education
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July 22, 2021

Michael Redman
1124 Regal Row
Austin, Texas 78748

RE: The Hill Country Alliance's Public Comments on the Desired Future Conditions of Groundwater Management Area 10

Dear Mr. Redman,

Please accept this letter as the official comments of the Hill Country Alliance (HCA) for the Desired Future Conditions (DFCs) of Groundwater Management Area 10 (GMA 10). We want to begin by recognizing the critical role both Groundwater Conservation Districts (GCDs) and GMAs play in our state's water planning process. The regional cooperation of GCDs within the GMA framework is critical to the long-term protection of our groundwater, which sustains our rivers, supports both rural and urban livelihoods, creates incredible belowground ecosystems, and powers our economy. We commend the work being done by GCDs, the only entities protecting groundwater resources. GCDs know best the importance groundwater plays in supporting the livelihoods of Hill Country residents, landowners and our precious ecosystems. At HCA, we are dedicated to seeing more institutional resilience granted to GCDs through increased state funding and legal backing. Below, we offer our comments on GMA 10's proposed DFC of 25-foot drawdown for the Trinity Aquifer, provide our thoughts on ways to improve the public comment process, and suggest improvements to our groundwater planning and management framework.

Proposed 25 foot-drawdown of the Trinity Aquifer
Given the unknowns surrounding the localized impacts of an average 25-foot drawdown, as well as a lack of sufficient population and hydrological data incorporated into the current models, HCA believes that a more conservative drawdown is necessary to protect the aquifers in GMA 10. We recognize that the population of the Texas Hill Country is growing, that our current frameworks offer few tools for GCDs to deny permit requests that comply with the rules laid out by each district, and that we need more localized scientific studies to model the impacts of drawdown within distinct geographic areas of the Hill Country. In fact, the proposed 25-foot drawdown of the Trinity Aquifer is not adequately quantified, lacks important detail of aquifer characteristics and does not protect the health of thousands of private wells and the springs that keep Hill Country rivers flowing.

- *The proposed DFC does not adequately factor in potential environmental and socioeconomic impacts of drawdown.* The proposed DFC of 25-foot drawdown for the Trinity Aquifer will have unreasonable ecological and economic consequences for downstream users by reducing base flows to springs and rivers that sustain aquatic habitats and by impacting recreational uses of rivers. Continuous drawdown of groundwater will eventually deplete our aquifers to such an extent that they are unable to supply base flow to our rivers or well water for landowners. In the Hill Country, groundwater supports 30% of the baseflow for rivers and streams. The Trinity Aquifer supplies critical flow to springs and rivers throughout GMA 10. If base flows are reduced to a point where recreational and ecological services are considerably impacted, the substantial public and private investment that has been made in riverine parks and nature preserves would be jeopardized. Once water levels decline to the degree planned for in the proposed DFC, recovering springflow will be difficult, if not impossible. Groundwater is also increasingly relied on as surface water is now mostly allocated. We are at an inflection point where it is critical we manage our groundwater supplies conservatively, for their long-term health.

- *The proposed DFC does not account for the distinctive character of the Trinity Aquifer's Middle and Lower formations*. Using one regional average for drawdown across a large, complex aquifer is a misleading planning metric. Section 36.108(d-1) of the Texas Water Code allows for the creation of different DFCs for different "subdivision[s] of an aquifer within the boundaries of the management area." To date, the GCDs in GMA 10 have set DFCs based on their political jurisdictional boundaries. Yet, water knows no political boundaries. It is well within the authority of GMA 10 groundwater districts to instead establish DFCs based on the distinctive Middle and Lower subdivisions of the Trinity Aquifer and model accordingly.

- *There is too much averaging in model results and assumptions in the models to make accurate predictions about local conditions*. Due to the way a model must average all known conditions and stresses that occur within an area represented by a single model cell, a model underestimates the actual drawdown that results from the pumping of individual wells within the same area of a real aquifer. For example, projections of growth in groundwater pumping from exempt wells vary greatly, making it difficult to effectively estimate the actual water available.The model's coarse grid (one square-mile cell size) is a major limitation that diminishes the model's usefulness as a representation of reality. It is problematic to rely on the model, as currently formulated, as a tool for groundwater stewardship. Relying on the model to justify pumping increases and a 25-foot drawdown is particularly unwise.

