MONTEREY COUNTY PROPERTY MANAGEMENT

COUNTY FACILITIES

Countywide

• Owned space: 2,126,614 ft²

• Leased space: 551,990 ft²

Annual Gross Lease Cost: \$8.9M

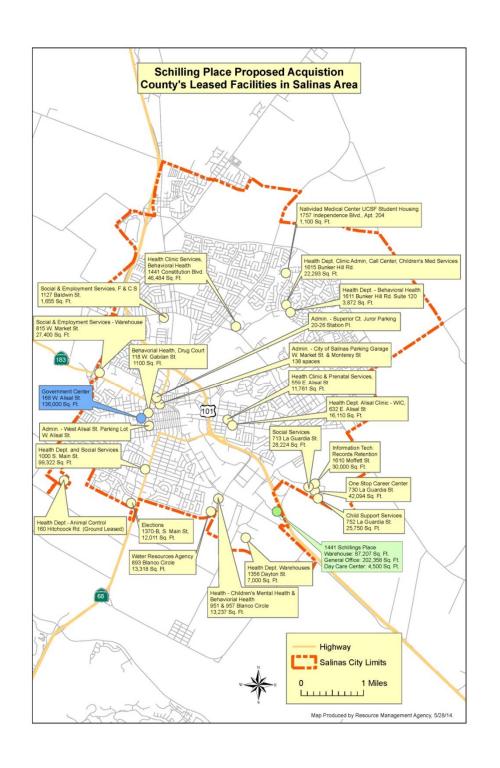
Salinas Area

• Owned space: 1,798,744 ft²

• Leased space: 409,469 ft²

Annual Gross Lease Cost: \$7.4M

Schilling Place: 294,065 ft²



FACILITY NEEDS IN SALINAS

- Move County
 Operations out of modular offices:
 - 1. District Attorney
 - 2. Public Defender
 - 3. Human Resources Training Center
 - 4. Law Library

- Inadequate parking at County Government Center
- County employee parking poorly located
- More courtrooms
- More Jail Housing
- New Juvenile Hall

MAJOR FACILITIES PLAN – FUND 404

Adopted by the Board in April 2014

- •\$198 million Countywide
- •\$196 million in Salinas Area

Jail Housing; New Juvenile Hall; Renovate East-West

Wing; Public Defender Building.; Salinas Vibrancy Plan;

Renovate 20 E. Alisal; Remediate 312 E. Alisal; Old Jail Reuse Study; Joint City/County Parking Structure

•\$47.9 million in borrowing

COUNTY/CITY MOU

(May 2012 to May 2015)

Ensure the continued and expanded presence..." in the downtown, when demonstrated for effective provision of services."

- a) 312 E. Alisal for City Police Headquarters
- b) Juror parking at Train Stationc) County to Rehab East-West Wing
- d) Reuse study of Old Jail
- e) Renovation of 20 E. Alival Street
- f) Vibrancy Plan Partner
- g) \$3M for shared parking facility with the City
- h) \$7M for Public Defender Building

WHY SCHILLING PLACE?

- Property available at a greatly reduced price
- Less expensive option to existing Fund 404 Plan
 - Savings of \$20M+ over the next 30 years
- Possibility of creating a One Stop Permit Center to facilitate development in the County
- LEED Gold Facility will help with meeting AB32 goal by replacing less efficient leased facilities
- Improved parking at both Schilling Place and Government Center

WHY SCHILLING PLACE?

- Consolidated Records Storage
- Greater efficiency through consolidating and co-locating Departments
- Ability to move operations out of modular offices sooner
- County owns rather than rents space
- Removal of modulars provides space for future parking garage
- East-West Wing provides more space for Courts
- Facilitates County Continuity of Operations Plan

CHALLENGES

- Site access
- Organizational Change
- Economic Impact on local Commercial Real Estate market

DUE DILIGENCE PROCESS – 75 DAYS (Owner Required Confidentiality)

- Negotiate a purchase price with owner
- Negotiate a buyout of Capital One lease
- Property Appraisal
- Facility Assessment
- Financial Analysis
- Traffic Impact Analysis

GOALS OF PROCESS

Purchase must:

- 1. Make financial sense
- 2. Meet County Space needs
- 3. Save taxpayer funds over time
- 4. Opportunity to improve services

PURCHASE PRICE

Property purchased in 2008 for \$63 million

Negotiated Purchase price: \$36 million

Capital One pays to buy out lease: (\$23 million)

Cost to the County \$13 million

• Purchase includes all desks, chairs, conference tables, equipment, warehouse storage racks, forklifts, etc.

PROPERTY APPRAISAL

Three methods of appraisal

1. Replacement Cost Approach \$56M

2. Fair Market Rental Value \$39M

3. Fair Market Value \$37M

Lease Buyout: \$27M

Land & Buildings: \$8.75M - \$12.5M

FACILITY CONDITION ASSESSMENT Repairs = \$2.8M

- Accessibility Fair
- Roofing Systems Fair
- Parking Lot Fair
- Building Exterior -Good
- Building Interior Good
- Electrical Good
- Environmental Good

- Fire Protection Systems -Good
- Landscaping Good
- Mechanical Good
- Security Surveillance Good
- Seismic & Structural Good

IMPROVEMENTS TO SCHILLING PLACE

Main Building:	\$7.6M
Warehouse:	\$1.2M
Furniture:	\$1.2M
Contingency & Escalation:	\$2.5M
Other Costs:	\$3.5M
(Engineering, Permits, Moving, IT cabling, CM, etc.)	

Total Cost: \$16M

IMPROVEMENTS FOR DISTRICT ATTORNEY - \$4.1M



TOTAL COST TO MOVE IN

Facility Repairs: \$2.8M

Improvements for DA at Gov't Center: \$4.1M

Improvements at Schilling Place: \$16M

Total Cost: \$22.9M

FINANCIAL ANALYSIS - County Space Options

- 404 Plan: Renovate the East-West Wing for the DA (70,000 sq. ft., includes law library and human resources training.) Build 17,500 sq. ft. for the Public Defender; \$3M to joint parking facility.
- Schilling + DA: Purchase and remodel Schillings Place; renovate Government Center Second Floor for D.A; Parking facility and Public Defender not funded.
- Schilling + DA + PD + PS: Acquire and remodel Schillings building. Renovate portion of East-West Wing for Public Defender; renovate second floor of Government Center for D.A; \$3M for joint parking facility
- Lease Space: Lease 87,500 sq. ft. for D.A, Public Defender; Law Library; and Human Resources Training. Parking facility not funded.

