

Drought Contingency Plan for Gulf Coast Water Authority

Section I: Introduction

The purpose of this drought contingency plan (the Plan) for the Gulf Coast Water Authority (GCWA) is as follows:

- To conserve the available water supply in times of drought and emergency
- To maintain supplies for domestic water use, industrial use, sanitation, and fire protection,
- To protect and preserve public health, welfare, and safety,
- To minimize the adverse impacts of water supply shortages
- To minimize the adverse impacts of emergency water supply conditions, and
- To satisfy the requirements set forth by the Texas Commission on Environmental Quality (TCEQ) and other agencies.

A drought is defined as an extended period of time when an area receives insufficient amounts of rainfall to replenish the water supply, causing water supply shortages. In the absence of drought response measures, water demands tend to increase during a drought due to the need for additional outdoor irrigation and cooling water. The severity of a drought depends on the degree of depletion of supplies and on the relationship of demand to available supplies.

Section II: TCEQ Requirements for Drought Contingency Plans

This Plan is consistent with TCEQ guidelines and requirements for the development of drought contingency plans by wholesale water suppliers, contained in Title 30, Part 1, Chapter 288, Subchapter B, Rules 288.20-288.22 of the Texas Administrative Code. These rules are included in *Appendix A*. As required by TCEQ rules, GCWA will review and update this plan, as appropriate based on an assessment of any other new or updated information. GCWA will review and update the Plan no less than every five years to satisfy TCEQ requirements, or as deemed necessary by GCWA.

Section III: Public Involvement

Opportunity for the public and GCWA's water customers to provide input into the preparation of the Plan was provided by GCWA through the following measures:

- Providing written notice of the proposed plan and the opportunity to comment on the plan by newspaper, posted notice, and notice on GCWA's website
- Making the draft plan available on GCWA's website
- Providing the draft plan to anyone requesting a copy, and
- Holding eight (8) stakeholder and/or public meetings on plan development from January 2017 through August, 2018.

Section IV: Water Customer Education

After the Plan is adopted, GCWA will continue to inform and educate the public about the Plan through the

45 following measures:

- 46 • Preparing a bulletin describing the Plan and making it available at appropriate locations,
- 47 • Making the Plan and actions taken by GCWA related to implementation of the Plan available to the
- 48 public through the GCWA website and other social media outlets.
- 49 • Notifying local organizations, schools, and civic groups that GCWA staff are available to make
- 50 presentations on the Plan (usually in conjunction with presentations on water conservation
- 51 programs).

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53 **Section V: Coordination with Regional Water Planning Groups**

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55 The water service area of the Gulf Coast Water Authority is located within the Region H water planning area
56 as defined by the Texas Water Development Board. GCWA has provided a copy of this drought contingency
57 plan to Region H, along with the letter shown in *Appendix B*.

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59 **Section VI: Authorization**

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61 The GCWA General Manager (the GM), or his/her designee is hereby authorized and directed to implement
62 the applicable provisions of this Plan upon determination that such implementation is necessary to protect
63 public health, safety, and welfare. The GM shall have the authority to initiate or terminate drought or other
64 water supply emergency response measures as described in this Plan.

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66 **Section VII: Application of Drought Response Measures**

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68 The provisions of this Plan shall apply to all of GCWA's water supply customers. The terms "person" and
69 "customer" as used in the Plan include individuals, corporations, partnerships, associations, municipalities,
70 political subdivisions, and all other legal entities.

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72 The following actions will be taken when a drought stage is initiated:

- 73 • GCWA's customers who are potentially affected by a drought or emergency (the Affected
74 Customers) will be notified by e-mail or via GCWA's designated emergency communications
75 network and will be provided details of the reasons for initiation of the drought contingency stage,
76 and
- 77 • If any mandatory provisions of the Plan are activated, GCWA will notify the Executive Director of
78 the TCEQ within 5 business days. Notifications will be made via e-mail to wcp@tceq.texas.gov.

