TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

AN AGREED ORDER Amending the operational procedures and continuing an Advisory Council pertaining to Special Condition 5.B., Certificate of Adjudication No. 21-3214; Docket No. 2001-0230-WR

On April 4, 2001, came to be considered before the Texas Natural Resource Conservation Commission ("Commission") the Motion by the City of Corpus Christi and Nueces River Authority for the adoption of an amendment to the Agreed Order issued April 28, 1995, establishing operating procedures pertaining to Special Condition 5.B., Certificate of Adjudication No. 21-3214, held by the City of Corpus Christi, the Nueces River Authority, and the City of Three Rivers" (the two cities and river authority shall be referred to herein as "Certificate Holders"). The Certificate Holders and the Executive Director of the Texas Natural Resource Conservation Commission have agreed to the provisions of this Agreed Order.

The City of Corpus Christi (managing entity) requests that Section 2 of this Agreed Order be amended to add further detail to the provisions regarding the use of water for bays and estuaries and to make changes in the required passage of inflows for the bays and estuaries automatic at 40 percent and 30 percent of total reservoir system capacity upon institution of mandatory outdoor watering restrictions. Additionally, Certificate Holders request the most recent bathymetric surveys be used for determining reservoir system storage capacity. The Certificate Holders request details be added regarding provisions for two projects to enhance/augment the amount of freshwater going into the receiving estuary and timelines for those projects.

After considering the proposals and the presentations of the parties, the Commission finds that it has authority to establish operational procedures under Special Condition 5.B. of Certificate of Adjudication No. 21-3214, and that operational procedures previously established should be amended. The Commission finds that, because of the need to continue to monitor the ecological environment and health of related living marine resources of the estuaries to assess the effectiveness of freshwater inflows provided by requirements contained in this Agreed Order relating to releases and spills from Choke Canyon Reservoir and Lake Corpus Christi (collectively referred to as the Reservoir System), as well as return flows, and to evaluate potential impacts which may occur to the reservoirs as well as to the availability of water to meet the needs of the Certificate Holders and their customers which may result from those operational procedures, the existing advisory council should be maintained to consider such additional information and related issues and to formulate recommendations for the Commission's review.

The Commission additionally finds that based on the preliminary application of the Texas Water Development Board's Mathematical Programming Optimization Model, (GRG-2), 138,000 acre-feet of fresh water is necessary to achieve maximum harvest in the Nueces Estuary; and, therefore, when water is impounded in the Lake Corpus Christi-Choke Canyon Reservoir System to the extent greater than 70 percent of the system's storage capacity, the delivery of 138,000

acre-feet of water to Nueces Bay and/or the Nueces Delta, by a combination of releases and spills, together with diversions and return flows noted below, should be accomplished; and that during periods when the reservoir system contains less than 70 percent storage capacity, reductions in releases and spills, along with diversions and return flows, are appropriate in that a satisfactory level of marine harvest will be sustained and the ecological health of the receiving estuaries will be maintained.

The Commission finds that return flows, other than to Nueces Bay and/or the Nueces Delta, that are delivered to Corpus Christi Bay and other receiving estuaries are currently in the assumed mount of 54,000 acre-feet per annum (per calendar year), and that they shall be credited at this amount until such time as it is shown that actual return flows to Corpus Christi Bay and other receiving estuaries exceed 54,000 acre-feet per annum.

The Commission finds that by contractual relationships, the City of Corpus Christi is the managing entity for operating the Reservoir System.

The Commission finds that the Motion by the City of Corpus Christi and Nueces River Authority to Amend this Agreed Order is reasonable and should be granted. Benefits of the proposed diversion project and operating changes will include increased water supply, increased reservoir storage levels, increased positive flow events for Rincon Bayou and the upper Nueces Delta, increased sources of nitrogen for the upper delta, and lower salinity levels in the upper delta.

When the Commission uses the word "release" in this Order, release means spills, inflow passage, intentional releases, and return flows; provided, however, under this Order no release from storage is required to meet conditions of this Order.

