Comments submitted via email on 10/14/2021 by Tim Boese, Manager, Groundwater Management District No. 2

- 1. There are many typos, grammar, and formatting issues that need to be addressed. I did not try to identify all of the issues.
- 2. Page 19 first paragraph. GMDs should be included as those measuring water-levels. For example, we measure around 650 wells every January, and take about 3,000 water-level measurements per year. All of the measurements are uploaded to KGS.
- 3. Page 20 first and second paragraphs are duplicates.
- 4. Page 20 first/second paragraph needs to be reworded. GMD2 and GMD5 do manage the aquifer based on safe yield principle, but only to the extent of new water permit applications and certain change applications. We do not restrict those water rights that were approved prior to the safe yield policy/regulation. Obviously, having the safe yield policy/regulation since 1980 greatly assisted in not over-developing the Equus Beds Aquifer. The same can probably be said for GMD5.
- 5. Page 21 last paragraph: Should include language that IGUCAs can also be formed to address water quality issues, such as the Burrton IGUCA.
- 6. Page 23, second paragraph. Contains a statement that "too many producers use the full authorized quantities under their water rights" in the Ogallala Aquifer. This is about western Kansas, but this statement doesn't feel accurate to me and should be explored. What does "too many" mean? Also, from data I have seen in the past, nowhere near the full allocation of water rights is being pumped. This type of statement needs to be backed up with actual data.
- 7. Page 24, first paragraph. GMDs should be included as those measuring water-levels.
- 8. Page 47, blue section, Include language that GMD2 maintains an extensive monitoring well network in the area that is sampled annually by GMD2 with the cooperation of KCC funding. Also, note that the Burrton IGUCA was established in 1984 to address the issue as it relates to water permitting and the salt contamination plumes. Including a section on the Burrton IGUCA would be helpful.
- 9. Page 51, second paragraph. It would be good to include information that other agencies are still monitoring water quality. For example, GMD2 owns and maintains over 500 monitor wells that are sampled. Some are sampled every year, other less frequently.
- 10. Page 92, next to last paragraph. Include the refinery in McPherson.
- 11. Page 92, last paragraph. Include a statement about smaller cities also having industrial and commercial enterprises. For example, Moundridge and Hesston both have two large manufacturers each.
- 12. Page 94, Second paragraph: There are only isolated areas that experienced declines in the Equus Beds Aquifer. The language makes it sound like the area is experiencing wide spread declines, which is counter to what is stated later on page 96.
- 13. Page 94, second paragraph: States depth to bedrock varies from 100 to 250 feet below land surface. This is incorrect. Bedrock is at or near land surface in parts of GMD2. There are lots of areas where depth to bedrock is much less than 100 feet. It also states that chloride plumes move eastward at 0.8 feet per day. This is true for the Burrton plume (east-southeast movement), but not necessarily true for the other plumes. The plumes follow groundwater flow direction, which is not east throughout GMD2. For example, the Hollow Nikkel plume moves north, the Johnson plume moves west, etc. Additionally, the rate of movement has not been determined, except for the Burrton plume. Also, the statement that nitrates are high in the southeastern part of the aquifer is confusing. Pretty Prairie has high nitrates and it is in the southwest part of the aquifer.
- 14. Page 95, first paragraph is too focused on the City of Wichita. There are many other cities that also rely on the Equus Beds Aquifer.

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- 15. Page 96, last paragraph needs to be revised. I do not think it is appropriate to state there will be an offset by reduced Equus Beds Aquifer use when the City of Wichita accumulates credits. This is not guaranteed in the City's Proposal and makes it sound supportive of the City's proposal that is still in the review and hearing process.
- 16. Page 97, first paragraph needs revision and is very confusing by "This plume of salts....". What plume of salts? The paragraph does not flow at all and there is a note to add more information in the text. This was not ready for review and is incomplete.
- 17. Page 97, last paragraph. Needs refinement. Does not flow and could use additional information. There is a report that is available that describes the nitrates issue and source for Pretty Prairie in great detail.
- 18. Finally, it is my understanding that revisions to the draft plan have been occurring at the same time as the public review and comment period. This is a somewhat confusing process, as it is difficult to make comments and recommendations on a plan that is still being revised by the agency. How will we be able to review and make comments on the revisions if they are being made during the public comment period if we do not see the revisions until after the comment period?

Tim Boese, Manager Equus Beds GMD2 313 Spruce, Halstead, Kansas 67056