South Santa Clara County Water Quality Assessment

Phase II Municipal Stormwater Permit

December 3, 2008

Central Coast Regional Water Quality Control Board

Phase II Stormwater Permit

- Program established by federal law on December 8, 1999 (Clean Water Act section 402(p)(6))
- Operators of regulated municipal separate storm sewer systems (MS4s) must obtain permit coverage
- MS4s must develop and implement a Stormwater Management Program (SWMP)
- MS4s must reduce pollutants in stormwater runoff to the maximum extent practicable (MEP) and protect water quality

South Santa Clara County Regulated Communities

City of Morgan Hill
(enrolled in 2005)

Community of San Martin

City of Gilroy

Enrollment Schedule

Tasks	Length of Process	Begin	End
Phase I: Water Quality Assessment	5 weeks	Nov 3	Dec 5
Phase II: MS4 Finalization of Draft SWMP and Water Board Staff and Public SWMP Review	19 weeks	Dec 8	Apr 17
Phase III: MS4 SWMP Redraft	6 weeks	Apr 20	May 29
Phase IV: Water Board Staff Final Review and Posting of SWMP	15 weeks	Jun 1	Sep 13
Phase V: Water Board Action	13 weeks	Sep 14	Dec 11

Purpose of Today's Meeting

Identify water quality problems

Identify known and potential sources

[So SWMPs can focus on
Pollutants of Concern (POCs)]

Pollutants of Concern (POCs)

(Municipal Phase II General Permit)

Pollutants exhibiting one or more of these characteristics:

- Current loadings or historic deposits of the pollutant are impacting the beneficial uses of a receiving water
- Elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein
- The detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna.

