

From: Robert Lonsdorf [RLonsdorf@brandywine.org]

Sent: Thursday, March 20, 2008 3:31 PM

To: Amanda A DeSantis; slindloff@americanrivers.org

Cc: Bethany Bearmore; craig.shirey@state.de.us; craig.woolcott@noaa.gov; dick_quinn@fws.gov; dkristine@state.pa.us; Edward J Lutz; flyguy007@earthlink.net; Frank J Olszewski; ghalfpenny@hagley.org; ginger@dnsashland.org; gregory_breese@fws.gov; Horwitz@acnatsci.org; kkuhn@state.pa.us; KSRIN@ci.wilmington.de.us; larry_m_miller@fws.gov; learson@ci.wilmington.de.us; lynn.dwyer@nfwf.org; Maurice Moe R Richard; mcorrozi@UDel.Edu; mentzer6@comcast.net; mhendrick@state.pa.us; meumann@ci.wilmington.de.us; Robert.Line@state.de.us; roy.miller@state.de.us; sally.kepfer@de.usda.gov; Sara Deuling; Sherri Evans-Stanton; wmontgom@ci.wilmington.de.us; John Theilacker

Subject: Brandywine Shad Restoration Project Update

Dear Partners,

I want to give you an update on the progress underway in the Brandywine Shad Restoration project, specifically with respect to the first blockage in the system, the City of Wilmington's West Street Dam, located just upstream from the Market Street Bridge in Brandywine Park. Originally a partial rock ramp was examined as the City was not willing to consider dam removal due to the complexities and expenses involving the two encased water pipes there. It has been estimated that dam removal could cost upwards of \$1 million dollars.

I hosted an on-site meeting at dam 1 last month with Bethany Bearmore (NOAA), Larry Miller (USFWS), Bill Weibrecht (URS), Sally Kepfer and Tim Garrahan (NRCS) and Larry Carson of the City. As a result, two NEW fish passage alternatives were put on the table and a federal partner (NOAA) has indicated a willingness to consider spending significant implementation money here. Bethany suggested she believed it would be feasible (technically and financially) to replace the dam with a *pedestrian bridge* built so the two pipes could be attached to it (directional drilling to bury the pipes is an alternative), and Larry Miller suggested that it might be possible to build a denil-style fish ladder from the base of dam 1 up to the adjacent mill race that conveys water from above dam 2, thus by-passing both dams simultaneously.

So, we all (including the City) agreed it would be worth looking further into these new alternatives. We believe this approach will be ultimately more satisfactory. It will, however, require additional funding for data and design. For that it looks like we are going to apply to the next AR-NOAA Community-based Restoration Partnership Program grant round (due April 1. See http://www.americanrivers.org/site/PageServer?pagename=AMR_content_63e9 for more information). The purpose is to do an analysis of potential fish passage alternatives for the dam. Again, these were -

- 1) A rock ramp;
- 2) Removal, with either raising (attaching them to a pedestrian bridge) or burying the two water mains there (24" and 16"); and
- 3) A denil fish ladder tied into the mill race there, thus getting the fish past both dams 1 and 2 at once.

Larry Miller has agreed to drop the denil idea in favor of the dam removal idea, so we're only going to analyze for alternatives 1 and 2 above. This will slow progress but put it on a surer footing. And depending which alternative the City may eventually select, the City may be relieved from future dam repair work and DNREC from future monitoring and maintenance obligations. If this course of action proceeds, the existing \$56,000 in NRCS funds awarded for fish passage at this dam may have to be returned, though we're looking into alternatives for that.

Additional data needs include detailed topographic surveys above and below the dam; more river transects, including across the top of the dam; water modeling/ hydraulic data and geo-technical analysis (e.g., is the bedrock granite, and is it solid).

If any of you have any further comments on these developments, please let me know.

Thank you,

Sincerely,

Robert

Senior Planner for Watersheds and Biodiversity

Brandywine Conservancy

Environmental Management Center

P.O. Box 141

Chadds Ford, PA 19317

610-388-8314

FAX 610-388-8345

www.brandywineconservancy.org