

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

City of Seabrook
1700 First Street, Seabrook Texas 77586

(CCN# 10858

(PW# 1010062

**Water Conservation
And
Drought Contingency
Plan**

REVISED MAY 2012

Table of Contents

25		
26		
27	1.0	Introduction, Declaration of Policy, Purpose and Intent
28		
29	2.0	Objectives
30		
31	3.0	Definitions
32		
33	4.0	Texas Commission on Environmental Quality Rules
34		
35	5.0	Water Conservation Plan Content
36	5.1	Utility Profile
37	5.2	Specification of Water Conservation Goals
38	5.3	Accurate Metering of Raw Water Supplies and Treated Water Deliveries
39	5.4	Metering of Customer and Public Uses and Meter Testing, Repair and
40		Replacement
41	5.5	Determination and Control of Unaccounted-for Water
42	5.6	Continuing Public Education and Information Campaign
43	5.7	Non-Proportional Water Rate Structure
44	5.8	Implementation and Enforcement of the Water Conservation & Drought
45		Contingency Plan
46		
47	6.0	Additional Required Water Conservation Plan Content
48	6.1	Leak Detection and Repair Pressure Control
49	6.2	Record Management System
50		
51	7.0	Optional Water conservation Plan Content
52	7.1	Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures
53	7.2	Monitoring of Effectiveness and Efficiency – Annual Conservation Report
54	7.3	Residential Landscape Irrigation System Assistance Program
55		
56	8.0	Drought Contingency Plan
57	8.1	Introduction
58	8.2	State Requirements for Water Conservation / Drought Contingency Plans
59	8.3	Implementation Phases
60		
61	9.0	Emergency Water Demand Management Information Program
62		
63		
64		
65		

66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91

Table of Contents - continued

10.0 Drought Contingency Plan for a Wholesale Public Water Supplier.

10.1 Declaration of Policy, Purpose, and Intent

10.2 Public Involvement

10.3 Wholesale Water Customer Education

10.4 Coordination with Regional Water Planning Groups

10.5 Authorization

10.6 Application

10.7 Criteria for Initiation and Termination of Drought Response Stages

10.8 Drought Response Stages

10.9 Pro Rata Water Allocation

10.10 Enforcement

10.11 Variances

Appendix A: Guidelines Checklist

Appendix B: Water Utility Profile

Appendix C: City of Seabrook CCN

Appendix D: Region C Water Planning Group Letter

Appendix E: Water Conservation Plan Annual Report

City of Seabrook

Water Conservation / Drought Contingency Plan

1.0 Introduction; Declaration of Policy, Purpose and Intent

Water conservation is not limited to the recurring periods of Texas drought. Conserving water and avoiding water waste are important for the long-term sustainability of the community even in times of abundant rainfall. The City of Seabrook recognizes that water is an essential resource for sustaining the growth and vitality of the city, the region and the State of Texas. This Plan describes both the city’s long-term commitment to conserving water resources for future generations and the need to manage water demands during short-term conditions when water supplies are limited.

The City of Seabrook has adopted this Water Conservation / Drought Contingency Plan as a comprehensive set of strategies and regulations on the delivery and consumption of water to conserve the available water supply and to protect the integrity of water supply infrastructure, particularly facilities critical for domestic water supply, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety. It is also the intent of the Plan to minimize the adverse impacts of water supply shortage or other water supply emergency conditions.

The authority to implement and enforce the Water Conservation / Drought Contingency Plan is established in Chapter 95, Article III, Sec. 95-76 of the City of Seabrook Code. The scope of authority applies to all persons and premises that obtain water directly or indirectly from the City.

Water supply has always been a key issue in the development of Texas. In recent years, the increasing population and economic development in the Southeast Texas region have led to growing demands for water. The latter half of the twentieth century saw the development of local and less expensive sources of water supply. Additional supplies to meet higher demands will be expensive and difficult to develop. Therefore, it is important to make efficient use of existing supplies. This will delay the need for new supplies, minimize the environmental impacts associated with developing new supplies, and delay the high cost of additional water supply development.

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation and drought contingency plans for public water suppliers. The City of Seabrook has adopted this Water Conservation / Drought Contingency Plan pursuant to TCEQ guidelines and requirements.

137 **2.0 Objectives**

138

139 2.1 The objectives of the water conservation plan are to:

140

141 • Reduce water consumption

142 • Reduce the loss and waste of water

143 • Improve efficiency in the use of water, and

144 • Extend the life of current regional water supplies by reducing the rate of growth in per
145 capita demand.

146

147 2.2 The objectives of the drought contingency plan are to:

148

149 • Conserve the available water supply in times of drought and emergency

150 • Maintain supplies for domestic water use, sanitation, and fire protection

151 • Protect and preserve public health, welfare, and safety

152 • Minimize the adverse impacts of water supply shortages; and

153 • Minimize the adverse impacts of emergency water conditions

154

155 **3.0 Definitions**

156

157 In the Water Conservation / Drought Contingency Plan, the following definitions apply:

158

159 **Agricultural irrigation** - irrigation for the purpose of growing crops commercially for human
160 consumption or to use as feed for livestock or poultry.

161

162 **Aesthetic use** - the use of water for fountains, waterfalls and landscape lakes or ponds where
163 such use is entirely ornamental and serves no other functional purpose.

164

165 **Athletic Fields** – grounds designated for sports and athletic practices and contests including
166 parks, schools (public and private), municipal and privately owned.

167

168 **Bucket** - bucket or other container holding five gallons or less, used singly by one person.

169

170 **Domestic water use** – use of water (other than the “Outdoor” category) for household,
171 personal, or sanitary purposes such as drinking, cooking, cooling, heating, bathing and cleaning
172 whether the use occurs in a residence, business, industry or institution.

173

174 **Existing landscape plant** - a landscaping plant planted during any period for which a water
175 conservation plan stage has not been declared or during a stage, which has been rescinded.

176

177 **Existing facility** - a swimming pool, hot tub or any similar facility, including residential and
178 private facilities, installed during any period for which a water conservation stage has not been
179 declared or during a stage that has been rescinded. This term does not include pools specifically
180 maintained to provide habitat for aquatic life.

181 **Hand-held hose** - a hose attended by one person, fitted with a manual shutoff nozzle.

182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227

Industrial use - the use of water in processes designed to convert materials of lower value into forms having greater value and usability as in the production of primary goods and services provided by industrial or commercial facilities. Industrial facilities include facilities which perform such process-specific activities as cooling, boiler-feed, cleaning and washing, pollution control, extraction and separation of desirable material from products and waste materials and the incorporation of water into final products. Commercial facilities include, but are not limited to, food service facilities, hotel, retail facilities and nursery operations.

Landscape plant - any plant including any tree, shrub, vine, herb, flower, succulent, groundcover or grass species that is used for landscaping purposes or for the support of recreational areas such as playgrounds and playing fields.

Landscape watering - the application of water to grow landscape plants.

Livestock use - the use of water for drinking by or washing of livestock. "Livestock" means cattle, sheep, goats, hogs, poultry, horses, and game, domestic, exotic and other animals and birds, including zoo animals used for commercial or personal purposes.

Makeup - means partial refilling due to evaporative water loss and backwashing.

