

BOWTIE PROPERTY ACQUISITION

Memorandum

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To: Chuck Reid, Manager, CCBWQA
CC: Rick Goncalves, Chairman, TAC
From: William P. Ruzzo, P.E.
Date: January 10, 2014
Re: Bow-Tie Property Acquisition – Project Summary Report

Presented in this memorandum is a summary of the Authority’s participation in the acquisition of a parcel of land located at the confluence of Cherry Creek and Piney Creek. Because of the unique shape, the project was referred to as the Bow-Tie Property Acquisition.

BACKGROUND AND PURPOSE

In 2002, the Authority was approached by the Trust for Public Lands (TPL) to participate in the acquisition of the Bow-Tie Property for the purpose of “...*preservation of open space and creation of parks in the Cherry Creek Corridor from Castle Wood Canyon to Cherry Creek’s confluence with the South Platte River*”¹.

The Bow-Tie Property is adjacent to Cherry Creek State Park in the northeast ¼ of Section 19, Range 67 West Township 5 South (see Figure 1 Location Map). The property is 21.4 acres in size, of which 16.4 acres is floodplain and the remaining area is upland. The Bow-Tie Property is also adjacent to land owned by Arapahoe County, which includes a detention pond for the Prairie Creek Subdivision north of Piney Creek.



PROJECT PARTNERS AND FUNDING

Acquisition of the Bow-Tie Property was a joint effort between the Authority, City of Centennial, Urban Drainage and Flood Control District, Colorado Parks Department², Arapahoe County, and The Trust for Public Land. The multi-party agreement was signed in early 2003 during a late-winter snow storm event that stranded at least one member of the signing party.

¹ The Trust for Public Land January 11, 2002. Letter from Douglas M. Robotham to Jim Worley, Cherry Creek Basin Water Quality Authority.

² Now Colorado Parks and Wildlife.

<i>Agency³</i>	<i>Contribution</i>
<i>Cherry Creek Basin Water Quality Authority</i>	\$350,000
<i>City of Centennial</i>	\$260,000
<i>Urban Drainage & Flood Control District</i>	\$50,000
<i>Colorado State Parks</i>	\$99,000
<i>Arapahoe County</i>	\$100,000
TOTAL	\$859,000

In addition to the Authority’s right to construct water quality related improvements along Cherry Creek and Piney Creek, the Authority’s contribution included \$100,000 for the property and water rights for an alluvial well, a Denver Basin well, easements for ingress and egress, and all the related pumps, equipment, pipelines and appurtenances. The Authority is currently evaluating future uses of these wells related to

the Authority’s business of protecting water quality in Cherry Creek. As the result of the Bow-Tie project, the Authority has included stream corridor preservation in the capital improvement program (CIP) since 2002.

WATER QUALITY BENEFITS



Protection of the floodplain, riparian corridor and other environmentally sensitive lands through public acquisition or conservation easement and restoration of the same lands for nutrient control through erosion control, revegetation or other means is identified by the Water Quality Control Commission (WQCC) as a nonpoint source nutrient control measure⁴.

The Authority evaluated the Bow-Tie Property Acquisition for water quality benefits using two different approaches. The first was based on construction of wetlands at the confluence of Cherry Creek and Piney Creek⁵. This analysis suggested that with a capital cost of \$826,200,

land costs of \$300,000 and annual O&M of \$6,400, the projected annual phosphorus costs could be from \$300 to \$400, based on an annual phosphorus reduction of 235-pounds. The second approach evaluated the acquisition based on preventing a portion of the property from being developed into single family housing⁶. A finding of this analysis was that development of approximately 9-acres would increase phosphorus loads by around 2.5-times over preserving the land as open space. This increase takes into account that the development would be required to implement post-construction best management practices (BMP) that could reduce phosphorus loads by 50% annually.



CONCLUSIONS

Although the Bow-Tie Property Acquisition was the first and only Authority PRF that was based on preservation of floodplain and riparian corridor, the Authority continues to include in its CIP budget funds for future acquisitions to take advantage of the opportunity which can occur on short notice.

³ Trust for Public Land, August 28, 2003. *Tying the Bow at Cherry Creek State Park*. Press Release

⁴ CDPHE, Water Quality Control Commission November 30, 2012. *Cherry Creek Reservoir Control Regulation*. @72.6.6. See Statement of Basis, Specific Statutory Authority and Purpose (May 2001).

⁵ Ruzzo, William P. and McGregor, Dr. Robert F. November 5, 2002. *Updated Analysis of Bow Tie Property*.

⁶ William P. Ruzzo, PE. January 28, 2002. *Bow Tie Property – Phosphorus Contribution from Developed Land*.