


**COMPTON CREEK AND DOMINGUEZ CHANNEL  
FLOOD RISK MITIGATION ALTERNATIVES STUDY**

**ADVISORY COMMITTEE MEETING  
NO. 2**


NOVEMBER 30, 2011



**INTRODUCTIONS**

- ❖ Name
- ❖ Agency / Group / Organization


2



**AGENDA**

- I. Background
- II. Advisory Committee Meeting
- III. Community Meetings
- IV. Current Status of Alternatives Study
- V. FEMA and NFIP Update
- VI. Recommended Action Plan
- VII. Questions/Comments
- VIII. Next Steps

3



**I. BACKGROUND: ALTERNATIVES STUDY PURPOSE**


**PRIMARY OBJECTIVE**

- ❖ Identify projects for levees to meet FEMA requirements

**GOAL**

- ❖ Identify solutions that mitigate channel deficiencies, address flood zones, and incorporate multi-beneficial components where possible

4



## II. ADVISORY COMMITTEE MEETING NO. 1 MARCH 14, 2011

### COMMITTEE INPUT

- ❖ Potential sites
  - Compton Creek Storm Drain Daylighting Study
- ❖ Suggestions to reduce flows entering channels
  - LID policies/infiltration projects
- ❖ Enhancement ideas
  - Earthen Bottom Enhancement Feasibility Study

5



## III. COMMUNITY MEETINGS

- ❖ 3 meetings conducted: 2 in Carson, 1 in Long Beach
- ❖ Invited 10,919 parcels from the affected area
- ❖ 160 property owners attended the meetings
- ❖ NFIP coordinators for cities attended the meetings



6



## III. COMMUNITY MEETINGS

### FEEDBACK

- ❖ Overall disbelief in the flooding issues
- ❖ When will flood insurance be required?
- ❖ Provide solutions as quickly as possible

7



## IV. ALTERNATIVES STUDY CURRENT STATUS

### STUDY SCOPE

- ❖ Evaluate Existing Conditions
- ❖ Establish Design Objectives
- ❖ Alternatives Analysis



8



## DOMINGUEZ CHANNEL

9

## DOMINGUEZ CHANNEL

- ❖ **Channel Design Requirements**
  - 100-year FEMA Required Channel Capacity: **26,280 cfs**
- ❖ **Existing Conditions**
  - Existing Channel Design Capacity: **-13,950 cfs**
- ❖ **Alternatives Objective**
  - Additional Required Capacity **12,330 cfs**

10

## DOMINGUEZ CHANNEL WATERSHED MAP



11

## PARK SITE: HOLLY PARK

- ❖ 5.1 acre Park
- ❖ 40 acre-feet of Detention Volume
- ❖ Flood Mitigation: 185 cfs
- ❖ \$17 Million



12

## PARKING LOT: INSURANCE AUTO AUCTIONS

- ❖ 22.5 acre Parking Lot
- ❖ Place Infiltration Basins Beneath Lot
- ❖ 52 acre-feet of Detention Volume
- ❖ Flood Mitigation: 210 cfs
- ❖ \$90 Million



13

## ALTERNATIVES SITES ASSESSMENT: DOMINGUEZ CHANNEL

SITE DESCRIPTION	MULTI-USE OPPORTUNITIES					Off Line Basin	Flood Mitigation (cfs)	IMPROVEMENT COST
	Water Quality	Recreation	Water Conservation	Habitat	Brown Field Location			
PARK SITES								
Alondra Field	*	*	*	*			200	\$ 30,800,000
Vernon Hemingway Memorial Park	*	*	*	*			179	\$ 13,600,000
Victoria Park	*	*	*	*			831	\$ 27,600,000
Del Amo Park	*	*	*	*			479	\$ 11,100,000
Dolphin Park	*	*	*	*			284	\$ 12,400,000
Torrance Boulevard Park	*	*	*	*	*	*	1,141	\$ 25,800,000
La Carretera Park	*	*	*	*	*		154	\$ 5,600,000
Columbia Park	*	*	*	*			175	\$ 77,000,000
Alondra Park	*	*	*	*		*	1,047	\$ 44,000,000
Bodger Park	*	*	*	*		*	314	\$ 16,500,000
Rowley Park	*	*	*	*		*	242	\$ 23,000,000
Holly Park	*	*	*	*			187	\$ 16,600,000
Darby Park	*	*	*	*			183	\$ 14,800,000
SCHOOL SITES								
Will Rodgers Intermediate School	*	*	*	*		*	220	\$ 27,400,000
El Camino Baseball/North Field	*	*	*	*		*	39	\$ 15,400,000
OTHER SITES								
Del Amo Gap	*	*	*	*	*	*	1,098	\$ 53,900,000
Royal Park	*	*	*	*	*	*	655	\$ 14,800,000
South Garden Park	*	*	*	*			190	\$ 14,500,000
Avalon Wetlands	*	*	*	*			84	\$ 17,200,000
Insurance Auto Auctions (Parking Lot)	*	*	*	*		*	208	\$ 90,200,000
TOTAL							7,755	\$ 550,800,000
Average Cost Per CFS Reduced \$71,025					Estimated Cost to Mitigate 12,330 CFS \$ 875,740,000			

14

## CHANNEL MODIFICATION ALTERNATIVES

### CHANNEL SHAPE MODIFICATIONS

- ❖ Rectangular, Trapezoidal, etc.