By consenting to the issuance of this Agreed Order, no party admits or denies any claim, nor waives with respect to any subsequent proceeding any interpretation or argument which may be contrary to the provisions of this Agreed Order.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION THAT:

1. a. The City of Corpus Christi, as operator of the Choke Canyon/Lake Corpus Christi reservoirs (the "Reservoir System"), shall provide not less than 151,000 acre-feet of water per annum (per calendar year) for the estuaries by a combination of releases and spills from the Reservoir System at Lake Corpus Christi Dam and return flows to Nueces and Corpus Christi Bays and other receiving estuaries (including such credits as may be appropriate for diversion of river flows and/or return flows to the Nueces Delta and/or Nueces Bay), as computed and to the extent provided for herein.

   b. When water impounded in the Reservoir System is greater than or equal to 70 percent of storage capacity, a target amount of 138,000 acre-feet is to be delivered to Nueces Bay and/or the Nueces Delta by a combination of releases and spills from

the Reservoir System as well as diversions and return flows. In accordance with the monthly schedule and except as provided otherwise in this Agreed Order, target inflows to Nueces Bay and/or the Nueces Delta shall be in the acre-foot amounts as follow:

January	2,500	July	6,500
February	2,500	August	6,500
March	3,500	September	28,500
April	3,500	October	20,000
May	25,500	November	9,000
June	25,500	December	4,500

It is expressly provided, however, that releases from Reservoir System storage shall not be required to satisfy the above targeted inflow amounts, as calculated in Subparagraph d.

c. When water impounded in the Reservoir System is less than 70 percent but greater than or equal to 40 percent of storage capacity, a targeted amount of 97,000 acre-feet is to be delivered to Nueces Bay and/or the Nueces Delta by a combination of releases and spills from the Reservoir System as well as diversions and return flows. In accordance with the monthly schedule and except as provided otherwise in this Agreed Order, target inflows to Nueces Bay and/or the Nueces Delta shall be in the acre-foot amounts as follows:

January	2,500	July	4,500
February	2,500	August	5,000
March	3,500	September	11,500
April	3,500	October	9,000
May	23,500	November	4,000
June	23,000	December	4,500

It is expressly provided, however, that releases from Reservoir System storage shall not be required to satisfy the above targeted inflow amounts as calculated in Subparagraph d.

d. The amounts of water required in subparagraphs 1.b. and 1.c. will consist of return flows, and intentional diversions, as well as spills and releases from the Reservoir System as defined in this subparagraph. For purposes of compliance with monthly targeted amounts prescribed above, the spills and releases described in this paragraph shall be measured at the U.S. Geological Survey stream monitoring station on the Nueces River at Calallen, Texas (USGS Station No. 08211500). Any inflows, including measured wastewater effluent and rainfall runoff meeting lawful discharge standards which are intentionally diverted to the upper Nueces Delta region, shall be credited toward the total inflow amount delivered to Nueces Bay and/or the Nueces

Delta. Inflow passage from the Reservoir System for the purpose of compliance with the monthly targeted amounts prescribed in subparagraphs 1.b. and 1.c. shall in no case exceed the estimated inflow to Lake Corpus Christi as if there were no impoundment of inflows at Choke Canyon Reservoir. The estimated inflow to Lake Corpus Christi as if there were no impoundment of inflows at Choke Canyon Reservoir shall be computed as the sum of the flows measured at the U.S. Geological Survey (USGS) STREAMFLOW GAGING STATIONS ON THE Nueces River near Three Rivers (USGS No. 08210000), Frio River at Tilden, Texas (USGS No. 08206600), and San Miguel Creek near Tilden, Texas (USGS No. 08206700) less computed releases and spills from Choke Canyon Reservoir.

e. The passage of inflow necessary to meet the monthly targeted allocations may be distributed over the calendar month in a manner to be determined by the City. Relief from the above requirements shall be available under subparagraphs (1) or (2) below and Section 2.(b) and 3.(c) at the option of the City of Corpus Christi. However, passage of inflow may only be reduced under one of those subparagraphs below, for any given month.

(1) Inflows to Nueces Bay and/or the Nueces Delta in excess of the required monthly targeted amount may be credited for up to fifty (50) percent of the targeted requirement for the following month, based on the amount received.