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80 The GM may decide not to order the implementation of a drought contingency response stage even though
81 one or more of the trigger criteria for the stage are met. Factors which could influence such a decision include,
82 but are not limited to, the time of year, weather conditions, the anticipation of replenished water supplies, or
83 the anticipation that additional facilities will become available to meet needs.

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85 **Section VII: Criteria and Actions Required for Drought or Emergency Response Stages for Affected 86 Customers.**

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88 This section describes the criteria for and actions required for drought response stages for only Affected
89 Customers based on the concepts of system demand and deliverable capacity, as defined below:

- 90 • **Affected Customers:** Customers that are impacted by a particular shortage of deliverable capacity
91 compared to system demand
- 92 • **Alternate Water Supplies:** Any water provided by GCWA other than Run-of-River supplies.
- 93 • **Conserved Water Quantity:** volume of extra water conserved by an individual GCWA customer,
94 defined as the difference between the customers Entitled Water Usage or Interruptible Water Usage

- 95 and actual customer usage.
- 96 • **Contributing Watershed:** The portion of the Brazos River watershed upstream of GCWA pump
- 97 stations on the Brazos River that is actively managed by the Brazos River Watermaster and could
- 98 potentially provide streamflow usable by GCWA.
- 99 • **Deliverable Capacity:** The ability to convey water at a given point in the GCWA water delivery
- 100 system as limited by diversion capacity, conveyance capacity, treatment capacity, etc.
- 101 • **Entitled Water Use:** Computed monthly average usage by GCWA firm customers based on reported
- 102 usage during the subject month during the three previous calendar years.
- 103 • **Excess Water Usage:** The quantity of water used by a customer in excess of the customer’s Entitled
- 104 Water Use or Interruptible Water Use.
- 105 • **Firm Customers:** Customers to whom GCWA is contractually obligated to provide water. Firm
- 106 customers may receive run-of-river supplies or alternate supplies provided by GCWA.
- 107 • **Interruptible Customers with Backup:** Customers to whom GCWA may provide water only when
- 108 sufficient run-of-river supplies are available, or when GCWA is delivering alternate water supplies
- 109 which the customer has purchased.
- 110 • **Interruptible Customers without Backup:** Customers to whom GCWA may provide water only
- 111 when sufficient run-of-river supplies are available; these customers do not have access to alternate
- 112 water supplies delivered by GCWA.
- 113 • **Interruptible Water Use – water usage by Interruptible Customers with Backup and Interruptible**
- 114 **Customers without Backup.**
- 115 • **Monthly Flow Target:** Computed target streamflow set by GCWA which is required to satisfy
- 116 Entitled Water Uses and Interruptible Water Uses of GCWA customers, as well as other entities
- 117 permitted to divert Brazos River water downstream from GCWA.
- 118 • **Raw Water Rate:** The raw water rate used for the purposes stated herein is the raw water rate for
- 119 Fund 08 Canal Division as adopted annually by the GCWA Board.
- 120 • **Run-of-River Supplies:** Water available to GCWA under its water rights 12-5168, 13-5169, 12-
- 121 5171, 12-5322, or 13-5357. This water is water available from the Brazos River, Mustang Bayou,
- 122 Halls Bayou, Chocolate Bayou, or Jones & Oyster Creek, and is diverted according to the State of
- 123 Texas prior-appropriation system.
- 124 • **Run-of-River Supplies at Hempstead:** Water within the Brazos River as measured at the US
- 125 Geological Survey gauging station #8111500.
- 126 • **System Demand:** Demand on the GCWA system, defined as the sum of GCWA customer demands
- 127 located at or downstream of a given subject location on the GCWA water distribution system (canals,
- 128 reservoirs, water treatment plant, pump stations, and other water distribution infrastructure).
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130 Monthly Flow Targets are average flow values (in “cfs” or “cubic feet per second” or “ft³/s units) at the

131 Brazos River US Geological Survey gauge near Hempstead, TX (#08111500) that are sufficient to meet the

132 estimated needs of GCWA and other permitted water right holders. Estimated needs are based on GCWA

133 records of customer usage by month for the previous three (3) years, as well estimated needs of other

134 permitted water right holders. Monthly flow targets are utilized by GCWA in assigning drought stages, as

135 described herein.

