

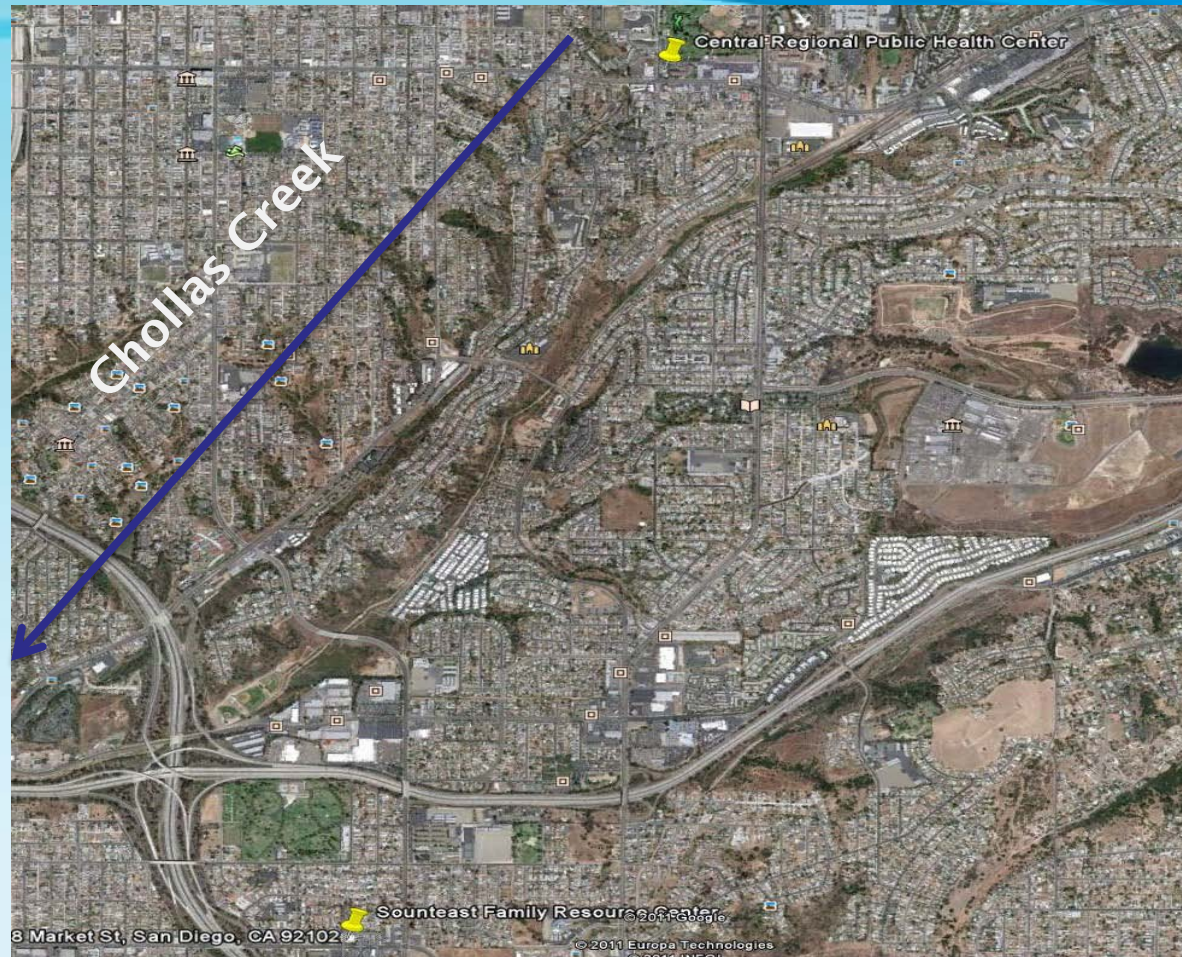
Chollas Creek Runoff Reduction & Groundwater Recharge

Deena Raver
County of San Diego
Department of General Services

Urban & Regional Planning
IRWM RAC Meeting



Central Region Public Health Center and Southeast Family Resource Center Locations



Project Overview

- **Demonstrate use of LID for TMDL compliance.**
- **Retrofit LID measures into existing development.**
- **Gain experience with rubberized porous pavement mix.**
- **Gain experience with bio-filter design and soil media.**
- **Monitor to assess effectiveness of porous pavement and biofiltration.**