New facility –a swimming pool, hot tub or any similar facility, including residential and private facilities, installed during any current water conservation plan stage. When the stage is rescinded, the new facility will be treated thereafter as an existing facility. This term does not include wading pools or pools specifically maintained to provide habitat for aquatic life.

New landscape – vegetation installed at the time of the construction of a new house, new multi-family building, or a new commercial building; installed as part of a capital improvement project; or vegetation which alters more than one half the area of an existing landscape; and has been installed for less than thirty (30) days.

New landscaping plant - a landscaping plant planted during any current water conservation plan stage when the stage is rescinded, the new landscaping plant will be treated thereafter as an existing plant.

Non-essential water use – water uses that are neither essential not required for the protection of public health, safety, or welfare, including:

- 1) Irrigation of landscape areas, including parks, greenbelt areas, athletic fields, and golf courses, except where otherwise provided under the Water Conservation / Drought Contingency Plan.
- 2) Washing of any motor vehicle, boat, or trailer.
- 3) Washing or rinsing of any sidewalk, walkway, driveway, parking lot, tennis court, or other hard-surfaces area.
- 4) Washing of buildings or structures for purposes other than immediate fire protection.
- 5) Flushing gutters or permitting water to run or accumulate in any gutter, alley or street.

- 228 6. Filling, refilling, or adding water to any indoor or outdoor swimming pool or spa.
229 7. Operating a fountain or pond for aesthetic or scenic purposes except where necessary to
230 support aquatic life.

231
232 **Other outside use** - the use of water outdoors for the maintenance, cleaning and washing of
233 structures and mobile equipment, including automobiles and boats and the washing of streets,
234 driveways, sidewalks, patios and other similar areas.

235
236 **Person** – any individual, partnership, co-partnership, firm, company, corporation, association,
237 joint stock company, trust estate, governmental; entity or any other legal entity, or their legal
238 representative, agents or assigns and includes the owner, occupant, lessee, or manager of a
239 property.

240
241 **Power production use** - the use of water for steam generation and the use of water for cooling
242 and for replenishment of cooling reservoirs.

243
244 **Reused water** - water that has been recycled or reclaimed after it has been used for beneficial
245 purpose.

246
247 **Waste** - includes, but is not limited to, allowing water to run off into a gutter, ditch drain or
248 street or failing to repair a controllable leak.

249
250 **Water Restriction Schedule** - where a water restriction calls for use only once every seven days,
251 or only on designated days, the following system shall apply to determine the "day" within each
252 calendar week that the use is permitted.

- 253 1) Buildings and premises with even-numbered addresses - Tuesdays only beginning at
254 7:00 p.m., and ending Wednesdays at 8:00 a.m. during Central Daylight Savings Time or
255 beginning at 6:00 p.m. on Tuesday and ending Wednesday at 8:00 a.m. during Central
256 Standard Time.
257 2) Buildings and premises with odd-numbered addresses - Thursdays only beginning at
258 7:00 p.m., and ending Fridays at 8:00 a.m. during Central Daylight Savings Time or
259 beginning at 6:00 p.m. on Tuesday and ending Wednesday at 8:00 a.m. during Central
260 Standard Time.

261
262 **Vegetable garden** - any non-commercial garden planted primarily for household use. For this
263 use "non-commercial" includes incidental direct selling of produce from such a garden to the
264 public.

265
266

267 **4.0 Texas Commission on Environmental Quality Rules**

268

269 **4.1 Conservation Plans**

270 The TCEQ rules governing development of water conservation plans for public water suppliers
271 are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas
272 Administrative Code. For the purpose of these rules, a water conservation plan is defined as:

273

274 “A strategy or combination of strategies for reducing the volume of water withdrawn from a
275 water supply source, for reducing the loss or waste of water, for maintaining or improving the
276 efficient in the use of water, for increasing the recycling and reuse of water, and for preventing
277 the pollution of water. A water conservation plan may be a separate document identified as
278 such or may be contained within another water management document(s).”

279

280 According to TCEQ rules, water conservation plans for public water suppliers must have a
281 certain minimum content (Section 3), must have additional content for public water suppliers
282 that are projected to supply 5,000 or more people in the next ten years (Section 4), and may
283 have additional operation content (Section 5).

284

285 **4.2 Drought Contingency Plans**

286 The TCEQ rules governing development of drought contingency plans for suppliers are contained
287 in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 of the Texas Administrative Code. For
288 the purpose of these rules, a drought contingency plan is defined as:

289

290 “A strategy or combination of strategies for temporary supply and demand management
291 responses to temporary and potentially recurring water supply shortages and other water
292 supply emergencies. A drought contingency plan may be a separate document identified as
293 such or may be contained within another water management document(s).”

294

295 **5.0 Water Conservation Plan Content**

296 The minimum requirements in the Texas Administrative Code for water conservation plans for
297 public drinking water suppliers covered in this report are as follows:

298

- 299 §288.2(a)(1)(A) – Utility Profile – Section 5.1
- 300 §288.2(a)(1)(B) – Specification of Goals – Section 5.2
- 301 §288.2(a)(1)(C) – Accurate Metering – Sections 5.3 and 5.4
- 302 §288.2(a)(1)(D) – Universal Metering – Section 5.4
- 303 §288.2(a)(1)(E) – Determination and Control of Unaccounted Water – Section 5.5
- 304 §288.2(a)(1)(F) – Public Education and Information Program - Section 5.6
- 305 §288.2(a)(1)(G) – Non-Promotional Water Rate Structure – Section 5.7
- 306 §288.2(a)(1)(I) – Means of Implementation and Enforcement – Section 5.8

307

308 **5.1 Utility Profile**

309 Table 5.1 below along with Appendix B summarizes key facts of the Water Utility Profile.

310

311

312 **5.2 Specification of Water Conservation Goals**

313 Table 5.2 shows historical per capita municipal water use for the City of Seabrook. Water use is
314 shown in units of gallons per capita per day (gpcd). Per capita municipal water use is total
315 municipal water sold divided by population.

316
317 Projected per capita uses are of Seabrook projections and are intended to be used for drier than
318 average seasons. Per capital municipal water use in a year with normal or high precipitation
319 during the summer should be less than projected here.

320
321
322
323

**Table 5.1
Water Utility Profile Summary**

Water Service Area	12.5 square miles
Miles of Distribution Pipe	56 miles
Water Supply Source(s)	City of Seabrook – 3 ground water wells City of Pasadena – Surface Water Supply
Population	2005 population = 11,099 2010 population = 12,260 2020 population = 17,800
Connections	3,593 in 2007 Total Increase in Connections in Last 3 years = 160

324
325
326

Water Use Information

Year Use (Gallons)	Estimated Population	Unaccounted for Water (In Percent)	Peak Day in MGD
704,588,000 (2005)	11,099	9%	(6-15) 4.086
604,949,000 (2006)	11,272	10%	(6-24) 3.057
601,995,000 (2007)	11,315	7%	(6-17) 2.514

327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343

Water Treatment System
City of Pasadena’s Subscription = 3.0 million gallons per day.
City of Seabrook’s 3 ground water wells = 30 million gallons per year.
Total Annual Wastewater Flow =480 MG in 2007.

The City of Seabrook projections include the impact of low-flow plumbing fixtures and water conservation measures that have been enacted through building code amendments and state and federal legislation but do not include the effect of water conservation measures recommended in this plan. Table 5.2 shows the projected per capita water use after implementation of this water conservation and drought contingency plan.

