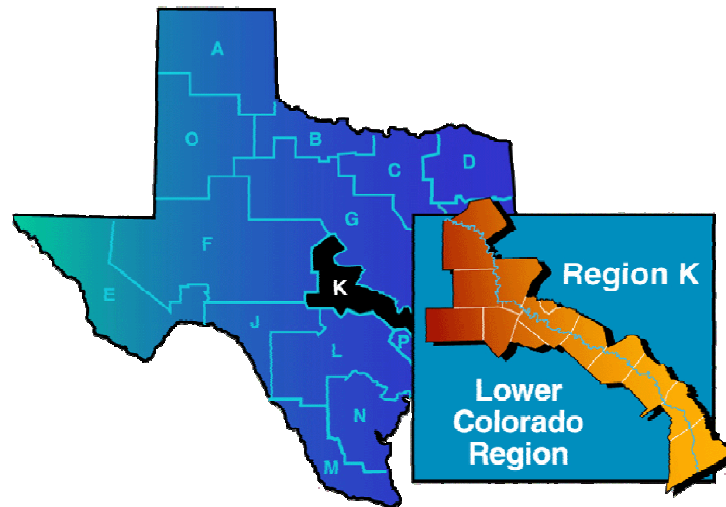


# State/Regional Water Planning

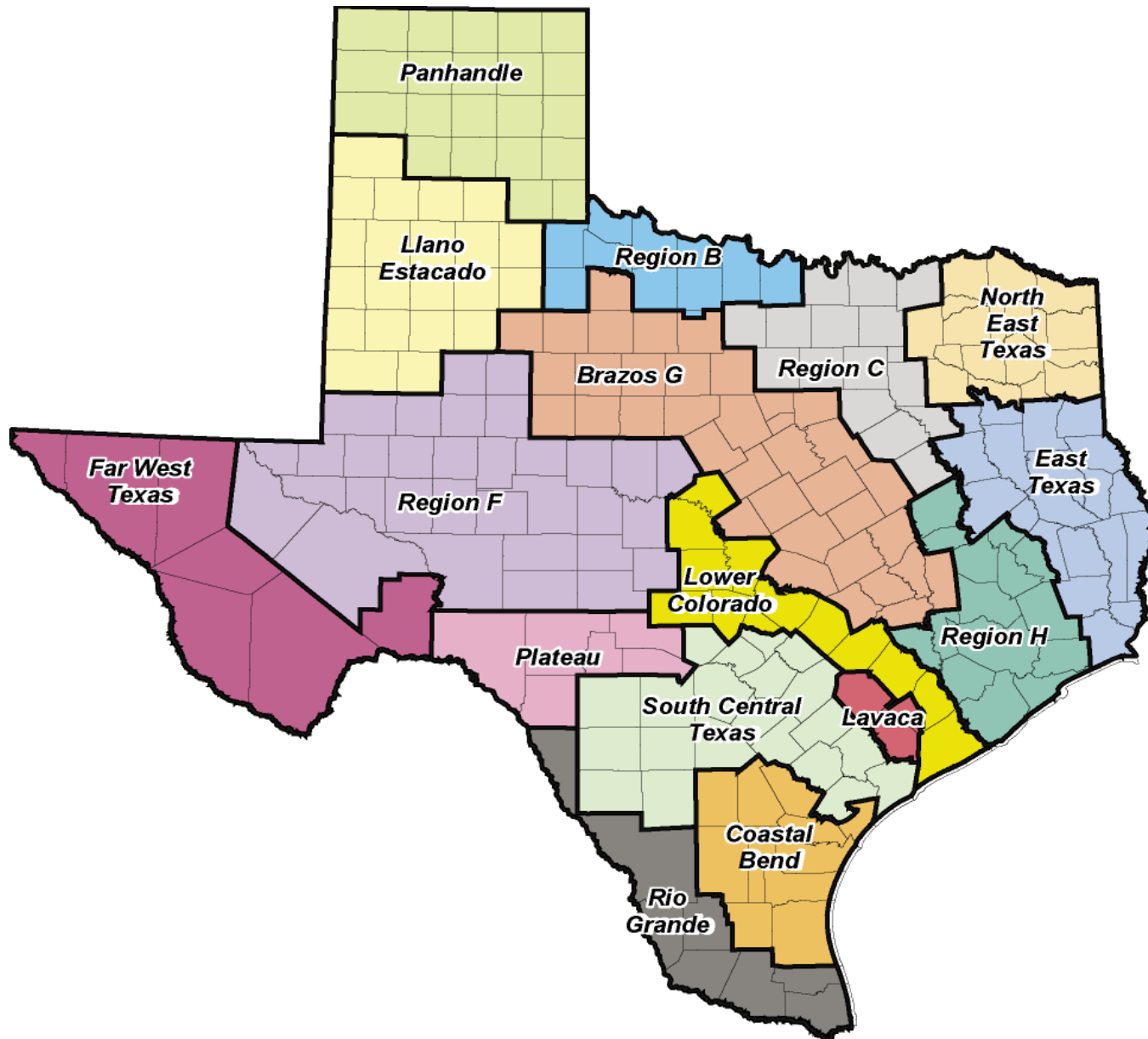
**Region K Water Planning 101**  
**LCRA Dalchau Service Center**  
**March 9, 2016**