Improvements to the DFC Public Comment Period
The DFC process is complicated, technical and ripe for innovation. It is HCA's vision to serve as an aid for connecting the public to this important management process, and supporting GCDs in managing groundwater more transparently and conservatively. We acknowledge the time and funding constraints GCDs are under. We also recognize that strong guidelines from the Texas Water Development Board could facilitate greater public participation and transparency. At HCA, we have the capacity to assist in creating educational and outreach materials for GCDs' use to increase public engagement in groundwater management. In order to best assist the public and encourage engagement, we have listed some aspects of the current DFC public comment period that we believe should be improved:

- *Establish a clear start date*. Currently, it is unclear when the public should get involved in the DFC planning process as there is no set start date. The clearest opportunity to comment on the DFCs comes at the 11th hour of planning, when models have been run and the DFC is all but set in stone. Establishing a clear start date, inviting public participation early in the process, and increasing coordination among neighboring GMAs would help clarify to the public the best time to get involved.

- *Release an explanatory report prior to public comment period*. As it stands now, the public is asked to submit comments without seeing a version of the explanatory report. The comments provided by the public could be more relevant and useful if an explanatory report was made public prior to the comment period.

- *Require less technical comments from the public*. Public commenting on DFCs requires interested individuals to submit technical comments as though they themselves are hydrogeologists. This emphasis on comments that are purely technical in nature precludes many stakeholders from participating.

Future DFC planning considerations
In addition to improvements to the DFC public comment period, we see other areas for improvement in the current DFC process. These improvements will require support and additional funding from state agencies. In particular, we would like to emphasize:

- *Reduce the hydrological disconnects between planning and reality.* DFCs should be established not along political county boundaries but along distinct hydrogeological areas. DFCs should consider surface water conditions, such as springflow or river baseflow, particularly where hydrologically connected to aquifers. More science and data are needed to more effectively manage groundwater, and data collection support should be provided by the state. We know these studies are achievable, and are encouraged to see such studies currently underway in the Blanco River Basin.

- *Improve stakeholder involvement*. In addition to improving the DFC public comment period, we would also like to see an increase in transparency and access in all GCD and GMA activities. Online meetings offer stakeholders

who are unable to travel to in-person meetings the option of attending and staying informed on the issues they care about. Maintaining an online option to meetings is an easy way to increase public engagement.

- *Funding for GCDs should be better supported by the State*. GCDs are burdened by unfunded mandates. The DFC process is time and money intensive, diverting funds away from groundwater management as GCDs create exhaustive reports and documentation. GCDs across the state are struggling with insufficient funding and lack the institutional resilience granted other state agencies to sustain legal challenges. The Texas Legislature should act to better support GCDs in their mandated mission to protect, preserve and conserve the state's important groundwater resources. We also believe it is incumbent upon the TWDB to find ways to fund a state-wide training campaign for GCDs and modelling contractors. The TWDB has used Requests for Information (RFIs) in the past to learn more about innovations in the private sector. Something similar could be done to learn about different modelling capabilities available in other sectors. We encourage the TWDB to use its power to find creative ways to fund and implement training programs designed to increase data collection capacity and utilize the best available models to most effectively manage our precious groundwater resources.

So much of what we treasure in Texas--and what makes life and business here viable--relies on healthy groundwater. With each passing day it becomes more evident that the status quo approach to groundwater management will have detrimental impacts on our environment, society and economy. We believe the time has come to prioritize the preservation of this precious resource and take the bold steps necessary to use less and reuse more. Sustainable alternatives exist and funding is available for implementation.

These comments were prepared by the Hill Country Alliance and reflect the collective vision of our Hill Country supporters and stakeholders to protect long-term spring-flow, healthy water catchment areas and sustained groundwater resources for current and future generations.

Thank you for your consideration,

Sydney Beckner
Hill Country Alliance Water Program Manager
sydney@hillcountryalliance.org

The undersigned represent stakeholders who support our written comments.

Organizations

National Wildlife Federation
Sierra Club Lone Star Chapter
Travis Audubon

Bandera

1. Betty Boyce
2. Janice Campbell
3. Margo Denke
4. Thomas Denyer
5. Julie Elise
6. Jim Goudge
7. Rod Keith
8. Fran Laue
9. Kathleen Lewis
10. Robert Shock
11. Dawn Renee Walters
12. William Wilson

Bexar

13. Susan Beavin
14. Curtis Cryer
15. Kathleen Danysh
16. Richard Danysh
17. David Drewa
18. Catherine Flato
19. Patricia Jones Fox
20. Jessie Allan Killian
21. Philip A. LeMessurier
22. James Murphy
23. Michelle Pokorny
24. Kelsey Scherschel
25. Natalie Schun
26. Randall Singleton
27. William Warren

Blanco

28. Cecily Allmon
29. Roy Appleton
30. J. David Bamberger
31. Jeremiah Bishop
32. Key Collie
33. Melissa Collie
34. David Davis
35. Jeff Derebery
36. Pam Fielding
37. Gwen Flory
38. Harris Greenwood
39. Ann Grimm
40. David Hamm
41. Susan Hamm
42. Mary Claire Huntington
43. Melissa James
44. Marcia Lucas
45. Ann Matlock