GOAL

Understand

existing water quality conditions

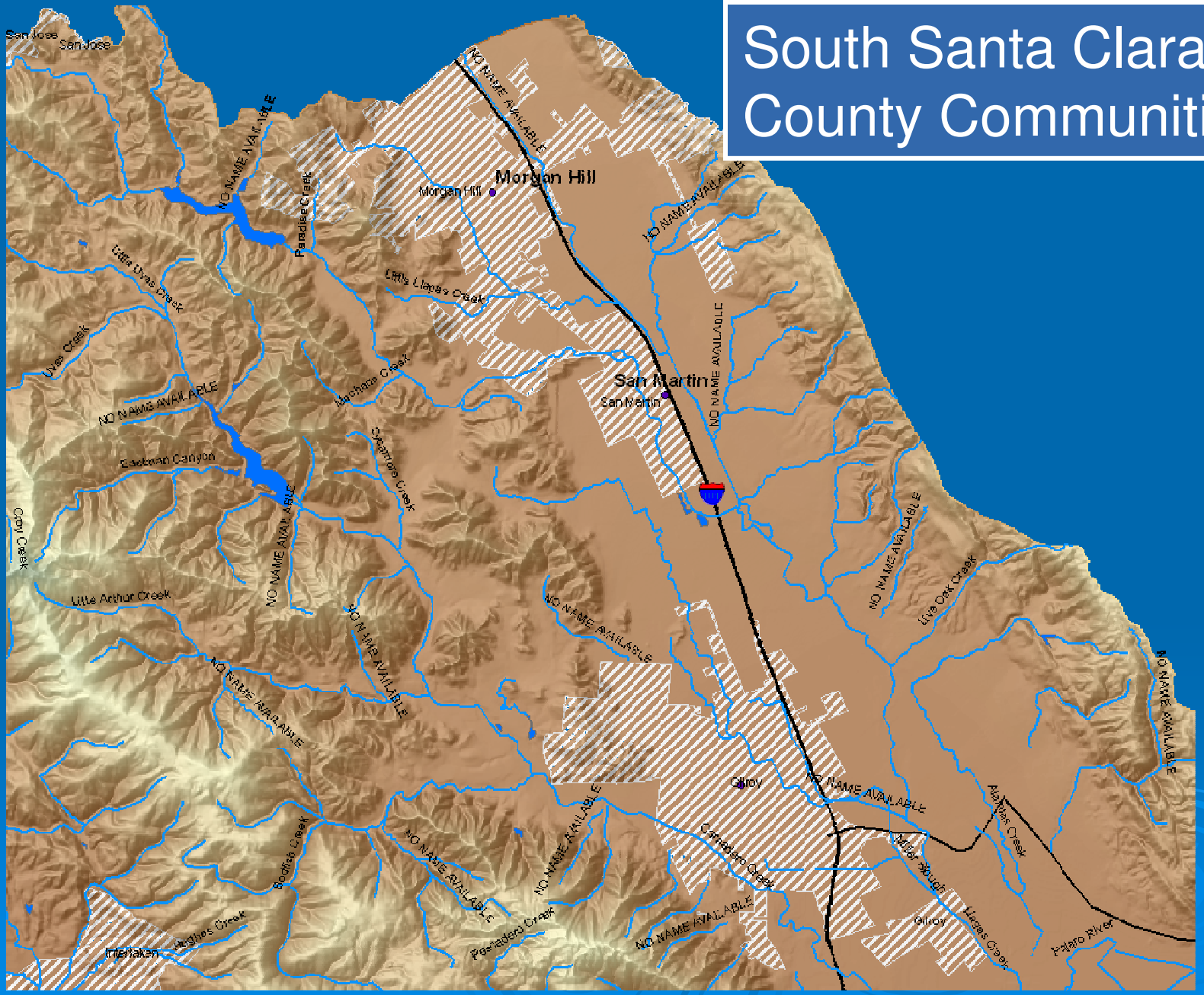
Focus

SWMP efforts on most serious water quality issues

Maximize Effectiveness

at reducing pollutants and protecting water quality

South Santa Clara County Communities



South Santa Clara County Communities

Watershed Context

POCs for All Communities

303(d) Listed Impaired Waterbodies

- Llagas Creek
  - Chloride (potential sources: point and nonpoint sources)
  - Low Dissolved Oxygen (potential sources: municipal point sources, crop irrigation, agricultural return flows, habitat modification
  - pH (potential sources: unknown)
  - Fecal Indicator Bacteria (sources: pet waste, controllable wildlife waste, trash receptacle leachate, human waste discharges, backyard Livestock, sewer leaks and spills)
  - Sodium (potential sources: unknown, nonpoint source)
  - Total Dissolved Solids (TDS) (potential sources: point and nonpoint sources)

POCs for All Communities

303(d) Listed Impaired Waterbodies (cont.)

- Pajaro River
  - Boron (potential sources: unknown, nonpoint source)
  - Fecal Indicator Bacteria (sources: pet waste, controllable wildlife waste, trash receptacle leachate, human waste discharges, backyard Livestock, sewer leaks and spills)

POCs for All Communities

Total Maximum Daily Loads (TMDLs)
(adopted by the Water Board)

- Sediment (Llagas Creek, Pajaro River)

  Sources: Agricultural runoff, Disturbed areas, Livestock, Stream bank erosion, Loss of riparian vegetation, Hydromodification

- Nitrate (Llagas Creek, Pajaro River)

  Sources: Septic systems, Landscape maintenance, Pet waste, Backyard livestock waste, Open space plant decay and animal waste, Atmospheric deposition

POCs for All Communities

TMDL Projects

(soon to be adopted by the Water Board)

- Bacteria (Llagas & Uvas Creeks, Pajaro River)

  Sources: Pet waste, Controllable wildlife waste, Trash receptacle leachate, Human waste discharges, Backyard Livestock, Sewer leaks and spills

Potential POCs for All Communities

(Common Urban Stormwater Pollutants)

- Sediment
- Nutrients
- Heavy metals
- Floatables
- Pesticides
- Herbicides
- Non-sediment solids
- Pathogens
- Oxygen-demanding substances
- Petroleum hydrocarbons
- Polycyclic aromatic hydrocarbons
- Trash

Potential POCs for All Communities

(Common Sources of Urban Stormwater Pollutants)

