



## Public Works

**Andy Silao**

*Engineering Manager, Contracts Division Chief*

**Byanka Velasco**

*Division Manager, Special Districts – Project Management*

**Marc Rodabaugh**

*Engineering Manager, Solid Waste Management Division*



**Construction Network Presentation - 2023**

[www.SBCounty.gov](http://www.SBCounty.gov)





## Public Works

**Andy Silao**

*Engineering Manager/Division Chief – Contracts*



**Construction Network Presentation - 2023**

[www.SBCounty.gov](http://www.SBCounty.gov)



San Bernardino is the largest County in the Country.

County has 3 geographic areas:

- Valley
- Mountain
- Desert

San Bernardino has 24 Cities/Towns

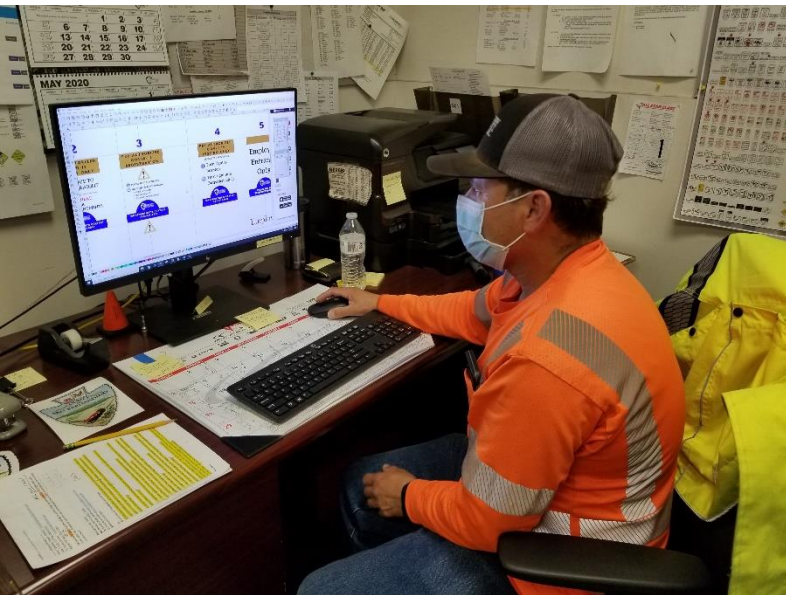


# PUBLIC WORKS EMERGENCY RESPONSE

## Why Me?

"...all public employees are hereby declared to be disaster service workers subject to such disaster service activities as may be assigned to them by their Superiors or by law..."

*-California Government Code Section 3100*





# PUBLIC WORKS WEBPAGE RESOURCES

Page 5



Latest News | **Public Notices** | Maps & Data

## Latest News

### Photos with Easter Bunny and Egg Hunt

April 3, 2023

Saturday Ayala Park. BRPD hosted our first annual "Photos with Easter bunny and egg hunt" at Ayala Park. We had 5 egg hunts from 10am to 11am. Each egg hunt...

### Saturday at Kessler Park

April 3, 2023

Saturday at Kessler park was a gorgeous day. Bloomington Little League finally had a sunny...

[NEWS](#) | [SPECIAL DISTRICTS](#)

### Redwood Avenue and Other Roads Project Completed

March 21, 2023

The San Bernardino County

## Report a Problem

See an issue that needs to be addressed. Using our new SeeClickFix app, you can report a problem and get feedback on the progress.

[Click to Report a Problem >](#)

## Waste Disposal Sites

Our interactive map will help you find the nearest disposal site to you.

[View the Map >](#)

## How to Obtain a Permit

GIS Maps Published by the County of San Bernardino Department of Public Works



County Maintained Roads



County Snow Removal Roads



Flood Control Facilities



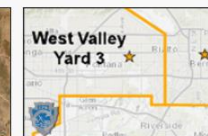
Flood Control Right of Way



Public Road Closure Map



SWMD Waste Disposal Sites



Transportation Road Yards Map

[Public Works – Public Works \(sbcounty.gov\)](https://dpw.sbcounty.gov) - <https://dpw.sbcounty.gov>

SAN BERNARDINO COUNTY PUBLIC WORKS



## PUBLIC WORKS DEPARTMENT



### TRANSPORTATION

- Planning
- Traffic
- Design
- Environmental
- Construction
- Operations
- Permits



### FLOOD CONTROL

- Planning
- Water Resources
- Design
- Operations
- Permits
- Environmental



### SURVEYOR

- Mapping
- Field Survey
- GIS
- Front Counter



### SOLID WASTE

- Engineering
- Recycling Programs
- Operations



### SPECIAL DISTRICTS

- County Service Areas
- Community Facility Districts
- Street Light Districts
- Road Improvement Zones
- Water and Sanitation Districts
- Parks and Recreation
- Project Management



The County Surveyor's position was one of the first County positions created in 1853.

- Reviews subdivision maps as prescribed by state law
- Prepare legal descriptions and maps for other county departments
- Assist the public in matters relating to land boundaries
- The Surveyor ensures these maps and plans conform to conditions of approval, local ordinances, standards for development, and state laws.
- The Surveyor's also provides construction staking for new roads and flood control channels. The Surveyor also maintains the county GIS Parcel Basemap for integrity and accuracy.





# SOLID WASTE MANAGEMENT



- The Solid Waste Management Division (SWMD) is responsible for the operation and management of the County's solid waste disposal system, which consists of five regional public landfills, eight transfer stations, three low volume transfer operations, three community collection centers and thirty-three closed landfills or disposal sites.
- Sanitary landfills are disposal sites for Non-Hazardous solid waste.
- Curbside collection Program.



# SPECIAL DISTRICTS



- County Service Areas
- Community Service Districts

- Road Improvement Zones
- Water and Sanitation District

- Street Light Districts
- Park and Recreation



# TRANSPORTATION



Transportation is responsible for the operation, maintenance, and improvement of the county's road system that currently includes approximately 2,552 miles of roadways.





Perform maintenance of the County/District facilities which includes:

- Roadway
- Reconstruction
- Overlay
- Surface Seals
- Storm Repair
- Preventative Improvements
- Dead animal pickup
- Grading
- Guardrail repair
- Bridge repair
- Snow Plow
- Levee repair



- Pavement projects
  - Reconstruction
  - Overlay
  - Surface Seals
- Widening, New Construction
- Grading
- Emergency Projects