In adopting this Plan, the City of Seabrook has established a goal of reducing total per capita water consumption by up to one percent as measured on rolling five and seven year averages as shown in Table 5.2.

344
345
346

**Table 5.2
Historical Total Per Capita Use and Water Conservation Goals**

	(year) gpcd
Historical Total Per Capita Use	(2000) 188 (2001) 180 (2002) 183 (2003) 155 (2004) 165 (2005) 174 (2006) 147 (2007) 146
5 Yr. Average	-157--
7 Yr. Average	-164--
2 Yr. Average	-147--
Conservation Measures in this Plan	-15--
Projected Per Capita Water Use Goals	-130 to 140 gpcd

347

The city's water conservation goals include the following:

348
349
350
351
352
353
354
355

- Maintain the city's ongoing meter replacement program (Section 5.4)
- Keep the level of unaccounted water in the system less than 10 percent in 2009 and subsequent years (Section 5.5).
- Raise public awareness of water conservation and encourage responsible public behavior through a public education and information program as discussed in Section 5.6.
- Decrease outdoor water use by implementing a landscape irrigation systems program (Section 7.3).

Goals for the Program (5 year target and goals):

356
357
358
359

- The City of Seabrook goals are to achieve a municipal use of 140 gallons per capita per day for the first five years beginning in the year 2009 and also achieve a municipal use water loss goal of 14 gallons per capita per day for the next five years beginning in the year 2009.

Goals for the Program (10 year target and goals):

360
361
362
363

- The City of Seabrook goals are to achieve a municipal use of 130 gallons per capita per day for the next ten years beginning in the year 2009 and also achieve a municipal use water loss goal of 13 gallons per capita per day for the next ten years beginning in the year 2009.

364

5.3 Accurate Metering of Raw Water Supplies and Treated Water Deliveries

365
366
367
368
369

The City of Seabrook uses raw water meters at each wellhead and the City of Pasadena meters the treated water deliveries to Red Bluff and Todville delivery points. Each meter has an accuracy of plus or minus 3 percent. The City's meters are calibrated on an annual basis in order to maintain the required accuracy and are repaired and/or replaced as needed.

370

5.4 Metering of Customer and Public Uses and Meter Testing, Repair and Replacement

371
372
373

Water usage for all customers of the City of Seabrook, including public and governmental users, is metered.

374 As part of the water conservation / drought contingency plan, the City of Seabrook replaces all
375 customer meters in a 10 year cycle or if the meter reaches the end of its warranty period
376 whichever comes first. In addition, any meters registering any unusual or questionable readings
377 are tested and replaced if necessary.
378

379 **5.5 Determination and Control of Unaccounted Water**

380 Unaccounted water is the difference between water purchased and produced and metered
381 deliveries to customers. Unaccounted water can include several categories:
382

- 383 • Line flushing
- 384 • Inaccuracies in customer meters (customer meters tend to run more slowly as they age
385 and under-report actual use)
- 386 • Losses due to water main breaks and leaks in the water distribution system
- 387 • Theft
- 388 • Fire fighting
- 389 • Inaccuracies of wholesale meters (plus or minus 2%)
- 390 • Inaccuracies of internal meters (plus or minus 3%); and
- 391 • Other unmetered uses

392 The City of Seabrook will begin to conduct water audits using AWWA guidelines in Water Audits
393 and Leak Detection.
394

395
396 Unaccounted water for the City of Seabrook has stayed at approximately 7% in the last three
397 years. With the measures described in this plan, it is the goal of the City of Seabrook to
398 maintain the unaccounted water below 10% annually.
399

400 **5.6 Continuing Public Education and Information Campaign**

401 The continuing public education and information campaign on water conservation for the City of
402 Seabrook includes the following elements.

- 403 • Promote the city's water conservation measures (presented in Sections, 5, 6 and 7.)
- 404 • Include inserts on water conservation periodically with water bills. Inserts may include
405 material developed by the City of Seabrook staff and material obtained from the
406 American Water Works Association, TWDB, TCEQ, and other sources.
- 407 • The City of Seabrook staff is available to make presentations on the importance of
408 water conservation and ways to save water.
- 409 • Make the water conservation brochures and other water conservation materials
410 available to the public.
- 411 • Make information on water conservation available online at
412 <http://www.ci.seabrook.tx.us> and include information on water conservation and links
413 to the TWDB and TCEQ web sites.

414
415 **5.7 Non-Proportional Water Rate Structure**

416 With the intent of encouraging water conservation and discouraging waste and excessive use of
417 water, the City of Seabrook has adopted a water usage rate structure where the unit price of
418 water increases with increasing water use. Water rates (2008) are shown in Table 5.3.
419

420
421
422

423

424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454

**Table 5.3
Monthly Customer Charges**

Single Family Residential and Commercial Use and Irrigation	
<i>for Meter readings taken monthly</i>	
first 2,000 gallons, 5/8 meter, minimum bill.....	\$8.74
All over 2,000 gallons per 1,000 gallons.....	\$2.53
10,000 - 15,000 gallons, per 1,000 gallons.....	\$3.03
All over 15,000 gallons, per 1,000 gallons.....	\$3.63

Multi-Family Use	
<i>for meter readings taken monthly</i>	
first 2,000 gallons, minimum bill.....	\$8.74
4,001 – 10,000 gallons, per 1,000 gallons.....	\$2.53
All over 10,000 gallons, per 1,000 gallons.....	\$3.03

5.8 Implementation and Enforcement of the Water Conservation / Drought Contingency Plan
The ordinance of the City of Seabrook City Council adopting this Water Conservation / Drought Contingency Plan designates responsible officials to implement and enforce the Water conservation / Drought Contingency Plan.

- Coordination with Regional Water Planning Group
- Additional required water conservation / drought contingency plan content

Title 30 of the Texas Administrative Code also includes additional requirements for water conservation plans for public drinking water suppliers that serve a population of 5,000 people or more and/or a projected population of 5,000 people or more within the next ten years:

- §288.2(a)(2)(A) - Leak Detection Repairs, and Water Lost Accounting - Sections 4.5, 5.1, and 6.3
- §288.2(a)(2)(B) - Record Management System - Section 5.2

6.0 Additional Required Water Conservation Plan Content

6.1 Leak Detection and Repair Pressure Control

Measures to control unaccounted water are part of the routine operations of the City of Seabrook. Meter readers watch for and report signs of illegal connections so they can be addressed quickly. Crews look for and report evidence of leaks in the water distribution system. Maintenance crews respond quickly to repair leaks reported by the public and city personnel. Areas of the water distribution system where numerous leaks and line breaks occur are targeted for replacement, as funds are available.

To further reduce water losses, the City of Seabrook maintains a proactive water loss program. As part of this program, the city responds to reports of leaks within 30 minutes when possible.