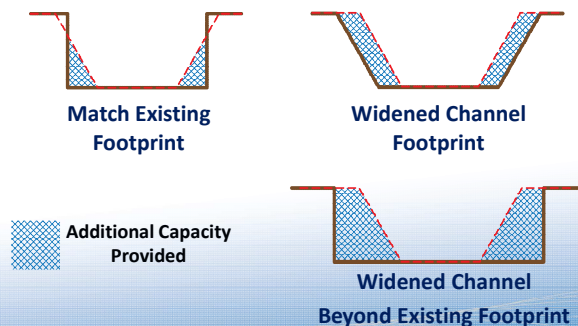
### CHANNEL LINING

- ❖ Smooth Concrete Bottom

### RAISE CHANNEL WALLS

15

## CHANNEL MODIFICATION ALTERNATIVES

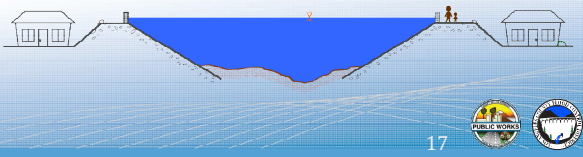


16



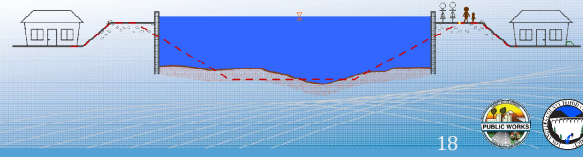
## PARAPET WALL ENHANCEMENTS

- ❖ Textured Concrete
- ❖ Bike Path Improvements
- ❖ Cost Estimate: \$500 Million



## CHANNEL MODIFICATION

- ❖ Textured Concrete
- ❖ Bike Path Improvements
- ❖ Cost Estimate: \$524 Million



## COMPTON CREEK

19

## COMPTON CREEK

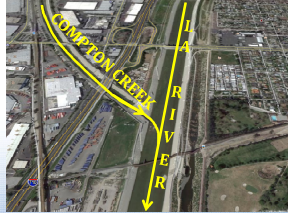
- ❖ 100-year FEMA Required Channel Capacity: **16,600 cfs**
  - Freeboard: **3 feet**
- ❖ Channel Design Capacity: **13,750 cfs**
- ❖ Identified Los Angeles River as a Downstream Control

20

## COMPTON CREEK

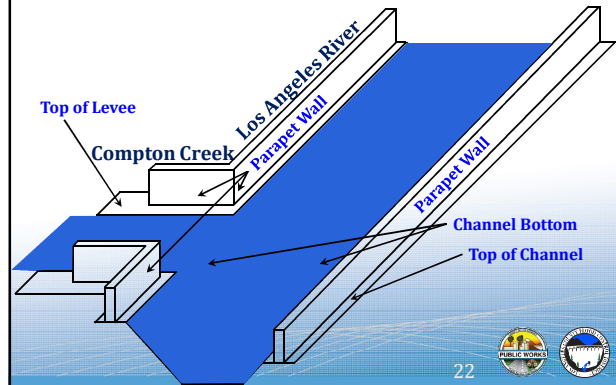
### COMPTON CREEK CONSTRAINT

- ❖ Los Angeles River Impact
  - The water surface level of the Los Angeles River controls the water surface level in Compton Creek
- ❖ Control Water Surface Elevation
  - Development increased the 100-year flow rate.
  - The higher 100-year flow rate increased the design water surface elevation by 3.51 feet



21

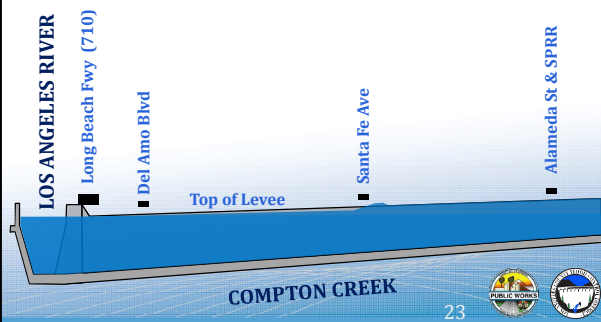
## LA RIVER AND COMPTON CREEK RELATIONSHIP