# OPERATIONS DIVISION - SNOW REMOVAL/STORM CLEAN UP

Page 13

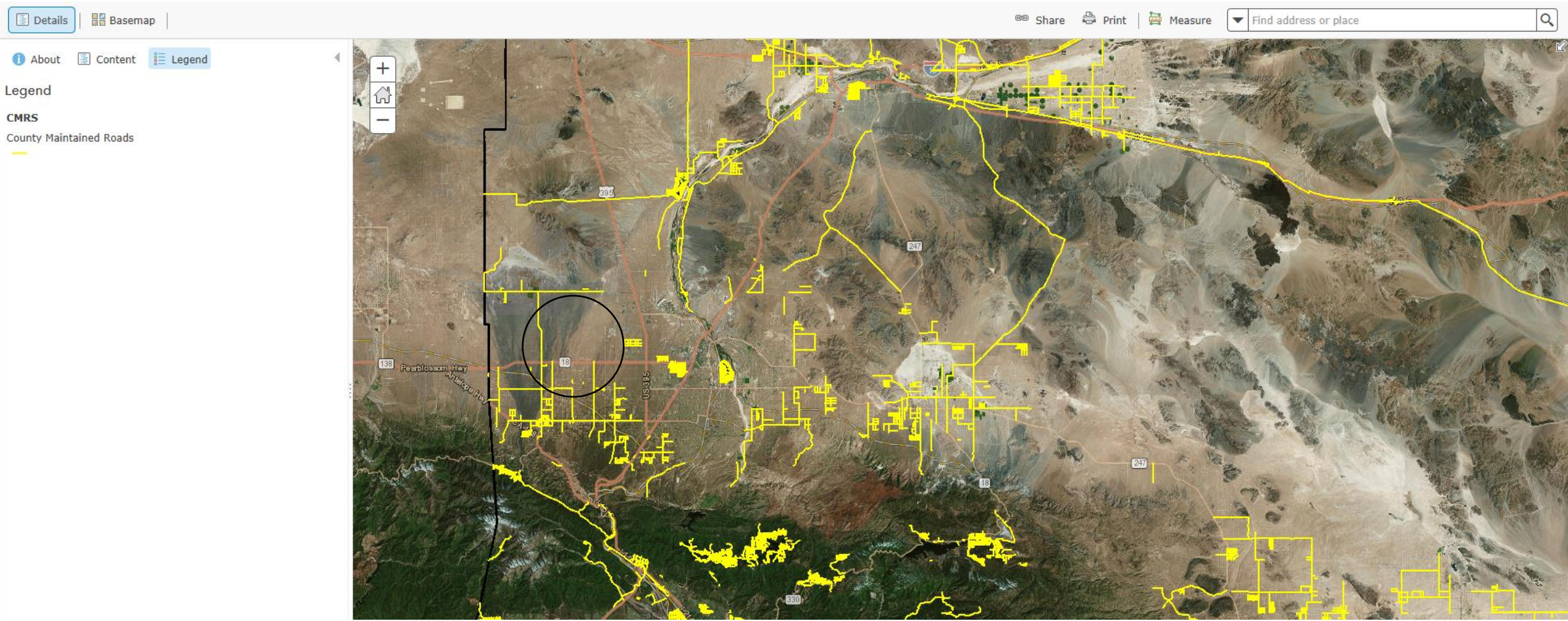




# PUBLIC WORKS WEBPAGE RESOURCES - CMRS

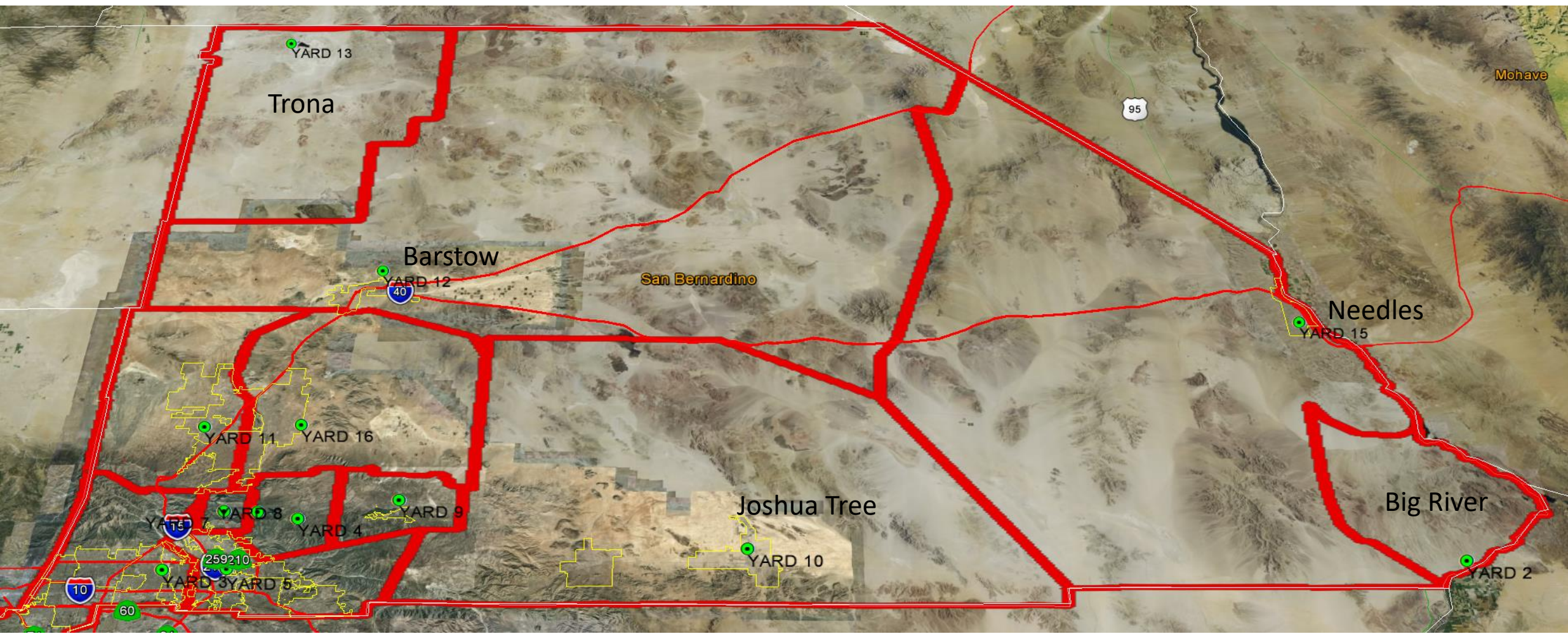
Home ▾ County Maintained Road System (CMRS)

