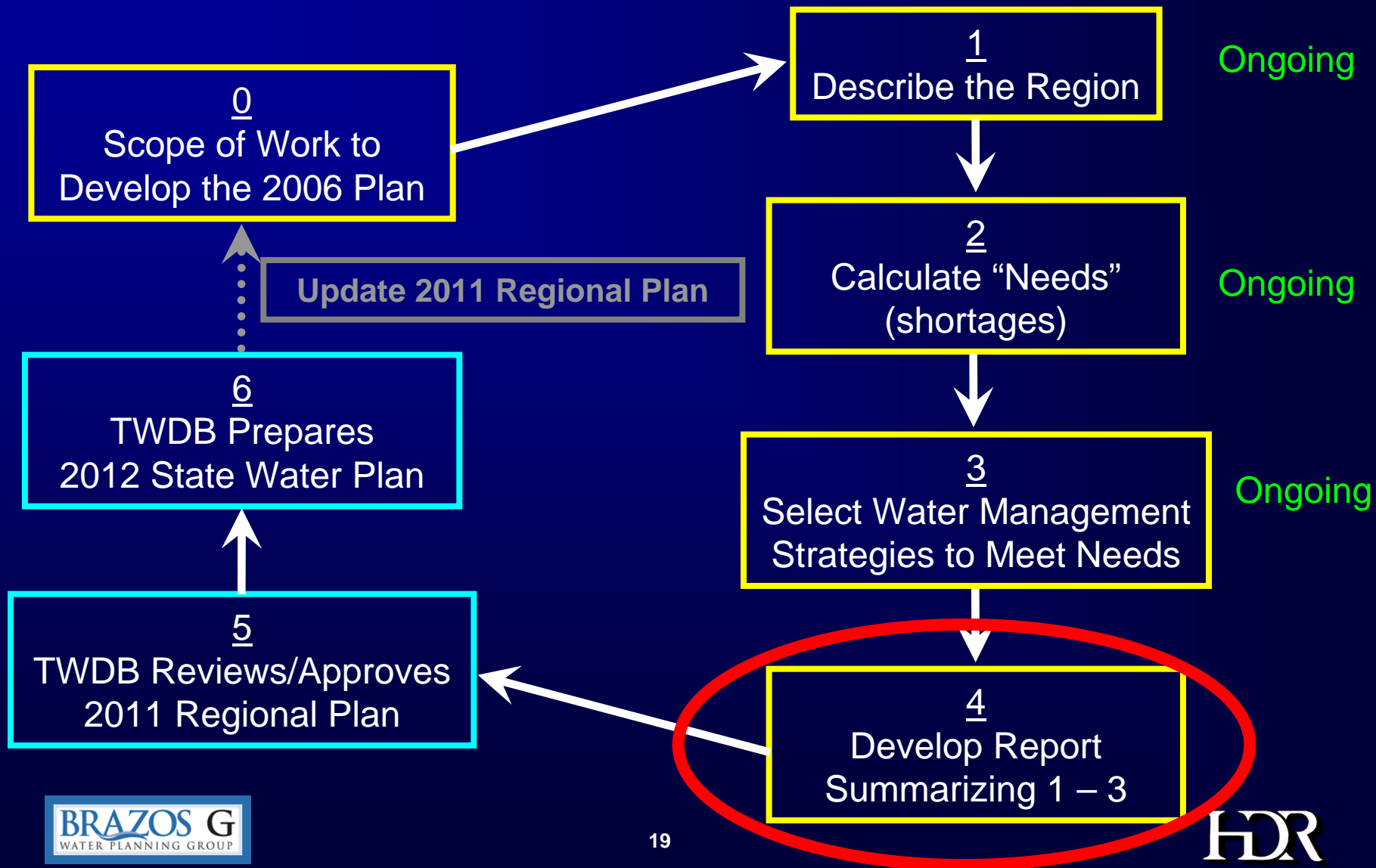
Status: Ongoing

- Supply
- Cost
- Environmental
- Cultural
- Historical
- Other Factors

3-3
Select Water Management Strategies to Meet Needs

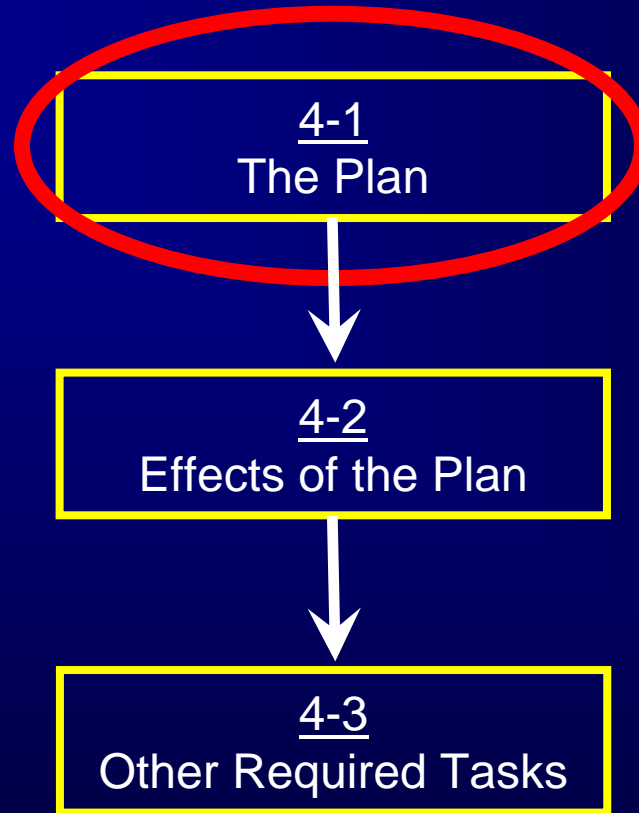
Status: Ongoing

SB1 Water Planning Process



SB1 Water Planning Process

4
Develop Report
Summarizing 1 – 3



SB1 Water Planning Process

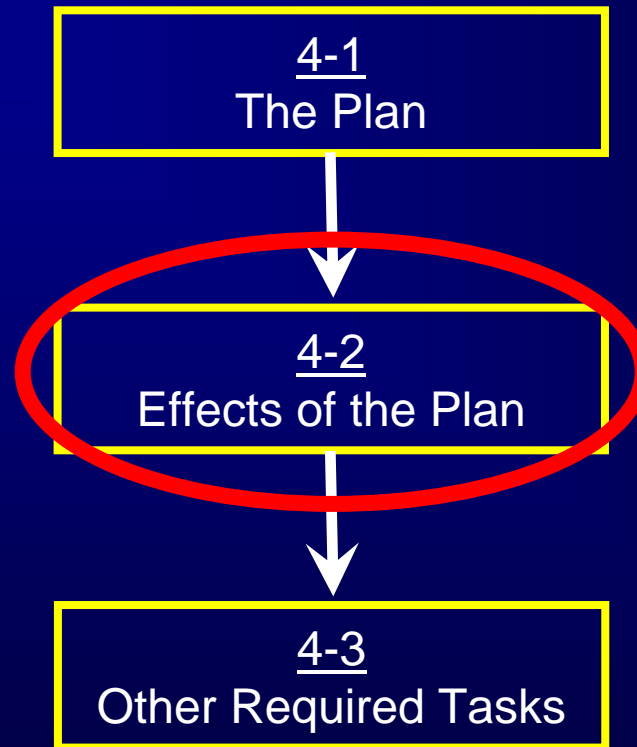
4
Develop Report
Summarizing 1 – 3

4-1 The Plan

- ✓ Describe Region
- ✓ Project Population
- ✓ Project Water Demands
- ✓ Determine Water Availability & Supplies
- ✓ Determine Needs
- ✓ Select Water Management Strategies to Meet Needs
 - Supply
 - Environmental Effects
 - Effects on Threats
 - Cost
 - Cultural/Historical Effects
 - Other Factors

SB1 Water Planning Process

4
Develop Report
Summarizing 1 – 3



SB1 Water Planning Process

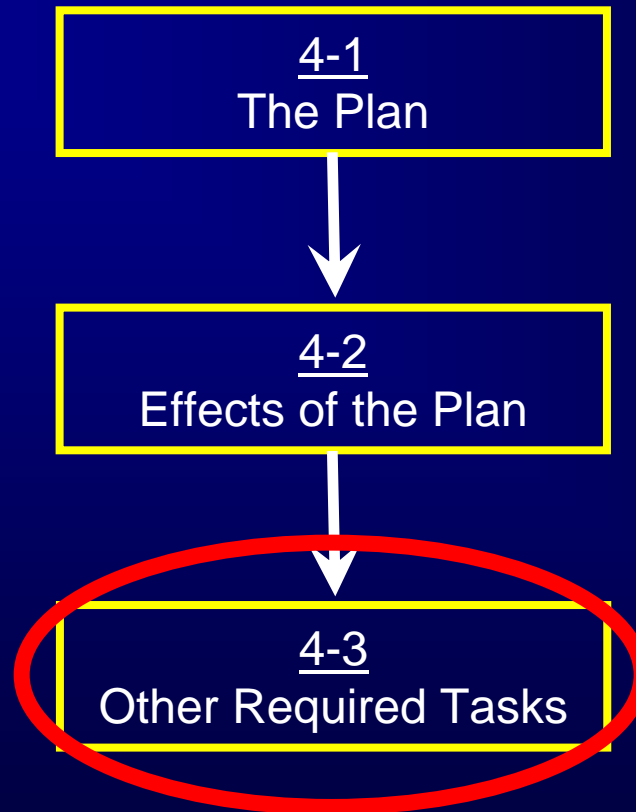
4
Develop Report
Summarizing 1 – 3

4-2 Effects of The Plan

- ✓ Environment
 - Streamflows
 - Habitat
 - Threatened/Endangered Species
 - Water Quality
- ✓ Cultural/Historical
 - Historical Sites (reservoir inundation, etc.)
 - Impacts of moving water from rural to urban areas
 - Quantity of water moved
 - Third-part impacts of moving water

SB1 Water Planning Process

4
Develop Report
Summarizing 1 – 3



SB1 Water Planning Process

4
Develop Report
Summarizing 1 – 3

4-3
Other Required Tasks

Status: Ongoing

- ✓ Water Conservation and Drought Management Recommendations
 - Develop a consolidated summary of water conservation and drought management recommendations
 - Model Water Conservation Plan (Appendix)
 - Model Drought Management Plan (Appendix)
- ✓ Description of how the Regional Water Plan is consistent with long-term protection of the State's resources:
 - ♠ Water
 - ♠ Agricultural
 - ♠ Natural
 - ♠ People??
- ✓ Recommend Unique Ecological Stream Segments
- ✓ Recommend Unique Reservoir Sites
- ✓ Water Infrastructure Funding Recommendations
- ✓ Recommend Legislative & Regional Policy Issues (Workgroup??)

SB1 Water Planning Process

