### Los Angeles Basin Stormwater Conservation Study

Los Angeles County Flood Control District U.S. Department of the Interior – Bureau Of Reclamation

TASK 4 – KICKOFF MEETING JANUARY 28, 2014





# **Meeting Objectives**

### Overview of Study

- Progress Update / Schedule
- Task 4 Overview



#### Los Angeles Basin Stormwater Conservation Study

Plan of Study





Southern California Area Office



Alhambra, California

County of Los Angeles Department of Public Works

Los Angeles County Flood Control District Alhambra, California December 2012

# **Study Overview**

#### Partnership between:

- Los Angeles County Flood Control District
- U.S. Department of the Interior Bureau of Reclamation

#### Basin Study Cost Estimate: \$2.4 million

- Reclamation funding: \$1 million
- LACFCD funding: \$1,364,666
- Local Partners match: \$59,960

Official Start Date – December 27, 2012 3 Years to Complete Study



### **Study Area**



## **Study Objectives**

#### LA Basin Study Objectives

- Evaluate existing water conservation under future conditions
- Evaluate potential new facilities and operational changes for a future climate

### Methodology

- Detailed scientific, engineering & economic analyses
- Coordinating with existing & proposed planning efforts
- Developing partnerships
- Local stakeholder involvement



## **Key Considerations**

- Account for projected climate change
- Population growth



California Department of Finance, - State and County Population Projections

### **Other Basin Studies**

- Colorado River Basin Water Supply & Demand Study
  - Completed December 2012
  - <u>http://www.usbr.gov/lc/region/programs/crbstudy.html</u>
- Santa Ana Watershed Basin Study
  - Completed September 2013
  - <u>http://www.usbr.gov/WaterSMART/bsp/completed.html</u>



### **Progress Update**

- Task 3 Downscaled Climate Change & Hydrologic Modeling
  - Report Published December 2013
- Projections show wide variability in Los Angeles County stormwater runoff



### RECLAMATION

Technical Memorandum

Los Angeles Conservatio

Task 3.1 Developm Hydrologic Model I









RECLAMATIO

**Conservation Study** 

Task 3.2 Hydrologic Modeling Report

Los Angeles Basin Stormwater

Managing Water in the West





U.S. Department of the Interior Bureau of Reclamation County of Los Angeles Department of Public Works Los Angeles County Flood Control District

December 2013

### **Study Schedule**



### **Study Schedule**



### **Task 4 Overview**

#### **Analyze Response to Current Climate**

- Investigate LACFCD water conservation and flood control system / facilities
- Use current operation guidelines & existing capacities
- Identify existing facilities that can benefit from enhancements

#### **Analyze Response to Future Climate**

- Assess current operation guidelines & existing capacities under a future climate
- Identify existing facilities that can benefit from enhancements
- Facilities identified will be investigated further in Task 5

#### **DELIVERABLE: Task 4 Interim Report**

### Task 4 - Dam & Reservoirs

#	Dam/Reservoir
1	Big Dalton
2	Big Tujunga
3	Cogswell
4	Devil's Gate
5	Eaton Wash
6	Hansen
7	Live Oak
8	Morris
9	Pacoima
10	Puddingstone
11	Puddingstone Diversion
12	San Dimas
13	San Gabriel
14	Santa Anita
15	Santa Fe
16	Sepulveda
17	Thompson Creek
18	Whittier Narrows



## Task 4 - Spreading Grounds

#	Spreading Ground
1	Ben Lomond
2	Big Dalton
3	Branford
4	Buena Vista
5	Citrus
6	Dominguez Gap
7	Eaton Basin
8	Eaton Wash
9	Forbes
10	Hansen
11	Irwindale/Manning Pit
12	Little Dalton
13	Live Oak
14	Lopez
15	Pacoima
16	Peck Road
17	Rio Hondo
18	San Dimas
19	San Gabriel
20	San Gabriel Canyon
21	Santa Anita
22	Santa Fe
23	Sawpit
24	Sierra Madre
25	Tujunga
26	Walnut



# Task 4 Methodology

#### **Analyze Response to Current Climate**

- Review and update existing WMMS facility models
  - Dams / Reservoirs and Spreading Grounds
- Analyze WMMS current climate results for:
  - Annual average volumes of stormwater captured and discharged
  - Yearly variation for annual stormwater volume captured and discharged
  - Capture-to-Bypass ratio for water conservation facilities
  - Frequency of spillway releases and capacity exceedances for dams / reservoirs
- Rank water conservation and flood control facilities

# Task 4 Methodology

Review and Update Existing WMMS Spreading Ground Model

SWS = Subwatershed

WMMS F-Table

### **Current System**



### **Remodeled System**



# Task 4 Methodology

#### **Analyze Response to Future Climate**

- Use WMMS to assess existing facilities for a range of future climate scenarios
- Analyze future hydrology to assess current operations and existing facilities
- Rank water conservation and flood control facilities for the future climate scenarios
- Facilities identified will be investigated further in Task 5



### **Task 4 Climate Scenarios**



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### **Task 4 Climate Scenarios**



### Task 4 Q&A



### **Next Steps**

#### Perform Task 4

- Analyze infrastructure response due to current/projected climate
- Determine where facility efficiencies can be improved

#### STAC Meeting – May 2014

- Review Draft Task 4 Report
- Task 5 Scoping

#### Public Meeting – July 2014

#### **Next Tasks**

- Task 2 Water Supply & Demand Projections
- Task 5 Develop Infrastructure & Operations Concepts

### **Contact Information**

#### Los Angeles Basin Stormwater Conservation Study

#### http://www.usbr.gov/lc/socal/basinstudies/LABasin.html





#### LACFCD Contact:

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