



Via E-mail and Certified Mail - Return Receipt Requested

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Re: Notice of Intent to Sue for Failure to Issue an Emergency Regulation To List the Jollyville Plateau Salamander as Required by the Endangered Species Act (FWS/R2/ARD-E510499417)

Dear Sirs and Madam:

This letter serves as official notice by the Center for Biological Diversity and Save Our Springs Alliance of our intent to sue the U.S. Fish and Wildlife Service and Ken Salazar, Secretary of the U.S. Department of the Interior, for failing to “prevent a significant risk” to the “well-being” of the Jollyville Plateau salamander (*Eurycea tonkawae*) by “mak[ing] prompt use of the authority” to issue an emergency regulation listing the salamander as threatened or endangered, as required by section 4 of the Act. 16 U.S.C. § 1533(b)(3)(C)(iii); *see* 16 U.S.C. § 1533(b)(7). This letter is being provided to you pursuant to the notice requirement of the citizen suit provision of the ESA, to the extent deemed necessary by a court. 16 U.S.C. § 1540(g)(2)(C).

We received the December 1, 2011 letter from Dr. Benjamin Tuggle, which provides the Service’s finding that our September 30, 2010 listing petition does not indicate that an emergency situation exists. Since we filed our petition, conditions have worsened for the

salamander, further highlighting the need for emergency protection. The salamander faces a severe threat of disrupted water flow due to the initial phase of shaft and tunnel construction for the City of Austin's new water treatment plant. This threat is compounded by an ongoing record-breaking Texas drought. In addition, efforts by the Service and the City to negotiate a Candidate Conservation Agreement with Assurances ("CCA") have collapsed, leaving the salamander without protection from the City's now-underway tunnel construction.

The information presented here and in the September 30, 2010 listing petition demonstrates that emergency listing is required to prevent a significant risk to the well-being of the Jollyville Plateau salamander.

Shaft Leaks Caused By Tunneling for the New Water Treatment Plant

As explained in our petition, the range of the Jollyville Plateau salamander is limited to northwest Travis county and southwest Williamson county near Austin, Texas, where it requires a constant supply of water from a small portion of the northern segment of the Edwards Aquifer (Cole 1995, p. 33). We also explained the threats posed by construction of the City of Austin's new water treatment plant, and in particular, the threat that shafts or tunnels excavated through and under the Edwards Aquifer could leak and dewater salamander habitat. A recent event confirms that the salamander is facing a severe and immediate threat from water flow disruption. Last month, a 40-foot wide shaft being excavated through the northern Edwards Aquifer began leaking (Toohey 2011).

The shaft is located in the Four Points area near the intersection of RM 620 and RM 2222 (Toohey 2011). When finished, the shaft will be 200 feet deep and allow construction crews to dig a miles-long transmission tunnel that will carry water from the treatment plant to a distribution point near McNeil Road and U.S. 183 (Toohey 2011). The transmission tunnel will run beneath a honeycombed layer of small limestone caverns and fissures that are part of the northern Edwards Aquifer. Crews need to dig the shaft through the limestone to get beneath the aquifer.

When the leak was first spotted, City officials observed that the water level of nearby wells that monitor the aquifer initially dropped by more than a foot (Toohey 2011). The decline has tapered off, although those readings could have been influenced by recent rainfall (Toohey 2011). City officials attempted to plug the leak but a few days later it became apparent water was still seeping into the shaft, probably from a number of places (Toohey 2011).

The City's lead environmental officer of the project, Chuck Lesniak, initially reported to the City's Environmental Board that groundwater loss into the Four Points shaft was one to two gallons per minute, which is approximately 2,000 gallons of water a day (Crawford 2011). At a follow up meeting on December 22, 2011, Mr. Lesniak estimated the leak at between two and four gallons per minute. Mr. Lesniak also conceded that this rate of loss was greater than the flow of small springs nearby that harbor the salamander. Even small leaks have the potential to impact springs that depend on this vertically thin aquifer, which as explained below is already impacted by drought conditions (Bennett 2011).