# Historical Perspective

- TWDB created in 1957
  - developed several State Water Plans
  - great planning documents
- 1997 Legislative Session
  - Leg changed state water planning in state
    - Changed from “top-down” to “bottom-up” approach
    - Created 16 planning regions/regional water planning groups (RWPG)
    - Diverse interests be represented on RWPG
    - Funded with state funds

# 16 Regional Water Planning Areas



# Regional Water Planning Groups (RWPG)

- **local Political Subdivision serves as contract administrator**
- **public involved**
- **consensus-driven; regional decision making process**



- Twelve Statutory interests:

- Public
- Counties
- Municipalities
- Industries
- Agriculture
- Environment
- Small business
- Electric generating utilities
- River authorities
- Water districts
- Water utilities
- Groundwater Management Areas

# Key Responsibilities of RWPG Members

- a) attend and participate in RWPG meetings;
- b) represent interest category and region;
- c) develop & approve plan that serves entire region;
- d) consider local water plans; and
- e) ensure adoption of a regional water plan by the statutory deadline that meets all requirements.

# Basic Functions of RWPG

- select host political subdivision;
- select technical consultant;
- add membership interests, if deemed necessary;
- self-govern (e.g., create bylaws);
- hold regular public meetings (quarterly to monthly);
- create committees, as needed;
- meet public notice requirements specified in TWDB rules; and
- planning entity only, no permitting/regulatory function.

# How Regional Planning is Funded

- Legislative appropriations
- Funding comes to RWPG through TWDB contract with local political subdivision
- RWPG applies for funding (5 years)
- RWPG group selects consultant

# BASIC PLANNING PARAMETERS:

- 50-year planning horizon
- 5-year planning cycle
- Categories of use being planned for: municipal/domestic, manufacturing, irrigation, mining, livestock and steam-electric power.



# planning units/terms

- **Decadal** data (50 year period: 2020-2070)
- water volumes are in **acre-feet/year** (AFY)  
*(1 acre-foot = 325,851 gallons)*
- wholesale water provider(s) = **“WWP”**
  - Designated by RWPG
- water user group = **“WUG”**
  - Planning Level for RWPG

## more terminology...

**DEMAND** = projected amount of water necessary to support anticipated drought (dry year) level of water use.

**NEED** = a potential shortage of water if no strategy is implemented.

**Water Management Strategy (WMS)**= project or action to *increase water supply* or *maximize existing supply* to meet **needs**.