Modify Map  Sign In





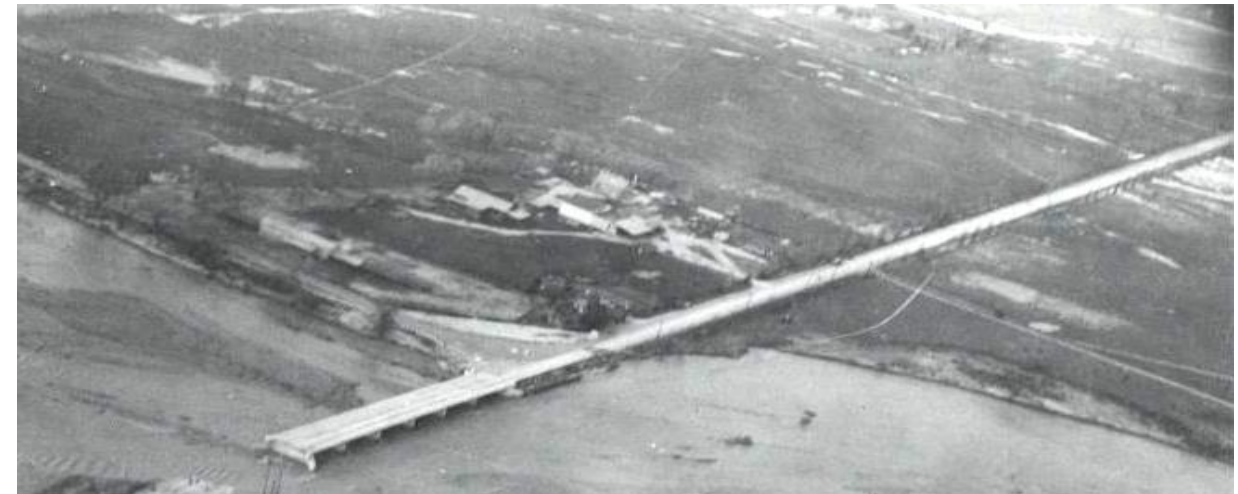
# ROAD YARD LOCATIONS – 12 + 1 Seasonal





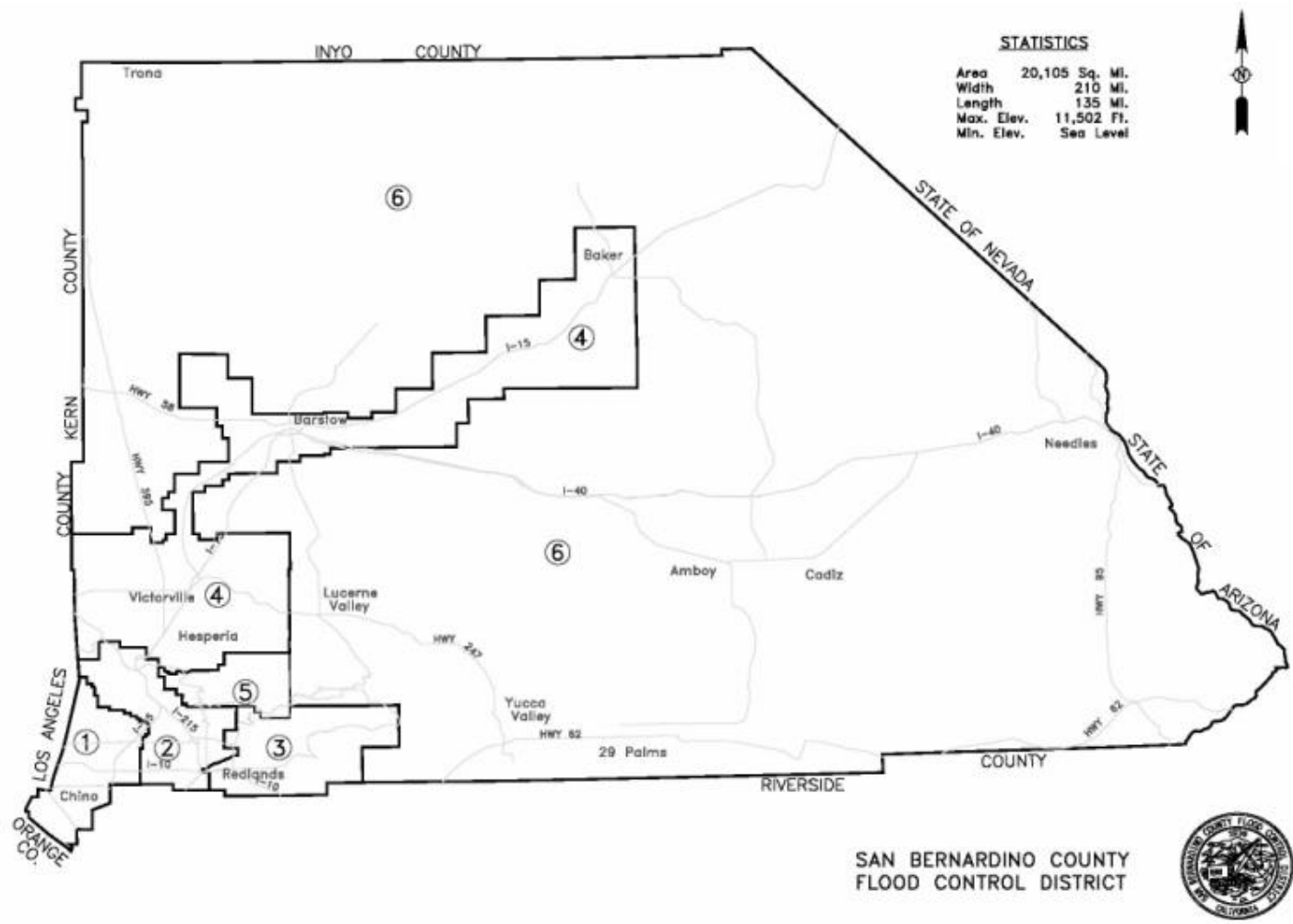
# FLOOD CONTROL DISTRICT

- The **San Bernardino County Flood Control District (FCD)** was created in 1939 and has developed a very extensive system of regional flood control and water conservation facilities including dams, conservation basins, debris basins, channels, and storm drains.
- The **FCD** provides a wide range of services and infrastructure to enhance the quality of life and help secure the safety of our diverse communities within the county.
- The primary functions of the **FCD** are to provide Flood protection on major streams, water conservation, and flood control facilities construction.
- The **FCD** has developed facilities throughout the County, including dams, levees, stormwater detention/conservation basins, channels, and storm drains. The purpose of these facilities is to capture and convey flood flows through and away from the major developed areas of the County.
- The **FCD** is divided into three main Divisions including the **Flood Control Planning / Water Resources Division**, and **Flood Control Engineering Division**.





# FLOOD ZONE ZONES



**Zone 1      275 square miles**  
The westerly portion of the San Bernardino Valley.

**Zone 2      318 square miles**  
The central area of the San Bernardino Valley.

**Zone 3      366 square miles**  
The easterly end of the San Bernardino Valley.

**Zone 4      1,783 square miles**  
The Mojave River Valley to Silver Lakes.

**Zone 5      163 square miles**  
The mountainous watershed of the Mojave River.

**Zone 6      17,200 square miles**  
The remainder of the County not embraced by other zones.

**Total District Area:    20,105 square miles**

# FLOOD CONTROL DISTRICT OPERATIONS

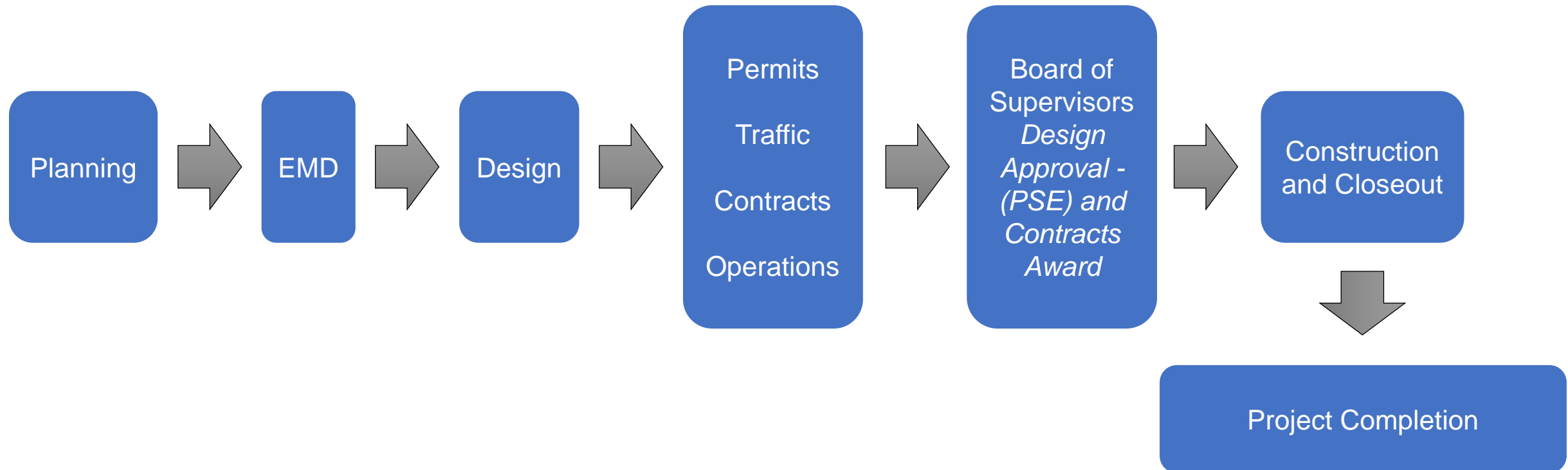
Page 18

- Flood protection from Major Streams
- Water Conservation
- Water Protection
- Protection of Stream and Watercourses
- Storm Drain Maintenance
- Hydrological Programs
- Debris Removal Programs
- Flood Hazard Investigations
- Flood Operations