EVALUATION MATRIX

Objective	404 Plan	Schilling & DA	Schilling, DA, PD, PS	Lease Space
Provides offsetting revenue		χ	χ	
Allows consolidation and centralization of County Records		Χ	Х	
Allows consolidation of County departments		Χ	Χ	
Meets District Attorney space needs	X	Χ	Χ	Χ
Meets Public Defender space needs	X		Χ	Χ
Provides funds for Downtown parking structure	X		Χ	
Meets other department's current space needs		Χ	Χ	
Provides Continuity of Operations Oportunity		Χ	Χ	
Creates oportunity for "One Stop" permit center		Χ	Χ	
Long-term ownership of building	Χ	Χ	Χ	
Allows consolidation of IT		Χ	Χ	
Eliminates modulars	Χ	X	X	

COST ANALYSIS

Scenario	Year 1 Cost	Average Annual Cost	Average Annual Cost (PV)	Year 31 Cost (PV)	Total 30- year Cost (PV)
Fund 404 Plan	\$5,587,05 7	\$6,700,45 5	\$4,381,36 0	\$2,290,890	\$85,300,0
Schilling & DA	\$3,498,72 0	\$3,083,31 2	\$2,681,39 4	\$944,331	\$51,980,0 00
Schilling, DA, PD, Parking Structure	\$4,405,05	\$5,051,16 1	\$3,325,65 1	\$1,199,506	\$64,300,0
Lease Space	\$3,895,49 1	\$6,177,65 4	\$3,895,49 1	\$3,895,491	\$78,644,0 00

POTENTIAL CONCERNS

- Requires cash for debt service and operating expenses from Year 1.
- Implementation will redirect County resources
- Internal and external resistance
- Will relocate 147 employees currently at Government Center
- Reduce Property tax revenue
- Perception of less convenient public access
- Lost Economic Opportunity for City

PRELIMINARY OCCUPANCY (394)

1441 Schilling Place (202,358 ft²)

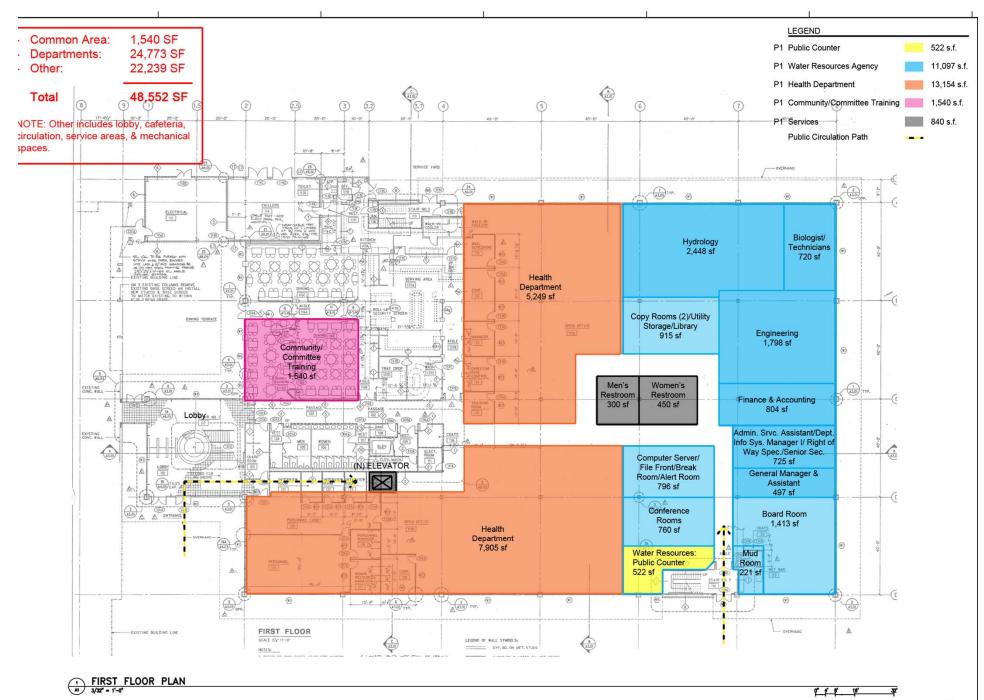
- Resource Management Agency (141)
- Water Resources Agency (51)
- Health Department (52)
 - Call Center
 - Quality Improvement
 - Clinic Services Admin
 - Public Guardian
- HR Learning & Organizational Dev. (6)
- Elections (12)
- Information Technology (103)
- Grand Jury (19)

1448 Schilling Place (87,207 ft²)

- Information Technology (5)
 - Records Retention Center
 - Equipment Staging/Storage
- Contracts-Purchasing (1)
 - Furniture Surplus
- Department of Social Services (3)
 - Records
 - Supplies & Furniture Surplus
- Health Department (1)
 - Records
 - Furniture Surplus

1494 Schilling Place (4,500 ft²)

Daycare Facility or Parks Admin



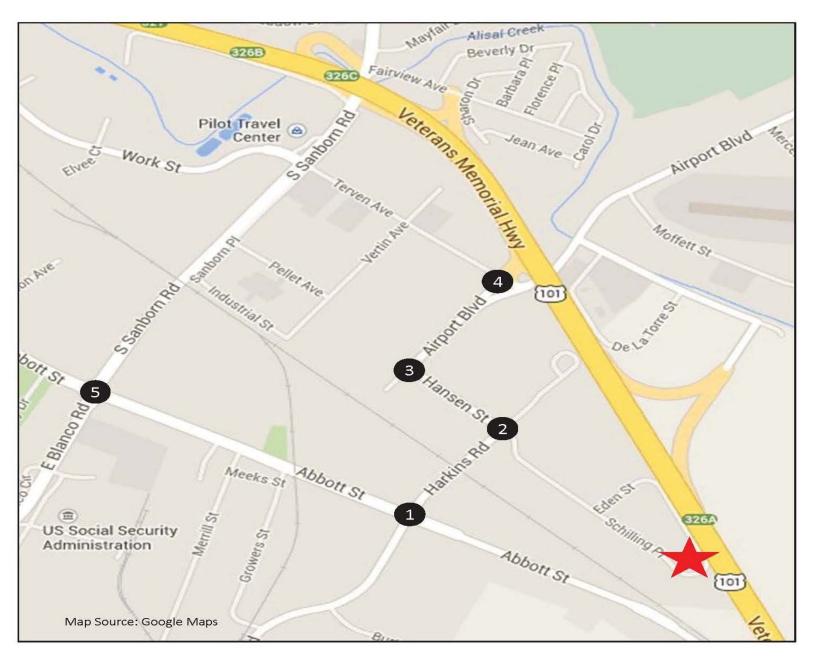
IMPACT TO SALINAS

- Number of County jobs will increase in Salinas Area
- Approximately 850 County and Court employees in downtown
- Relocation of 147 County employees from the Government Center
 - About 17% of total downtown County/Court employment
 - Less than 10% of overall downtown employment
- Taylor Farms Building will offset impact of County moving employees to another part of Salinas