455 **6.2 Record Management System**

456 As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the record
457 management system for the City of Seabrook records water received, water pumped, water
458 delivered and water sold; estimates water losses and allows for the separation of water sales
459 and uses into residential, commercial, public / institutional, and industrial categories.
460

461 **7.0 Optional Water Conservation Plan Content**

462 TCEQ rules also list optional conservation strategies, which may be adopted by suppliers to
463 achieve the stated goals of the plan. The following optional strategies and listed in the rules and
464 included in this plan:

- 465 • §288.2(a)(3)(A) – Conservation Oriented Water Rates - Section 5.7
- 466 • §288.2(a)(3)(B) – Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures -
467 Section 7.1
- 468 • §288.2(a)(3)(G) – Monitoring Method - Section 7.2

469
470
471 In addition, the City of Seabrook will also pursue the following optional water conservation
472 strategies that exceed those suggested in the rules:

- 473 • Residential Landscape Irrigation System Program - Section 7.3

474
475
476 **7.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures**

477 The State of Texas has required water-conserving fixtures in new construction and renovations
478 since 1992. The state standards call for flows of no more than 2.5 gallons per minutes (gpm) for
479 faucets, 3.0 gpm for showerheads, and 1.6 gallons per flush for toilets. Similar standards are
480 also required under federal law. These state and federal standards assure that all new
481 construction and renovations in the City of Seabrook will use water-conserving fixtures.
482

483 **7.2 Monitoring of Effectiveness and Efficiency - Annual Conservation Report**

484 An annual report provided by the TWDB (Appendix E) will be used in the development of an
485 annual conservation report for the City of Seabrook. The information for this form will be
486 compiled by January 1st for the preceding fiscal year and will be used by the city to monitor the
487 effectiveness and efficiency of the water conservation program and to plan conservation related
488 activities for the next year. The form records the water use by category, per capita municipal
489 use, and unaccounted water for the current year and compares them to historical values.
490

491 **7.3 Residential Landscape Irrigation Systems Program**

492 The City of Seabrook will provide guidance to residential customers to improve the efficiency of
493 their existing irrigation system as necessary. By improving the efficiency of an irrigation system,
494 outdoor water usage can be reduced while maintaining a healthy landscape.
495

496 Upon approval of this plan, irrigation system equipment that shall be required on all newly
497 installed irrigation systems shall be as follows.

- 498 • Rain and freeze shut-off device.

- 500 • Customers will be responsible for installation and maintenance of all water
501 conservation devices.
502

503 The projected reduction in per capita use from the landscape irrigation system program is 2
504 gpcd in 2010 and 4 gpcd by 2015.
505

506 **8.0 Drought Contingency Plan**

507 **8.1 Introduction.**

508 Droughts and other uncontrollable circumstances can disrupt the normal availability of water
509 supplies from either ground or surface sources. During drought periods, consumer demand is
510 typically from 15 – 25 percent higher than under normal conditions. Limitations on the supply
511 of either ground or surface water, or on facilities to pump, treat, store or distribute water, can
512 also present a public water supply utility with an emergency demand management situation.
513

514 The Seabrook Water Conservation Plan and Drought Contingency Plan is proposed as follows:
515

- 516 1) Trigger conditions signaling the start of an emergency period;
 - 517 2) Demand reduction measures;
 - 518 3) Information and education;
 - 519 4) Penalties for violations; and
 - 520 5) Emergency conservation water rates.
- 521
522

523 The specific trigger levels, reduction goals, information and education actions, penalties and
524 demand reduction measures for each emergency water demand management stages as well as
525 implementation and termination procedures are listed below.
526
527
528
529
530
531
532
533

534 (Continued on next page)
535
536
537

538 **8.2 State Requirements for Water Conservation / Drought Contingency Plans**
539

540 **Texas Administrative Code**

541 **TITLE 30 ENVIRONMENTAL QUALITY**

542 **PART 1 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

543 **CHAPTER 288**

544 **WATER CONSERVATION PLANS, DROUGHT CONTINGENCY**

545 **PLANS, GUIDELINES AND REQUIREMENTS**

546 **SUBCHAPTER A WATER CONSERVATION PLANS**

547 **RULE §288.2**

548 **Water Conservation Plans for Municipal Uses by Public**

549 **Water Suppliers**

550 (a) A water conservation plan for municipal water use by public water suppliers must provide
551 information in response to the following. If the plan does not provide information for each
552 requirement, the public water supplier shall include in the plan an explanation of why the
553 requirement is not applicable.

554 (1) Minimum requirements. All water conservation plans for municipal uses by public
555 drinking water suppliers must include the following elements:

556 (A) a utility profile including, but not limited to, information regarding population and
557 customer data, water use data, water supply system data, and wastewater system data;

558 (B) until May 1, 2005, specification of conservation goals including, but not limited to,
559 municipal per capita water use goals, the basis for the development of such goals, and a
560 time frame for achieving the specified goals;

561 (C) beginning May 1, 2005, specific, quantified five-year and ten-year targets for water
562 savings to include goals for water loss programs and goals for municipal use, in gallons
563 per capita per day. The goals established by a public water supplier under this
564 subparagraph are not enforceable;

565 (D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and
566 account for the amount of water diverted from the source of supply;

567 (E) a program for universal metering of both customer and public uses of water, for meter
568 testing and repair, and for periodic meter replacement;

569 (F) measures to determine and control unaccounted-for uses of water (for example,
570 periodic visual inspections along distribution lines; annual or monthly audit of the water
571 system to determine illegal connections; abandoned services; etc.);

572 (G) a program of continuing public education and information regarding water
573 conservation;

574 (H) a water rate structure which is not "promotional," i.e., a rate structure which is cost based
575 and which does not encourage the excessive use of water;

576 (I) a reservoir systems operations plan, if applicable, providing for the coordinated
577 operation of reservoirs owned by the applicant within a common watershed or river basin
578 in order to optimize available water supplies; and

579 (J) a means of implementation and enforcement which shall be evidenced by:

580 (i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water
581 conservation plan by the water supplier; and

582 (ii) a description of the authority by which the water supplier will implement and
583 enforce the conservation plan; and

584 (K) documentation of coordination with the regional water planning groups for the service
585 area of the public water supplier in order to ensure consistency with the appropriate
586 approved regional water plans.

587 (2) Additional content requirements. Water conservation plans for municipal uses by public
588 drinking water suppliers serving a current population of 5,000 or more and/or a projected
589 population of 5,000 or more within the next ten years subsequent to the effective date of the
590 plan must include the following elements:

591 (A) a program of leak detection, repair, and water loss accounting for the water
592 transmission, delivery, and distribution system in order to control unaccounted-for uses of
593 water;

594 (B) a record management system to record water pumped, water deliveries, water sales,
595 and water losses which allows for the desegregation of water sales and uses into the
596 following user classes:

597 (i) residential;

598 (ii) commercial;

599 (iii) public and institutional; and

600 (iv) industrial;

601 (C) a requirement in every wholesale water supply contract entered into or renewed after
602 official adoption of the plan (by either ordinance, resolution, or tariff), and including any
603 contract extension, that each successive wholesale customer develop and implement a
604 water conservation plan or water conservation measures using the applicable elements in
605 this chapter. If the customer intends to resell the water, the contract between the initial
606 supplier and customer must provide that the contract for the resale of the water must have
607 water conservation requirements so that each successive customer in the resale of the water
608 will be required to implement water conservation measures in accordance with the
609 provisions of this chapter.