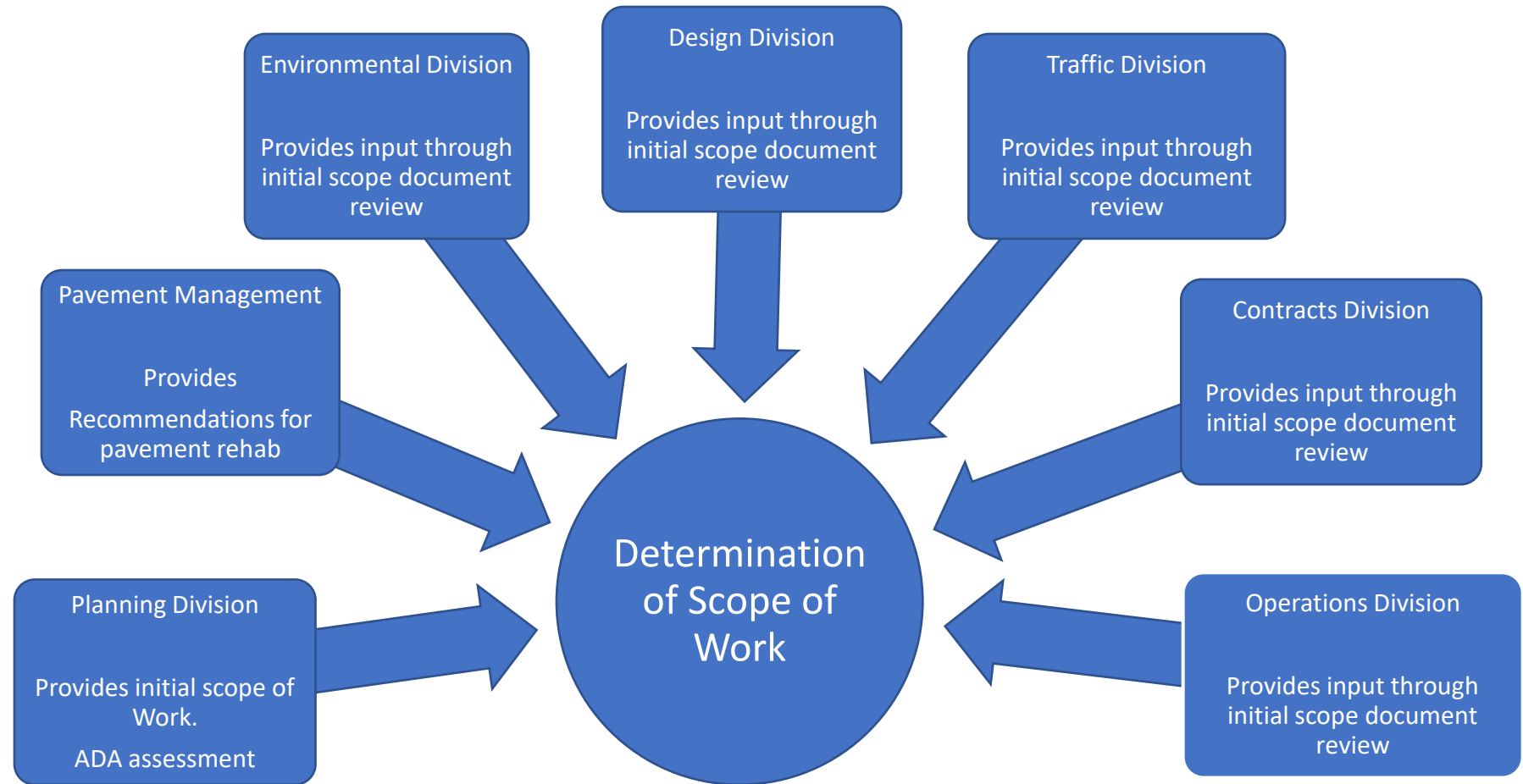
# PROJECT PHASES



# PROJECT PHASES – PLANNING SCOPE DETERMINATION MEETING

Page 20

- Scope Determination
- Funding / Budgeting
- Planning
- Funding Types
  - Federal
  - Gas Tax
  - SB 1
  - Measure 1
  - Cal Recycle
  - Local Funds
  - ATP
  - SBCTA
  - CDBG
  - HPB





- Schedules and Programs CIP and Pavement Rehabilitation Projects
- Seeks funding sources
  - i.e., Measure I, SB 1, Gas Tax, Community Development Block Grant (CDBG), Transportation and Infrastructure Grants, American Rescue Plan Act (ARPA)
- Allocates and tracks funding for Projects
  - Planning through Construction/Project Closeout phases
- Establishes Cooperative Agreements and Reimbursements
  - i.e., Cities, Caltrans, San Bernardino County Transportation Authority (SBCTA)
- American Disabilities Act (ADA) DPW Program Coordinator
  - reviews, field-verifies, and updates **all** County ADA ramps in compliance with the Federal ADA requirements.



- Flood Control Planning Division is responsible for preparing hydraulics for Comprehensive Storm Drain Plans (CSDPs) and Master Plans of Drainage (MPDs) to provide the planning documents to mitigate against flooding, thereby protecting residents and their properties.
- Flood Control Planning explores grant opportunities, determine the FCD needs, submit grant applications, provides grant management/closeout, also reviews construction permits, environmental permits, and Letters of Map Change (LOMC) submittals.
- Performs HEC-RAS modeling for various projects and grants to analyze potential flooding hazards. Other tasks/assignments include assistance with aerial maps, annual and quarterly basin inspections, post-fire field investigations and Fire Safety Assessment Team (SAT) Reports to identify and mitigate flooding risks within the County.
- Manage the Flood Control System Number Index, also referred to as the "Redbook".

- The Water Resources Division prepares hydrology models for MPDs and CSDPs.
- Collaborates with Federal Emergency Management Agency (FEMA) to prepare FEMA maps and Flood Insurance Studies (FIS). Prepares and reviews LOMR.
- Performs floodplain analyses and participates in permit and environmental reviews for the safety and protection of San Bernardino County.
- Develops the SAT Reports after major wildfires. These reports' purpose is to identify County drainage facilities that may be impacted by debris flows and identify hazards outside the County right-of-way.
- Operates and maintains the rain and streamflow gauges, and monitors the associated data collected from these gauges. The data stored is used for flood control storm warnings, structure and channel design, environmental/hydrology studies, and evidence for litigations.
- Coordinates with local water agencies for groundwater recharge in facilities owned and/or maintained by the District.



- Environmental Management Division (EMD) is responsible for reviewing the project scope and determines the path of compliances with the Environmental Agencies (State and Federal) for construction activities.
  - CEQA, NEPA, MND
- EMD role is critical as it shapes how projects are constructed by informing the various divisions which areas are protected, which species are protected and how to minimize and mitigate the upcoming construction and developed activities and impacts.
- Ensures compliance with the Construction General Permit (CGP) as well as the County's Municipal Separate Storm Sewer System (MS4) Program
  - Phase 1 - Santa Ana Region
  - Phase 2 – Mojave Desert
  - Colorado Region



- Transportation and Flood Design is responsible for designing the Project and incorporates the various comments and requirements from all the divisions.
- Design is responsible for the Plans, Special Provisions, Estimate and produces a design that will fit within the scope from Planning.
- Gains approval from the Board of Supervisors for the project advertisement (Contracts).



## Transportation / Flood Control Design

### Review

- Field Review
- Data Collection
  - Surveying
  - Geotech
  - Utilities
  - Traffic
  - Hydrology
  - Right-of-way
  - Structural

### Design

- Preliminary Design
- Environmental
- Regulatory Permits
- Special Provisions
- Quantity Calculations
- Final Design – Signed Plans and Specs

### Construction Support

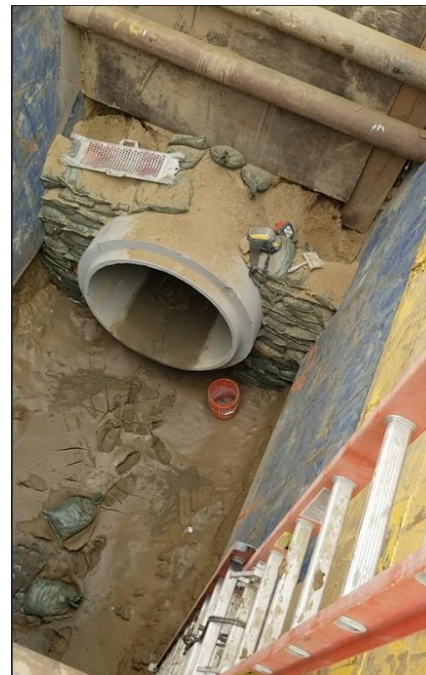
- RFI
- Change Order - Review and Support