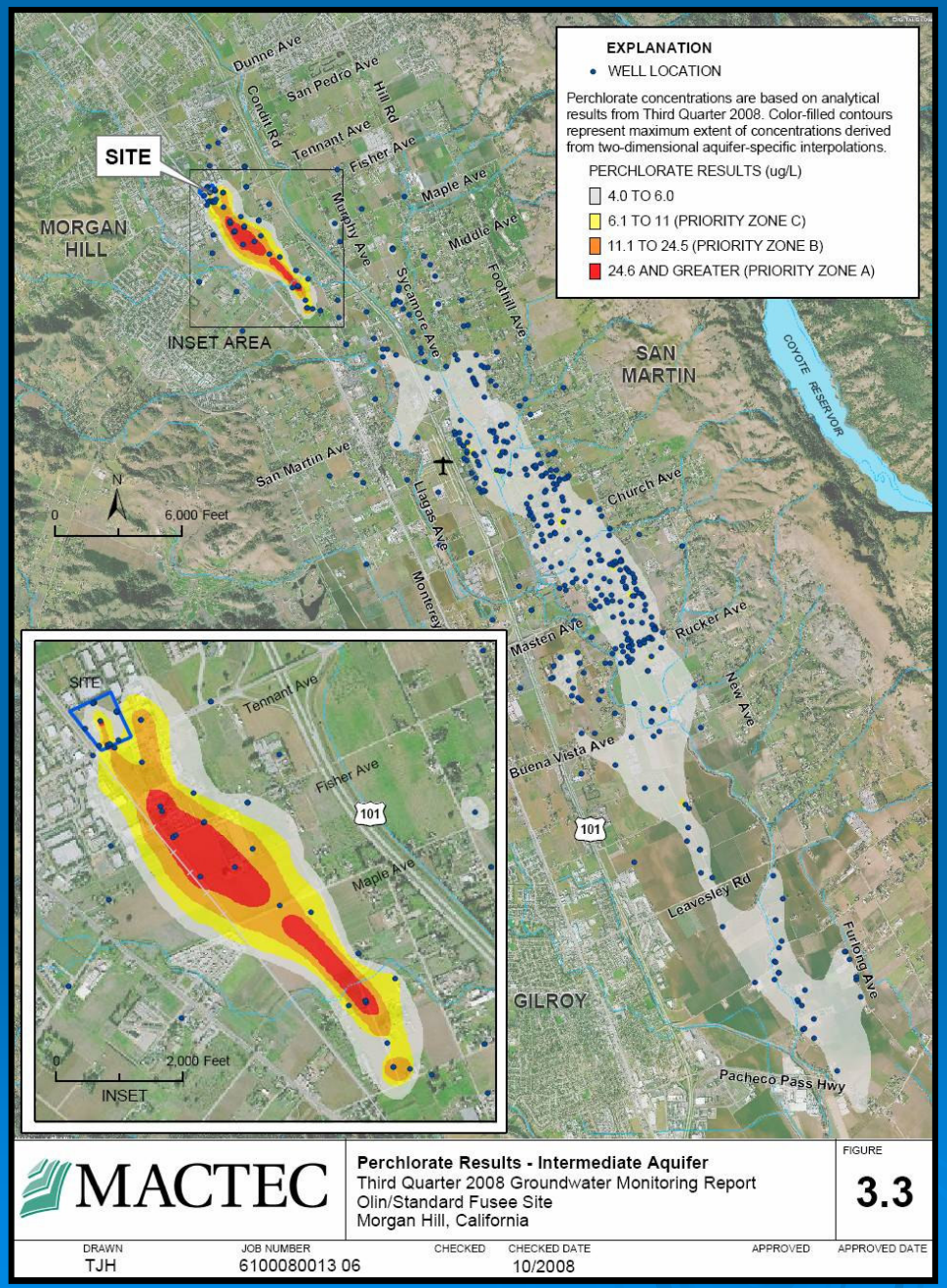
- Power washing
- Landscape maintenance
- Pet waste
- Homeless Encampments
- Vehicle washing
- Used oil disposal
- Restaurant wash-off
- Litter
- Construction activities
- Garbage receptacles
- Septic systems
- Yard waste
- Development
- Brake pads
- Parking lots
- Loading docks
- Illegal dumping
- Industrial waste
- Sewer leaks
- Vehicle maintenance

