



Office of the City Manager

WORK SESSION

October 25, 2011

To: Honorable Mayor and Members of the City Council

From:  Phil Kamlarz, City Manager

Submitted by: Andrew Clough, Director, Public Works

Subject: Watershed Management Plan Update

INTRODUCTION

The Watershed Management Plan (WMP) takes a comprehensive and holistic approach to establishing a healthier balance between the urban environment and natural ecosystems. Toward this end, the WMP includes recommendations for enhancing and improving City efforts to meet the goals of: water quality protection; urban flooding reduction; natural waterways and habitat preservation and restoration; and promotion of the re-use of rainwater as a resource. Included in the plan are four proposed funding scenarios that correspond to WMP implementation levels.

CURRENT SITUATION AND ITS EFFECTS

The WMP builds on established City activities by recommending policies and programs related to water quality, creeks, storm drain pipe infrastructure, and maintenance. Although these are addressed in separate chapters, they are all connected and integral components of watershed management.

Through analysis of computerized hydraulic modeling results, the WMP has developed a Sustainable Green Infrastructure Capital Improvement Program (CIP) for both the Potter and the Codornices Watersheds, which represent the full drainage spectrum within the City. The Potter Watershed is the largest watershed in the City, at roughly 1/3 the land area of Berkeley, and is drained by engineered storm drainpipes in the public right-of-way. The Codornices Watershed, roughly 1/10 of the City's land area, is regionally significant because Codornices Creek is one of the few creeks in the East Bay with a salmonid fishery population. The Codornices Watershed is drained by a creek winding through public and private properties.

Green Infrastructure (GI) is the term for various landscape-based retrofits within the public right-of-way or open space areas. GI measures are designed to reduce peak runoff flows using retention while treating pollutants, typically by the natural filtering and cleansing properties of vegetation and soils. Examples of GI measures include bioretention cells, swales, permeable paving, and engineered pollutant removal devices. Modeling results indicated that when GI measures are combined with other traditional approaches, a number of WMP goals can be met for a capital cost similar to merely upsizing storm drain

pipes to convey flow. These techniques can be combined and customized to fit neighborhoods.

The Plan concludes with detailed discussions of funding scenarios associated with alternative WMP implementation levels.

BACKGROUND

The development of a Watershed Management Plan was a key recommendation submitted by the Creeks Task Force, which was established by Council and active from November 2004 until May 2006. Development of the Plan began in late 2008.

Watershed drainage pathways in Berkeley's densely urban settings include curb and gutters, storm drain pipeline infrastructure, and open and culverted creeks. The existing storm drain pipes and creek culverts on public property are 80 to 100 years old, and have exceeded their life expectancies. Stormwater runoff from the public right-of-way and adjacent properties is discharged to San Francisco Bay or to local creeks. As urban runoff travels over impervious surfaces, it can pick up various pollutants and gain volume and velocity. This contributes to water quality impairments, localized flooding, and wash-out of in-stream habitat.

The National Pollutant Discharge Elimination System (NPDES) permit (now in its third cycle and called the Municipal Regional Permit or MRP), is the building block for many of the City's on-going water quality protection efforts. The WMP meets existing MRP requirements and looks to the future to meet later revisions. While watershed management plans are not a current requirement of MRP, they do communicate a level of watershed coordination and analyses that are attractive to granting agencies.

POSSIBLE FUTURE ACTION

Staff have circulated the WMP to the Public Works, Parks, Recreation & Waterfront, Public Health, and Planning Departments for review and comment. WMP presentations have also been made to the Public Works, Parks, Transportation, Planning, and Community Environmental Advisory Commissions for their comments.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

The WMP includes 4 proposed funding levels for Council's consideration, with details of how much of the Plan can be implemented at each level. Revenues currently generated by the Clean Storm Fee are not adequate to maintain existing programs and the City will be at-risk of being out of compliance with MRP requirements beginning in 2013.

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Attachments:

1: Watershed Management Plan (www.cityofberkeley.info/WatershedResources/)