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July 13, 2004

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VIA FEDERAL EXPRESS

Renne Lohofener
Texas State Administrator
U.S. Fish & Wildlife Service
10711 Burnet Road, Suite 200
Austin, TX 78758-4460

Dear Mr. Lohofener:

This letter supports the letter sent to you this day by Leonard Young, CEO of our client, the San Antonio Water System (SAWS), requesting that the Service undertake a review of the minimum springflow numbers for San Marcos Springs and Comal Springs. The Service announced those minimum springflow numbers in 1993 (1993 numbers) in response to a United States District Court order. Those 1993 numbers were proffered by the Service as necessary to avoid a finding under the Endangered Species Act (ESA) of "jeopard[y]" related to, or a "take" of, any species associated with the Edwards Aquifer (Aquifer) listed pursuant to the ESA as an endangered species or a threatened species.

We and SAWS believe that a favorable response to SAWS' request will allow the Service to fulfill the commitments it made in 1993 when it announced the minimum springflow numbers. We believe a reexamination of the 1993 numbers will ensure that sound science is applied in the protection of the five species listed and four critical habitats designated prior to the 1993 announcements and the three species listed thereafter.

Application of HCP and ITP. Review of the 1993 minimum springflow numbers now is especially timely because the Edwards Aquifer Authority (EAA) is preparing a habitat conservation plan (HCP) and an application for an incidental take permit (ITP) with respect to the protected Aquifer-associated listed species. (The EAA is a political subdivision of the state of Texas created by the legislature in 1993 to manage pumping from the Aquifer. It also is expressly authorized to apply

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for an ITP.) Even in the absence of an EAA ITP, review of the 1993 numbers is critical to SAWS and other pumpers of Aquifer water to enable them to plan for, and operate in, compliance with the ESA "jeopardy" and "take" prohibitions with confidence that the minimum springflow numbers attached to those prohibitions are based on current and accurate data and analyses. This, of course, is consistent with the ESA requirement that decisions related to the "jeopardy" prohibition be based on "the best scientific and commercial data available."

Sierra Club suit. The minimum springflow numbers we request the Service review arose from a lawsuit filed by the Sierra Club in 1991 in United States District Court in the Western District of Texas alleging that the Secretary of the Interior and the Service were allowing "take" of the Aquifer-associated listed species. On February 1, 1993, Judge Lucius Bunton ruled in favor of the plaintiffs and, among other matters, required the Service to determine the minimum springflow requirements to avoid violation of the prohibitions of ESA §§ 9(a)(1)(B) ("take" of any of the listed species) and 7(a)(2) ("likely to jeopardize the continued existence of" any of the listed species or "result in the destruction or adverse modification" of any designated critical habitat of those species). *Sierra Club et al v. Lujan*, No. MO-91-CA-069, 1993 WL 151353 (W.D. Tex. Feb. 1, 1993). The Service determined and provided those numbers to the court with extraordinary alacrity, in two documents distributed separately to affected persons within 2½ and 4½ months, respectively.

The 1993 "take" minimum springflow numbers. In a Service document dated April 15, 1993 (announced in an April 28, 1993 cover letter to Aquifer pumpers), the Service established minimum springflow numbers for the two Springs to avoid "take." Those minimum springflow numbers were 200 cfs at Comal Springs and 100 cfs at San Marcos Springs for the fountain darter, with identical or lower numbers for the other listed species. The April 15, 1993, document establishing those minimum springflow numbers contained the following conclusion:

The "take" numbers referenced in this report reflect the Service's best professional judgment based upon data available at this time. Because there is a lack of data to base these determinations on, the Service has taken a conservative approach to this analysis. As additional data are obtained, the Service plans to modify its recommendations to the Court.

The 1993 "jeopardy" minimum springflow numbers. In a subsequent Service document dated June 15, 1993 (announced in a June 25, 1993 cover letter to Aquifer pumpers), the Service established minimum springflow numbers for the two Springs to avoid "jeopardy" for the listed species or "destruction or adverse modification" of critical habitat. Those minimum springflow numbers were 150 cfs

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at Comal Springs and 100 cfs at San Marcos Springs for the fountain darter, with identical or lower numbers for the other listed species. The June 15, 1993, document contained similar Service disclaimers:

[T]here are significant gaps in knowledge upon which to base minimum flow level findings for all the species. Because this evaluation was conducted with much less data than are normally available, this document reflects the Service's best professional judgment for the various flow estimates. Because sufficient data were not available, a conservative approach was taken in developing flow estimates to ensure that irrevocable harm would be unlikely to occur to listed species.

The knowledge upon which to base these determinations can be improved greatly with additional research and data collection. The Service is in the early stages of a multi-year study to collect such data for the Comal ecosystem. The Service is also planning to initiate a similar study for the San Marcos ecosystem later this year. Completion of these studies should greatly improve our ability to determine the flow levels where listed species in these ecosystems are first harmed, and to predict what flows are necessary to protect the chances of long-term survival of the listed species and the ecosystems upon which they depend. As more information becomes available, the numbers identified in this document may change to more accurately reflect the best available scientific and commercial information.

No subsequent review. Despite the disclaimers in the 1993 documents acknowledging that the minimum springflow numbers were based on limited information, the Service has not adjusted or reviewed these 1993 numbers. For some time now SAWS and other pumpers have been concerned that the 1993 numbers are not based on sound science or the ESA § 7(a)(2) standard of "best scientific and commercial data available." Even in 1993, the Service acknowledged that the minimum springflow numbers were determined by "professional judgment" with "a lack of data to base these determinations on" — an absence of "data that are normally available."