46. Deb McClintock
47. Julia McComas
48. Susan McDonald
49. Kasey Mire
50. Penny Ney
51. Eric Oliver
52. Katherine Peake
53. Jeffery Poehlmann
54. Faith Ray
55. Katherine Sauer-Bishop
56. Bill Sisak
57. John Sone
58. Sherri Stockman
59. Mary Sward
60. Annie Walker
61. Richard Walker
62. Roger Wallace
63. Kenneth Welch, PE
64. John Worrall
65. Weldon Yates

Brazoria

66. Roger Leach

Comal

67. Jennifer Adams
68. William Adams
69. Rafael Aguilar
70. Jimmy Arreaga
71. Yvonne Arreaga
72. Billy Barrington
73. Stacy Becker
74. Virginia Bergis
75. Joan Bobrukiewiez
76. Candace Bowmer
77. Sean Bowmer
78. David Bullock
79. Bill W. Burton
80. Paul Buske
81. Melissa Byler
82. Laurie Canfield
83. Don Carnes
84. Bruce Cates
85. David Chrisopherson
86. M'Lissa Christopherson
87. Sylvia Cobos
88. Greg Collins
89. Shirley Corkill
90. Catherine Croom
91. Barbara Crutchfield
92. Hellen Cunningham
93. Oscar Decker
94. Armando Diaz
95. Allison Dodson
96. Al Dunagan

97. Joel Dunnington, MD
98. John Durand
99. Don E. Ribbens
100. Dianna Elbel
101. Lori Elmer
102. Anna Enthoven
103. James Entringer
104. Larry Ewald
105. LeAnne Fey
106. Laine Fichter
107. Michael Filhiol
108. David Foster
109. Jerra Foster
110. Margrit Frazier
111. Samantha Friesenhahn
112. Ronald Goelzer, Jr.
113. Martin Gordon
114. Vicky Graves
115. Clay Gruesbeck
116. Jeanne Gruesbeck
117. Milann Guckian
118. Pru Guckian
119. James Guethle
120. Martha Guethle
121. Ramon Guitart
122. Jonathan Gulick
123. Sheri Hannasch
124. Edward Harris
125. Douglas Harrison
126. Sally Harvey
127. Tom Harwell
128. Veronica Hawk
129. Timothy Heintzelman
130. Pamela Hibler
131. Kenneth Higby
132. Christine Hillard
133. Joy Hirata
134. Sabrina Houser-Amaya
135. Terri Hughes
136. Jaime Hurley
137. Kerim Jacaman
138. Marian Jenson
139. Wendy Jones
140. Jerry Jones
141. Lori Kendall
142. Steve Kirkpatrick
143. Toni Kirkpatrick
144. Rex Klaurens
145. Judy Krup
146. Michael Krup
147. Dale Lafferty
148. Karen Lafferty
149. Bruce Lee
150. Charles Littlejohn
151. Karen Logue

152. Claire Loomis
153. Magdalen Marbry
154. Bambi Mayer
155. Theresa McClung
156. Stephanie McClure
157. Allison McDaniel
158. Meredith McGuire
159. Merrellyn McMillen
160. Pam Medina
161. Dan Meneilly
162. Cheryl Miles
163. Janalea Milford
164. Cynthia Millichamp
165. Natalie Minniss
166. Lori Michell
167. Linda Mohr
168. William Mohr
169. John Mooney
170. John Mooney III
171. Ginger Morgan
172. Scott Morris
173. Don Morton
174. Rick Myrick
175. Deborah Nolen
176. Robert Nolen
177. Jack Olivier
178. Kira Olson
179. Nathan Olson
180. Maggie Parma
181. David Perelstein
182. Gracie Perez
183. Stephen Petty
184. Dale Pillow
185. Eric Poesch
186. Joy Poesch
187. Stephen Price
188. Paul Ramirez
189. Edwin Romero
190. Anne Rowland
191. Gary Scott
192. Frank Servaty
193. Elias Shaer
194. Grace Shaer
195. Carolyn Shelton
196. Peggy Shipman
197. Kathryn Sisk
198. Anita Smith
199. Steven Smith
200. Eugenia Southwell
201. James Spickard
202. George Steinke
203. Sandra Steinke
204. Rita Stephenson
205. Audrey Stewart
206. Michael Stidman
207. Edward Strey
208. Tamara Stroud
209. Alexander Sullivan
210. Barbara Sullivan
211. Susan Taylor
212. Samuel Teixeira
213. Connie Terao
214. Laura Terrell
215. Steve Terrell
216. Wanda Thompson
217. Victoria Trammell
218. Merry Treen
219. Shawn Troxell
220. Tim Tudyk
221. William Vaughn
222. Leslie Vollmer
223. Petra Wagner
224. Nicole Wagner
225. Judy Wallisch
226. Bonnie Ward
227. Eric Waters
228. Toni Wayne
229. George Wiggins
230. Lance Williams
231. Beverly Willmann
232. Jolynn Tosko