ECONOMIC IMPACT

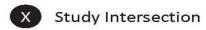
- Net increase of County jobs in Salinas Area
- Net increase of jobs in downtown with Taylor Farms Building
- 10 of 41 leases won't be renewed when they expire None in downtown

Department/Use	Address	Sq.Ft.
Elections	1370-B South Main	12,011
Health	1611 Bunker Hill, Suite 120	3,872
Health Call Center	1615 Bunker Hill, Suite 210	1,266
Health Admin	1615 Bunker Hill, Suite 100	6,600
Health Warehouse	1356 Dayton, Unit O	3,500
Health Warehouse	1356 Dayton, Unit H	3,500
IT Records Retention	1610 Moffett	27,000
IT Warehouse	1610 Moffett, Suite C	3,000
Social Services Warehouse	815 West Market	27,400
Water Resources Agency	893 Blanco Circle	13,318









TRAFFIC IMPACTS (Based on Occupancy of 700)

Abbott Street/Harkins Road	No impact
Abbott Street/S. Sanborn Road	No impact
Harkins Road/Hansen Street	AM peak hour Level of Service (LOS) will remain C PM peak hour LOS will decrease from D to E
Airport Blvd/Hansen Street	AM peak hour LOS will remain A PM peak hour LOS will decrease from B to D Northbound PM peak hour LOS will decrease from E to F
Airport Blvd/Terven Ave	AM peak hour LOS will remain E PM peak hour LOS will remain D

TRAVEL TIME & PARKING

- Travel Time during the Peak Hour between Schilling Place & Government Center is 10.5 minutes
- Travel time to Government Center or Schilling Place is equivalent:
 - Monterey Peninsula
 - Northbound Highway 101
 - Southbound Highway 101
- Parking:
 - Government Center = 407 spaces
 - Schilling Place = 1175 spaces
- Time to reach each facility is the same, but parking delays are higher at Government Center

TRAFFIC ANALYSIS SUMMARY

- County staff and the public will experience the same level of traffic congestion and delays whether coming to the Government Center or Shilling Place
- 2. Schilling Place provides adequate parking for employees and customers
- 3. Government Center does not have adequate parking

PROCESS MOVING FORWARD

- Due Diligence Period ends on August 30th
- Board of Supervisors will decide on August 26th whether to move forward with a purchase or not
- If the Board approves:
 - A Purchase and Sale Agreement will be signed
 - 30 Day Escrow Period begins
 - County must provide \$250,000 deposit (nonrefundable)
 - Original deposit of \$100,000 becomes nonrefundable
 - Capital One deposits \$23M into escrow
 - County deposits \$12.65M into escrow
 - County owns building at end of September
- If the Board does not approve, the process ends and County gets back \$100,000 deposit

QUESTIONS?



TODAY'S ACTION

Consider Adoption of the Monterey Peninsula, Carmel Bay, and Southern Monterey Bay Integrated Regional Water Management Plan Update



Committee Action

None



Financial Impact

There is no Financial Impact for adopting this plan.



Discussion

- June 27, 2005
 - Agency BOD adopted a MOU for Integrated Regional Water Management in the Greater Monterey Bay Area
 - Led to Greater Monterey Bay area funding for Prop 50 funding in an aggregate amount of approx. \$60 million
- November 26, 2007
 - Agency BOD approved Agency participation in a fiveorganization MOU creating a RWMG for the Monterey Peninsula, Carmel Bay and South Monterey Bay administered by MPWD

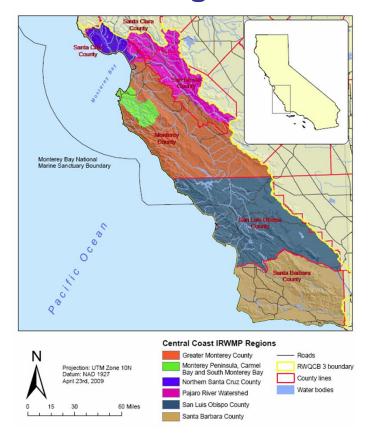


IRWM History

- November 2002, Proposition 50, the "Water Security, Clean Drinking Water, Coastal and Beach Protection Act," passed approving the IRWM Program and authorizing \$500 million in grant funds for IRWM projects.
- November 2006, Proposition 84, the "Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act of 2006," authorized \$5.4 billion in bond funds. Administered by DWR, Proposition 84 includes an additional \$1 billion in funding for the IRWM Grant Program (\$52 Million for Central Coast FA)



Central Coast Funding Area



MP IRWMP Boundary





- MPIRWM Regional Water Management Group
 - Big Sur Land Trust
 - City of Monterey
 - Monterey County Water Resources Agency
 - Monterey Peninsula Water Management District
 - Monterey Regional Water Pollution Control
 - Marina Coast Water District
 - (new addition)
 - Resource Conservation District of Monterey Co.
 - (new addition)



- MP IRWMP History with Agency
 - Original Plan adopted by Agency 2009
 - 2014 Plan updated to meet additional guidelines set by CA Department of Water Resources since 2006



- For Grant fund eligibility RWMG members must adopt the 2014 Plan update
- MP IRWMP has submitted application for drought round of funds
- CA DWR has established September 16, 2014 as the deadline for RWMG to adopt respective plans



- Agency either adopts plan by September 16
 - OR Agency removed from RWMG
 - OR Monterey Peninsula, Carmel Bay, and Southern Monterey Bay Integrated Regional Water Management Region's application deemed not eligible for drought funding by CA DWR



TODAY'S ACTION

Adopt the Monterey Peninsula, Carmel Bay, and Southern Monterey Bay Integrated Regional Water Management Plan Update





TODAY'S ACTION

Consider Adoption of the DRAFT Monterey County Floodplain Management Plan 2014 Update



Prior BOD/BOS Action

 In 2009, the BOD and the BOS adopted the Monterey County Floodplain Management Plan (FMP) 2008 Update



Financial Impact

- The Agency is funding this effort through a grant
- In Sept 2011, Monterey County was awarded \$90,000 by FEMA to update the 2008 FMP



Discussion

- The FMP 2014 Update is a requirement for continued participation in the National Flood Insurance Program (NFIP) Community Rating System (CRS)
- The CRS is a voluntary program encouraging communities to adopt higher regulatory standards.