## still more terminology...

**WAM** = water availability model.

**GAM** = groundwater availability model.

**MAG** = modeled available groundwater determined using a GAM.

**DOR** = drought of record.

**GPCD** = gallons per capita per day.

**Firm Yield (FY)** = amount of water available through simulated drought of record conditions.

# RWPG Deliverables

1. Eleven (11) Contract Tasks
2. Populate State Water Plan database (online)
3. Complete Technical Memorandum/Reports
4. Produce:
  - Approved Initially Prepared Plan (IPP)
  - Adopted Regional Water Plan

# 11 Contract Tasks/Chapters

- 1 - Planning area description**
- 2 - Population and water demand projections for six categories of use**
- 3 - Water supply analysis**
- 4 - Identify water needs**
- 5 - Water management strategies (WMS)**

# **11 Contract Tasks/Chapters (Cont.)**

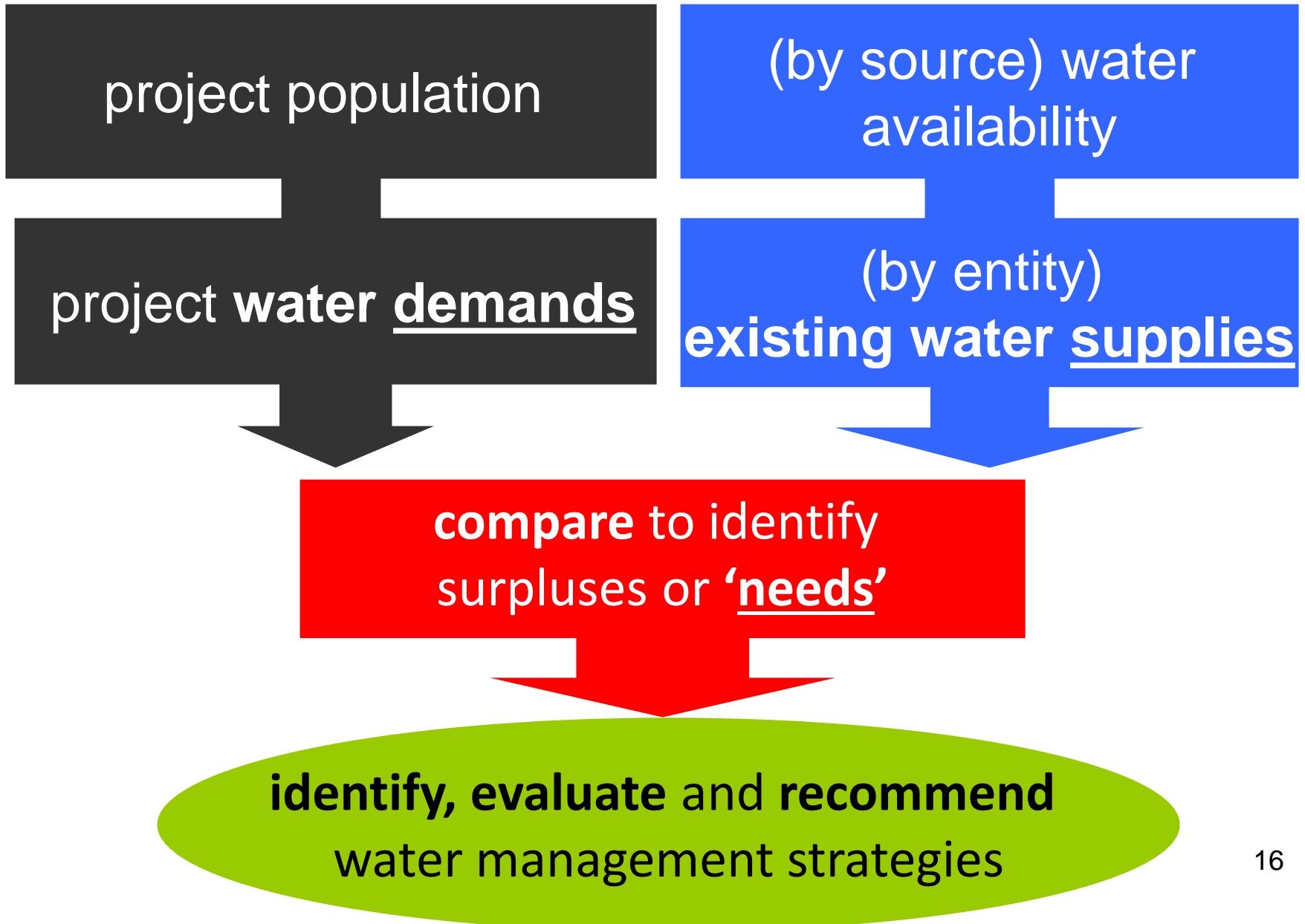
- 6- Impacts of WMS and long-term protection of State's water, agricultural, and natural resources**
- 7 - Drought response**
- 8 - Unique stream segments and reservoir sites/ Legislative & regional policy issues**
- 9 - Water infrastructure funding**
- 10 - Adoption of plan**
- 11 - Implementation & Comparison**

