Stormwater Basin Enhancement Project
City of Torrance

Final Project Report

Agreement R12AP35355
City of Torrance
20500 Madrona Avenue, Torrance CA 90503
July 9, 2015

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1. Recipient Information:	
Recipient Name: (Name, contact person, address and phone number)	**City of Torrance** **20500 Madrona Ave., Torrance CA 90503** **John Dettle, Engineering Manger (310)618-3059**
Project Name:	**Stormwater Basin Enhancement Project**
Assistance Agreement No:	**R12AP35355**
Date of Award: (Month, Year)	**9/25/2012**
Estimated Completion Date (Month, Year)	**4/24/2015**
Actual Completion Date: (Month, Year)	**4/24/2015**

2. Final Funding Information	**Funding Amount**
Non-Federal Entities	
1. State Water Resources Control Board via Santa Monica Bay Restoration Commission	$3,337,500.00
2. City of Torrance	$1,597,027.64
3.	
Non-Federal Subtotal:	
Other Federal Entities	
1.	
2.	
3.	
Other Federal Subtotal:	
Requested Reclamation Funding:	$300,000
Total Project Funding:	$5,234,527.64

3. One Paragraph Project Summary:

The stormwater from the City of Torrance that requires treatment mostly comes from the watershed area is tributary to the Amie, Henrietta and Entradero stormwater detention basins. The Stormwater Basin Enhancement Project provided the following:

- Amie Basin: passive wetland treatment, native habitat restoration and additional stormwater infiltration.
- Henrietta Basin: passive wetland treatment, additional stormwater infiltration and habitat restoration, access pathways and educational opportunities and
- Entradero Basin: additional infiltration, habitat restoration and improved public access without affecting the existing park and baseball activities and retrofit of existing park irrigation to recycled water.

4. Final Project Description: *Briefly describe components of the project and the work*

completed, including each element of the scope of work and the work completed at each stage of the project. Please include maps, sketches, and/or drawing of the features of the completed project, as appropriate. In addition, please describe any changes in the project scope.

All the components of the project have been completed.

- Amie Basin: passive wetland treatment, native habitat restoration and additional stormwater infiltration.
- Henrietta Basin: passive wetland treatment, additional stormwater infiltration and habitat restoration, access pathways and educational opportunities and
- Entradero Basin: additional infiltration, habitat restoration and improved public access without affecting the existing park and baseball activities and retrofit of existing park irrigation to recycled water.

Plans and specifications can be reviewed and downloaded from http://www.torranceca.gov/3239.htm

Changes to the project were made to address resident complaints.

At the Henrietta Basin the access path on the southwest side of outdoor class room was omitted and a turnaround for maintenance vehicles provided adjacent to the outdoor classroom. Minor changes to the landscaping were made to protect existing native plants.

At the Entradero Basin the viewing area on the west side and access paths adjacent to the viewing area were modified due to resident complaint. The proposed fencing where residents had existing block walls at the property line was omitted. The installation of new light poles at Entradero Park was omitted, but lights were replaced. An additional drainage ditch was constructed on the west side of the embankment which re-used concrete debris dug up from the basin for the slopes, set in place with concrete.

The Notice of Completion has not been issued because City's Risk Manager identified several improvements at Entradero Basin to address concerns about having standing water in the park and the City issued an amendment to the construction contract for these items of work. This added work is considered additional non-grant work which includes split rail fence in between the existing park and the new basin, grates on two storm drain inlets, grading of basin to provide a shallow area along the perimeter and signs warning the public to stay out of the water.

5. Accomplishment of Project Goals: *Describe the goals and objectives of the project and whether each of these was met. Where appropriate, state the reasons why goals and objectives were not met, and describe any problems or delays encountered in completing the project. Please include whether or not the project was completed within cost.*

The project will conserve water and recharge groundwater, approximately 325 AFY, reduce potable water use by 25 AFY and install trash screens on catch basins tributary to the basins, provide wetland treatment for flows that by-pass the basins. Habitat Restoration was completed at all three basins. Recent rain events have demonstrated the projects effectiveness on capturing and infiltrating stormwater. The accomplishments of the project are demonstrated in the 2015 CASQA Award Nomination proposal attached. Rain events during construction delayed the completion of the project by a couple of months. The project was completed within budget, with added work requested by Risk Manager funded by the City with a separate account.