- CRS Class 5 rating = 25% discount to NFIP policy holders
 - \$554,237 in total savings
 - 1,139 policies in Monterey County
 - \$487 average savings per policy
- The savings are a direct result of the activities the Agency continues to perform for Monterey County



- The Monterey County Floodplain Management Plan was developed to:
 - Identify the flooding sources affecting 109 Repetitive Loss Properties (RLPs)
 - \$7.1 million in flood insurance claims from RLPs
 - Establish an implementation plan to reduce flooding Repetitive Loss Areas (RLAs)



Zone VE: Corresponds to the 1-percent annual chance coastal floodplains that have additional hazards associated with storm waves. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone. Mandatory flood insurance purchase requirements apply.

Zone X: Corresponds to the areas outside the 0.2-percent annual chance floodplain, areas within the 0.2-percent annual chance floodplain, and to areas of 1-percent annual chance flooding where average depths are less that one foot, areas of 1-percent annual chance flooding where the contributing drainage area is less that one square mile, and areas protected from the 1-percent annual chance flood by levees. No base flood elevations or depths are shown within this zone.

Floodway: The floodway, shown in Figure 16 below, is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot. Where appropriate, the floodway limits for some streams were set using flood velocities.

6.2.2 Regulated Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 100-year floodplain is divided into a floodway and a floodway fringe.

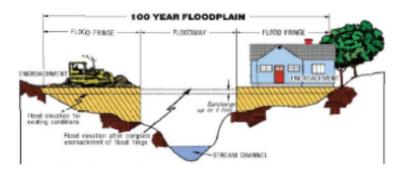


Figure 16: Floodway and Encroachment

Hazard Assessment | 34



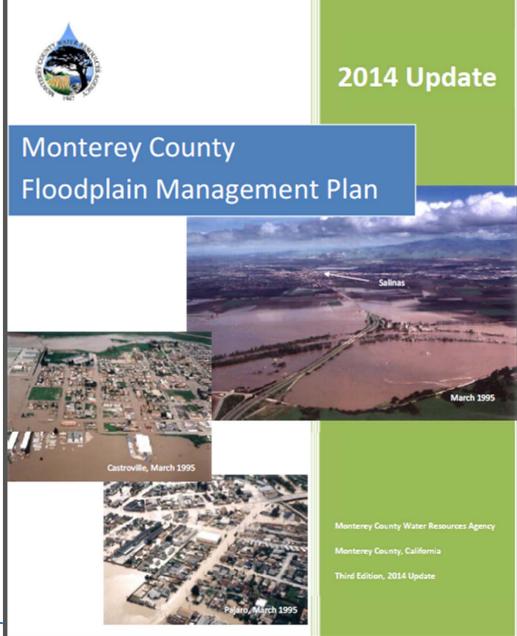
- Any community with 10 or more RLPs must focus the FMP on RLAs
- Monterey County RLAs include:
 - Big Sur River
 - Calera Creek
 - Carmel Highlands
 - Carmel River
 - Carneros Creek
 - Castroville Wash
 - El Toro Creek

- Paloma Creek
- Pebble Beach
- Piney Creek
- Ralph Lane Channel
- San Miguel Canyon Creek
- Santa Rita Creek



- The FMP 2014 Update includes:
 - Updated background information
 - Updated tables & figures
 - New maps for each RLA
 - Updated Implementation Plan, Chapter 8







Water Project, included enlargement of the spillway opening and installation of an inflatable rubber spillway gate at the dam. These modifications were completed in July of 2009.

Prior to the modification of the spillway, the storage capacity in Nacimiento Reservoir was constrained by a rule curve mandated by the State of California Division of Safety of Dams (DSOD) and the Federal Energy Regulatory Commission (FERC). The purpose of the rule curve was to ensure that sufficient flood storage was available in the reservoir to safely pass the PMF. The recent modification of the spillway allows for the safe impoundment of water to an elevation of 800 ft all year, and the spillway is now rated for passage of the PMF (101,000cfs). Flood protection is provided by the capture of winter flows from the Nacimiento watershed for controlled release at a later time. Water is released throughout the year for flood control, ground water recharge, fish passage, and to meet the diversion needs of the SVWP.

Lake Nacimiento has spilled three times since construction: April 1958, February 1969, and April 1983. The largest spill occurred on February 25, 1969 with a total discharge of 6,770 cfs. Of the total, 3,770 cfs was discharged through the outlet works and 3,000 cfs flowed over the spillway. On April 29, 1983, 1,100 cfs flowed over the spillway due to high inflow.

Nacimiento Reservoir is an important component of the region's existing water supply. Local runoff and groundwater are the only sources of water in the Salinas River Basin, to which Nacimiento Reservoir contributes. Water demands in the Salinas River have exceeded the available safe water yield, resulting in over-drafting of the Salinas Groundwater Basin. Consequently, the Agency would like to maximize the yields from local surface water sources under its control.



Figure 6: Spillway Modification to Nacimiento Dam

Flood Control Systems Description | 17



- Chapter 8 The Implementation Plan, updates include:
 - Flood Mitigation Assistance Grant update (19 RLPs)
 - Carmel River Lower Carmel River Flood Control Projects (69 RLPs)
 - CSA-50 Stormwater and Floodplain Management Plan
 - Carmel Lagoon Ecosystem Barrier, Scenic Road Protection Structure, and Interim Sandbar Management Plan
 - Big Sur Land Trust Carmel River Restoration



8. IMPLEMENTATION PLAN

Various methods to reduce flood losses and to attain the goals of the FMP are analyzed in this Chapter. Current programs were looked at to determine their adequacy and to determine whether new programs were necessary. CRS guidelines require the FMP to identify all the mitigation activities considered and to indicate if an activity is not pursued in this Chapter, why the activity was not recommended. The following provides an update and discussion regarding the six primary (FEMA-recommended) categories.

Emergency Services: Activities that are undertaken during a flood to minimize its impact, which include warning and evacuation.

Natural Resource Protection: Activities undertaken to protect the natural and beneficial functions of the floodplain, such as wetland protection. These activities include erosion and sediment control and best management practices.

Preventive: Activities that include planning and zoning, open space preservation, floodplain regulations, stormwater management, and drainage system maintenance.

Property Protection: These activities include actions undertaken by the property owners on a case-by-case basis, such as floodproofing and flood insurance, but also include acquisition of land and relocation of structures.

