



MEMORANDUM

TO: Mayor and Council

FROM: Victoria J. Li, P.E., Director
Watershed Protection and Development Review Department

Sara L. Hensley, CPRP, Director
Parks and Recreation Department

DATE: July 20, 2009

SUBJECT: Barton Springs Bypass

Last fall, holes developed in the bypass culvert that routes Barton Creek flows around Barton Springs. The deterioration compromises the culvert's ability to convey creek flows, imposes operational restrictions on the pool, and makes maintaining water levels in the pool and adjacent Eliza Spring challenging. Engineering studies show that the structure has insufficient safety margins against sliding, overturning, and buoyancy. Staff from WPDRD and PARD have been meeting with consultants to discuss and evaluate repair options. Three options with rough estimated costs and expected construction duration have been presented. All of these preliminary options have significant implications for costs, pool operations, and risk to the endangered salamander population. All three options could take 6-8 months to complete and would close Barton Springs for swimming. Cost estimates are preliminary. The options include:

1. Pouring a new bypass floor, concrete footings, retaining wall and installing drains on the north side for approximately 600 feet of the eastern end of the bypass with an estimated cost of \$2.5 million and a life expectancy of approximately 10 years.
2. Installing new pipe inside the existing culvert, grouting the annular space, and installing new footings and drains on the north side for approximately 600 feet of the eastern end of the bypass with an estimated cost of \$2.4 million and a life expectancy of approximately 15 years.
3. Replacing the entire 1,000 feet of culvert with an estimated cost of \$4.7 million and a life expectancy of 75 years.

Water levels in the pool will need to be lowered to facilitate the construction. This creates unique challenges regarding how and when to conduct the work. Protection of the endangered Barton Springs salamander and our permit with the U.S. Fish and Wildlife Service requires that drawdowns only occur when spring discharge is greater than 54 cfs. The extended drought has reduced spring discharge to below 20 cfs. Moreover, full drawdowns at flows less than 54 cfs can potentially de-water Eliza Spring threatening our major salamander population. Ideally,

construction would occur when spring discharge is high enough that it will not drop to levels that would dry Eliza Spring during the months of construction.

The best option for repairing the bypass is not clear at this time. Relative level of disturbance, cost, longevity, flooding, potential impact to the salamander, and time required for pool closure must all be considered. Pool closure during construction will be a major issue for the public from a recreation standpoint and for the City due to lost revenue. City staff continues to work with consultants on other techniques to repair the bypass and on ideas to reduce the period of time the pool must be closed. Not making any repairs to the bypass is not a realistic option. Structural failure of the bypass could be a public safety risk, could close the pool for longer than repairs might take, and threaten the endangered salamander.

Funding for the project is under discussion. The Barton Springs Pool Master Plan identified a number of short-term projects for the springs and surrounding grounds that were funded with \$6.2 million, approved by Council in 2007. The Master Plan allocated \$285,000 for minor repairs to the bypass. Because the current serious deterioration of the bypass developed after the short-term project list had been approved, the funding to fix the bypass greatly exceeds the allocation in the project budget. Diverting most of the short-term project funding to pay for the bypass repairs would prevent implementation of those important projects. PARD staff is discussing the situation with the budget office to determine if there are any other funding options.

We anticipate presenting these repair options to the joint Parks/Environmental Board subcommittee on July 20th at 6:15 PM and receiving initial public input at that time.

Presentations to the full Parks Board, Environmental Board, stakeholder groups and Council would follow. Please call David Johns (WPDRD) at 974-2891 or Gary Gregson (PARD) at 974-9475 if you need any additional information at this time.

cc: Marc A. Ott, City Manager
Sue Edwards, Assistant City Manager
Bert Lumbreras, Assistant City Manager
Stuart Strong, Assistant Director, PARD
Nancy L. McClintock, Assistant Director, WPDRD
David Johns, Sr. Environmental Scientist, WPDRD
Gary Gregson, Project Coordinator, PARD