

Region K WMS Committee Meeting

April 10, 2019



1

Agenda

1. **Call to Order**
2. **Welcome and Introductions**
3. **Receive public comments**
4. **Approval of meeting minutes**
5. **Discussion of agricultural irrigation conservation strategy development**
6. **Discussion of municipal conservation strategy development**
7. **Discussion of drought management strategy development**
8. **Discussion of expand local use of groundwater strategy development**
9. **Open discussion by committee on current strategies or public input items**
10. **New / Other Business**
11. **Schedule next meeting**
12. **Public Comments**
13. **Adjourn**

Region K

Page 2

AECOM

2

4/10/19

1

Agenda Item 5

DISCUSSION OF AGRICULTURAL IRRIGATION CONSERVATION STRATEGY DEVELOPMENT

3

Irrigation Conservation Strategy Development

- ▼ Discussion results from March 4, 2019 meeting.
 - Task 1. AECOM will work with Stacy Pandey to develop a plan to gather data on currently improved acreage, including acreage watered with surface water and/or groundwater, and develop projections for potential future water saving improvements.
 - Task 2. AECOM will work with both Stacy Pandey and Daniel Berglund to update savings estimates for existing irrigation conservation strategies.
 - Task 3. AECOM will work with Daniel Berglund to consider on-farm SCADA as a new strategy. Also discussed tail water recovery and drip irrigation strategies.

4

Irrigation Conservation Strategy Development

▼ Expectations and Challenges

– Irrigation Conveyance Improvements

- Included measures in 2016 Plan
 - Automation of major checks structures within the irrigation division
 - Creating a centralized control system for each irrigation division
 - Automation of flow control structures delivering water to individual fields (turnouts)
 - New flow regulating reservoirs
 - Targeted lining of high loss canal segments
 - Regular maintenance of canal banks
- Canal losses were built into our 2021 Plan irrigation water demand projections in the Lower Basin. (20-30% depending on the district = nearly 100,000 AF)
 - What is reasonable reduction in the losses and what rate of reduction should be considered across the decades?
 - Are all of the above listed items included in these losses?

5

Irrigation Conservation Strategy Development

▼ Expectations and Challenges

– On-Farm Conservation

- 2016 Plan included land leveling, multiple inlets, reduced levee interval, and improved management of water control activities.
- 2021 Plan
 - Surface water planted acreage available from water demand projection memo.
 - Can calculate groundwater planted acreage using TWDB water use and CBGCD water use rates.
 - How big of an impact do we think conjunctive use has?
 - Need to determine how much acreage has already been improved.
 - » NRCS probably has this information, but will take a couple of months to get.
 - » May want to check with GCDs as well.
 - Land leveling may not be a priority in the Gulf Coast district because there is more crop rotation there, and land leveling is preferential for rice only.
 - Levee reduction has shown to be more effective than reducing the intervals of levees.

6

Irrigation Conservation Strategy Development

▼ Expectations and Challenges

- Sprinkler and/or Drip Irrigation
 - Want to look at revising numbers for sprinkler irrigation this cycle
 - Is drip irrigation a feasible option?
 - What about tail water recovery?
- Challenges with obtaining data such as improved acreage...may end up having to make assumptions.
- What are the group's expectations with respect to evaluation of these new strategies?
 - Initial qualitative analysis for all, then decide which ones to move further with full evaluation?

7

Agenda Item 6

DISCUSSION OF MUNICIPAL CONSERVATION STRATEGY DEVELOPMENT

8

Municipal Conservation Strategy Development

▼ Discussion at March 4, 2019 meeting:

- Committee voted to use a methodology of 1% annual reduction until 140 GPCD is reached.
- Question was asked about what other regions are doing / have done.

▼ Handout containing list of regions' methodologies from 2016 Plans (includes non-municipal for some regions as well).

▼ 1% reduction numbers have been brought to share today (see handout).

- Concerns for some of the demand reductions. Discussion needed.
- Committee can review to determine if exceptions are needed.

9

Agenda Item 7

DISCUSSION OF DROUGHT MANAGEMENT STRATEGY DEVELOPMENT

10

4/10/19

5

Drought Management Strategy Development

▼ Discussion at March 4, 2019 meeting:

- Committee suggestion to use a minimum 20% drought management reduction for GPCD > 100. Last cycle was 15%.

▼ Drought management (municipal) demand reduction numbers have been brought to share today (see handout).

- Drought management reduction applied to post-conservation demands.
- Need to go back through and apply more applicable Drought Contingency Plan reduction percentages, where needed.
- Handout showing remaining needs post-conservation / post-drought management.

11

Agenda Item 8

DISCUSSION OF EXPAND LOCAL USE OF GROUNDWATER STRATEGY DEVELOPMENT

12

4/10/19

6

Expand Local Use of Groundwater Strategy Development

- ▼ Discussion at March 4, 2019 meeting:
 - Presentation of memo – see handout
 - Discussion of memo tabled pending groundwater representation.
- ▼ Expand Local Use of Groundwater involves pumping additional groundwater from an aquifer that the WUG is currently using as a source, either using the WUG's existing wells or drilling additional wells. Memorandum details the feasibility and limitations of strategy recommendation based upon water availability in the aquifer post-supplies distribution.

13

Agenda Item 9

OPEN DISCUSSION BY COMMITTEE ON CURRENT STRATEGIES OR PUBLIC INPUT

14

Agenda

10. New / Other Business
11. Schedule next meeting
12. Public Comments
13. Adjourn

15

Process for Identifying Potentially Feasible Water Management Strategies

▼ TWDBB Regional Water Planning Guidelines:

– RWPGs shall consider these strategies (but are not limited to):

1. conservation
2. drought management
3. reuse
4. management of existing water supplies
5. conjunctive use
6. acquisition of available existing water supplies
7. development of new water supplies
8. developing regional water supply facilities or providing regional management of water supply facilities
9. developing large-scale desalination facilities for seawater or brackish groundwater that serve local or regional brackish groundwater production zones identified and designated under TWC § 16.060(b)(5)34
10. developing large-scale desalination facilities for marine seawater that serve local or regional entities
11. voluntary transfer of water within the region using, but not limited to, contracts, water marketing, regional water banks, sales, leases, options, subordination agreements, and financing agreements
12. emergency transfer of water under TWC § 11.139
13. interbasin transfers of surface water
14. system optimization
15. reallocation of reservoir storage to new uses
16. enhancements of yields
17. improvements to water quality
18. new surface water supply
19. new groundwater supply
20. brush control
21. precipitation enhancement
22. aquifer storage and recovery
23. cancellation of water rights
24. rainwater harvesting

16