Public Information: Activities that provide information to property and business owners, prospective buyers, residents, contractors, and realtors, about flood hazards and ways to protect people and property from flood damage. These activities include outreach projects and environmental education programs.

Structural Projects: Activities that keep floodwaters away from an area and include channel modifications, water diversion structures, and reservoirs.

8.1 Ongoing County-Wide Flood Mitigation Activities

8.1.1 Emergency Services

8.1.1.1 ALERT System

Following the Marble Cone fire of 1977, Monterey County began the installation of one the first ALERT flood warning networks anywhere. ALERT (Automated Local Evaluation in Real Time) is a communications protocol that was developed by the National Weather Service in the 1970's. ALERT is a reliable, low cost method of transmitting environmental data from remote sites to a central database in real time. ALERT compatible hardware and software has continued to improve and is currently being used for environmental monitoring and flood warning systems throughout the world.

Implementation Plan | 53



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- Public Comment Period will begin some time after the BOD adoption of DRAFT FMP 2014 Update
 - General Public
 - FEMA Region IX
 - California Office of Emergency Services
 - Insurance Services Office (ISO)



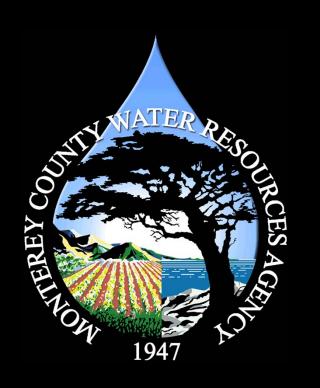
- Proposed Schedule
 - August 2014
 - Adopt DRAFT FMP
 - Apply for Grant Extension
 - Late 2014
 - Release FMP for Public Review
 - Release FMP for Regulatory Review
 - (regulatory review could take up to 10 months)
 - Mid 2015 (or later)
 - Incorporate comments
 - Bring to respective governing bodies for adoption of the Final FMP



TODAY'S ACTION

Adopt the DRAFT Monterey County Floodplain Management Plan 2014 Update





TODAY'S ACTION

Consider Receiving a Report on the Status of the Agency's Compliance with the California Statewide Groundwater Elevation Monitoring (CASGEM) Program, and Provide Direction to Staff



Committee Action

None



Financial Impact

 The Financial Impact of compliance with CASGEM is unknown at this time.

 Also, the Financial Impact of non-compliance with CASGEM is unknown at this time.



Discussion

- CASGEM is a product of SB x7-6 (11/09)
- Unfunded State mandate that:
 - Requires entities to monitor groundwater wells, and report data to State
 - Requires entities to develop monitoring plans for areas they are required to monitor, even where there are no funding resources
 - Disqualifies entities from receiving State grants if not CASGEM-compliant



- Agency sent letter to State in 2010, indicating we would need funding to perform compliancerelated efforts
 - No response
- Knowing CASGEM is an eligibility requirement for State grants (IRWM, etc.), Agency provided information on Agency-owned wells
 - State does not have technology to "upload" data had to hand enter (longer time required)



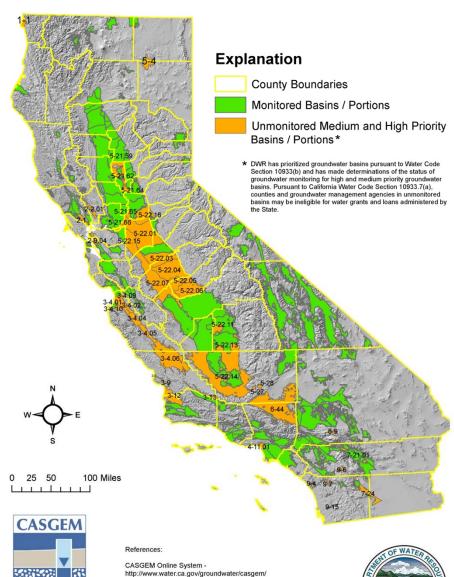
- Compliance requirements have expanded over time
- Staff is working with State staff regarding what is necessary to be compliant
- State speaks of data gaps
 - Not enough wells
 - Not all basins monitored
 - Need for a new GWMP
 - Agency developed a GWMP in 2006 for Prop 50 efforts



- Compliance efforts by Agency:
 - Submitted a statement of intent
 - Submitted GIS files of basins to be monitored
 - Submitted well information for Agency-owned wells
 - Submitted 2006 MC GWMP
 - Created CASGEM monitoring notifications for basins and sub-basins in MC – Agency will be monitoring entity
 - Submitted DWR-issued Well Completion Reports for Agency-owned monitoring wells
 - Requested a "Compliance Checklist"



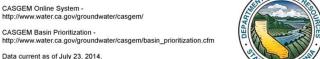
Monitored Groundwater Basins, and Unmonitored High and Medium Priority Basins and Portions of Basins, in the CASGEM Program as of July 23, 2014



