

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Iliana Delgado, Project Manager
Water Rights Permitting Team

Date: November 30, 2006

Thru: Bill Billingsley, Team Leader
Resource Protection Team

BB 12/1/06

From: *Wes* Wendy Gordon, Ph.D., Aquatic Scientist
11/30/06 Resource Protection Team

Subject: Lower Colorado River Authority
Application 5731 - Application to Appropriate Excess Flows
Colorado River, Colorado River Basin
Colorado, Wharton, Matagorda Counties

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COMMISSION
ON ENVIRONMENTAL
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Environmental reviews of water right applications are conducted in accordance with §11.147, §11.1491, §11.150, and §11.152 of the Texas Water Code and with TCEQ administrative rules which include 30 TAC §297.53 through §297.56. These statutes and rules require the TCEQ to consider the possible impacts of the granting of a water right on fish and wildlife habitat, water quality, and instream uses associated with the affected body of water. Possible impacts to bays and estuaries are also addressed.

ADDENDUM

This memo serves to update and clarify the environmental analysis memo dated June 22, 2006 based on comments received on the draft permit mailed on July 13, 2006.

ENVIRONMENTAL ANALYSIS

Target Instream Flows are measured on an instantaneous basis. As such, Table 1 has been relabeled to make this requirement unambiguous.

Table 1: Instantaneous Target Flows (in cfs) by Month for downstream reaches of the Colorado River		
Month	Eagle Lake (Columbus)	Egypt (Wharton)
January	300	240
February	340	280
March	500	360
April	500	390
May	820	670
June	660	540
July	300	240
August	200	160
September	320	260
October	380	310
November	290	240
December	270	220

The environmental analysis examined the need for and role of bankfull flows based on prevailing scientific thought. Accordingly, the analysis concluded that the two-year bankfull event calculated at approximately 27,000 cfs should be maintained in this system. It is recognized that given climatological variability, periods longer than two years may pass without such a peak flow. However, in the absence of data demonstrating the significance of peak flows less than 27,000 cfs in this system, no additional recommendations are being made.

SUMMARY AND RECOMMENDATIONS

The environmental flow values implemented in the LCRA Water Management Plan and approved by the Commission, most recently in 1999, did not contemplate large scale, downstream diversions such as those proposed in the current application. Both the instream flow and freshwater inflow regimes implemented through the Management Plan are designed to provide some level of natural flow variation through (1) passage of inflows between Target Flow and critical flows, and (2) localized rainfall events in the watershed downstream of the Highland Lakes that provide occasional pulsed flow events. The applicant is seeking an appropriation without the necessity of demonstrating the continuous availability of historic, normal stream flow as allowed under 30 TAC §297.42(d) such as the for the diversion of above-normal streamflow (e.g., "scalping" operations) for seasonal or supplemental use.

Applicant has proposed diversions of excess flows from the Colorado River to be diverted into off-channel reservoirs in the vicinity of Columbus. The following special conditions are recommended and intended to protect a riverine environment of similar ecological character as that from Columbus downstream to Garwood. Moreover, Special Conditions have been drafted consistent with provisions contained in LCRA's Commission-approved Water Management Plan, dated March 1, 1999, and shall be superseded by Commission-approved changes in future Water Management Plans. It is anticipated that the permit authorized under this application and the special conditions contained therein will be incorporated into future revisions of the Water Management Plan.

1. Diversions shall only occur under this permit when flow levels in the Colorado River are above the instantaneous Target Flows listed in Table 1 and diversions will not reduce streamflow to less than those Target Flows in sections of the Colorado River as measured at Columbus and Wharton;

Table 1: Instantaneous Target Flows (in cfs) by Month for Downstream Reaches of the Colorado River		
Month	Eagle Lake (Columbus)	Egypt (Wharton)
January	300	240
February	340	280
March	500	360
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May	820	670
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July	300	240
August	200	160
September	320	260
October	380	310
November	290	240
December	270	220

2. Unless a peak flow event of at least 27,000 cfs with a duration of 48 hours has occurred within the previous 24 months or is forecast to occur given rainfall that has

fallen or is falling in the basin, Permittee shall make no diversion that will reduce a flow to less than 27,000 cfs as measured at Columbus;

3. Provided that the flow values in Special Conditions numbers 1 and 2 have been met, water withdrawals authorized under this permit may be diverted into off-channel reservoirs and stored without further use until the end of the accounting month as identified in the Commission-approved LCRA Water Management Plan in effect at the time of the diversions. Regardless of water levels in the Highland Lakes, if the requirements for the Colorado River portion of the monthly Target Freshwater Inflow requirements for the Matagorda Bay are not fully satisfied, Permittee shall release enough water stored in reservoirs authorized under this permit during the prior month to meet the freshwater inflow requirements, up to all water impounded in such reservoirs during that prior accounting month. The water shall be released during the month following impoundment;
4. Intake structures at diversion points authorized under this permit shall minimize potential adverse impacts due to entrainment and impingement of fishery resources by providing fish screen on the intake structures with a maximum through screen velocity of 0.5 feet per second; and
5. Permittee is required to develop a Riparian Management Plan (RMP) and submit it to the Executive Director for approval prior to diverting water under this permit. Within six months of approval by the Executive Director, the Permittee shall seek an amendment to the LCRA Management plan to incorporate the RMP into the LCRA Management Plan. The RMP shall:
 - A. Identify public lands between Columbus and the lower-most diversion point with significant riparian value; and
 - B. Outline a plan for maintaining the riparian ecosystem functions of those lands, including provisions for long-term monitoring.
6. For purposes of these special conditions, flows in the Colorado shall be measured at the USGS Gage (08161000) at Columbus and the USGS Gage (08162000) at Wharton.

This instream use assessment was conducted using current TCEQ operation procedures and policies and available data and information. The recommendations in this environmental analysis are intended for the protection of instream uses and do not necessarily provide protection to downstream water rights; that analysis is addressed in the hydrology memo and further restrictions may be applicable as necessary. Authorizations granted to the permittee by the water rights permit shall comply with all rules of the Texas Commission on Environmental Quality, and other applicable State and Federal authorizations.