610 (3) Additional conservation strategies. Any combination of the following strategies shall be
611 selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and
612 (2) of this subsection, if they are necessary to achieve the stated water conservation goals of
613 the plan. The commission may require that any of the following strategies be implemented by
614 the water supplier if the commission determines that the strategy is necessary to achieve the
615 goals of the water conservation plan:

616 (A) conservation-oriented water rates and water rate structures such as uniform or
617 increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block
618 rates;

619 (B) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving
620 plumbing fixtures to be installed in new structures and existing structures undergoing
621 substantial modification or addition;

622 (C) a program for the replacement or retrofit of water-conserving plumbing fixtures in
623 existing structures;

624 (D) reuse and/or recycling of wastewater and/or gray water;

625 (E) a program for pressure control and/or reduction in the distribution system and/or for
626 customer connections;

627 (F) a program and/or ordinance(s) for landscape water management;

628 (G) a method for monitoring the effectiveness and efficiency of the water conservation
629 plan; and

630 (H) any other water conservation practice, method, or technique which the water supplier
631 shows to be appropriate for achieving the stated goal or goals of the water conservation
632 plan.
633 (b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to
634 Required Water Conservation Plan) of the Texas Water Development Board and substantially
635 meeting the requirements of this section and other applicable commission rules may be
636 submitted to meet application requirements in accordance with a memorandum of understanding
637 between the commission and the Texas Water Development Board.
638 (c) Beginning May 1, 2005, a public water supplier for municipal use shall review and update its
639 water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year
640 targets and any other new or updated information. The public water supplier for municipal
641 use shall review and update the next revision of its water conservation plan not later than May 1,
642 2009, and every five years after that date to coincide with the regional water planning group.
643 **Source Note:** The provisions of this §288.2 adopted to be effective May 3, 1993, 18 TexReg
644 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April
645 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384

646 **8.3 Implementation Phases**

647

648 **8.3.1 STAGE I - WATER DEMAND AWARENESS (Mild Water Shortage Conditions)**

649

650 **Regulation**

- 651 1) Trigger Level: Water use from Pasadena exceeds 2.55 MGD for five consecutive days. (85% of Current
652 capacity)
- 653 2) Reduction Goal: 10%
- 654 3) Continue on-going education program, coordination activities, special use provisions, fire hydrant
655 and line monitoring and programs with water purveyors and companies.
- 656 4) Waste of water is prohibited.
- 657 5) Penalty for violation of mandatory Stage 1 demand reduction measures: \$25.00 to \$100.00 per day
658 fine for each violation.
- 659 6) Demand Reduction measures:
- 660 A. Landscape irrigation:
- 661 1. Landscape watering with automated irrigation systems or sprinklers between 8 a.m. and 7 p.m. is
662 prohibited. (MANDATORY)
- 663 2. Existing or new landscapes:
- 664 (a) Watering with automated irrigation systems or sprinklers is permitted from 7 p.m. to 8 a.m.,
665 once every seven days in accordance with the Water Restriction Schedule contained in the
666 definitions. (MANDATORY)
- 667 (b) Watering with hand-held hoses, buckets or drip irrigation systems is permitted at any time.
- 668 (c) Watering with reused water is exempt from reduction measures.
- 669 B. Vegetable Gardens:
- 670 1) Watering between 8 a.m. and 7 p.m. is prohibited. (MANDATORY)

671 2) Watering with automated irrigation systems or sprinklers is permitted from 7 p.m. to 8 a.m.,
672 once every seven days. (MANDATORY)

673 3) Watering with hand-held hoses, buckets or drip irrigation systems is permitted at any time.

674

675 C. Golf Courses:

676 1) Watering between 8 a.m. and 7 p.m. is prohibited. (MANDATORY)

677 2) Watering with automated irrigation systems or with sprinklers is permitted from 7 p.m. to 8 a.m.
678 on Tuesdays. (MANDATORY)

679 3) Watering with reused water is exempt from reduction measures.

680 D. Swimming Pools, Hot Tubs and similar facilities:

681 1) Filling and makeup of new and existing facilities is permitted.

682 2) Draining is prohibited except onto pervious surfaces only. (MANDATORY)

683 E. Aesthetic Uses: Reduction is recommended-for inside and outside use. It is recommended that non-
684 recirculating fountains be shut off and that recirculating fountains be operated only during low
685 evaporation periods.

686 F. Other Outdoor Uses:

687 1) Waste is prohibited. (MANDATORY)

688 2) Reduction of washing of impervious (paved) surface areas is recommended.

689 3) Non-commercial washing of automobiles, trucks, trailers, boats, airplanes and other mobile
690 equipment is permitted on designated days once every seven days only between the hours of 7
691 p.m. and 8 a.m. Washing shall be done with a hand-held hose or bucket. Hand-held hoses shall be
692 equipped with a positive shut-off nozzle. (MANDATORY)

693 G. Commercial and Industrial Use

694 1) Washing of automobiles, trucks, trailers, boats, airplanes and other mobile equipment is permitted
695 on the immediate premises of a commercial washing facility.

696 2) Commercial nurseries, commercial sod farms and other similar establishments are requested to
697 curtail all non-essential water use. (VOLUNTARY)

698 3) Restaurants are asked not to serve water to customers, unless specifically requested by the
699 customer. (VOLUNTARY)

700 4) Voluntary reduction of water use in commercial and industrial processes is recommended.

701 5) Demand use reduction measures for all outdoor water uses apply to commercial and industrial
702 users.

703 H. Domestic Use: Voluntary reduction for indoor domestic use is recommended by any means available.

704 I. Essential and Utility Use: (VOLUNTARY)

705 1) Fire Fighting: NO RESTRICTIONS

706 2) Medical use by health care facilities: NO RESTRICTIONS

707 3) Water Utility Use:

708 a) Reduction of average system pressure to 45 p.s.i. is recommended.

709 b) Leak detection and system repairs are recommended.

710 c) Stabilizing and equalizing system pressure is recommended.

- 711 d) Sewer line flushing reduction is recommended.
- 712 e) Fire hydrant flushing reduction is recommended.

713

714 **8.3.2 STAGE II - WATER DEMAND WATCH (MODERATE WATER SHORTAGE CONDITIONS)**

715

716 **Regulation**

717 1. Trigger Level: Water use from Pasadena exceeds 90 percent of allotment (2.7) MGD for five
718 consecutive days.

719 2. Reduction goal: 15%

720 3. Wastewater is prohibited.

721 4. Penalty for violation of Stage 2 demand reduction measures: \$50.00 to \$200.00 per day for violation.

722 5. Demand Reduction Measures:

723 A. Landscape irrigation:

724 1) Existing landscapes:

725 (a) Watering with sprinklers is permitted on designated days only from 7 p.m. to 8 a.m., once every
726 seven days.

727 (b) Watering with hand-held hoses, buckets or drip irrigation systems is permitted at any time.

728 (c) irrigation with reused water is exempt from reduction measures.

729 B. Vegetable Gardens:

730 1) Watering with automated irrigation systems or sprinklers is permitted on designated days only from
731 7 p.m. to 8 a.m., once every seven days.

732 2) Watering with hand-held hoses, buckets or drip irrigation systems is permitted at any time.

733

734 C. Golf Courses: Only limited irrigation of greens and tees is permitted with the following restrictions:

735 1) Watering with automated irrigation systems or sprinklers is permitted only on from 7 p.m. to 8
736 a.m. on Tuesdays.