# Contract Task/Chapter 1

## Planning Area Description

- Revise planning area description;
- First plan provided the basic description; of planning area; and
- Limited funds to revise/update this chapter each subsequent cycle.

# Regional Water Planning Basics





# Regional Water Planning Basics

project population

project water demands

Contract  
Task/Chapter 2

# Contract Task/Chapter 2

## Population/Water Demand Projections

- Basic tasks are:
  - Make TWDB draft population/water demand projections publicly available;
  - Review comments from public, WUGs, WWPs and local entities;
  - Evaluate TWDB's draft population and demand projections;

# Contract Task/Chapter 2 (Cont.)

## Population/Water Demand Projections

- Basic tasks are:
  - Prepare and submit numerical revisions to TWDB in accordance with their requirements;
  - Provide detailed feedback to TWDB on projections, including any justification and documentation for suggested changes; and
  - Assist TWDB in incorporating final TWDB approved projections into the IPP, final plan and DB 22.

# Contract Task/Chapter 2 (Cont.)

## Population/Water Demand Projections

- Terminology:
  - Demands are broken into two basic categories:
    - Population related (domestic and municipal); and
    - Non-population related (manufacturing, irrigation, livestock, mining and steam-electric).

## Task 2 Timeline

- TWDB release to RWPG its projected draft population & water demands;
  - **July 2016**: TWDB provide new municipal WUG descriptions (utility based);
  - **Oct- Dec 2016**: population and municipal/domestic, livestock and mining demand projections;
  - **June 2017**: irrigation, manufacturing and steam-electric demand projections; and
  - **July 2017**: 2011-2015 Utility GPCDs.

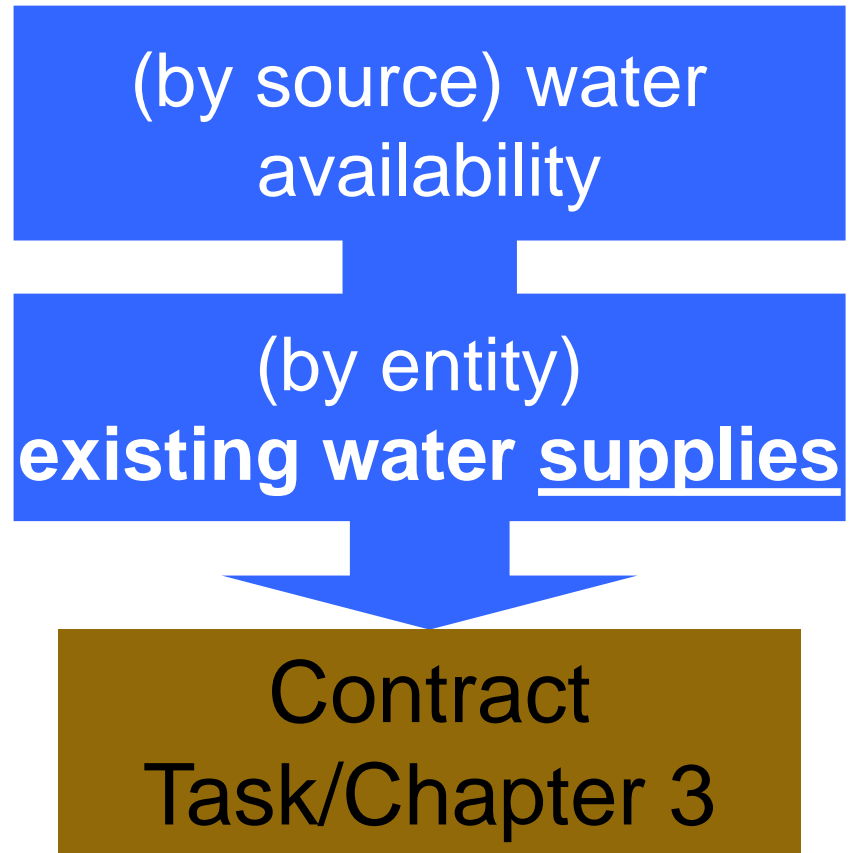
## Task 2 Timeline (Cont.)