## All work within CMRS Requires a permit

- **Moving Permits** - Issued to move manufacture homes, steam generators, giant excavators etc.
- **Excavation Permits** - Issued to install underground utility lines as well as storm drains.
- **Road Construction Permits** - Issued to Construct new roads for commercial and residential development.
- **Encroachment Permits** - Issued to construct residential and commercial driveways.
- **Special Event Permits** - Issued for special events like Big Bear Tour of France, Redlands Classic, County of SB Sheriffs Memorial Runathon, etc.
- **Tract Permits** - Issued to construct all the roads in tract developments to be maintained by the County.
- **Tree/Trimming Permits** - Issued to trim/remove trees that are dead, diseased, safety issue or causing damage to property.
- **Filming Permits** - Issued Filming Permits to film movies and shows like Grace Anatomy, Conjuring, Devil Made Me Do It, City of Angels, etc.
- **Road Closure Permits** - Close roads for safety issues.
- **Conditional Utility Work Authorization Permits** - Issued to all utility companies for emergency work, new services connections and maintenance that doesn't involve cutting into CMRS roads.
- **Adopt A Road Permits** - Allows public to adopt road and clean up trash along the road for a day or for an entire year.
- **Neighborhood Watch Permits** - Public works with local sheriffs to install Neighborhood Watch Signs within their community.
- **Respond To Constituent Complaints And Operation Maintenance Request** - Meet with constituents and operations about any concerns in public road right-of-way.



**All work within CMRS Requires a permit**



**All work within and access to the Flood Control District right-of-way, even on a temporary basis, requires a permit from the Flood Control District.**

- **Construction Permits** - Permit construction occurring within District R/W
  - Protect District facilities and limit liability
  - Protect ocean, rivers and creeks
- **Corps of Engineers Oversight**
  - Facilities the Corps constructed or funded within San Bernardino County
  - Coordination / Liaison with the Corps of Engineers for the issuance of 408 Permissions
- **Storm Patrol** - Manage and coordinate deployment of Storm Patrol
- **Lytle Creek Gatehouse**
  - Operate and maintain on behalf of the Corps of Engineers
  - Severe storm events we close gate to act as a detention basin



- **Basin & Facility Inspection**

- After the storm season ends (March 15<sup>th</sup>) perform Annual Facility Inspections and report any deficiencies to Operations for them to fix before they become larger issues.

- **Lease, License, Annual Permit Inspections/Tracking**

- Perform tracking of Lease/License/Annual permits (I.E. expiration, insurance expiration and fees due)
- Entities utilizing District property for other uses such as parking lots, driveways, Apiary, Trails.
- Inspect the permitted area to make sure there aren't any deficiencies that need to be corrected by the permittee

- **Surplus Material Permits**

- Operations removes sand & gravel from our basins and channels and stockpiles it on adjacent r/w. We coordinate with Operations to try to sell this material to vendors.

- **Disaster Recovery Claims (FEMA and Cal OES)**
  - Responsible for applying for federal or state funding assistance after a disaster for both Flood Control and Transportation.
  - Submitting valid eligible cost, with all the supporting documentation.
  - Our goal is to get the appropriate assistance and not be vulnerable to audits that may come later.
- **Create, Maintain, and Distribute Emergency Action Plans for our DSOD Dams**
  - For each DSOD jurisdictional dam, coordinates with all the stakeholders and create and maintain all of Emergency Action Plans.
  - Provide Emergency Action Plan training and exercises.
- **Division of Safety of Dams Inspections**
  - Work with Operations to ensure that all DSOD jurisdictional dams are maintained to the DSOD standards.
  - Coordination and joint inspections with DSOD.



- **Levee Safety Program (23 Levees)**
  - Work with Operations to ensure that the USACE built levees are maintained to the USACE standards.
  - The U.S. Army Corps of Engineers (USACE) Levee Safety Program works to better understand, manage, and reduce the flood risks associated with levees.
  - Video inspect every pipe passing through our levees and rate using the NASSCO rating system.
- **USACE Levee Rehabilitation Program**
  - All USACE built levees are automatically in the Rehabilitation Program.
  - The Rehabilitation Program is a disaster recovery program in which the USACE will pay for 80% of the cost to repair facilities that have “Active” status.

- Traffic Division is responsible for the Signing and Striping Plans.
- Inspects, verifies and approves the Cat-Track prior to striping the project. (Construction)
- Traffic Division ensures compliance with CA-MUTCD





- Understanding how new development impacts the road network.
- Signal operations and maintenance.



- Contracts Division constructs the projects from both SBCFCD, DPW Transportation as well as other Departments within the County.
- Contracts Division ensures compliance with:
  - Construction Materials (Lab Testing/QAP)
  - Contract Compliance with various State and Federal
- Departments (Labor, Davis-Bacon, Caltrans, etc.)
  - Environmental Coordination (DFW, CEQA/NEPA, MND, etc.)
  - Board Approve Plans, Specs and Construction Contract.

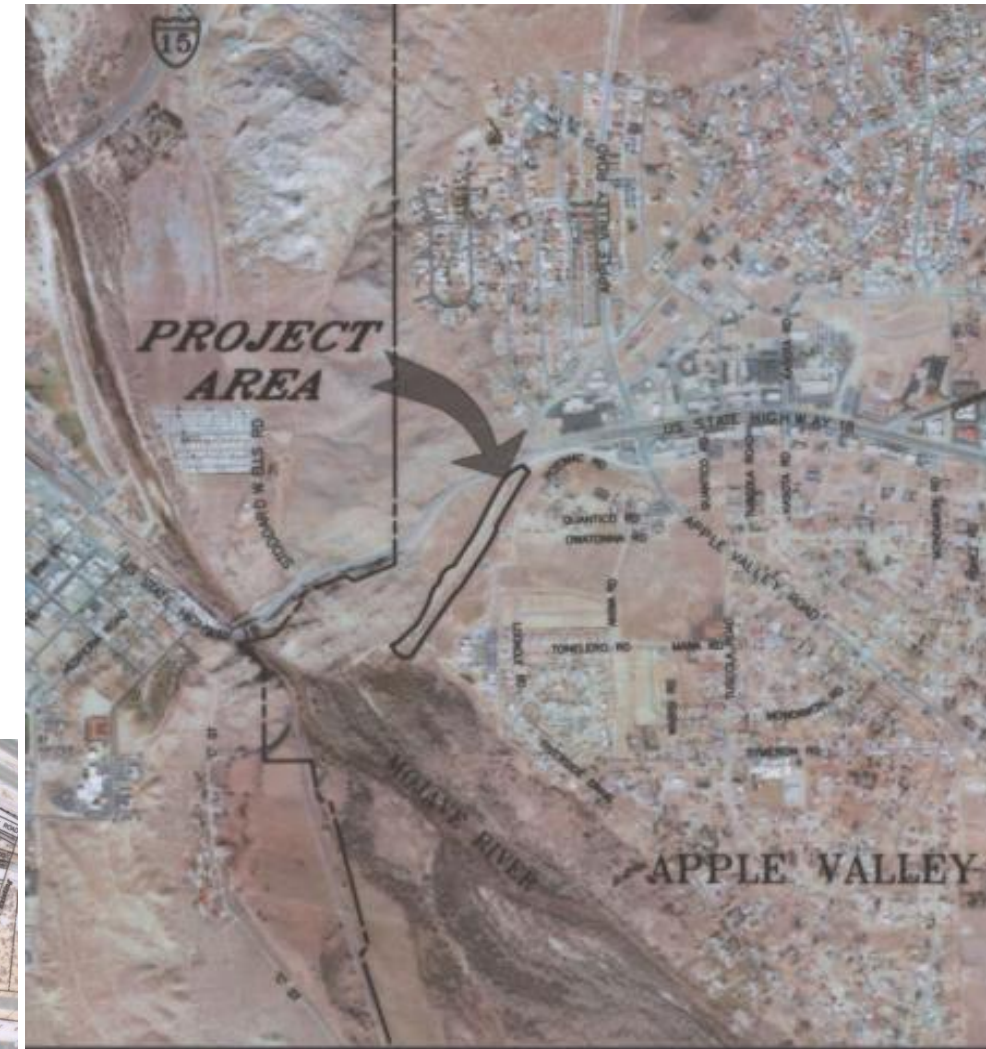
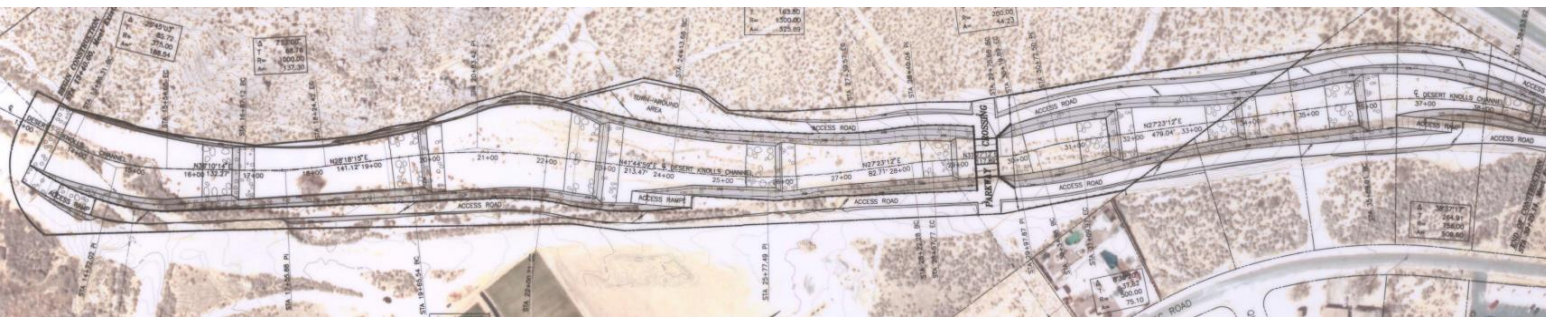