POCs – City of Morgan Hill

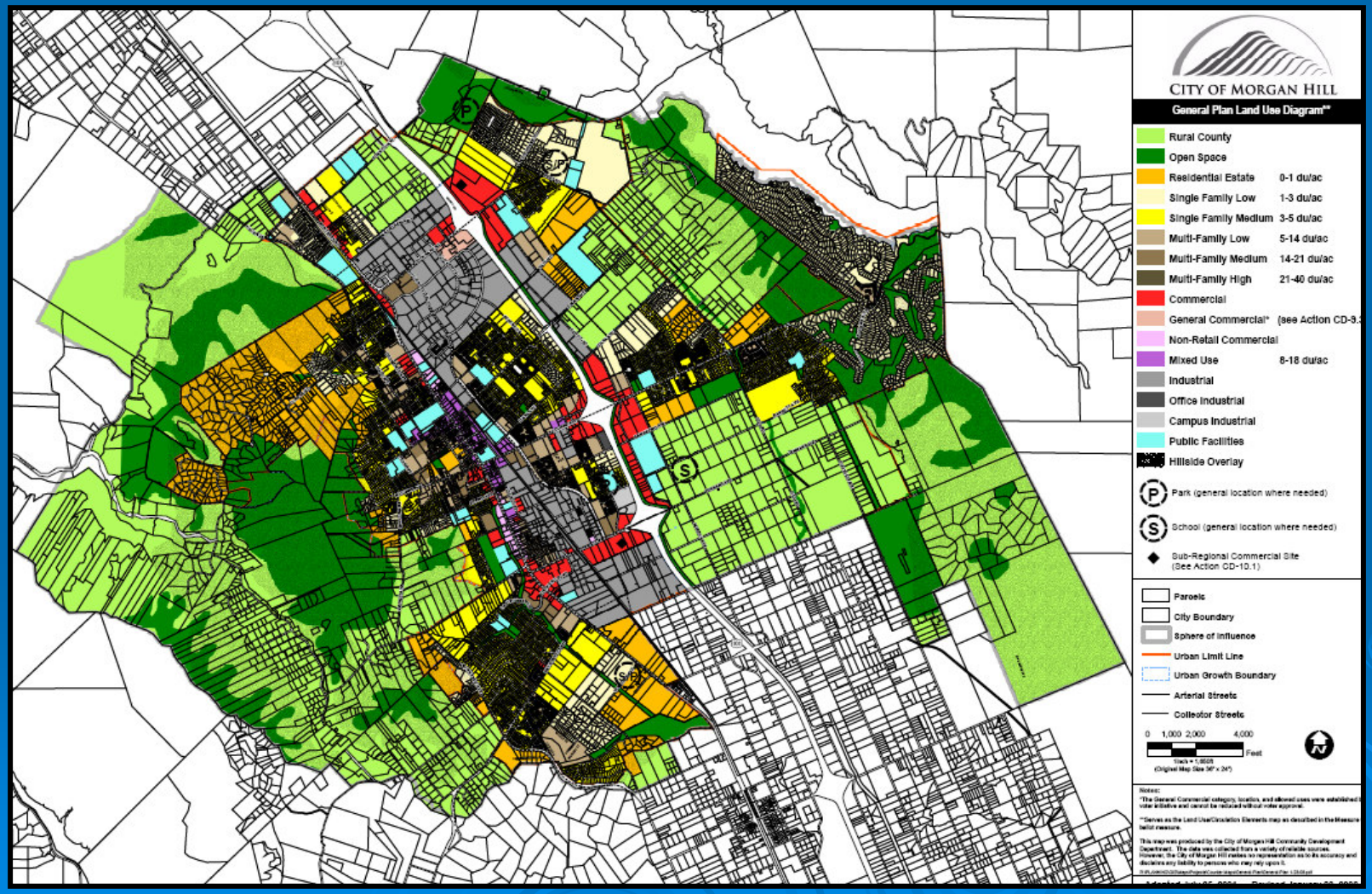
Additional Concerns

- Olin Perchlorate Plume (groundwater contamination)
- Castle Vegtech site (pesticide soil contamination)
- Future Development