(2) When the mean salinity in Upper Nueces Bay (Lat. 27°51'02", Long. 97°28'52") for a 10-day period, ending at any time during the calendar month for which the reduction of the passage of inflow is sought, is below the SUB*, pass through of inflow from the reservoir system for that same calendar month may be reduced as follows:

(a) For any month other than May, June, September and October, if 5 parts per thousand (ppt) below the SUB for the month, a reduction of 25% of the current month's targeted Nueces Bay inflow;

(b) If 10 ppt below the SUB for the month, a reduction of 50 % of the current month's targeted Nueces Bay inflow except that credit under this provision is limited to 25 % during the months of May, June, September and October;

* "SUB" means "salinity upper bounds" as set forth more specifically in Section 3.b.

(c) If 15 ppt below the SUB for that month, a reduction of 75% of the current month's targeted Nueces Bay inflow.

f. The City of Corpus Christi shall submit monthly reports to the Commission containing daily inflow amounts provided to the Nueces Estuary in accordance with this Agreed Order through releases, spills, return flows and other freshwater inflows.

2. a. Certificate holders are to provide in any future contracts or any amendments, modifications or changes to existing contracts the condition that all wholesale customers and any subsequent wholesale customers shall develop and have in effect a water conservation and drought management plan consistent with Commission rule. The City of Corpus Christi shall solicit from its customers and report to the Commission annually the result of conservation under the City's plan, the customers' plans, and the feasibility of implementing conservation plans and programs for all users of water from the reservoir system. This report shall be submitted with the Certificate Holder's annual water use report as provided by 31 T.A.C. §295.202.

b. The Certificate Holders may reduce targeted Nueces Bay inflows during times of prolonged drought in accordance with this subparagraph 2.

(1) When the combined storage in the Choke Canyon/Lake Corpus Christi reservoir system (Reservoir System Storage) falls below 50% of the total system storage capacity, the City of Corpus Christi shall issue public notice advising and informing the water users of the region of voluntary conservation measures that are requested immediately and required drought management measures to be taken should the Reservoir System Storage fall to under 40% and/or 30% of total system storage capacity. To the extent of its legal authority, the City of Corpus Christi shall require its wholesale customers to issue public notice advising and informing the water users of the region of voluntary conservation measures that are requested immediately and required drought management measures to be taken should the Reservoir System Storage fall to under 40% and/or 30% of total system storage capacity.

(2) In any month when Reservoir System Storage is less than 40%, but equal to or greater than 30% of total system storage capacity, the City of Corpus Christi shall implement time of day outdoor watering restrictions and shall reduce targeted inflows to Nueces Bay to 1,200 acre-feet per month (1,200 acre-feet per month represents the quantity of water that is the median inflow into Lake Corpus Christi during the drought of record). Time of day outdoor watering restrictions prohibit lawn watering between the hours of 10:00 o'clock a.m. and 6:00 o'clock p.m. and are subject to additional conditions as described in the City of Corpus Christi's approved "Water Conservation and Drought Contingency Plan ("Plan")." To the extent of its legal authority, the City of Corpus Christi shall require its wholesale customers to implement time of day outdoor watering restrictions similar to those of the City.

(3) In any month when Reservoir System Storage is less than 30% of total system storage capacity, the City of Corpus Christi shall implement a lawn watering schedule in addition to time of day outdoor watering restrictions (see subparagraph 2.b.(2)) and shall suspend the passage of inflow from the Reservoir System for targeted inflows to Nueces Bay. However, return flows directed into Nueces Bay and/or the Nueces Delta shall continue. The lawn watering schedule shall allow customers to water lawns no oftener than every five days, subject to the time of day restrictions described in subparagraph 2.b.(2) and any additional conditions as described in the City's Plan.