737 2) Irrigation with reused water is exempt from reduction measures.

738 D. Swimming Pools, Hot Tubs and similar facilities:

739 1) Filling and makeup of existing facilities are permitted.

740 2) Filling or makeup of new facilities is prohibited.

741 3) Draining is prohibited except onto pervious surfaces only.

742 E. Aesthetic Uses: Outside use is prohibited except with reused water.

743 F. Other outdoor uses:

744 1) Waste is prohibited.

745 2) The washing of any impervious surface is prohibited, except for immediate human health, safety and
746 welfare.

747 3) Non-commercial washing of automobiles, trucks, trailer, boats, airplanes and other mobile equipment
748 is permitted on designated days once every seven days only between the hours of 7 p.m. and 8 a.m.

749 Washing shall be done with a hand-held hose or bucket. Hand-held hoses shall be equipped with a
750 positive shutoff nozzle. (MANDATORY)

751 G. Commercial and Industrial Uses

- 752 1) Washing of automobiles, trucks, trailers, boats, airplanes and other mobile equipment is permitted
753 on the immediate premises of a commercial washing facility,
754 2) Commercial nurseries, commercial sod farms and other similar establishments shall restrict watering
755 hours to 6 a.m. to 10 a.m.
756 3) Restaurants are prohibited from serving water to customers unless specifically requested by the
757 customer.
758 4) Voluntary reduction of water use in commercial and industrial processes is recommended.
759 5) Demand use reduction measures for all outdoor water uses apply to commercial and industrial users.
760 H) Domestic Use: Voluntary reduction for indoor domestic use is recommended by any means available.
761 I) Essential and Utility Use: (VOLUNTARY)
762 1) Fire fighting: NO RESTRICTIONS.
763 2) Medical use by health care facilities: NO RESTRICTIONS.
764 3) Water utility use:
765 a) Reduction of average system pressure to 45 p.s.i. recommended.
766 b) Leak detection and system repairs are recommended.
767 c) Stabilizing and equalizing system pressure are recommended.
768 d) Sewer line flushing is prohibited except for emergencies.
769 e) Fire hydrant flushing is prohibited except for emergencies.
770 f) Power production use: Reduction of water use for power production is recommended.

771

772 **8.3.4 STAGE III - AQUIFER ALERT (SEVERE SHORTAGE CONDITIONS)**

773 **Regulation**

- 774 1. Trigger Level: Water use from Pasadena is 95% of allocation (2.85 MGD) for five consecutive days.
775 2. Reduction Goal: 25%
776 3. Wasting of water is prohibited.
777 4. Emergency conservation water rates may be implemented by City Council action.
778 5. Penalty for violation of Stage 3 demand reduction measures: \$50.00 to \$500.00 per day fine for each
779 violation.
780 6. Demand Reduction Measures:
781 A. Landscape Irrigation:
782 1) Existing landscapes:
783 a) Watering with automated irrigation systems or sprinklers is prohibited.
784 2) The washing of any impervious surface is prohibited, except for immediate human health, safety
785 and welfare.
786 B. Commercial and Industrial Uses
787 1) Commercial washing of automobiles, trucks, trailers, boats, airplanes and other mobile
788 equipment is prohibited except at commercial facilities with recirculating water systems.
789 2) Commercial nurseries, commercial sod farms and other similar establishments shall restrict
790 watering hours to 6 a.m. to 10 a.m., once a week on Mondays.

- 791 3) Restaurants are prohibited from serving water to customers unless specifically requested by
792 the customer.
- 793 4) Voluntary reduction of water use in commercial and industrial processes is recommended.
- 794 5) Demand use reduction measures for all outdoor water uses apply to commercial and industrial
795 users.
- 796 C. Domestic Use: Voluntary reduction indoor domestic use recommended by any means available.
- 797 D. Essential and Utility Use: (VOLUNTARY)
- 798 1) Fire fighting: NO RESTRICTIONS
- 799 2) Medical use by health care facilities: NO RESTRICTIONS
- 800 3) Water Utility Use:
- 801 a) Reduction of average system pressure to 45 p.s.i. is recommended.
- 802 b) Leak detection and system repairs are recommended.
- 803 c) Stabilizing and equalizing system pressure are recommended.
- 804 d) Sewer Line flushing is prohibited except for emergencies.
- 805 e) Fire Hydrant flushing is prohibited except for emergencies.
- 806

807 **8.3.5 STAGE IV - AQUIFER RISK (CRITICAL WATER SHORTAGE CONDITION)**

808 **Regulation**

- 809 1. Trigger Level: Water use from Southeast Plant exceeds 100% of allotment 3 MGD for five consecutive
810 days.
- 811 2. Reduction goal: 30%
- 812 3. Waste is prohibited. Water use restricted to those uses essential for human health, safety and
813 welfare.
- 814 4. Emergency conservation water rates may be implemented by City Council action.
- 815 5. Penalty for violations of Stage 3 demand reduction measures: \$100.00 to \$ 1,000.00 per day fine for
816 each violation.
- 817 6. Mandatory Demand Reduction Measures:
- 818 a) Watering of trees and shrubs with buckets or drip irrigation systems is permitted on designated
819 days between 7 p.m. and 8 a.m. only. All other landscape irrigation is prohibited except with
820 reuse water.
- 821 b) Vegetable Gardens: Irrigation is prohibited, except with handheld hoses, buckets or drip
822 systems
823 between 7 p.m. and 8 a.m., once every seven days on designated days.
- 824 c) Golf Courses: Irrigation is prohibited except with reused water.
- 825 d) Swimming Pools, Hot Tubs and similar facilities:
- 826 1) Filling or makeup of new facilities or existing is prohibited.
- 827 2) Draining is prohibited except onto pervious surfaces only.
- 828 e) Aesthetic Uses: Inside or outside use is prohibited except with reused water.
- 829 f) Other outdoor uses:
- 830 1) Waste is prohibited.

- 831 2) The washing of any impervious surface is prohibited, except for immediate human health,
832 safety and welfare.
- 833 3) Non-commercial washing of automobiles, trucks, trailers, boats, airplanes and other mobile
834 equipment is prohibited.
- 835 g) Commercial and Industrial Uses:
- 836 1) Commercial washing of automobiles, trucks, trailers, boats, airplanes and other mobile
837 equipment is prohibited.
- 838 2) Commercial nurseries, commercial sod farms and other similar establishments shall restrict
839 watering hours to 6 a.m. to 10 a.m., once a week on Mondays.
- 840 3) Restaurants are prohibited from serving water to customers unless specifically requested by
841 the customer.
- 842 4) Voluntary reduction of water use in commercial and industrial processes is recommended.
- 843 5) Demand use reduction measures for all outdoor water uses apply to commercial and
844 industrial users.
- 845 h) Domestic use: Voluntary reduction for indoor domestic use is recommended by any means
846 available.
- 847 i) Essential and Utility Use:
- 848 1) Fire Fighting: No restrictions
- 849 2) Medical use by health care facilities: No restrictions.
- 850 3) Water utility use:
- 851 a) Reduction of average system pressure to 40 p.s.i. is recommended.
- 852 b) Leak detection and system repairs are recommended.
- 853 c) Stabilizing and equalizing system pressure are recommended.
- 854 d) Sewer line flushing is prohibited except for emergencies.
- 855 e) Fire hydrant flushing is prohibited except for emergencies.
- 856 f) Power production use: reduction of water use for power production s recommended.