- RWPG has until **Jan 2018** to:
  - Gather comments, data and information on population & projected water demands;
    - Population & Water Demand Committee works with AECOM to review and provide recommendations to RWPG;
      - A lot of effort soliciting input from WUGs, counties, WWPs, etc.... and reviewing input and historic data & information; and
  - Finalize review and provide TWDB with RWPG recommended adjustments to population and water demands for all categories.

## Task 2 Timeline (Cont.)

- ***Mar 2018***: TWDB approval of population/demand projections.
- Once approved by TWDB, projections are **set in stone** for current planning cycle.

# Regional Water Planning Basics





# Contract Task/Chapter 3

## Water Supplies

- Basic tasks are:
  - Select hydrologic assumptions, models and procedures to be used during planning cycle;
  - Obtain TWDB approval of hydrologic assumptions or models and any variation of modeling requirements;
  - Update WAM to reflect recent water right additions/changes and operational requirements;

# Contract Task/Chapter 3 (Cont.)

## Water Supplies

- Basic tasks are:
  - Quantify firm yield (FY) of reservoirs and run-of-river (ROR) water rights
    - Reservoirs FY to reflect current and future sedimentation;
  - Utilize MAG volumes, where applicable;
  - Select assumptions for distribution of available groundwater for potential future use by WUGs;

