

Environmental Restoration and Protection Areas Work Group
April 25, 2011, 1:30 – 4:30pm
New Braunfels City Hall

Attendees: Ed Oborny, Thom Hardy, Chad Norris, Cindy Loeffler, Steve Bereyso, Ken Diehl, Nathan Pence, Tom Brandt, and Todd Votteler

New Braunfels City Council has opposed through a Resolution the ERPA area behind the spring-fed pool in Landa Park. New Braunfels City Council in the same Resolution supported the ERPA near Spring Run # 3 as long as the piping system was underground and undetectable by visitors to Landa Park.

The ERPA Group discussed providing the Mayor and City Council of New Braunfels with additional information on locating an experimental channel and recirculating system below Landa Lake dam. City of New Braunfels staff and members of the ERPA Group agreed to present any new or updated information to the appropriate policy makers, should any be developed. The ERPA Group remains divided on whether or not the experimental channel and recirculating system as proposed should be located below the dam. Since installation of an experimental channel and recirculation system behind the spring-fed pool was not supported by the New Braunfels City Council at this time, the ERPA Group stopped discussion of the matter.

The City of New Braunfels has applied for permits to restore the Landa Lake dam and spillway to their original heights. Currently, the top of the dam has a lower elevation than the spillway. The permits should be obtained in the near future and the work to restore the height of the dam will begin. At the present time when severe floods occur, water runs over the dam into the spring-fed pool and at times over the banks of the new channel near the Park Office. Raising Landa Lake dam height will correct water flowing over the dam but will increase new channel bank overflow if the power generation plant gates are not correctly adjusted. The power generation plant gates are manually operated and maintaining the correct opening during a flood event is problematic. The ERPA Group recommends that New Braunfels Utilities be contacted about installation of an automatic gate control system that would control flows in the new channel in order to maintain desired flow targets in the old channel with changes in total Comal River flows. The ERPA Group feels it is important to maintain flows in the old channel as constant as possible. The three culverts and valves that control water flow to the spring-fed pool and old channel are in need of repair, replacement, or removal. All three gate valves are inoperable. The culverts and valves need to be evaluated and a plan for their repair/replacement/removal developed. As a preliminary step, existing information on the control structures at Landa Lake, flow management capacity at the New Braunfels Utilities plant and the design height of the Landa Lake dam and spillway be used to model the ability of maintaining desired flow rates in the old channel versus flow splits to the new channel over a range of discharges. Once water flow into the old channel is controllable, the ERPA Group recommends that a series of tests be run to determine how vegetation and fountain darter numbers are affected by different flow rates. Most of the ERPA Group supported testing the effects of flows between 40 and 80 cfs. There was more opposition than support for testing flows between 20 and 40 cfs in the old channel during normal flow periods.

Since installation of an experimental channel and water recirculation system below Landa Lake dam is not currently a viable option, other locations for the experimental channel component of the ERPA were discussed. The Group did come to agreement that the feasibility of locating an experimental channel in the Schlitterbahn Waterpark employee parking area downstream of the Elizabeth Street bridge be evaluated. A point of concern for this piece of property was who owned it and whether or not the owner(s) would be willing to allow installation of an experimental channel. The Group agreed that the old channel from below Landa Lake dam to the downstream end of the Schlitterbahn Waterpark employee parking area be restored to maximize fountain darter habitat. Restoration includes terrestrial and aquatic non-native vegetation removal; native aquatic vegetation planting; and sediment removal. The Group agreed that if an experimental channel was constructed in the parking area that Comal Springs riffle beetle work should not be undertaken at this location.

The Comal Springs riffle beetle ERPA to be located near Spring Run # 3 was discussed. The New Braunfels City Council supported the Spring Run # 3 ERPA, but only if the infrastructure was buried and undetectable by Landa Park visitors. Agreement within the ERPA Group on what should be done was not obtained as concerns exist that burying the needed infrastructure may negatively impact the habitat along Spring Run 3. The ERPA Group decided that additional laboratory work with the Comal Springs riffle beetle needs to be done to better understand the effects low flows will have on individuals and the population as a whole. Future work should focus on the habitat requirements of the riffle beetle with emphasis on life history characteristics (e.g. time spent in each life stage, vulnerability of each life stage, identification of pupation sites, generations per year, etc.) and factors that limit their distribution to spring orifices (e.g. primary food source, dispersal capability, affinity for superstition of certain dissolved gases (i.e. CO₂), and water quality requirements).

The Group also discussed the value of Thom Hardy's proposed mesocosm studies to determine what will happen when spring water is no longer flowing through portions of Landa Lake. How fast vegetation will decay and its affect on water quality will be the focus of the work.

The ERPA group recommends that a scientific review panel be formed with the responsibility to provide oversight on any proposed EARIP ERPA and related species and habitat activities. The panel would provide technical review of proposed study scopes of work prior to any work being undertaken and review of research products.