857

858 **8.3.6 STAGE V: AQUIFER EMERGENCY**

859 **Regulation**

- 860 1. Trigger Level: Water use exceeds allocation, other sources at or near 100% of production capacity for
861 five consecutive days.
- 862 2. Reduction goal to be determined by the Water Demand Management Program to protect human
863 health, safety and livestock watering.
- 864 3. Penalty for violations of Stage 5 demand reduction measures: \$100.00 to \$2000.00 per day fine for
865 each violation.

866

867 **9.0 EMERGENCY WATER DEMAND MANAGEMENT INFORMATION PROGRAM**

868 The City of Seabrook's Public Works Director maintains, in current condition, information about the
869 City's water supplies, including water usage of both ground and surface waters and shall provide this
870 information to the City Manager and others as appropriate. When water demand at the Southeast Plant

871 reaches trigger levels, as specified in Stage I through 5 of the Drought Contingency Plan (Section 8.3),
872 the full range of information, goals, demand reduction, measures and penalties for each respective
873 stage, as stated in the plan will be communicated to the Seabrook water customers. The means of
874 communication will be by public announcements in newspaper, radio and television and printed
875 bulletins that will be posted at City Hall and when warranted, will be either mailed or hand delivered to
876 water customers.

877

878 **10.0 Drought Contingency Plan for a Wholesale Public Water Supplier.**

879

880 **10.1 Declaration of Policy, Purpose, and Intent**

881 In order to conserve the available water supply and/or to protect the integrity of water supply facilities,
882 with particular regard for domestic water use, sanitation, and fire protection, and to protect and
883 preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage
884 or other water supply emergency conditions, the City of Seabrook adopts the following Drought
885 Contingency Plan (the Plan).

886

887 **10.2 Public Involvement**

888 Opportunity for the public and wholesale water customers to provide input into the preparation of the
889 Plan was provided by City of Seabrook by means regularly scheduled City Council meetings.

890

891 **10.3 Wholesale Water Customer Education**

892 The City of Seabrook will periodically provide wholesale water customers with information about the
893 Plan, including information about the conditions under which each stage of the Plan is to be initiated or
894 terminated and the drought response measures to be implemented in each stage. This information will
895 be provided by means of providing the wholesale customer a copy of the Drought Contingency Plan for a
896 Wholesale Supplier.

897

898 **10.4 Coordination with Regional Water Planning Groups**

899 The water service area of the City of Seabrook is located within the Region H and the City of Seabrook
900 has provided a copy of the Plan to: San Jacinto River Authority, P.O. Box 329, Conroe, TX 77305-0329,
901 phone 936-588-1111.

902

903 **10.5 Authorization**

904 The City of Seabrook City Manager or his/her designee, is hereby authorized and directed to implement
905 the applicable provisions of this Plan upon determination that such implementation is necessary to
906 protect public health, safety, and welfare. The City of Seabrook City Manager, or his/her designee, shall
907 have the authority to initiate or terminate drought or other water supply emergency response measures
908 as described in this Plan.

909 **10.6 Application**

910 The provisions of this Plan shall apply to all customers utilizing water provided by the City of Seabrook.
911 The terms person and customer as used in the Plan include individuals, corporations, partnerships,
912 associations, and all other legal entities.

913

914 **10.7 Criteria for Initiation and Termination of Drought Response Stages**

915 The City of Seabrook Public Works Director, or his/her designee, shall monitor water supply and/or
916 demand conditions on a daily basis and shall determine when conditions warrant initiation or
917 termination of each stage of the Plan. Customer notification of the initiation or termination of drought
918 response stages will be made by mail or telephone. The news media will also be informed. The
919 triggering criteria described below are based on the four (4) Stages listed below in accordance with the
920 City of Seabrook's ability to safely operate water capacity from the City of Pasadena.

921

922 **10.7.1 Stage 1 Triggers -- MILD Water Shortage Conditions**

923

924 Requirements for initiation The City of Seabrook will recognize that a mild water shortage condition
925 exists: *when total daily water demand equals or exceeds 85 percent of the safe operating capacity of 3*
926 *million gallons per day for 5 consecutive days.*

927

928 Requirements for termination - Stage 1 of the Plan may be rescinded when all of the conditions listed as
929 triggering events have ceased to exist for a period of 30 consecutive days. The City of Seabrook will
930 notify its wholesale customers and the media of the termination of Stage 1 in the same manner as the
931 notification of initiation of Stage 1 of the Plan.

932

933 **10.7.2 Stage 2 Triggers -- MODERATE Water Shortage Conditions**

934

935 Requirements for initiation The City of Seabrook will recognize that a moderate water shortage
936 condition exists: *when total daily water demand equals or exceeds 90 percent of the safe operating*
937 *capacity of 3 million gallons per day for 5 consecutive days.*

938

939 Requirements for termination - Stage 2 of the Plan may be rescinded when all of the conditions listed as
940 triggering events have ceased to exist for a period of 30 consecutive days. Upon termination of Stage 2,
941 Stage 1 becomes operative. The City of Seabrook will notify its wholesale customers and the media of
942 the termination of Stage 2 in the same manner as the notification of initiation of Stage 1 of the Plan.

943

944

945

946 **10.7.3 Stage 3 Triggers -- SEVERE Water Shortage Conditions**

947
948 Requirements for initiation The City of Seabrook will recognize that a severe water shortage condition
949 exists: *when total daily water demand equals or exceeds 95 percent of the safe operating capacity of 3*
950 *million gallons per day for 5 consecutive days.*

951
952 Requirements for termination - Stage 3 of the Plan may be rescinded when all of the conditions listed as
953 triggering events have ceased to exist for a period of 30 consecutive days. Upon termination of Stage 3,
954 Stage 2 becomes operative. The City of Seabrook will notify its wholesale customers and the media of
955 the termination of Stage 2 in the same manner as the notification of initiation of Stage 3 of the Plan.

956

957 **10.7.4 Stage 4 Triggers -- CRITICAL Water Shortage Conditions**

958
959 Requirements for initiation - The City of Seabrook will recognize that an emergency water shortage
960 condition exists: *when total daily water demand equals or exceeds 100 percent of the safe operating*
961 *capacity of 3 million gallons per day for 5 consecutive days, major or excessive water line breaks, or*
962 *pump or system failures occur, which cause unprecedented loss of capability to provide water service; or*
963 *natural or man-made contamination of the water supply source(s).*

964
965 Requirements for termination - Stage 4 of the Plan may be rescinded when all of the conditions listed as
966 triggering events have ceased to exist for a period of 30 consecutive days. The City of Seabrook will
967 notify its wholesale customers and the media of the termination of Stage 4.

968

969 **10.7.5 STAGE V: AQUIFER EMERGENCY**

- 970
971 Regulation
- 972 1. Trigger Level: Water use exceeds allocation, other sources at or near 100% of production capacity for
973 five consecutive days.
 - 974 2. Reduction goal to be determined by the Water Demand Management Program to protect human
975 health, safety and livestock watering.
 - 976 3. Penalty for violations of Stage 5 demand reduction measures: \$100.00 to \$2000.00 per day fine for
977 each violation.