Olin Perchlorate Plume

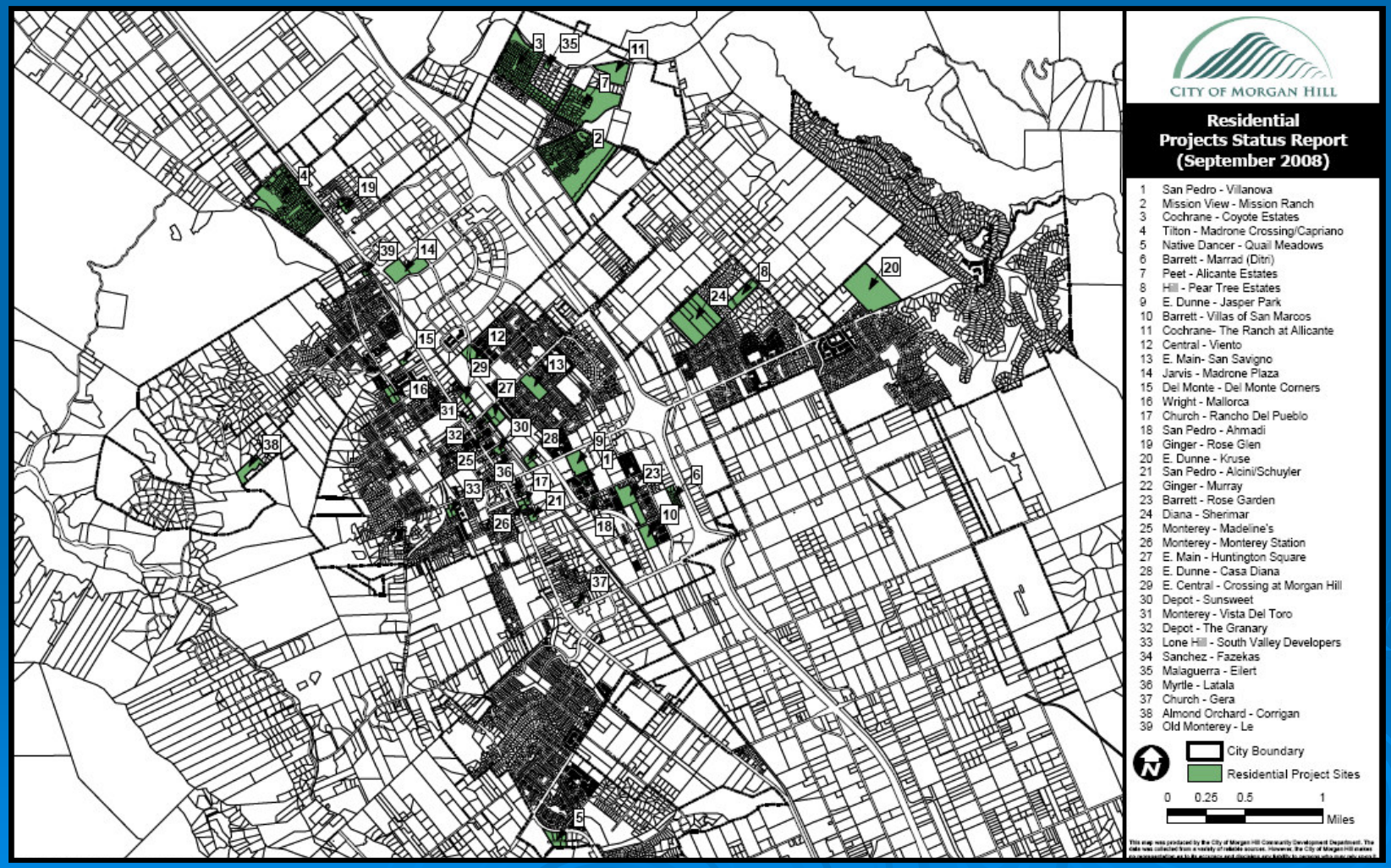


Morgan Hill General Plan



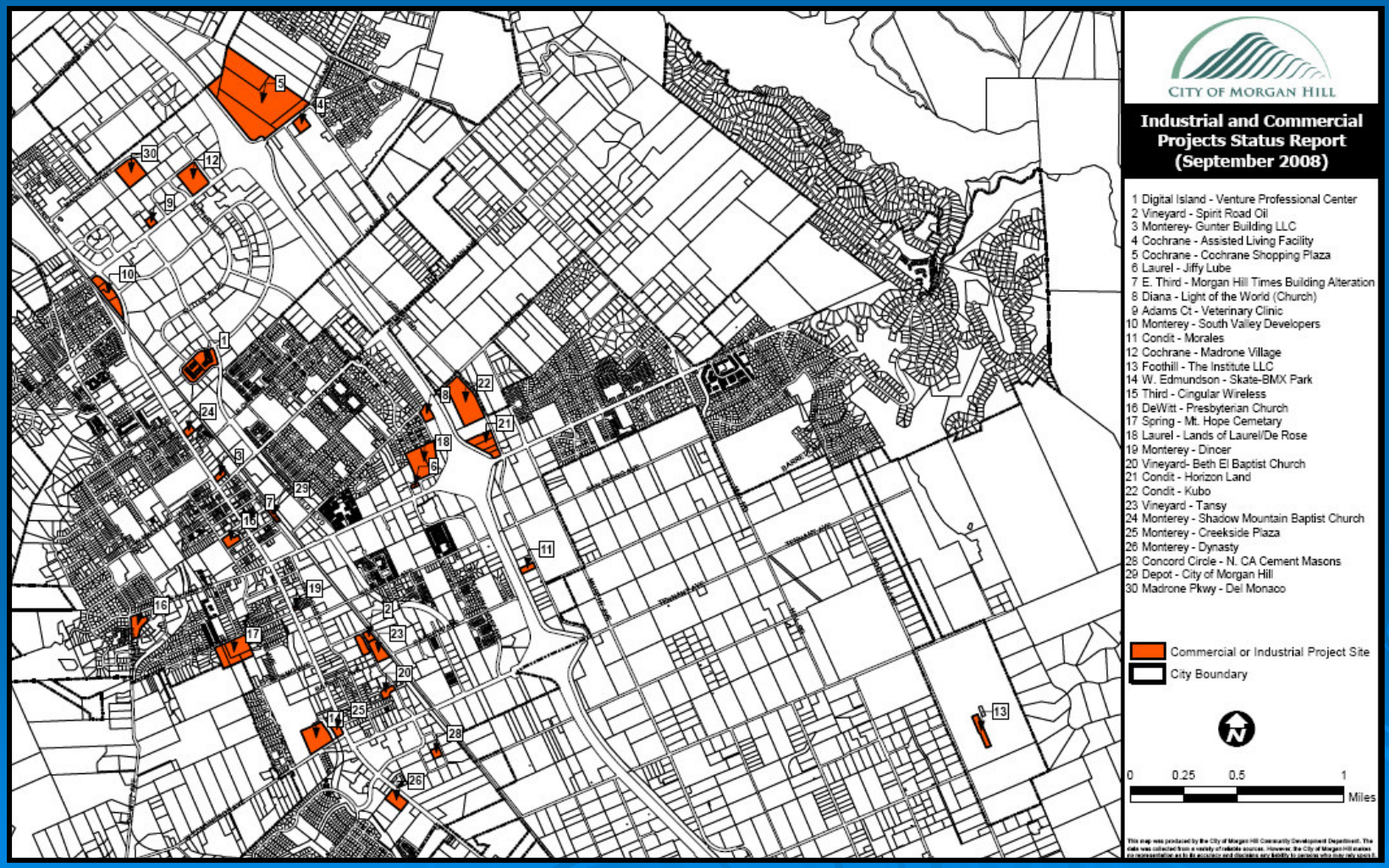
Morgan Hill Development Projects

(Residential)



Morgan Hill Development Projects

(Industrial and Commercial)



Discussion

Additional water quality concerns in Morgan Hill?

Identify POCs & Sources

POCs – Morgan Hill

Stakeholder Input from 12/03/08 Meeting

- Golf course construction & maintenance

POCs – San Martin

Additional Concerns

- Olin Perchlorate Plume (groundwater contamination)
- Backyard Livestock
- Future Development
- Incorporation

Discussion

Additional water quality concerns in San Martin?

Identify POCs & Sources

POCs – San Martin

Stakeholder Input from 12/03/08 Meeting

- Small commercial and industrial sites

POCs – City of Gilroy

303(d) Impaired Waterbodies

- Carnaderos/Uvas Creek (soon to be listed)
  - Low Dissolved Oxygen (potential sources: unknown)
  - Fecal Indicator Bacteria (sources: pet waste, controllable wildlife waste, trash receptacle leachate, human waste discharges, backyard Livestock, sewer leaks and spills)
  - Turbidity (potential sources: unknown)

POCs – City of Gilroy

POCs Identified in 2004 Draft SWMP

- Construction site runoff
- Litter
- Waste oil disposal
- Industrial/Construction waste