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137 Affected Customers include the customers that have take-points downstream of the circumstances that are

138 triggering a drought or emergency response. For instance, GCWA’s canal customers may be affected by

139 events impacting river pump stations or canal conveyance to the point of diversion by the customer. Similarly,

140 GCWA treated water customers may be impacted by events concerning the river pump stations and canal

141 conveyances, but also storage in GCWA reservoir(s) and operation of the Thomas S. Mackey water treatment

142 plant and distribution infrastructure. The concept of Affected Customers is intended to limit the scope of

143 drought and emergency response to only those customers directly impacted by a significant event, whether it

144 be related to river conditions, pump station capacity, or conveyance and other infrastructure.

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Section VII.1: Stage 1 Response (Mild Water Shortage)

A Stage 1 Response for Affected Customers can be triggered when the GM finds that conditions warrant the declaration of a Stage 1 Response. The GM will consider declaring a Stage 1 response when at least one of the following conditions is satisfied:

- 1) **System Demand** exceeds 85% of **Deliverable Capacity** within GCWA’s conveyance system for three consecutive days (applicable to any portion thereof),
- 2) Greater than 50% (by area) of the **Contributing Watershed** that could potentially contribute streamflow to GCWA is classified as being under a “D1 (Moderate Drought)” condition as identified on the most recent United States Drought Monitor website.
(Currently accessible at: <http://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?TX>)

A Stage 1 response may be terminated by the GM when the circumstances that triggered the initiation of Stage 1 no longer prevail.

The goal for water use under Stage 1 is 95% of the total **Entitled Water Use** and **Interruptible Water Use** for all **Affected Customers**. The GM may order the implementation of any of the following actions deemed necessary, and may implement other actions not listed below:

- Notify all **Affected Customers** that a Stage 1 drought condition exists,
- Request all **Affected Customers** to initiate Stage 1 or other appropriate stage in their drought contingency plan.
- Request voluntary reductions in water use by all **Affected Customers**,
- Increase public awareness of drought conditions and measures to reduce demand.

Section VII.2: Stage 2 Response (Moderate Water Shortage)

A Stage 2 response for Affected Customers can be triggered when the GM finds that conditions warrant the declaration of a Stage 2 response. The GM will consider declaring a Stage 2 response when at least one of the following conditions is satisfied:

- 1) **System Demand** exceeds 90% of **Deliverable Capacity** within GCWA’s conveyance system for three consecutive days (applicable to any portion thereof),
- 2) Predicted **Run-of-River Supplies** at GCWA’s pump stations are less than 95% GCWA’s **Monthly Flow Target** for fourteen days into the future
- 3) Water available from **Run-of-River Supplies** and **Alternate Water Supplies** is determined to be insufficient to satisfy 95% of GCWA’s **Monthly Flow Target** through August 31 of the current year (if date is on or after January 1) or through August 31 of the next year (if date is on or after September 1).

A Stage 2 response may be terminated by the GM when the circumstances that triggered the initiation of Stage 2 no longer prevail.

The goal for water use under Stage 2 is 90% of the total **Entitled Water Use** and **Interruptible Water Use**

196 for all **Affected Customers**. If the circumstances warrant, the GM may set an alternative water use
197 reduction goal.

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199 The GM may order the implementation of any of the following actions deemed necessary:

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- Continue or initiate any actions available under Stage 1.

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- Notify all **Affected Customers** that a Stage 2 drought condition exists.

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- Initiate or continue usage of **Alternate Water Supplies** available to GCWA, to augment **Run-of-River Supplies**.