## Contracts Division - Construction

- Funding Verification
- Advertisement of BOS approved Plans & Specs
- Pre-Bid, Q&A, Bid opening
- Bid verification
- BOS awards contract
- Contractor Submittals
- Departments / agencies coordination
- Pre-Construction Meeting
- Construction
- Inspections
- Material testing (QA)
- Payments
- Acceptance
- Project close-out

# UPCOMING PROJECT HIGHLIGHTS

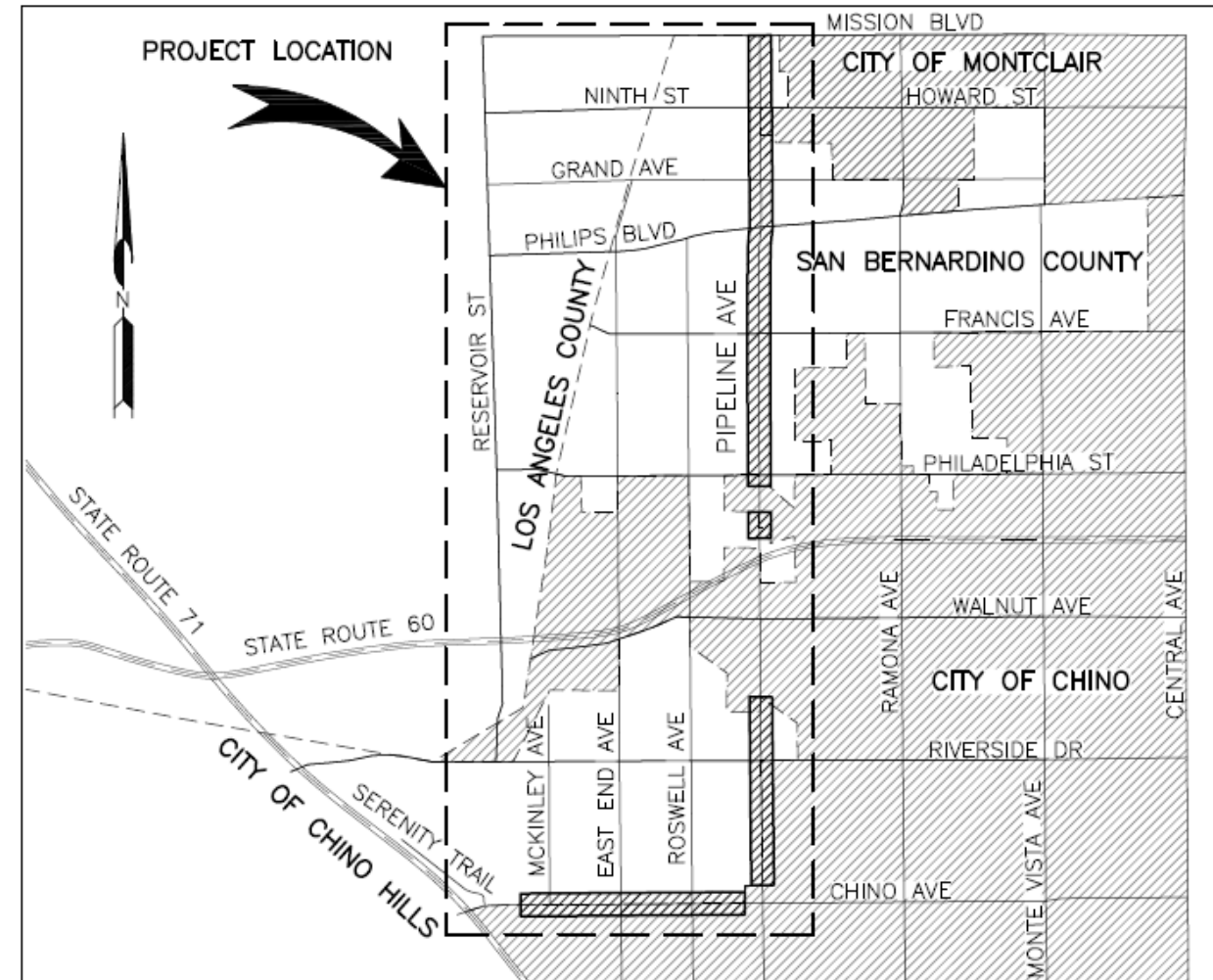
- Earthen Channel
- 2,700 LF of Channel Constructed
- Construction – Winter 2023 - Winter 2024
- Features
  - Plunge Pool Design
  - Earthen Bottom Promotes Percolation
  - Drop Structures
  - Widened and Improved Channel





## Pipeline Avenue and Other Roads – Chino & Montclair Areas

- Project Length – 3.25 Miles
- Construction – Winter 2023 – Spring 2024
- Mill & Overlay
- Full Depth Reconstruction
- ADA Ramps
- Storm Drain



## Flood Control District

- El Rey Culvert Replacement (29 Palms) – 2023
- Randall Ave. Culvert Replacement (Rialto) - 2023
- Rialto Channel Trail Fence (Rialto) - 2023
- Birch Elder Creek Channel (Mentone) – 2024
- Desert Knolls Wash (Apple Valley) – 2023

## Transportation

- Ceres Ave. and Other Roads (Fontana) - 2024
- Pipeline Ave. & Other Roads (Chino & Montclair) – 2023
- Park Ave. and Other Roads (Wrightwood) – 2023
- Lynwood Ave. and Other Roads (Arrowhead Farms, Del Rosa and Highland ) – 2023
- Baker Blvd. and Other Roads (Baker) – 2023
- Mission Blvd. (Montclair) – 2023
- Lake Gregory Dr. and Lake Dr. (Crestline) – 2023
- Linden Avenue and Locust Avenue (Bloomington Area) - 2024



**Electronic Procurement System - <https://epro.sbcounty.gov/bsa/>**

- Project Advertisements (Flood and Trans)
  - Select correct commodity codes:
  - National Institute of Government Purchasing (NIGP) Class 913 and Class 27
- Creates Plan holders List
- Prebid Information
- Submits Questions for Bidders
- Plans and Specifications available for download
- Disperses addendum(s)
- Bid Submission
  - Bid Bonds submitted must be original and wet signed
- Posts Bid Opening Results
- BOS Contracts Award







## Public Works

**Byanka Velasco**

*Division Manager, Special Districts – Project Management*



**Construction Network Presentation - 2023**

[www.SBCounty.gov](http://www.SBCounty.gov)



# SPECIAL DISTRICTS OVERVIEW

Page 42

- The Special Districts Division provides oversight to approximately 100 dependent special districts, under governance by the San Bernardino County Board of Supervisors.
- Services include road construction and maintenance, water and sanitation districts, television, streetlight, dam, detention basin, and park districts.