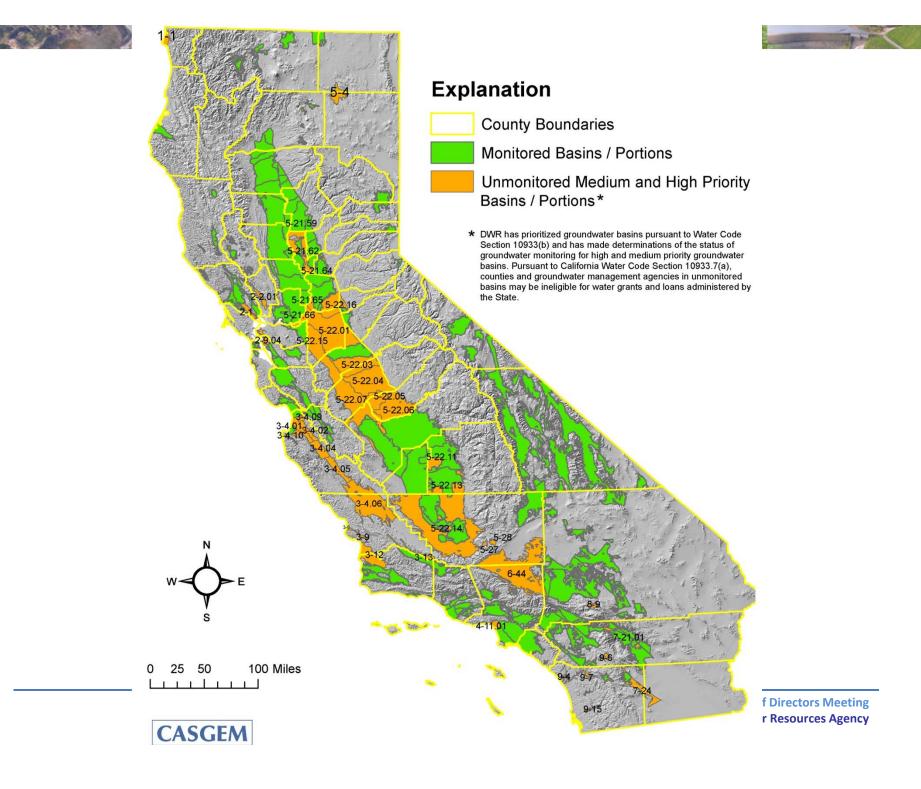
CASGEM Basin Prioritization -

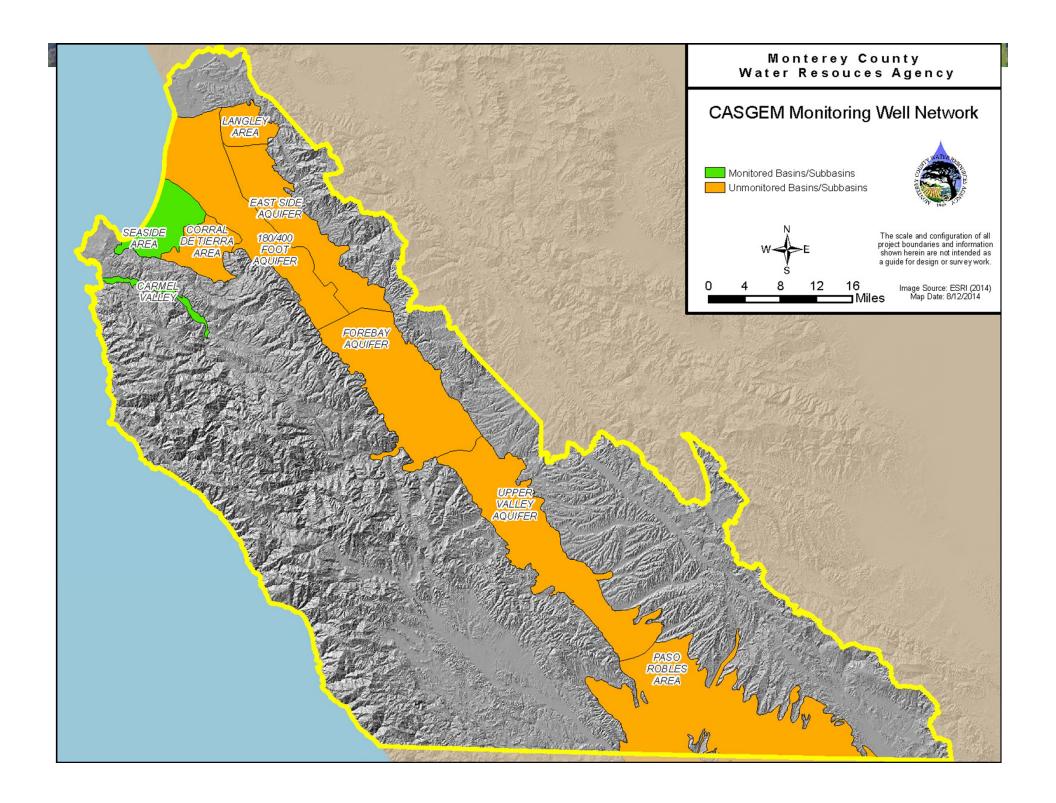
Data current as of July 23, 2014. Data subject to change without notice.