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204 • Request all **Affected Customers** to initiate Stage 2 or other appropriate stage in their drought
205 contingency plan.

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- Request voluntary reductions in water use by **Affected Customers**.

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- Meet with **Affected Customers** to determine water use on a as needed basis, identify **Affected Customers** exceeding 95% of their **Entitled Water Use** or **Interruptible Water Use** and advise them to reduce their usage,

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- Cease issuance of new short-term or interruptible contracts with the exception of emergency conditions,

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- Terminate water deliveries to existing **Interruptible Customers without Backup**, or

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- Increase public awareness of drought condition and measures to reduce demand.

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215 Section VII.3: Stage 3 Response (Severe Water Shortage)

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217 A Stage 3 Response for **Affected Customers** can be triggered when the GM finds that conditions warrant the
218 declaration of a Stage 3 Response. The GM will consider declaring a Stage 3 response when at least one of
219 the following conditions is satisfied:

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- 221 1) **System Demand** exceeds 95% of **Deliverable Capacity** within GCWA's conveyance system for three
222 consecutive days (applicable to any portion thereof),
- 223 2) Water available from **Run-of-River Supplies** and **Alternate Water Supplies** is determined to be
224 insufficient to satisfy 90% of GCWA's Monthly Flow Target through August 31 of the current year (if
225 date is on or after January 1) or through August 31 of the next year (if date is on or after September 1).
- 226 3) Predicted **Run-of-River Supplies** at GCWA's pump stations are less than 90% GCWA's **Monthly**
227 **Flow Target** for fourteen days into the future

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231 A Stage 3 response may be terminated by the GM when the circumstances that triggered the initiation of
232 Stage 3 no longer prevail.

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234 The goal for water use under Stage 3 is 85% of the total **Entitled Water Use** and **Interruptible Water Use**
235 for all **Affected Customers**. If the circumstances warrant, the GM may set an alternative water use
236 reduction goal.

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239 The GM may order the implementation of any of the following actions deemed necessary:

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- Continue or initiate any actions available under Stage 1 and Stage 2

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- Notify all **Affected Customers** that a Stage 3 drought condition exists

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- Continue usage of **Alternate Water Supplies** available to GCWA, to augment **Run-of-River Supplies**

243

- Continue to coordinate with **Affected Customers** to determine water use on as needed basis, identify **Affected Customers** exceeding 90% of their **Entitled Water Use** or **Interruptible Water Use**, and advise them to reduce their usage

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- 246 • Request all **Affected Customers** to initiate Stage 3 or other appropriate stage in their drought
- 247 contingency plan
- 248 • Encourage **Affected Customers** to engage their alternative sources of supply where feasible
- 249 • Terminate delivery of water to **Interruptible Customers Without Backup**
- 250 • Terminate Run-of-River diversions for **Interruptible Customers with Backup**, thereby limiting
- 251 such customers to only obtaining water from **Alternate Water Supplies**
- 252 • Increase public awareness of drought condition and measures to reduce demand
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254 **Section VII.4: Stage 4 Water Emergency Response (Emergency Water Shortage)**

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256 A Stage 4 Water Emergency Response for **Affected Customers** can be triggered when the GM finds that

257 conditions warrant the declaration of a water emergency response due to:

- 258 1) An emergency water shortage,
- 259 2) A major GCWA system failure leading to loss of water service,
- 260 3) The water supply becoming contaminated and unusable, or
- 261 4) Any other emergency conditions.
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263 A Stage 4 response may be terminated by the GM when the circumstances that triggered the initiation of

264 Stage 4 no longer prevail.

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266 The goal for water use reduction under a water emergency response is subject to the scope of the

267 emergency. The GM may order the implementation of any of the actions listed below as deemed necessary.