# SPECIAL DISTRICTS FORMATION

- Special Districts staff work with the property owners:
  - Create the special districts. Property owners fund and vote for these districts to be formed.
  - Sell public tax-exempt bonds. Bonds are used to finance some of the Special Districts' projects.



## Special Districts Teams

- Water and Sanitation
- Project Management
- Operations (Roads & Parks)
- MIS Services
- HR Business Support
- Finance

## Project Management Team

### Project Managers

- Projects Planning & Design (Hire Consultants)
- Contracts Administration
- Monitoring & Control

### Construction Inspectors

- Inspections
- Support design & specs reviews
- Respond to residents' requests

### Staff Analyst II

- RFPs
- Support Management with letters and responses to PRAs

### Engineering Tech III

- Provide development services



- Department/Division
  - Project need is identified and scope of work and cost estimate is developed.
  - Funding source is identified.
  - Project is assigned to the Project Management Team.
- Project Management
  - Plans and specifications are developed.
  - Environmental clearance is obtained.
  - Formal and informal bidding process per Public Contract Code.
  - Contract Administration (Awarding through Close Out).
  - Inspection.



# SPECIAL DISTRICTS PROJECTS

## Major Recently Completed Projects:

- Big Bear Zoo
- Snowdrop Road
- Fawnskin Vacuum Sewer Line

## Major Ongoing Projects:

- Calico Wastewater Treatment Plant
- Glen Helen Screw Press Chino
- Airport Water Remediation Phase 1 Project
- Glen Helen Small Bridge Replacement



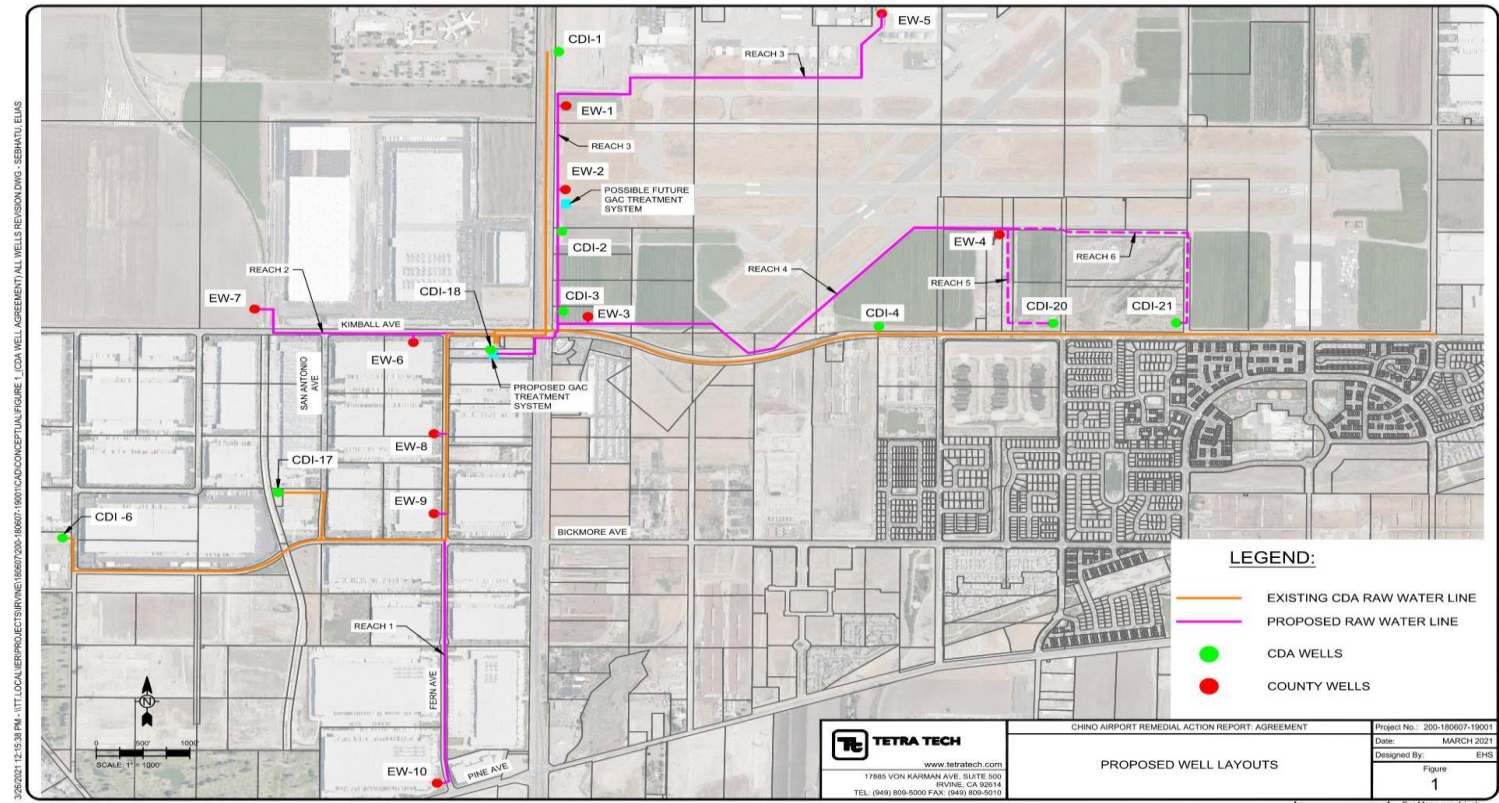
Snowdrop Road Ribbon Cutting April 2023



# SPECIAL DISTRICTS UPCOMING PROJECT HIGHLIGHT

Page 47

- Phase – 1 (Onsite)
  - 17,500 linear feet of 16-inch, 12-inch, 8-inch and 6-inch C-900 PVC Raw Water Pipeline
  - Installation of a fiber optic communication network
  - Construction of 5 groundwater pumping wells
  - Construction of 5 monitoring wells, and construction of 5 well sites with masonry building for electrical equipment.
- Phase – 2 (Offsite)
  - 6,500 linear feet of 16-inch, 12-inch, 8-inch and 6-inch C-900 PVC Raw Water Pipeline
  - Installation of a fiber optic communication network
  - Construction of 5 groundwater pumping wells, monitoring wells and well sites.