The leaking shaft is just southwest of several known locations of the salamander. The plant's large transmission tunnel will pass through and under several known localities of the Jollyville Plateau salamander, within the heart of the Plateau population and within and adjacent to the Bull Creek Preserve (Hillis et al. 2010; Lewis 2010; Chippendale 2010). More specifically, 52 sites of 90 sites where the salamander has been sighted are within one mile of the proposed Jollyville Transmission Main alignment and 11 sites are within 300 feet (Black et al. 2010).

The City's choice to align the tunnel directly below the most essential salamander spring habitat puts the Jollyville Plateau salamander at severe risk. In our petition, we highlighted the concerns of scientists that construction of the water treatment plant, with its associated shafts and intake and transmission tunnels, "pose[s] a major threat to the survival of the species, both in the short and long term" (Hillis et al. 2010). In a letter from April of 2010, these experts warned that construction crews could inadvertently hit a pocket and allow water to flow into the shafts and tunnels, disrupting the flows of springs upon which the salamander depends (Hillis et al. 2010). These concerns are further explained in detail in a report by Dr. Phil Bennett, Professor of hydrogeology and geochemistry at the University of Texas' Jackson School of Geosciences, which reviews the City's technical reports on the Jollyville Transmission Main (Bennett 2011). (This report and most of the other cited documents are included in the CD provided with this letter.)

The recent leak reinforces the need to heed the warning of these scientists, as does past damage to the fragile karst ecosystem. In the 1980's, a small test well interrupted flow to Moss Gully Spring and resulted in extirpation of one population of Jollyville Plateau salamanders (Hillis et al. 2010; Bennett 2011). A bore hole only a few inches in diameter caused the damage and normal flow to the spring was never restored (Bennett 2011). The scientists expressed concern that dewatering of this spring and the loss of this salamander population has not been "heeded as a significant warning sign" of a "significant" risk that construction could "puncture[e] a major flow path, and dewater[] critical salamander habitat" (Hillis et al. 2010).

Even if the leak in the Four Points shaft is successfully plugged, the risks of additional leaks and other problems from the construction remain. Construction of the Four Points shaft remains in its initial phases and construction on the 6.5 mile long Jollyville Transmission Main not yet begun.

There could be impacts from the blasting operations needed to construct vertical shafts connecting the surface to the transmission tunnels. Blasting in karst topography has been shown to set off vibrations and shock waves that cause cave roofs to collapse (Vermeulen & Whitten 1999, pp. 67-68). Vermeulen and Whitten (1999) warn that "[e]ven one new crack in a cave may alter the environmental conditions so that cave communities are displaced or killed." Blasting can also change the pattern of groundwater movement and change the quantity of water flowing through the karst system (Ekmekci 1993, pp. 3-6). In addition, there are serious risks of sedimentation and dewatering from drilling vibrations, diversion of flow paths in karst conduits and along fractures, and from failure of mitigation measures and tunnel operations over the long term (Bennett 2011; Hillis et al. 2010). Changes in flow paths could also affect salamanders by increasing karst flow velocity in some areas; high water velocities results in increased instability of substrates thereby dislodging and removing cover for salamanders (Booth and Jackson 1997).

The City decided that construction of the water treatment plant should proceed without delay and construction is ongoing (Longoria 2011). This recent leak – and others that will undoubtedly occur as construction proceeds – threatens to disrupt water flow that is critical to the survival of the Jollyville Plateau salamander. We believe that the ongoing leak at the Four Points shaft demonstrates the need to immediately list the salamander on an emergency basis.

Severe and Ongoing Texas Drought

Since the filing of our petition, Texas has experienced its worst one-year drought on record (Freedman 2011). And Texas state climatologist John Nielsen-Gammon has predicted that the state's devastating drought could last until 2020 (Morello 2011). Drought is of particular concern to the Jollyville Plateau salamander because the portion of the Edwards Aquifer underlying its habitat is relatively shallow, with a high elevation, thus being unlikely to sustain spring flows during periods of drought (Cole 1995, pp. 26-27). Drying spring habitats strand and kill salamanders (COA 2006, p. 16).