268 The water emergency response measures are as follows:

- 269 • Continue or initiate any actions available under Stage 1, 2, and 3
- 270 • Notify all **Affected Customers** that an emergency condition exists and meet with **Affected**
- 271 **Customers** as appropriate to inform them of the specific nature of the emergency condition
- 272 • Require **Affected Customers** to initiate the emergency or other appropriate stage in their drought
- 273 contingency plan
- 274 • Impose mandatory water rationing under TWC §11.039 to reduce demand to the appropriate level as
- 275 determined by the GM
- 276

277 Under Stage 4, GCWA will notify TCEQ of its emergency conditions and the imposition of mandatory

278 reductions in water use by **Affected Customers**. GCWA will notify TCEQ within five (5) days of initiation

279 and termination of Stage 4 conditions. Notifications will be made via e-mail to wcp@tceq.texas.gov

281 **Section VIII: Pro Rata Water Allocation**

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283 In the event that triggering criteria specified herein have been met, the GM is hereby authorized to initiate

284 allocation of water supplies on a pro-rata basis among all the **Affected Customers** in accordance with Texas

285 Water Code, §11.039, Distribution of Water During Shortage. The water to be distributed shall be divided

286 among all customers pro rata, according to the amount each may be entitled to, so that preference is given to

287 no one and everyone suffers alike.

289 **Section IX: Enforcement**

291 **Surcharge**

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293 Under Stage 2 or Stage 3 drought conditions, , customers shall pay the following surcharge on their monthly

294 **Excess Water Usage:**

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296 2.5 times the individual's customer's **Raw Water Rate**.

297
298 Under Stage 4 drought conditions , customers shall pay the following surcharge on their monthly **Excess**
299 **Water Usage**:

300
301 10.0 times the individual's customer's **Raw Water Rate**.

302
303 **Credits**

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305 Under Stage 2, Stage 3, or Stage 4 drought conditions, customers who achieve the established water use goal
306 shall receive conservation incentives based on their **Conserved Water Quantity**:

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308 1.0 times the individual's customer's **Raw Water Rate**.

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310 **Section X: Variances**

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312 The GM may, in writing, grant a temporary variance for existing water uses otherwise prohibited under this
313 Plan to an Affected Customer if one or more of the following conditions are met:

- 314 • Failure to grant such a variance would cause an emergency condition adversely affecting health,
315 sanitation, or fire safety for the public or the Affected Customer requesting the variance,
- 316 • Compliance with this Plan cannot be accomplished due to technical, legal, or other limitations, or
- 317 • Alternative methods that achieve the same level of reduction in water use can be implemented.

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319 Variances shall be granted or denied at the discretion of the GM. All petitions for variances should be in
320 writing and should include the following information:

- 321 • Name and address of the petitioner(s),
- 322 • Purpose of water use,
- 323 • Specific provisions from which relief is requested,
- 324 • Detailed statement of the adverse effect of the provisions from which relieve is requested,
- 325 • Description of the relief requested,
- 326 • Period of time for which the variance is sought
- 327 • Alternative measures that will be taken to reduce water use, and
- 328 • Other pertinent information.

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330
331 Variances include adjustments to the monthly **Entitled Water Use** or **Interruptible Water Use** computed
332 by GCWA. Variance requests regarding **Entitled Water Use** or **Interruptible Water Use** must provide
333 evidence that the original GCWA-calculated **Entitled Water Use** or **Interruptible Water Use** either under
334 or over-estimates reasonably expected customer usage.

335
336 **Section XI: Severability**

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338 It is hereby declared to be the intention of the GCWA that the sections, paragraphs, sentences, clauses, and
339 phrases of this Plan are severable and, if any phrase, clause, sentence, paragraph, or section of this Plan shall
340 be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such
341 unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections
342 of this Plan, since the same would not have been enacted by the GCWA without the incorporation into this
343 Plan of any such unconstitutional phrase, clause, sentence, paragraph, or section.

344
345 **Section XII: Implementation**

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347 This Plan was adopted by the Gulf Coast Water Authority via a resolution passed by the Board of Directors
348 on _____. A copy of this resolution may be found in *Appendix C* of this document.
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DRAFT