6. Discussion of Amount of Water Conserved, Marketed or Better Managed: *In responding to the questions set forth below, Recipients should rely on the best data or information available. Actual field measurements should be used whenever possible (e.g., baseline data or post-project data derived from measuring devices, diversion records, seepage tests, etc.) Where actual field measurements are not available, water savings (or amounts marketed or better managed) may be estimated based on studies, other similar improvement projects, or anecdotal evidence.*

A. Recipient's total water supply (average, annual, available water supply in acre-feet per year):

- **21,000 AFY: MWD**
- **3,500 AFY: local groundwater**
- **5,500 AFY: recycled water**

B. Amount of water conserved, marketed or better managed as a result of the project (in acre-feet per year):

- **25 AFY potable water conserved by using recycled water**
- **325 AFY groundwater recharge**

C. Describe how the amounts stated in response to 6.B were calculated or estimated: *In responding to this question, please address (1) – (3) below.*

(1) Describe the information/data being relied on to calculate/estimate the project benefits. State how that data/information was obtained, if appropriate. Provide any other information necessary to explain how the final calculation/estimate of project benefits was made.

The City of Torrance is currently requesting a proposal from Northgate Environmental Management Inc. to include water quality monitoring for the Stormwater Basin Enhancement Project as part of the City's existing stormwater quality monitoring contract. The number for potable water saved comes from historical water metering data for Entradero Park. The number for stormwater captured for groundwater recharge was estimated based on historical rain fall data and the proposed design of the basins.

(2) As appropriate, please include an explanation of any concerns or factors affecting the reliability of the data/information relied on.

The current drought, and differences each year in rain patterns, will have an impact on actual stormwater captured for groundwater recharge.

(3) Attach any relevant data, reports or other support relied on in the calculation/estimate of project benefits, if available. Please briefly describe the data/information attached, if any.

The Predesign of BMPs for Detention Basins Tributary to Santa Monica Bay, CIP No. I 102; Task 7 Conceptual Report dated December 2008 (attached) was used as the basis for determining the effectiveness of the Stormwater Basin Enhancement Project.

Historical potable water consumption meter data was used to estimate the reduction of potable water use for Entradero Park retrofit to recycled water.

D. Use of Conserved Water: *Please explain where the water saved, marketed, or better managed, as a result of the project is going (e.g. used by the recipient, in stream flows, available to junior water users, etc.)*
Water from MWD comes from the State Water Project, therefore potable water conserved reduces demand on water from the State Water Project.

E. Future tracking of project benefits: *Please state whether and how the recipient plans to track the benefits of the project (water saved, marketed or better managed) in the future. If no actual field measurements are currently available to support the estimate of project benefits in 6.B., please state whether actual field measurements will become available in the future. If so, please state whether the Recipient is willing to provide such data to Reclamation on a voluntary basis once it is available.*

The City of Torrance will be awarding a contract or amendment to existing contract for monitoring of storm water treated by the basins. There is a requirement for both the State Grant and MS4 NPDES Permit to monitor flows captured and water quality into and out of the basins. The City of Torrance is willing to provide the same reports to BOR.

7. Discussion of Amount of Renewable Energy Added: *If your project included the installation of a renewable energy component, please describe the amount of energy the system is generating annually. Please provide any data/reports in support of this calculation.*

N/A

8. Describe how the project demonstrates collaboration, stakeholder involvement or the formation of partnerships, if applicable: *Please describe the collaboration involved in the project, and the role of any cost-share or other types of partners. If there were any additional entities that provided support (financial or otherwise), please list them.*

Letters of support were provided by Regional Water Quality Control Board, West Basin Municipal Water District, Heal the Bay and Southern California Water Replenishment District. The State Water Resources Control Board provided a $3,337,500.00 grant via the Santa Monica Bay Restoration Commission.

9. Describe any other pertinent issues regarding the project:

The project provided multiple benefits beyond water conservation and groundwater recharge. The project provided water quality benefits by creating storm water detention basins, installation of catch basin screens and No Parking for street sweeping signs in the watershed.

10. Feedback to Reclamation regarding the WaterSMART Program: *Please let us know if there is anything we can do to improve the WaterSMART program in general, including the process for applying for or completing a WaterSMART project. Your feedback is important to us.*

Staff and management at the BOR were most helpful in the administration of the grant. The invoice and on-line payment process is the easiest of the 3 grants I have administered. The simple requirement of 'was the project completed' verses grant payment by bid line item made the administration of this project simple.

11. Attachments: *Please attach the following*

- **Predesign of BMPs for Detention Basins Tributary to Santa Monica Bay, CIP No, I 102; TASK 7 Conceptual Report, dated December 2008**
- **2015 CASQA Award Nomination. City of Torrance, Stormwater Basin and Treatment Wetlands Enhancement Design, 2015**
- **A table showing the total expenditures for the completed project**

NOTE: This Final Report Format is a suggested format only; the recipient may use its own form or format. A report in this form will satisfy the requirements of 43 CFR 12.80 or 12.951, as applicable. Failure to submit timely and acceptable progress reports places a recipient in noncompliance with the terms and conditions of the assistance agreement. Noncompliance can result in the withholding of assistance payments, suspension or termination of the assistance award and may delay further aw