POCs – City of Gilroy

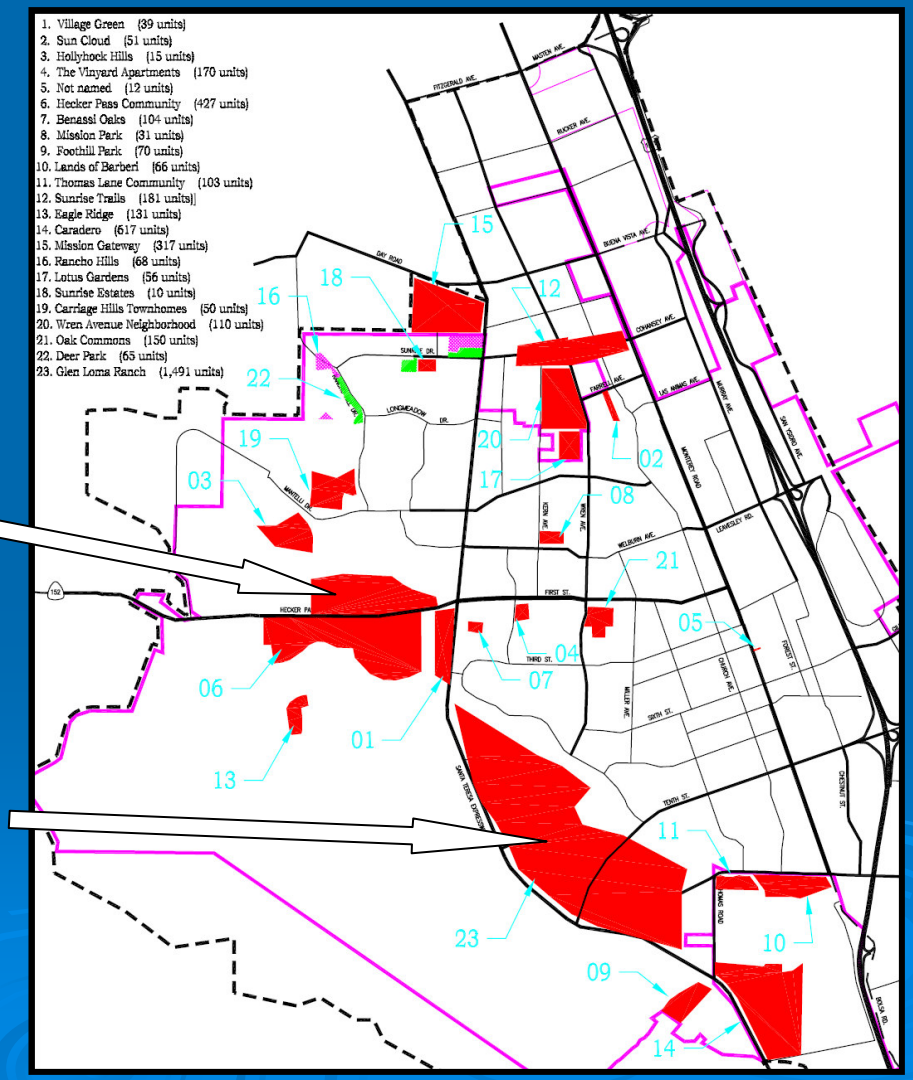
Additional Concerns

- Olin Perchlorate Plume (groundwater contamination
- Future Development
  - Hecker Pass Specific Plan
  - Glen Loma Ranch Specific Plan
  - Eastside commercial/industrial (General Plan)

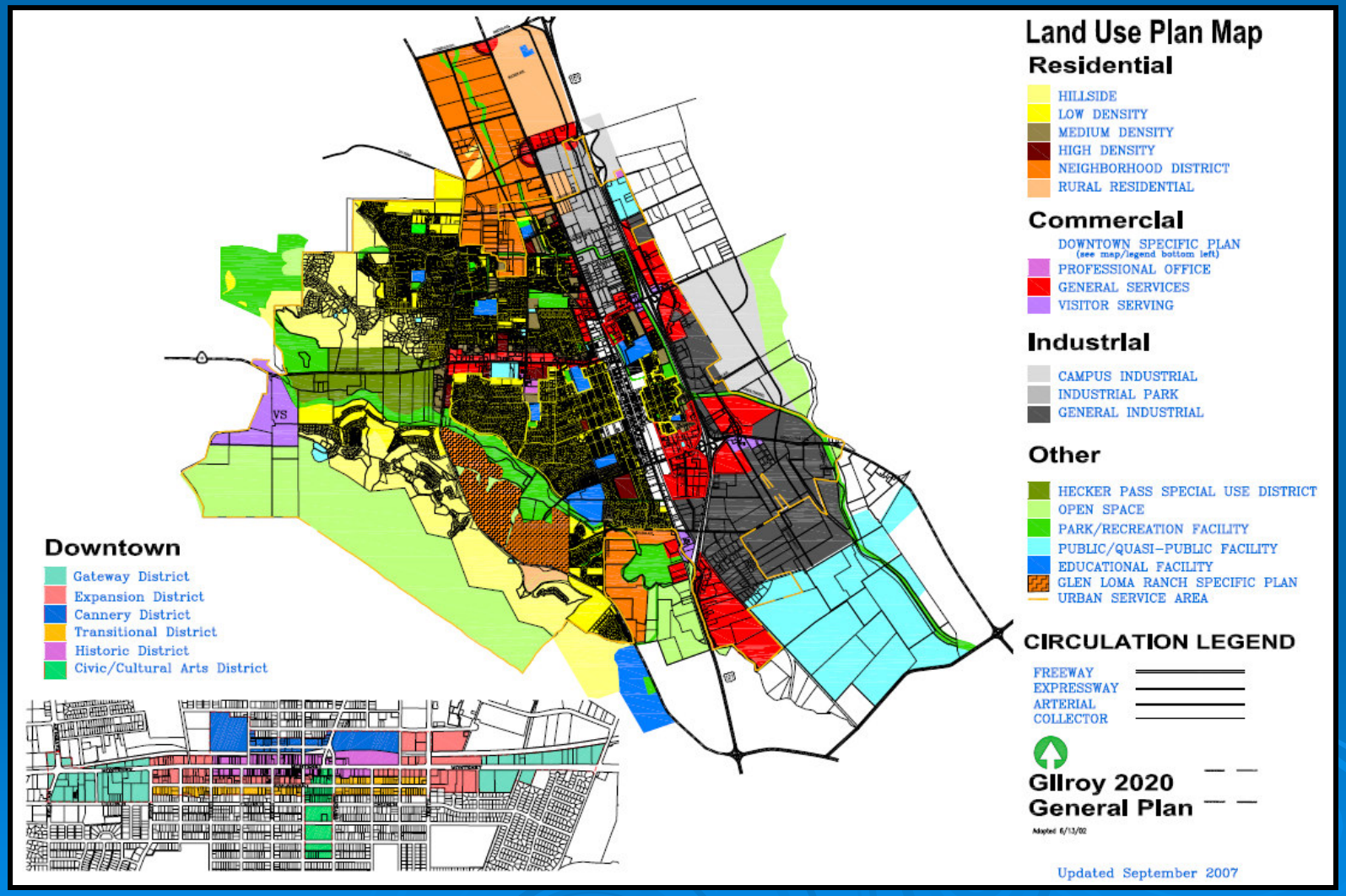
Gilroy Development Applications
(Residential)