22

## COMPTON CREEK WATER LEVELS

- ❖ Shows downstream control elevation, and 100-yr flood (backwater effect)



23

## CHANNEL MODIFICATION ALTERNATIVES

### CHANNEL SHAPE MODIFICATIONS

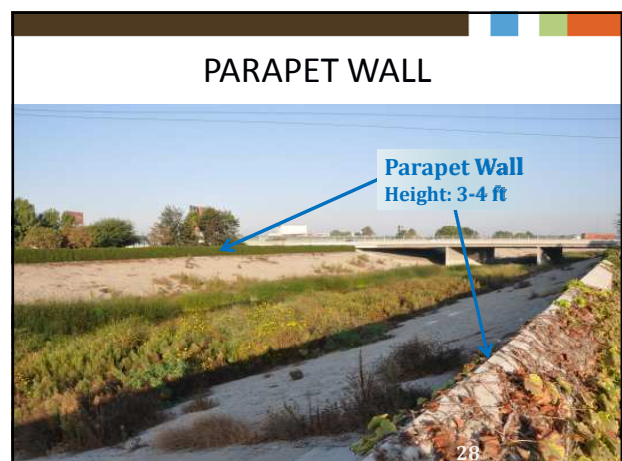
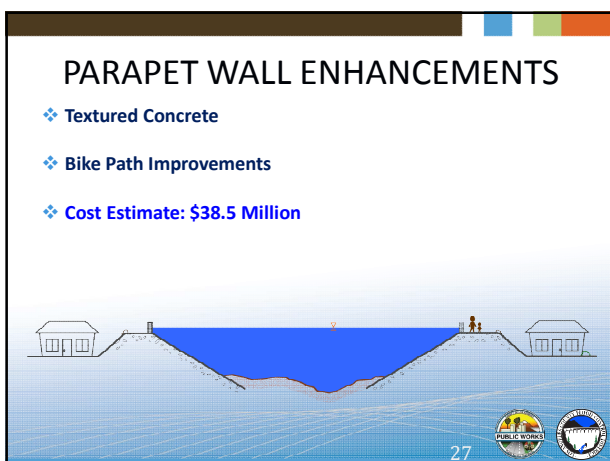
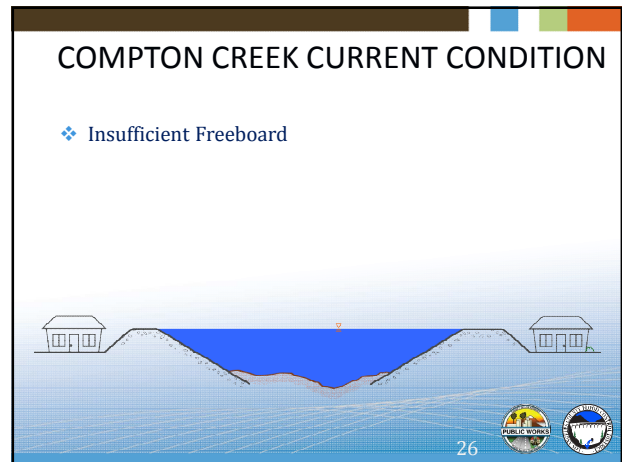
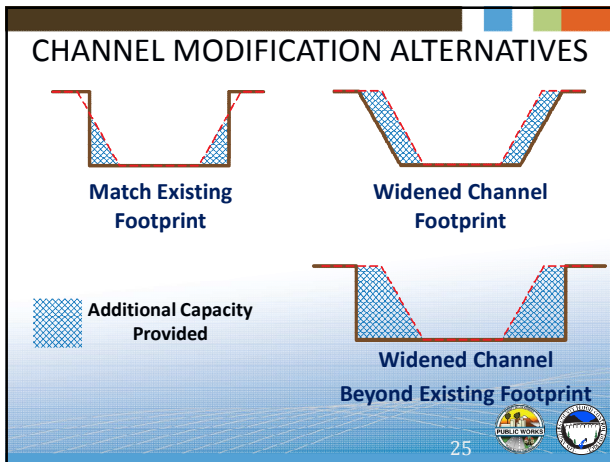
- ❖ Rectangular, Trapezoidal, etc.