978

979 **10.8 Drought Response Stages**

980

981 The City of Seabrook Public Works Director, or his/her designee, shall monitor water supply and/or
982 demand conditions and, in accordance with the triggering criteria set forth in Section VI, shall determine

983 that mild, moderate, or severe water shortage conditions exist or that an emergency condition exists
984 and shall implement the following actions:

985

986 **10.8.1 Stage 1 Response -- MILD Water Shortage Conditions**

987

988 Target: Achieve a 10 percent reduction in total daily water demand.

989 Best Management Practices for Supply Management:

990 Investigate the use of available well water within the potable water system and the
991 possibility of the use of reclaimed water for non-potable purposes.

992

993 Water Use Restrictions for Reducing Demand:

994 (a) The City of Seabrook Public Works Director, or his/her designee(s), will contact wholesale
995 water customers to discuss water supply and/or demand conditions and will request that
996 wholesale water customers initiate voluntary measures to reduce water use (e.g.,
997 implement Stage 1 of the customer drought contingency plan).

998

999 **10.8.2 Stage 2 Response -- MODERATE Water Shortage Conditions**

1000

1001 Target: Achieve a 15 percent reduction in total daily water demand.

1002

1003 Best Management Practices for Supply Management: Investigate the use of available well
1004 water within the potable water system and the possibility of the use of reclaimed water for non-potable
1005 purposes.

1006

1007 Water Use Restrictions for Reducing Demand:

1008 (a) The City of Seabrook Public Works Director, or his/her designee(s), will initiate weekly
1009 contact with wholesale water customers to discuss water supply and/or demand conditions
1010 and the possibility of pro rata curtailment of water diversions and/or deliveries.

1011

1012 (b) The City of Seabrook Public Works Director, or his/her designee(s), will request
1013 wholesale water customers to initiate mandatory measures to reduce non-essential water
1014 use (e.g., implement Stage 2 of the customer drought contingency plan).

1015

1016 (c) The City of Seabrook Public Works Director, or his/her designee(s), will initiate
1017 preparations for the implementation of pro rata curtailment of water diversions and/or
1018 deliveries by preparing a monthly water usage allocation baseline for each wholesale
1019 customer according to the procedures specified in Section VI of the Plan.

1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1040
1041
1042
1043
1044
1045
1046
1047
1048
1049
1050
1051
1052
1053
1054
1055

(d) The City of Seabrook Public Works Director, or his/her designee(s), will provide a weekly report to news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

10.8.3 Stage 3 Response -- SEVERE Water Shortage Conditions

Target: Achieve a 25 percent reduction in total daily water demand.

Best Management Practices for Supply Management:

Investigate the use of available well water within the potable water system and the possibility of the use of reclaimed water for non-potable purposes.

Water Use Restrictions for Reducing Demand:

(a) The City of Seabrook Public Works Director, or his/her designee(s), will contact wholesale water customers to discuss water supply and/or demand conditions and will request that wholesale water customers initiate additional mandatory measures to reduce non-essential water use (e.g., implement Stage 2 of the customer drought contingency plan).

(b) The City of Seabrook Public Works Director, or his/her designee(s), will initiate pro rata curtailment of water diversions and/or deliveries for each wholesale customer according to the procedures specified in Section VI of the Plan.

(c) City of Seabrook Public Works Director, or his/her designee(s), will provide a weekly report to news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

10.8.4 Stage 4 Response -- EMERGENCY Water Shortage Conditions

Whenever emergency water shortage conditions exist as defined in Section 8 of the Plan, the City of Seabrook Public Works Director shall:

1. Assess the severity of the problem and identify the actions needed and time required to solve the problem.

- 1056 2. Inform the utility director or other responsible official of each wholesale water customer
1057 by telephone or in person and suggest actions, as appropriate, to alleviate problems
1058 (e.g., notification of the public to reduce water use until service is restored).
- 1059 3. If appropriate, notify city, county, and/or state emergency response officials for
1060 assistance.
- 1061 4. Undertake necessary actions, including repairs and/or clean-up as needed.
- 1062 5. Prepare a post-event assessment report on the incident and critique of emergency
1063 response procedures and actions.
- 1064

1065 **10.8.5 STAGE V: RESPONSE AQUIFER EMERGENCY**

1066 Whenever emergency water shortage conditions exist as defined in Section 8 of the Plan, the City of
1067 Seabrook Public Works Director shall:

1068

- 1069 1. Consult with wholesale customers to discuss the following water diversions and/or deliveries:
1070 disconnection of service or limitation to water service by use of throttling at the interconnect.
- 1071

1072 **10.9 Pro Rata Water Allocation**

1073 In the event that the triggering criteria specified in Section VII of the Plan for Stage 3 Severe Water
1074 Shortage Conditions have been met, the City of Seabrook Public Works Director is hereby authorized
1075 initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code Section
1076 11.039. The drought contingency plan must include a provision in every wholesale water contract
1077 entered into or renewed after adoption of the plan, including extensions, that in case of a shortage of
1078 water resulting from drought, the water to be distributed shall be divided in accordance with Texas
1079 Water Code, § 11.039.

1080 **10.10 Enforcement**

1081 During any period when pro rata allocation of available water supplies is in effect, wholesale customers
1082 shall expect the following water diversions and/or deliveries: disconnection of service or limitation of
1083 water service by use of throttling at the interconnect.

1084

1085 **10.11 Variances**

1086 The Seabrook City Manager or his/her designee, may, in writing, grant a temporary variance to the pro
1087 rata water allocation policies provided by this Plan if it is determined that failure to grant such variance
1088 would cause an emergency condition adversely affecting the public health, welfare, or safety and if one
1089 or more of the following conditions are met:

1090

- 1091 (a) Compliance with this Plan cannot be technically accomplished during the duration of the water
1092 supply shortage or other condition for which the Plan is in effect.

1093 (b) Alternative methods can be implemented which will achieve the same level of reduction in
1094 water use.

1095 Persons requesting an exemption from the provisions of this Plan shall file a petition for variance with
1096 the City of Seabrook City Manager or designee within 5 days after pro rata allocation has been invoked.
1097 All petitions for variances shall be reviewed by the City Manager or designee and shall include the
1098 following:

- 1099 (a) Name and address of the petitioner(s).
- 1100 (b) Detailed statement with supporting data and information as to how the pro rata allocation of
1101 water under the policies and procedures established in the Plan adversely affects the petitioner
1102 or what damage or harm will occur to the petitioner or others if petitioner complies with this
1103 Ordinance.
- 1104 (c) Description of the relief requested.
- 1105 (d) Period of time for which the variance is sought.
- 1106 (e) Alternative measures the petitioner is taking or proposes to take to meet the intent of this Plan
1107 and the compliance date.
- 1108 (f) Other pertinent information.

1109
1110 Variances granted by the City Manager shall be subject to the following conditions, unless waived or
1111 modified by the Seabrook City Council :

- 1112
- 1113 (a) Variances granted shall include a timetable for compliance.
- 1114 (b) Variances granted shall expire when the Plan is no longer in effect, unless the petitioner has
1115 failed to meet specified requirements.

1116
1117 No variance shall be retroactive or otherwise justify any violation of this Plan occurring prior to the
1118 issuance of the variance.

1119
1120 _____

1121
1122
1123
1124
1125