The Service's reliance in 1993 on professional judgment was understandable, considering the time constraints imposed by the federal court on the Service for generating minimum springflow numbers. But more than eleven years have passed without any apparent review of the 1993 numbers by the Service. Nor has the Service appeared to act on its April 15, 1993, commitments to review any of the substantial data that have been generated subsequent to 1993 and make recommendations for changes in the minimum springflow numbers. Further, the Service seemingly did not review the 1993 numbers even when it listed the three additional Aquifer-associated invertebrate species on December 18, 1997.

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Moreover, to our knowledge, the "multi-year study" of the "Comal ecosystem" has never been completed and the "similar study" of the "San Marcos ecosystem" has never been initiated, despite the Service's commitments to conduct those studies in its June 15, 1993 document.

Consequently, SAWS, and presumably the Service, do not know whether the minimum springflow numbers dictated by the "conservative approach" taken in 1993 are still appropriate or represent the best science available more than a decade later.

SAWS undertakings. Despite its concerns about the accuracy of the 1993 numbers and the currency and soundness of the data on which those numbers are based, SAWS undertook several steps to assure itself that a request to the Service for review of those numbers would be appropriate and of value to all affected persons.

1. On April 15, 2003, we filed, on behalf of SAWS, a Freedom of Information Act (FOIA) request for, among other matters, "all scientific and other documentation relating to and/or supporting any and all streamflow determinations made by FWS or at FWS's direction in response to the court order...". We and SAWS appreciate the cooperative manner in which the Service responded to the FOIA request.

2. We retained Horizon Environmental Services, Inc. (Horizon) to: review the materials received in response to the FOIA request and all other relevant data extant in 1993 to determine on what basis the existing minimum springflow numbers were established and whether those numbers were justified by those materials and any other data then available; review studies conducted and data generated subsequent to 1993 to determine whether they buttress or cast doubt on those 1993 numbers; and review all relevant information pertaining to the three invertebrate species listed after 1993 to determine whether these newer listings would elicit numbers that are similar to or differ from either the 1993 numbers, or numbers otherwise supported by the new studies and data, for the original five listed species and four critical habitats.

The report of Horizon, *An Analysis of the Take and Jeopardy Flows for the Fountain Darter Including Potential Flows Required by the Endangered Invertebrates of Comal Springs*, dated July 2004, (Horizon Report) is enclosed with, and should be considered as an element of, this request for review of the 1993 minimum springflow numbers.

Review of information from the FOIA request. The materials we received in response to the FOIA request confirmed the Service's own 1993

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statements as to the inadequacy of the then-existing data on which to base anything other than "conservative" numbers. As stated in the Horizon Report (pp. 9 and 45):

There is nowhere presented in the FOIA documents a single set of notes, paper, or meeting results that clearly indicate how the USFWS determined any of the take or jeopardy flows it published in 1993. ...

Based upon our review of the FOIA materials received from USFWS, the take and jeopardy numbers were derived from a series of separate and unconnected data sources largely because, to the time of the Sierra Club lawsuit, no one had done a systematic study to define the take and jeopardy flows.

After reviewing the FOIA materials and other data existing in 1993, studies and data generated since 1993 (including the Service's draft Instream Flow Assessment prepared by Hardy et al. in 2000, the Range of Variability Approach flow assessment prepared for the EAA by Bio-West in 2002, and Horizon's extensive Comal Springs water depth surveys conducted from February 1996 through February 1999), and data specific to the three invertebrate species listed after 1993, Horizon concluded that the existing minimum springflow numbers are not merely, as the Service characterized, "conservative," but they are *unduly conservative and unsupported*, as described in excerpts from the Horizon Report (pp. 45 and 52):

According to Hardy et al. (2000), there is no substantive difference in habitat for the darter from 300 cfs down to 150 cfs. Therefore, it is clear that the take and jeopardy flows of 200 cfs and 150 cfs, respectively, are clearly too high and are so conservative as to be meaningless for the intent they were established. ...

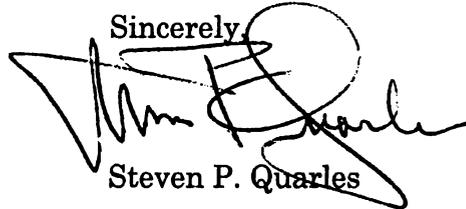
The data collected supports our contention that the 200 cfs take and 150 cfs jeopardy flow levels are not at all accurate and much too high. Based upon our water depth data, flows of 150 cfs would not even produce a take, much less cause jeopardy.

New review by Service is consistent with the ESA. We and SAWS have carefully reviewed the materials received in the FOIA request and the numerous studies and data generated since the 1993 minimum springflow numbers were established. We conclude that the available information renders at this time even more pertinent the Service's 1993 disclaimers both as to the quality of the data and the analytical approach taken, and even more imperative the Service's 1993 commitments to review subsequent information, conduct multi-year ecosystem studies, and make any necessary adjustments in the 1993 numbers.

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Thorough reconsideration of the 1993 minimum springflow numbers is consistent with the provisions of the ESA and the implementing regulations. Any decisions on the applicability of the ESA's "jeopardy" and "take" prohibitions to actions that may affect Aquifer-associated listed species should be made on the basis of the ESA standard of "best scientific and commercial data available."

Sincerely,

Steven P. Quarles

Enclosures

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