In October of 2011, it was reported that the last significant rain in Texas fell in September of 2010, leaving 97 percent of Texas under extreme or exceptional drought at that time (Peeples 2011). Rains at the end of 2011 in parts of Texas provided some relief but total rainfall is still less than half of the normal total of 26 inches. The drought and water use have reduced levels of groundwater in much of Texas to the lowest levels seen in more than 60 years, according to national maps produced by NASA and distributed by the National Drought Mitigation Center at the University of Nebraska-Lincoln (Science Daily 2011).

The drought is likely due in part to the effects of La Nina, a weather phenomenon triggered by unusually cool surface waters in the tropical Pacific Ocean, and Pacific Decadal Oscillation, a long-term warming or cooling of the Pacific's surface waters (Peeples 2011). Although the salamander has likely survived many droughts over the eons, the combination of habitat destruction, high water demand by the City of Austin and other municipalities, and a severe drought may be the nail in the coffin for the unique salamander. This drought may also be unique because of the effects of climate change caused by anthropogenic release of greenhouse gases, which is predicted to result in a dryer southwest.

Virtually all of the springs harboring salamanders in upper Bull Creek stopped flowing in the summer and fall, though some have resumed some limited flow in response to the December rains (as reported by Mr. Lesniak at the December 22, 2011 Austin Environmental Board subcommittee meeting). The severe and ongoing Texas drought is compounding the threat of disrupted water flow posed by shaft leaks. These threats create a severe risk of extirpation for the salamander's small and isolated populations.

Failure of the CCAA Process

When we submitted our petition in September of 2010, the Service and the City of Austin were negotiating and drafting a Candidate Conservation Agreement with Assurances ("CCAA") for the Jollyville Plateau salamander. Since then, the CCAA process has failed, leaving the

salamander without a framework for conservation endorsed by the Service and little to no protection from the City of Austin's tunneling.

Specifically, in December of 2010, the Service suspended further effort toward developing a CCAA pending the City's completion of studies and a final decision by the City to move forward with the CCAA (Lesniak 2010). In March of 2011, the City informed the Service that it is "likely that a CCAA is no longer the best path forward, as actual listing might well overtake the effort" (Li 2011). Last week, the City's Environmental Policy Program Manager confirmed that the Service and the City "stopped work" on the CCAA based on a determination "that a CCAA wasn't the appropriate tool for the City's and the Service's needs" (Lesniak 2011).

With the failure of the CCAA process, the City continues to rely upon existing practices and regulations, which FWS has determined are inadequate to protect the species. The failure of the CCAA process is yet another reason why emergency listing of the Jollyville Plateau salamander is necessary.

Violation of the ESA

In 2007, the Service determined that listing of the salamander was warranted but precluded. *See* 16 U.S.C. § 1533(3)(B)(iii). Because the salamander is a candidate species, the Service "shall implement a system to monitor effectively [its] status . . . and shall make prompt use of the authority under paragraph 7 to prevent a significant risk to the well being of any such species." 16 U.S.C. § 1533(b)(3)(C)(iii). The information presented here and in the September 30, 2010 listing petition demonstrates that emergency listing is required to prevent a significant risk to the well-being of the Jollyville Plateau salamander. The Service's failure to take action to prevent this significant risk to the salamander's well-being is a violation of section 4 of the ESA. *Id.*; *see id.* § 1533(b)(7).

Should FWS fail to respond to this letter and take prompt action to emergency list the species, we intend to file suit in federal court. Indeed, you should be aware that we are not required to wait for 60 days to elapse before filing suit because of the pending emergency. 16 U.S.C. § 1540(g)(2)(C) ("[A]ction may be brought immediately after such notification in the case of an action under this section respecting an emergency posing a significant risk to the well-being of any species of fish or wildlife or plants.").

We appreciate that the Service is currently working on a listing rule for the salamander, but immediate action is required. If you have any questions or would like to discuss our concerns, please do not hesitate to contact us.

Sincerely,



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