Hecker Pass SP (433 ac.)
145 ac. SF Residential (506 du)
18 ac. Community Facility
145 ac. Park/Open space
115 ac. Agriculture

Glen Loma Ranch SP (360 ac.)
192 ac. SF Residential (1,693 du)
59 ac. Mixed
190 ac. Park/Open space



Gilroy General Plan



Discussion

Additional water quality concerns in Gilroy?

Identify POCs & Sources

POCs – City of Gilroy

Stakeholder Input from 12/03/08 Meeting

- Dairy farms

Summary

Pollutants of Concern for Morgan Hill

Primary POCs

- Sediment
- Nitrate
- Fecal Indicator Bacteria
- Castle Vegtech Site

Secondary POCs

- Chloride
- Sodium
- Low Dissolved Oxygen
- pH
- Total Dissolved Solids
- Boron

Summary

Pollutants of Concern for San Martin

Primary POCs

- Sediment
- Nitrate
- Fecal Indicator Bacteria

Secondary POCs

- Chloride
- Sodium
- Low Dissolved Oxygen
- pH
- Total Dissolved Solids
- Boron

Summary

Pollutants of Concern for Gilroy

Primary POCs

- Sediment
- Nitrate
- Fecal Indicator Bacteria
- Trash
- Waste Oil

Secondary POCs

- Chloride
- Sodium
- Low Dissolved Oxygen
- pH
- Total Dissolved Solids
- Boron
- Turbidity

Addressing POCs in the SWMP

- Secondary Pollutants of Concern
  - Analyze potential for presence of pollutant in stormwater runoff; if potentially present, treat as a primary pollutant of concern
- Primary Pollutants of Concern
  - Identify potential sources
  - Address each pollutant in each section of the SWMP
  - Develop BMPs to reduce each pollutant to the MEP
- Additional Requirements for TMDLs
  - Include Wasteload Allocation Attainment Plan in SWMP for each TMDL
  - Comply with wasteload allocations and other requirements in Resolutions and Staff Reports

Remember …

The Permit Requirement

Reduce pollutants in stormwater runoff to the maximum extent practicable (MEP) and protect water quality

Remember …

The Goal

Understand

existing water quality conditions

Focus

SWMP efforts on most serious water quality issues

Maximize Effectiveness

at reducing pollutants and protecting water quality

Questions?

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MS4 Enrollment Strategy Website:

http://www.waterboards.ca.gov/centralcoast/stormwater/municipal/phase_2/ms4enrollment/enrollment_strategy_index.htm