# Contract Task/Chapter 3 (Cont.)

## Water Supplies

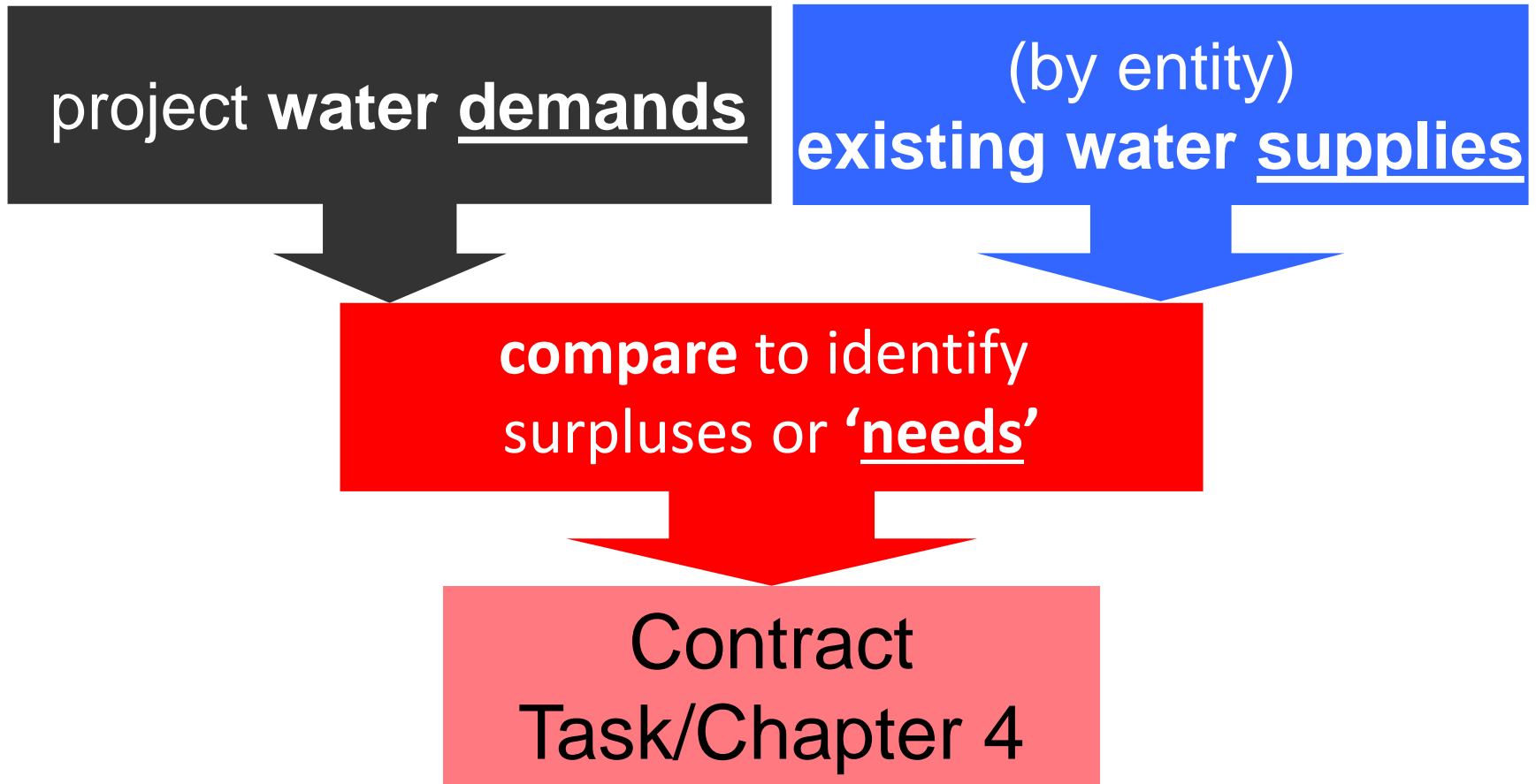
- Basic tasks are:
  - Update WWP and WUG contractual obligations;
  - Compile/update information on acquisition of groundwater rights;
  - Based on infrastructure and other limitations determine existing water supplies available to each WUG and WWP;

# Contract Task/Chapter 3 (Cont.)

## Water Supplies

- Basic tasks are:
  - Research, quantify and update existing supplies of treated effluent through direct and indirect reuse;
  - Assign available reuse supplies, as appropriate to WWP and WUGs;
  - Update DB 22; and
  - Prepare a written summary of WAM, GAM and assumptions used to quantify supplies.

# Regional Water Planning Basics



# Contract Task/Chapter 4

## Identify Water Needs

- Basic tasks are:
  - Evaluate DB 22 Identified Needs Report provided by TWDB;
  - Prepare the Region’s proposed process to identify and select WMS;
    - Receive public comments on the Region’s proposed process
  - Obtain and consider existing water supply plans;
  - Prepare a list of potentially feasible WMS; and
  - Prepare, approve and submit Technical Memorandum to TWDB.