# SPECIAL DISTRICTS PROJECTS

## Upcoming Projects :

1. Kessler Park Snack Bar and Restroom Improvements  
(Awarding in Progress)
2. Kessler Park Corridor Improvements (Out for Bid)
3. Glen Helen Regional Park Gate Monument (Out for Bid)
4. Oro Grande Tank Replacement Project (Design)
5. Chino Airport Water Remediation Phase 2 (Design)
6. Cedar Glen Lead & Copper Replacement (Design)
7. Tank Recoating (Design)
8. Kessler Park Dream Field (Design)

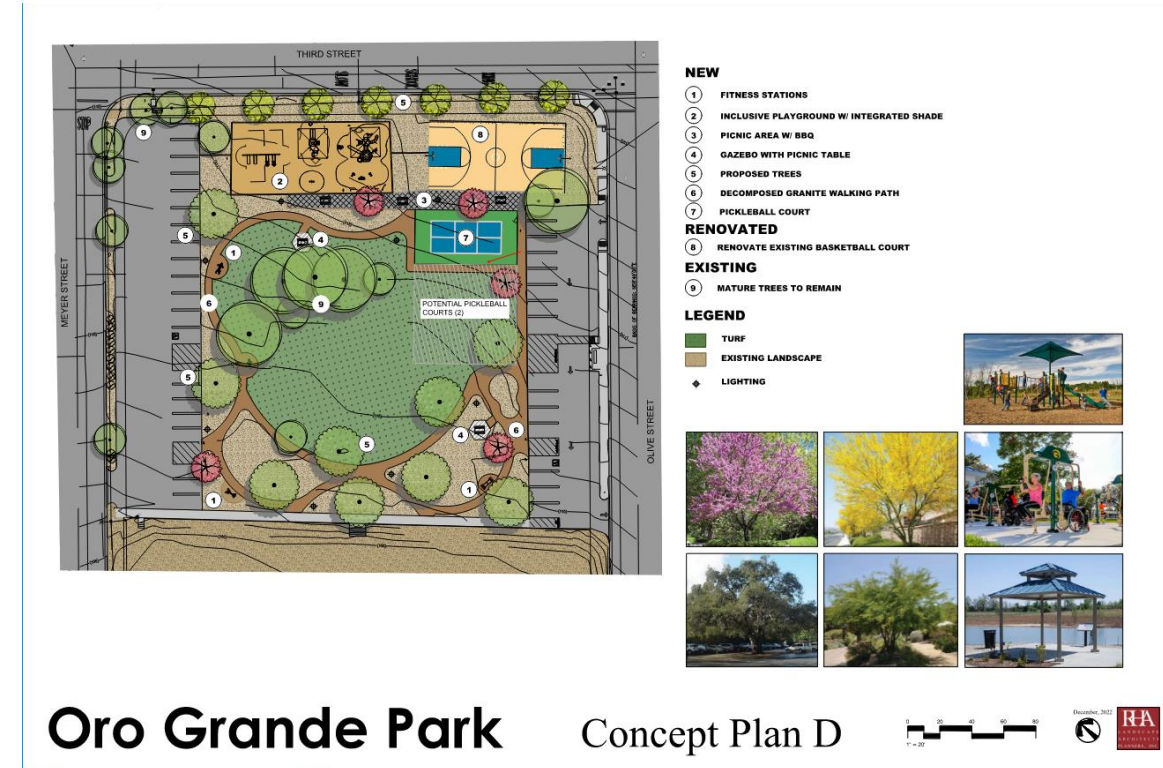




# SPECIAL DISTRICTS ARPA PROJECTS

- Funds must be allocated before December 2024 and construction completed before December 2026

1. CSA 70 M – Wonder Valley Kitchen Remodel
2. CSA 82 – Trona Sewer Line Replacement
3. CSA 42 – Oro Grande Phase 2 Park Rehab
4. Glen Helen Regional Park Lighting Project
5. CSA 29 – Lucerne Valley Community Center Upgrades
6. West Valley Water District and Glen Helen Water Interconnection Project
7. CSA 70 F – Little Morongo Tank Replacement
8. Camp Switzerland Lift Station
9. Lake Gregory Sitewide Sediment Management Project



**Electronic Procurement System - <https://epro.sbcounty.gov/bsc/>**

- Project Advertisements: Bid Number SPD123
- Creates Plan holders List
- Prebid Information
- Submits Questions for Bidders
- Plans and Specifications available for download
- Disperses addendum(s)
- Bid Submission
  - Bid Bonds submitted must be original and wet signed
- Posts Bid Opening Results
- BOS Contracts Award







**Public Works**  
**Solid Waste Management Division**

**Marc Rodabaugh**  
*Engineering Manager, Solid Waste Management Division*



**Construction Network Presentation - 2023**

[www.SBCounty.gov](http://www.SBCounty.gov)



# SAN BERNARDINO COUNTY WASTE SYSTEM

Page 52

## Five Large Volume Transfer Facilities

- Mountains
- High Desert
- East Desert

## Six Active Landfills

- Barstow
- Landers
- Redlands (San Timoteo)
- Rialto (Mid Valley)
- Victorville

~6,750 tons of waste per day

~10,250 cy airspace consumed per day





- Public Works projects are publicly funded
  - Local Taxes, Property Taxes, Gasoline Taxes, State and Federal Funds and Grant Programs
- Landfill Projects
  - Gate Fees – Enterprise Fund





- Landfill receives permits for entire landfill project from RWQCB and CalRecycle
- CEQA for the entire landfill life (30+ years)
  - Studies performed (traffic, air quality, noise, aesthetics, bio, paleo, etc.)
- Liners constructed in phases to provide airspace for 5-7 years
  - May require additional permits from CDFW, ACOE, F&W, etc.



## Landfill Projects

- Landfill and Liner design standards are performance based (groundwater protection)
- CCR Title 27, local Water Board criteria
- Site and Design are unique, but incorporate standards where possible
- Combination of multiple disciplines (earthwork, drainage, roadways, HDPE liner, piping, gravel, preparation of select soils)
- Design and CQA Plan subject to approval by local Water Board
- Liner components are heavily scrutinized and subject to a wide variety of physical and chemical testing.







## Public Contract Code

- Formal and Informal processes
- Exemptions for some landfill work (Section 20121.1)

Minimum qualifications / experience requirements





## Landfill Cell (Waste Disposal)

- Liner Placement
  - HDPE membrane, and intervening geosynthetics placed in multiple layers, anchor trenches on benches, seam welding, strict CQA
  - Hand Crews only. No equipment allowed on the liner materials
- Leachate Collection and Recovery System
  - Extensive HDPE pipe collection system
  - Gravel Layer (Low Ground Pressure Equipment Only)
  - Associated Leachate Pumping and Holding Tank including pumps, dual containment holding facility, automated operation control and alarm system, loadout facilities



- Landfill Cell (Waste Disposal)
  - Operations Layer Placement
    - Low Ground Pressure equipment only
  - Appurtenances
    - Drainage channels (run-on and runoff)
    - Roadways
  - Survey
    - Performed with each and every activity and layer placement





## Landfill Closure Final Cover

- Monolithic Soil Layer Placement
  - Typical 4-6' compacted soil cover
  - On-site Soil Processing or Import of Select Soils
- HDPE Membrane
  - Soil foundation layer
  - HDPE Membrane placement
    - Mostly Handcrew placement
    - Membrane seaming
    - Installation of anchors into foundation layer and/or spreading of ballast materials (granular sands)
  - On-membrane Drainage facilities



- Scalehouse
  - Structure / Architecture
  - Scales
  - Utilities
- Drainage Systems
  - Roadway curb and gutter
  - Channels
  - Stormdrains and stormdrain connections
  - Sedimentation Basins (NPDES BMPs)
- Environmental
  - Landfill Gas Collection and Treatment Facilities
  - Groundwater Monitoring and Treatment Facilities





### Summer/Fall 2023

- San Timoteo LF Liner Project
- San Timoteo LF Partial Final Cover
- Mid Valley LF LFG Flaring Facility

### Summer/Fall 2024

- Landers LF Liner Project
- Phelan TS Floor Rehabilitation
- Heaps Peak TS Slope Stabilization





## Public Works

**Andy Silao**

*Engineering Manager, Contracts Division Chief*

**Byanka Velasco**

*Division Manager, Special Districts – Project Management*

**Marc Rodabaugh**

*Engineering Manager, Solid Waste Management Division*



# Construction Network Presentation - 2023

[www.SBCounty.gov](http://www.SBCounty.gov)