### CHANNEL LINING

- ❖ Smooth Concrete Bottom

### RAISE CHANNEL WALLS

24



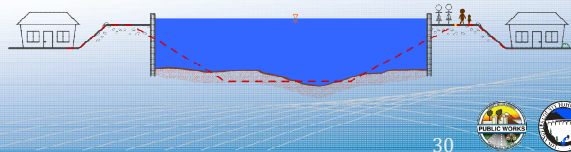
## PARAPET WALL ENHANCEMENTS



29

## CHANNEL RECONFIGURATION

- ❖ Vertical Concrete Walls
- ❖ Soft Bottom
- ❖ Bike Path Improvements
- ❖ Cost Estimate: \$126 Million



30

## COMPTON CREEK WATERSHED MAP



31

## SCHOOL SITE: COMPTON H.S.

- ❖ 7.2 acre Baseball and Soccer field
- ❖ 55 acre-feet of Detention Volume
- ❖ Flood Mitigation: 130 cfs
- ❖ \$23.6 Million

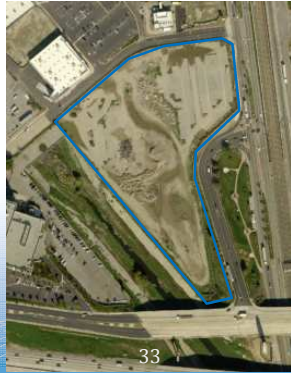


32



### PARK SITE: GATEWAY PARK

- ❖ 8.4 acre Vacant Lot
- ❖ 55 acre-feet of Detention Volume
- ❖ Flood Mitigation: 90 cfs
- ❖ \$17.3 Million



33

### PARK SITE: TED WATKINS PARK

- ❖ 14.9 acre Park
- ❖ 135 acre-feet of Detention Volume
- ❖ Flood Mitigation: 240 cfs
- ❖ \$28.4 Million



34

### REDEVELOPMENT SITE: JORDAN DOWNS EXPANSION

- ❖ 14.0 acre Vacant Lot
- ❖ 95 acre-feet of Detention Volume
- ❖ Flood Mitigation: 365 cfs
- ❖ \$28.5 Million



35

### ALTERNATIVE SITES ASSESSMENT: COMPTON CREEK

SITE DESCRIPTION	MULTI-USE OPPORTUNITIES					Flood Mitigation (CFS)	IMPROVEMENT COST
	Water Quality	Recreation	Water Conservation	Habitat	Brown Field Location		
LACFCD FACILITY							
Compton Creek Pump Station	•					430	\$ 330,000
SCHOOL SITES							
Compton High School		•		•		130	\$ 23,600,000
Davis Middle School		•		•		75	\$ 27,900,000
Compton Elementary	•	•	•	•		90	\$ 8,600,000
PARK SITES							
Gateway Park	•	•	•	•		90	\$ 17,300,000
Cressey Park	•	•		•		155	\$ 12,800,000
Maigic Johnson Park	•	•	•	•		490	\$ 52,900,000
Clovie Avenue Park	•	•	•	•		195	\$ 20,900,000
Ted Watkins Park	•	•	•	•		240	\$ 28,400,000
South Park	•	•		•		500	\$ 39,000,000
REDEVELOPMENT SITE							
Jordan Downs Expansion	•	•	•	•		365	\$ 28,500,000
TOTAL						2,760	\$ 260,230,000

36

## ASSESSMENT OF ALTERNATIVES: RESULTS

Assessment Criteria	Compton Creek	Dominguez Channel
Existing Design Capacity	13,750 cfs	13,950 cfs
100-year FEMA Capacity	16,600 cfs	26,280 cfs
Capacity Needed	N/A	12,330 cfs
Constraint	Water Surface in LA River	Channel Capacity
<b>Detention Site Concepts</b>	<b>11 sites</b>	<b>20 sites</b>
Flow Reduction	2,760 cfs	7,755 cfs
Adtl. Flow Reduction Req'd.	N/A	4,575 cfs
Estimated Cost	\$265 Million	\$875 Million
<b>Channel Modifications</b>		
Parapet Walls	\$38.5 Million (3-4 ft, varies)	\$500 Million (6-9 ft, varies)
Rect. Channel/Soft Bottom	\$126 Million	\$524 Million

37



## V. FEMA AND NFIP INFORMATION UPDATE

- ❖ New levee analysis guidelines being developed by FEMA (release anticipated early 2012)
- ❖ Flood hazard boundaries for our region to be mapped by FEMA by mid to late 2012
- ❖ Legislative changes to the National Flood Insurance Program

38



## VI. RECOMMENDED ACTION PLAN

### PENDING FEMA GUIDELINES

- ❖ Expected new FEMA levee guidelines may impact action plan

### COMPTON CREEK

- ❖ If necessary, recommend a parapet wall project that includes multi-use enhancements.

### DOMINGUEZ CHANNEL

- ❖ Recommend a combination of channel modification and parapet wall projects that may include multi-use enhancements

### PURSUE ALTERNATIVE SITES FOR LOCAL DRAINAGE ISSUES

39



## VII. QUESTIONS/COMMENTS



???

40



## VII. NEXT STEPS

1. Adjust Alternatives Study based on FEMA's new levee guidelines
2. Further develop the Alternatives Study
3. Share Draft Alternatives Study with the Advisory Committee and community
4. Finalize the Alternatives Study

41



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42