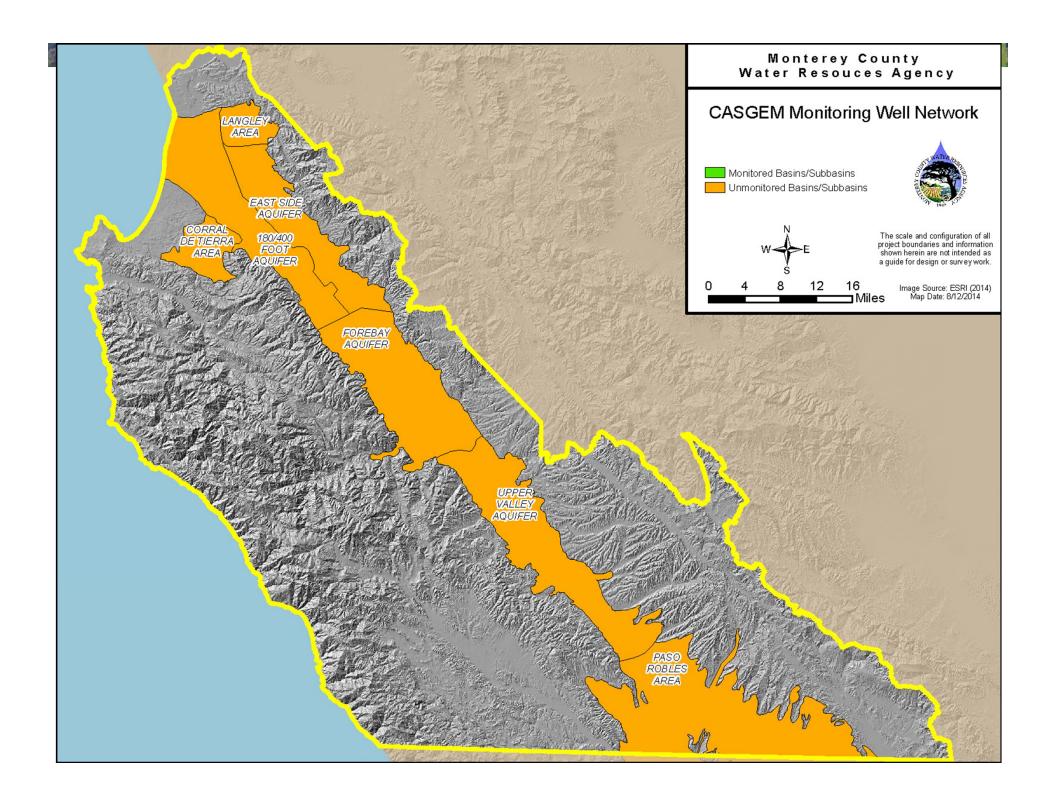
E L E V A T I O N M O N I T O R I N G

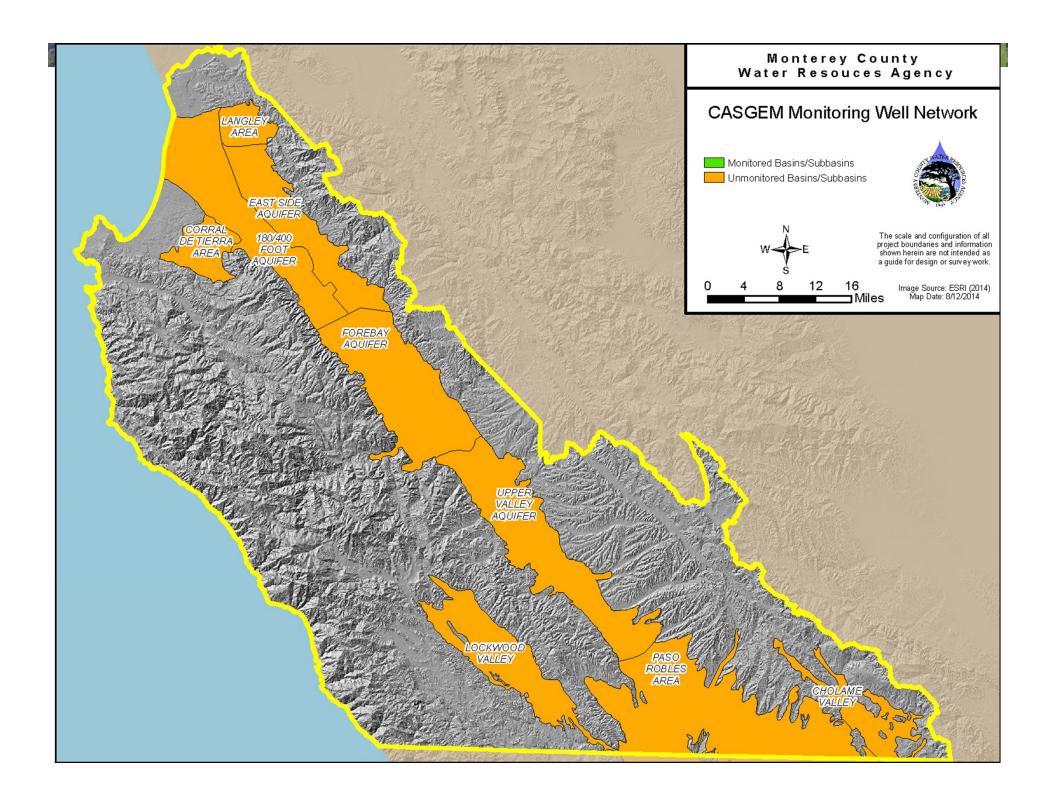


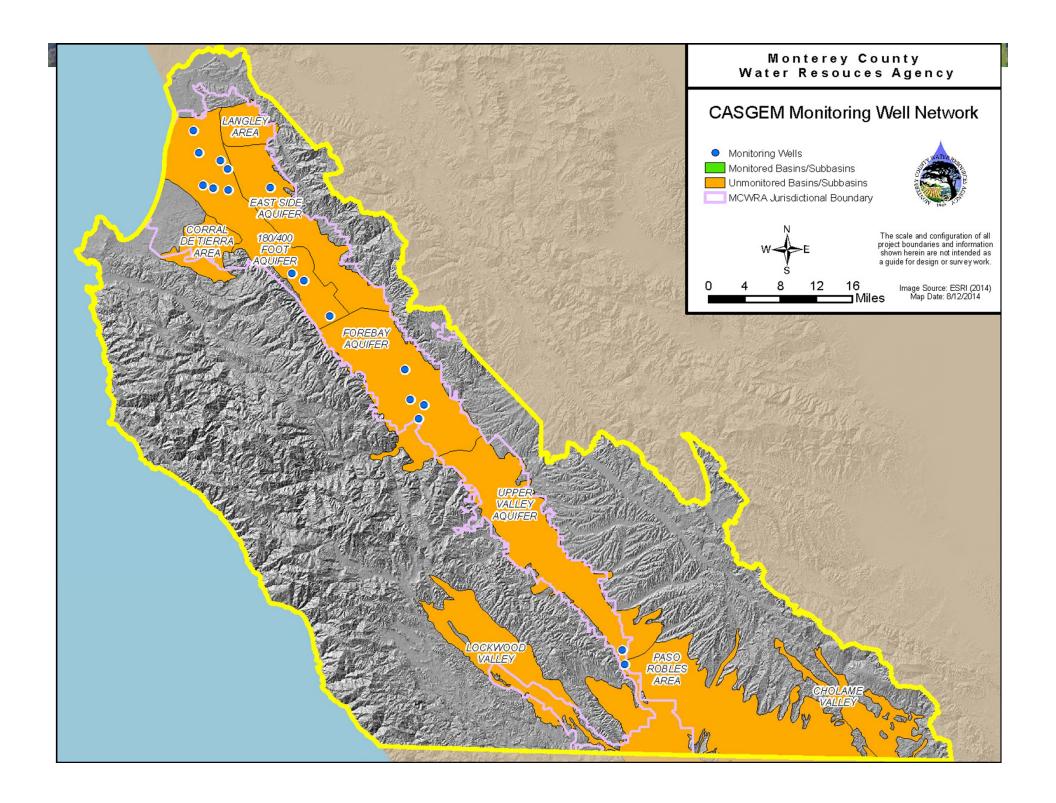
Board of Directors Meeting ey County Water Resources Agency











Discussion (cont.)

- As mentioned earlier:
 - Financial Impact of compliance is unknown
 - Financial Impact of non-compliance is unknown
- Staff looking at possible options:
 - Continue working with State regarding current efforts being compliant
 - Ask current well owners if they want their data released
 - Choose not to be compliant Agency would not be eligible for State grants
 - Prioritize CASGEM work over other tasks need to identify what other work will not be done
 - Other options...