# Regional Water Planning Basics

project water demands

(by entity)  
existing water supplies

compare to identify  
surpluses or 'needs'

identify, evaluate and recommend  
water management strategies

Contract  
Task/Chapter 5

# Contract Task/Chapter 5

## Water Management Strategies

- Basic tasks are:
  - Technical evaluation of all potentially feasible WMSs, including previously recommended WMS;
  - Identification of the process for selecting all recommended WMS;
  - Consideration of all water conservation and drought contingency plans for each WUG;
  - Documentation of the evaluation and selection of all recommended WMS;



# steps to recommending strategies

- **identify** “potentially feasible” strategies
- **evaluate** potentially feasible strategies
- **compare** evaluated strategies
- **recommend** strategies that are “cost-effective and environmentally sensitive” *31 TAC 357.35(b)*

# evaluation of strategies

## Based on:

- water quantity and reliability
- financial costs
- impacts to environment and agriculture
- impacts to water quality
- other factors such as regulatory requirements, time required to implement, etc.

# Contract Task/Chapter 6

Impacts of WMS and long-term protection of State's water, agricultural, and natural resources

- Basic tasks are:
  - Evaluate the cumulative impacts of the Regional Water Plan (RWP) on things like groundwater levels and environmental flows;
  - Discuss impacts of the recommended WMS on agricultural, water, and other natural resources, as well as water quality and navigation; and
  - Summarize unmet water needs in the RWP, and the socioeconomic impact of not meeting water needs in the region.

# Contract Task/Chapter 7

## Drought Response Information, Activities, and Recommendation

- Basic tasks are:
  - Identify regional “*drought of record*” used in RWP, and any potential new “*drought of record*”;
  - Discuss current drought preparations and response, including drought triggers and water reduction goals;
  - Collect confidential information related to emergency interconnects and provide to the TWDB Executive Administrator;

# Contract Task/Chapter 7 (Cont.)

## Drought Response Information, Activities, and Recommendation

- Basic tasks are:
  - Collect and provide information related to emergency preparedness for entities with a single source of supply and < 7,500 population;
  - Provide region-specific drought response recommendations and model drought contingency plans; and
  - List potentially feasible and recommended drought management WMS from Chapter 5.

# Contract Task/Chapter 8

## Recommendations Regarding Unique Stream Segments and/or Reservoir Sites and Legislative & Regional Policy Issues

- Basic tasks are:
  - Consider recommendations for designations of ecologically unique stream segments and/or reservoir sites within the regional planning area; and
  - RWPG consideration and discussion of potential regional policy issues and recommendations for legislative, administrative, and regulatory rule changes.

# Contract Task/Chapter 9

## Water Infrastructure Financing Recommendations

- Basic tasks are:
  - Contact WMS project sponsors/WUGs to collect data related to anticipated needs for State financing in order to implement recommended projects; and
  - Summarize survey results in RWP.

# Contract Task/Chapter 10

## Public Participation and Plan Adoption

- Basic tasks are:
  - Attending and participating in RWPG and subcommittee meetings, including special meetings associated with certain milestones of the planning process;
  - Allowing public comment and responding to comments on certain RWP documents;
  - Intraregional and interregional coordination;
  - Executive Summary development for IPP and Final Plan;



# Contract Task/Chapter 10 (Cont.)

## Public Participation and Plan Adoption

- Basic tasks are:
  - Documentation of public participation in Chapter 10 of RWP;
  - Obtain RWPG approval of IPP and adoption of Final Plan; and
  - Compile IPP and Final Plan, and submit deliverables to TWDB for review and approval.