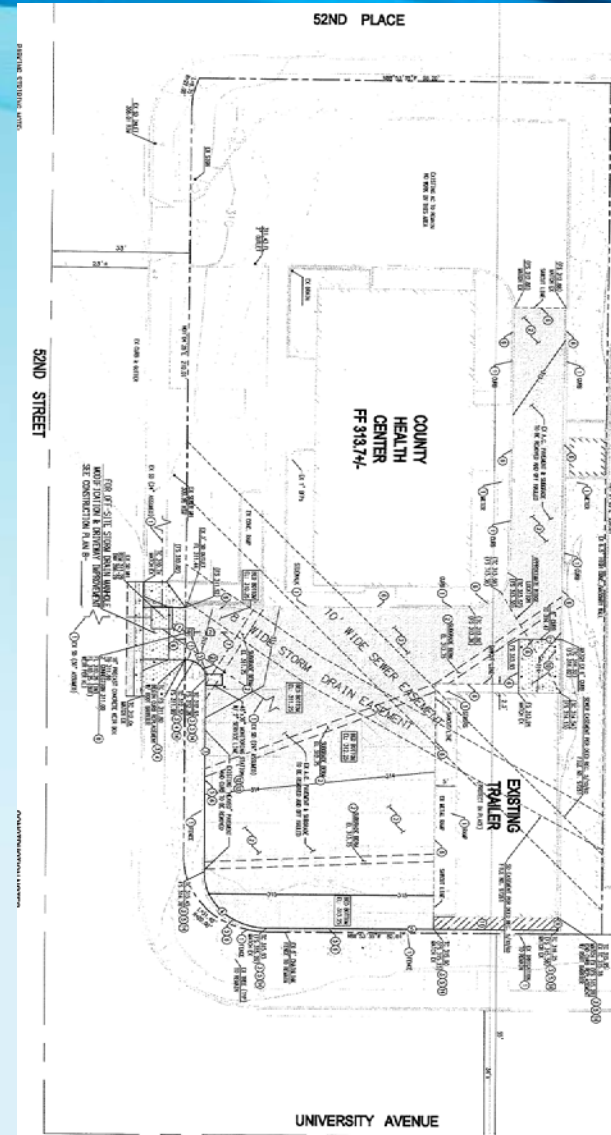
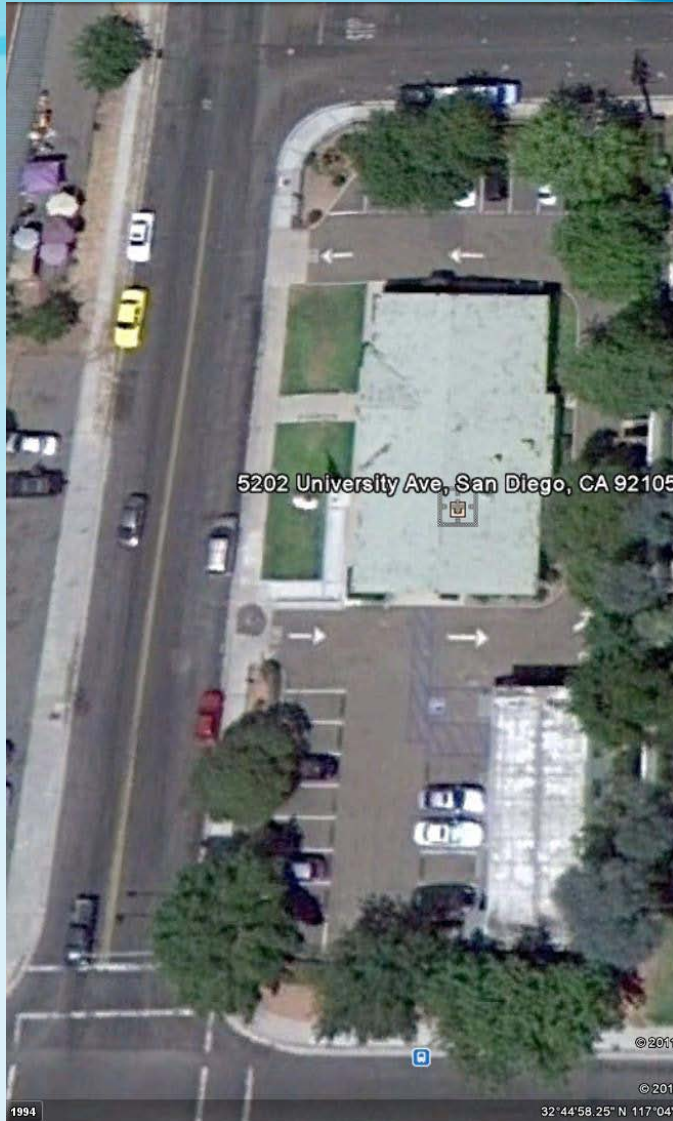