Summary

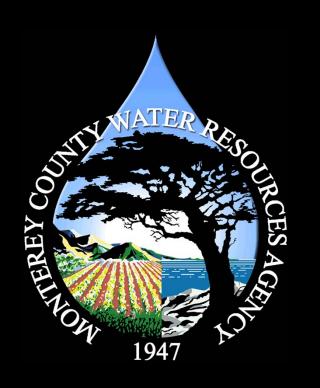
- CASGEM compliance is an eligibility requirement for State grants
- CASGEM is an unfunded mandate
- Agency has Budget issues...
- Staff is seeking direction



TODAY'S ACTION

Receive a Report on the Status of the Agency's Compliance with the California Statewide Groundwater Elevation Monitoring (CASGEM) Program, and Provide Direction to Staff





Well 14A1 (Hurley Ranch – near Hwy 183)

- New well screen & pump installed
- Pump operational ~Aug 1



Well 9D4 (New 2 – Nashua Rd)

- Two patches installed (201.5' & 230')
- Pump to be installed August
- Latest Water Quality:

 8/15/2013 (prior to second patch)
 Chloride 204 mg/l
 Conductivity 1110 umho/cm



Well 1C1 (Gularte Ranch – Espinosa Rd)

- Installed 40 ft additional pump column
- Severe pump sand wear
- Well screen blockage & preferential flow
- Fall 2014: well cleaning & new pump install
- Latest Water Quality: 1/29/2014

Chloride 53 mg/l

Conductivity 553 umho/cm



Well 11B1 (Q&B Ranch – Rodgers Rd)

- Discharging air
- Fall 2014: pull pump, determine condition of pump & well, repair as-needed
- Latest Water Quality:

1/29/2014

Chloride 51 mg/I

Conductivity 531 umho/cm

CSIP Well Water Quality Sampling Update

• 2014 Well Water Quality Samples:

January (agronomic)

July (agronomic)

August (seawater intrusion)

Wells to be Destroyed

- Well 16G1 (New 4 Conley Ranch Nashua Rd)
- Well 14L3 (Cooper Ranch Hwy 183 & Cooper Rd)

CSIP Espinosa Booster Pump Station Update

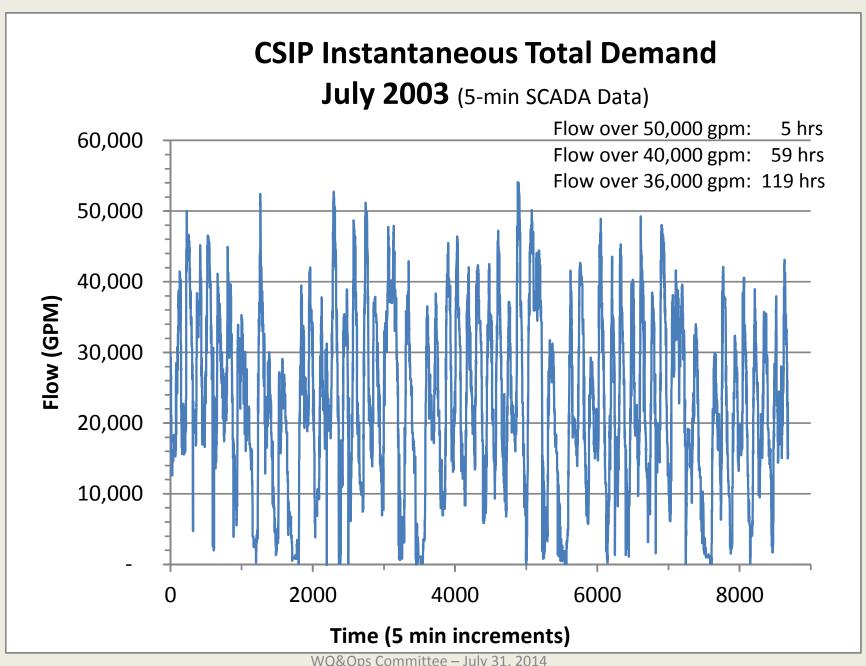
- Goal
- Status
- Conclusions
- Next Steps

Goal of this analysis:

Replace groundwater with non-groundwater sources to stop seawater intrusion. Keep the wells OFF.

Status:

CSIP System Hydraulic Model is primary analysis tool; model is updated, calibrated, many demand scenarios analyzed, intermediate conclusions reached, further work needed



WQ&Ops Committee – July 31, 2014 C.Moss, MCWRA

Intermediate Conclusions:

Generally...

- <u>CSIP System AS-DESIGNED</u>: The system was designed to operate with water sources dispersed throughout the system (wells) and scheduled deliveries to not exceed system capacities.
- <u>CSIP System AS-OPERATED</u>: The system has been operated with relatively unscheduled deliveries, and since 2010 (with SRDF) attempting to supply water from one source (Pond/Pipeline).
- Pressure boost needed in system for total demand of ± 36,000 gpm and higher to keep wells OFF (with no system modifications)
- Above ± 53,000 gpm total demand, the hydraulic limitations of supplying the system from one point are reached, restricting the ability to maintain needed pressure within north-east portion of system – i.e., existing booster stations cannot meet pressure needs because the needed flow cannot "feed" the booster pumps from one source.
- The system hydraulics are more complicated than thought
- "Over sold" converting Espinosa Booster pumps to variable speed drives as fix to all demand/pressure scenarios.
- Espinosa Booster modification can improve its use to keep wells OFF for total demand up to ± 53,000 gpm.
- To maximize operation of Espinosa Booster, modifications at other locations will likely be needed.

Specifically...

- 1. Existing Espinosa & Molera Boosters can supply pressure for up to \pm 53,000 gpm total demand with wells OFF, and one point water source, but have control difficulties in doing so in .
 - Espinosa Booster Bypass Valve manual control only
 - ± 6 minutes reaction time for booster pump to turn ON/OFF
- 2. The following would improve system pressure management capability and automated control of Espinosa Boosters up to ± 53,000 gpm total demand with wells OFF:
 - Faster Booster response to pressure control point(s)
 - o Direct link radio comm, modify control & display programming
 - New standpipe tank near TO # 231 (???)
 - Automate control of Espinosa Booster Bypass Valve
 - Convert all three pumps at Espinosa Booster to variable speed control less pressure swing when turn ON/OFF, reduced operation complexity
 - Improve control at FFO Pipeline Isolation Valve (Hurley Ranch)
 - Pressure relief devices at critical locations

- 3. To keep wells OFF at total demands above ± 53,000 gpm:
 - a) Supply water from source(s) "out" in the system (NE portion) needed
 - Reservoir(s)
 - b) Operate Boosters as-is, provide pressure relief at critical locations, use wells above ± 53,000 gpm
 - c) Schedule deliveries to operate within system hydraulic limits to supply needed flow & pressure
 - All turnouts; above a maximum demand; geographic portion
- 4. Adding 27" dia (or larger) pipeline from Pond to E0-pipeline allows gravity flow to supply needed pressure up to \pm 42,000 gpm total demand. Boosters still needed from \pm 42,000 to \pm 53,000 gpm. Boosters do not supply needed pressure above \pm 53,000 gpm.

CSIP Booster Pump Stations needed most when one point source of water is occurring (when SRDF is operating).

Recommended Next Steps:

To obtain most effective system physical modifications:

- hire experts to complete design analysis,
- finalize design recommendations,
- select approach,
- proceed with modifications

To consider scheduling options/approaches:

examine options