(4) Certificate Holders' may implement whole or partial suspension of the passage of inflow through the reservoir as described above when the City implements, and requires its customers to implement, water conservation and drought management measures at diminished Reservoir System levels, as set forth in subparagraphs b.(2) and b.(3).

c. For purposes of this Agreed Order, Reservoir System storage capacity shall be determined by the most recently completed bathymetric survey of each reservoir. As of 2001, completed bathymetric surveys of each reservoir reports conservation storage capacities of 695,271 acre-feet (below 220.5 feet mean sea level) for Choke Canyon Reservoir (Volumetric Survey of Choke Canyon Reservoir, TWDB September 23, 1993) and 241,241 acre-feet (below 94 feet mean sea level) for Lake Corpus Christi (Regional Water Supply Planning Study-Phase I Nueces River Basin, HDR, December, 1990).

d. Percentage of the Reservoir System capacity shall be determined on a daily basis and shall govern, in part, the inflow to be passed through the reservoir during the remaining days of the month.

e. Within the first ten days of each month, the City of Corpus Christi shall submit to the Commission a monthly report containing the daily capacity of the Reservoir System in percentages and mean sea levels as recorded for the previous month as well as reservoir surface areas and estimated inflows to Lake Corpus Christi assuming no impoundment of inflows at Choke Canyon Reservoir. The report shall indicate which gages or measuring devices were used to determine Reservoir System capacity and estimate inflows to Lake Corpus Christi.

f. Concurrent with implementing subparagraphs 2.b.(1) through 2.b.(3), the City shall proceed to:

1. Acquire land rights to properties necessary to re-open the Nueces River Overflow Channel and make the Nueces River Overflow Channel and Rincon Bayou Overflow Channel permanent features of the Rincon Bayou Diversion;

2. Construct and operate a conveyance facility to deliver up to 3,000 acre-feet per month of required Reservoir System "pass-throughs" directly from the Calallen Pool into the Upper Rincon Bayou by use of one or two of the five authorized points of diversion under Certificate of Adjudication No. 2464, being the existing San Patricio Municipal Water District point of diversion and/or a point on the North bank of the Calallen Pool located at Latitude 27.8823°N, Longitude 97.6254°W, also bearing S 27° 24' W, 4,739 feet from the southwest corner of the J.H.W. Ottman Survey, Abstract No. 212, San Patricio County, Texas, where the water will be pumped at the maximum rate of 45,000 gpm; and

3. Implement an on-going monitoring and assessment program designed to facilitate an "adaptive management" program for freshwater inflows into the Nueces Estuary.

4. Construction necessary to implement subparagraph 2.f.1. shall be accomplished by December 31, 2001 and work necessary to accomplish subparagraph 2.f.2. shall be accomplished by December 31, 2002.

5. In the event the City fails to timely complete the work set forth in subparagraphs 2.f.1. and 2.f.2., this amendment shall automatically terminate and the provisions of the Agreed Order of April 28, 1995 shall be reinstated and become operative despite this amendment, unless the Executive Director grants a modification after considering the recommendations of the Nueces Estuary Advisory Council.

g. The Executive Director is delegated authority to make modifications to subparagraph 2.f., after considering the recommendations of the Nueces Estuary Advisory Council. However, changes may be made through this process only with the City's consent if the changes result in increased costs to the City.

If the Executive Director makes modifications to subparagraph 2.f. as authorized in this paragraph, any affected person may file with the chief clerk a motion for reconsideration of the Executive Director's action no later than 23 days after the date the Executive Director mails notice of the modification to the City. This motion shall be considered under the provisions of 30 Texas Administrative Code § 50.39(d) and (e).

h. The City shall obtain all necessary permits from the Commission before beginning these projects. The deadlines set out above include time necessary to apply for, process and, if necessary, complete hearings on these permits.

3. a. The City of Corpus Christi, with the assistance and/or participation of federal, state and local entities, shall maintain a monitoring program to assess the effect of this

operating plan on Nueces Bay. The cornerstone of this program is the development of a salinity monitoring program. The program shall include at least two monitoring stations, one in upper Nueces Bay (Lat. 27°51'02", Long. 97°28'52") and one in mid Nueces Bay (Lat. 27°51'25", Long. 97°25'28") with the capability of providing continuous salinity and/or conductivity data, temperature, pH, and dissolved oxygen levels. Additional stations may be established at the recommendation of the Advisory Council (continued by paragraph 4 of this Agreed Order) to assess inflow effects throughout the estuarine system, but the City shall not be obligated to establish such additional stations except to the extent authorized by its City Council.