# Contract Task/Chapter 11

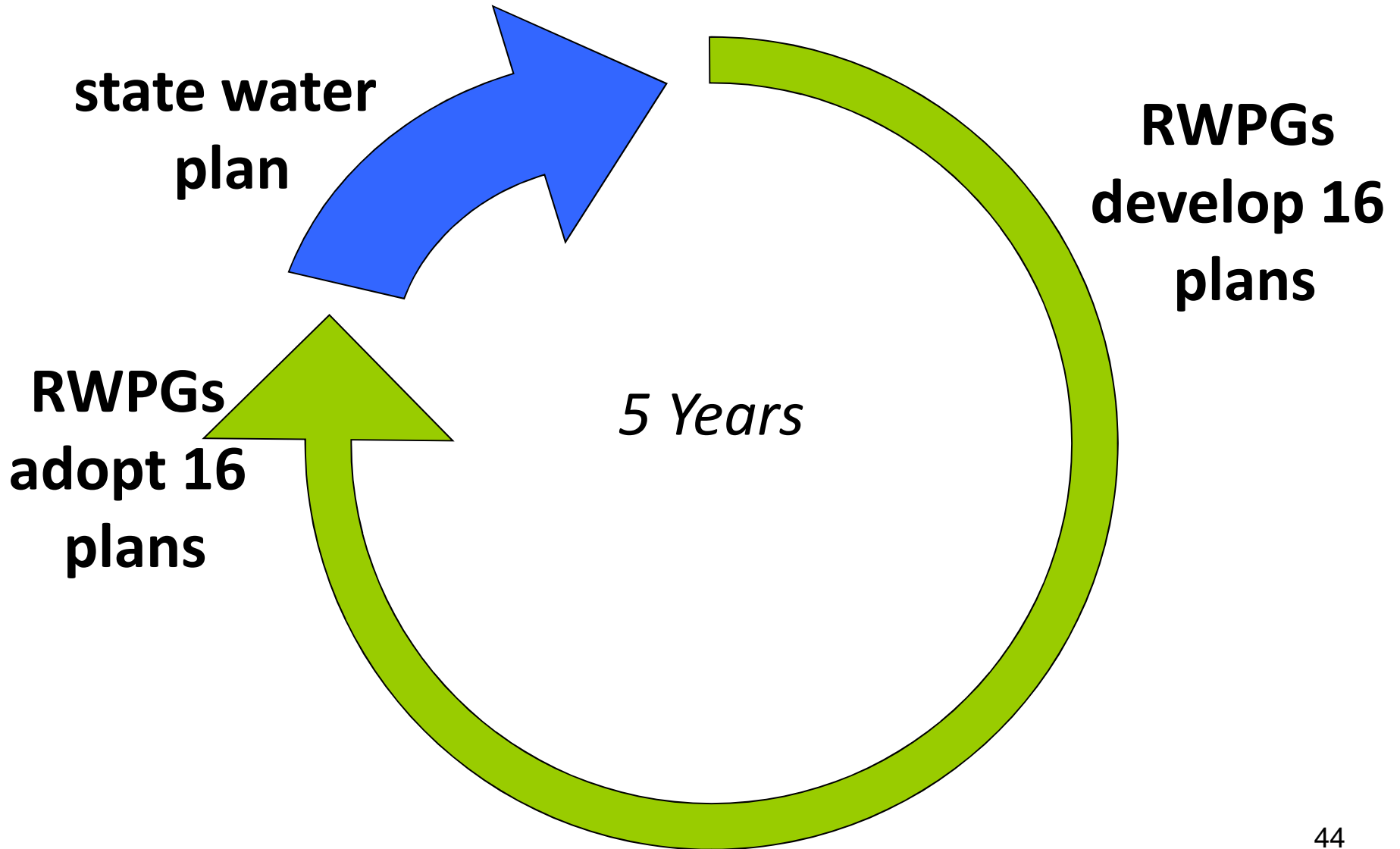
## Implementation and Comparison to the Previous Regional Water Plan

- Basic tasks are:
  - Collection of data related to the status of implementation of water management strategy projects listed in the previous regional water plan; and
  - Compare the current RWP to the previous RWP by chapter, both quantitatively and qualitatively.

# 2021 Regional Water Plans - Timeline

- Initially prepared plan (IPP) due: *Mar 2020*
- **TWDB comment period on IPP: *120 days***
- ‘Adopt’ and submit final plan: *Sept 2020*
- ‘Approval’ by TWDB Board: by *????*

# region & state water planning cycles



# foundation for state water plan

**A B C D E F G H I J K L M N O P**

online state water plan  
data base  
(DB22)

## 2022 State Water Plan

# Questions?

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