Dallas
233. Brandon Sifuentez

Edwards
234. Ted Flato

Gillespie
235. Susan Candy
236. Mike Crowder
237. C. E. Steuart Dewar
238. Skip Gerson
239. Peter Holverson
240. Ed Persyn
241. Paula Stone
242. Mary Ubach
243. Annie Crowder
244. Curtis Thorpe

Guadalupe
245. Suzanne Kirchstein
246. Patrick Monahan

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247. James Berryman
248. Shawnna Fatjo

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249. Elizabeth Arceneaux
250. Dayton Bailey
251. Dalma Bane, ND, PhD
252. Darren Bayhi
253. Tony Blair
254. Grover Boyett
255. Kathy Carriker
256. C. A. Clowe
257. Danielle Corrick
258. Cindy Danton
259. Elaine Davenport
260. Suzanne Davis
261. Shannon du Plessis
262. Karen Ford
263. Peggy Foreman
264. Bret Fossum
265. Norman Glorioso
266. Elenore Goode
267. Jonathan Grant
268. Mary Heatwole
269. Nancy Hernandez
270. Diane Higby
271. Janet Holland
272. Leslie Howe
273. Colby Jackson
274. Kathleen Krueger
275. Susan Parker Leigh
276. Christina Lopez
277. Laney Lyle
278. David McCully
279. Kimberly Meitzen
280. Chris Mitchell
281. Teresa Peterson
282. Mike Poffenberger
283. Eric Pohl
284. Daniel Putegnat
285. Stephen Ramirez
286. Brian Sorensen
287. Charles Stewart
288. Suzanne Teshera
289. Scott Way
290. Philip Wickes
291. Constance Wierman
292. Gerald Willis
293. Henry Wollam
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299. Lisa Byrd
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301. Eric Christopher
302. Lana Christopher
303. Jerry Coger
304. Nancy Coger
305. Lisa Del Puerto
306. Holly Delaney
307. David Delaney
308. Shannon DeLaune
309. Sarah Fawcett
310. S. Fisher
311. Todd Fry

312. Cecilia Fuentes
313. Elvira Fuentes
314. John Gallo
315. Debra Gessner
316. Jeff Gibson
317. Luke Harms
318. Denise Herbst
319. Molly Houck
320. Jana Jonas
321. Brittney Kerr
322. Lance Kyle
323. Curtis Land
324. Zane Land
325. David K. Langford
326. Margaret LaRose
327. Peg Layton
328. Toni Lott
329. Mark Mason
330. Raylene Means
331. Audra Miller
332. Gary Nazaruk
333. Dennis Orr
334. Joan Pfiel
335. Wajida Quintero
336. Lee Robinson
337. Edward Rogers
338. Charlotte Rose
339. Curtis Stanley
340. Marilyn Tremper
341. Lisa Walker
342. Odie Walters
343. Linnea Whitehead
344. Dana Williams
345. Rick Wilson

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347. Marsha Baumann
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349. Suzanne Bettac
350. Janet Buchert
351. Chester Hurst
352. Henry Lagro
353. Barbara McCullough
354. James Partain
355. Scott Pfeil
356. Bob Rizarri
357. Virginia Rizzari
358. Georgia Roth

Kimble
359. Brian Cassens
360. Linda Fawcett
361. Augustus Paul
362. Martha Richardson
363. Scott Richardson

Mason
364. Gaye Thomas

Medina
365. Joel Cunningham

Real
366. James Gayhart
367. Charmaine Ganson

Tarrant
368. Rebekah Feaster

Travis
369. Pamela Boyd
370. Gabriella Caraballo
371. Susan Cooper
372. Suzane Daniels
373. Daniel Eck
374. Christopher Harte
375. Gary Hoffman
376. Karen Huber
377. Janelle James
378. Paul Johnson
379. Warren Kull
380. Mike Lange
381. Tom Mason
382. Bryce Miller
383. Christy Muse
384. Judy Osborne
385. Ernestine Palmer
386. Mayra Radzinski
387. Rene Shields
388. David Todd
389. William Volk
390. Kathleen Zarsky

Uvalde
391. William Cato
392. Evelyn O'Hara
393. Norma Stegman

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394. Michael Spano
395. Austin Nikel