Meeting Regional Priorities & Contributing to Regional Integration

- **Supported the Region's IRWM Goals and objectives**
 - Address water quality management
 - Provide multiple benefits
 - Complement other projects within Chollas Creek Watershed
 - Benefit disadvantage communities
 - Build on local and regional planning efforts
 - Foster partnerships
 - Demonstrate LID Projects for various audience
 - Benefit the Chollas Creek Watershed and San Diego Bay
 - Specific water shed benefits
 - Reducing runoff
 - Reducing discharge of pollutants



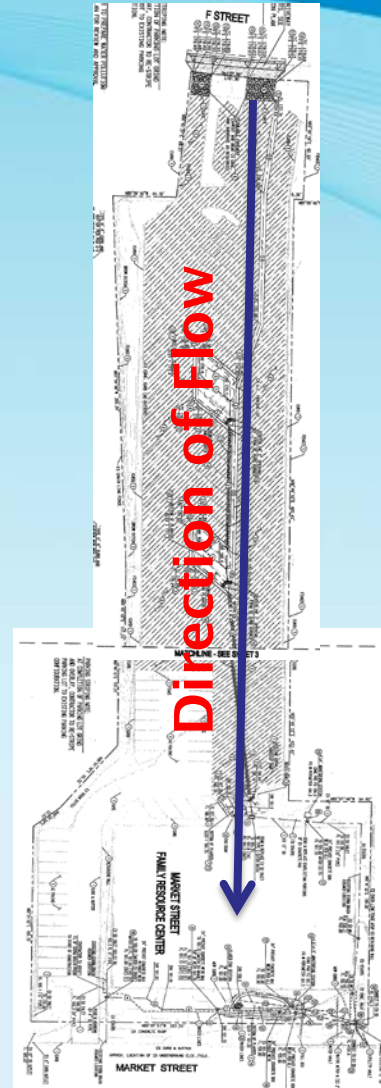
Central Regional Public Health Center



Porous Pavement Construction



Southeast Family Resource Center



Bio-filtration Planter Construction



Bio-filtration Planters

Planter 3



Planter 4



Overcoming Bio-Filter Operational Challenges



- **Experienced capacity problem in planters 1 & 2**
 - Improved capacity by regrading to improve surface storage
 - Demonstrated that visual monitoring during storms is important



Overcoming Bio-Filter Operational Challenges



- **Experienced very slow infiltration through soil matrix in planter 3**
 - Found clotting within planter mix
 - Possibly related to discharge of oil after slurry coating of parking lot
 - Probing planter helped flow
 - Portion of soil matrix excavated and replaced
 - Will continue to monitor



Lessons Learned

Lessons

- Retrofitting BMPs into existing development is difficult.
- As-built plans need to be kept up-to-date.
- Infiltration and bio-filtration can be difficult to implement.
- Good bio-filtration soil media is hard to find in San Diego.
- Contractors need more education on LID BMPs.

Responses

- Educate Regional Board about difficulties.
- Amend as-builts to show changes.
- Target use of BMPs to fit sites.
- Adopt a regional bio-filtration soil media formula.
- Continually educate contractors.



Evolution of the project

- **Original Project Scope:**

- Proposed \$1,300,00 project
- We were asked to reduce the amount by more than ½, therefore the additional sites and BMP were removed.
- Included 2 sites

- **Final Project Scope:**

- Reduce to \$710,000
- Included 5 sites
- Included additional BMP to vegetated roof system and capture/reuse technology.



Financial Statistics

Actual

• Grant contributions	\$ 600,000
• Administration	\$ 18,000
• <u>Match contributions</u>	<u>\$ 185,625</u>
• Total Project Cost	\$ 803,225

Budget

• Grant Budget	\$ 600,000
• Administration	\$ 18,000
• <u>Required Match</u>	<u>\$ 100,000</u>
• Project Total Cost	\$ 728,000



Contact Information

Thank You

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