b. The City of Corpus Christi or its designated representatives shall monitor salinity levels in Upper and Mid-Nueces Bay. The lower (SLB) and upper (SUB) salinity bounds (in parts per thousand-ppt) developed for application of the Texas Estuarine Mathematical Programming Model and considered appropriate for use herein, are as follows:

	SLB	SUB		SLB	SUB
January	5	30	July	2	25
February	5	30	August	2	25
March	5	30	September	5	20
April	5	30	October	5	30
May	1	20	November	5	30
June	1	20	December	5	30

c. When the average salinity for the third week (the third week includes the seven days from the 15th through 21st) of any month is at or below the subsequent month's established SLB for upper Nueces Bay (Lat. 27°51'02", Long. 97°28'52"), no releases from the Reservoir System to satisfy targeted Nueces Bay inflow mounts shall be required for that subsequent month.

d. All data collected as a result of the monitoring program required by paragraph 3 of this Agreed Order shall be submitted monthly to the Commission within the first ten days of the immediately following month. The Nueces Estuary Advisory Council shall study the feasibility of developing a method of granting credits for inflows which exceed the required amounts to replace the credits that are set out in subparagraph 1.e.(1) and make recommendations to the Commission for possible implementation. That method shall have as its goal the maintenance of the proper ecological environment and health of related living marine resources and the provision of maximum reasonable credits towards monthly inflow requirements.

4. a. To assist the Commission in monitoring implementation of this Order and making recommendations to the Commission relating to any changes to this Agreed Order and the establishment of future operating procedures, the Nueces Estuary Advisory

Council shall be continued. Its members shall include, but are not limited to a qualified representative chosen by each of the following entities or groups: the Executive Director of the Texas Natural Resource Conservation Commission, whose representative shall serve as chair;the Texas Water Development Board; the Texas Parks and Wildlife Department; the Texas Department of Health; the General Land Office; the holders of Certificate of Adjudication No. 21-3214 (the Cities of Corpus Christi and Three Rivers and the Nueces River Authority; the University of Texas Marine Science Institute; Texas A&M University - Corpus Christi; Save Lake Corpus Christi; Corpus Christi Chamber of Commerce; the City of Mathis; Coastal Bend Bays and Estuaries Program, Inc.; a commercial bay fishing group; a conservation group (e.g. the Sierra Club and the Coastal Bend Bays Foundation); wholesale water suppliers who are customers of the Certificate Holders (e.g., the South Texas Water Authority and the San Patricio Municipal Water District); the Port of Corpus Christi Authority; and a representative of industry. The representatives should have experience and knowledge relating to current or future water use and management or environmental and economic needs of the Coastal Bend area.

b. No modification shall be made to this Order without the unanimous consent of the Certificate Holders, except to the extent provided by law.

c. Matters to be studied by the Nueces Estuary Advisory Council and upon which the Executive Director shall certify recommendations to the Commission shall include, but are not limited to:

(1) the effectiveness of the inflow requirements contained in this Agreed Order on Nueces Estuary and any recommended changes;

(2) the effect of the releases from the Reservoir System upon the aquatic and wildlife habitat and other beneficial and recreational uses of Choke Canyon Reservoir and Lake Corpus Christi;

(3) the development and implementation of a short and long-term regional water management plan for the Coastal Bend Area;

(4) the salinity level to be applied in Paragraphs 1.e. and 3.c., at which targeted inflows in the subsequent month may be suspended;

(5) the feasibility of discharges at locations where the increased biological productivity justifies an inflow credit computed by multiplying the amount of discharge by a number greater than one; and development of a methodology for granting credits for inflows which exceed the required amount to replace the credits that are set out in subparagraph 1.e. That methodology shall have as its goal the maintenance of the proper ecological

environment and health of related living marine resources and the provision of maximum reasonable credits towards monthly inflow requirements; and,

(6) any other matter pertinent to the conditions contained in this Agreed Order.

5. This Agreed Order shall remain in effect until amended or superseded by the Commission.

Issued date: APR 05 2001

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION

Robert J. Huston, Chairman