

Smart Growth Stormwater Management Policies

*New Partners for
Smart Growth Conference
Denver, Colorado
January 26, 2006*

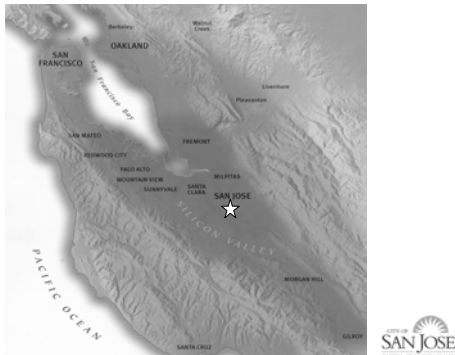


Overview

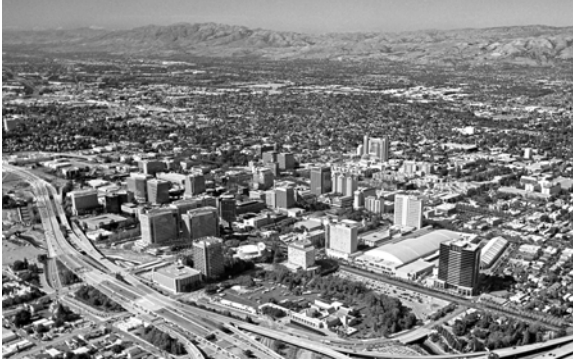
- **San José's Comprehensive Smart Growth Planning Strategy (Smart Growth 101)**
- **Smart Growth Policies Benefits to San José's Stormwater Management Goals**
- **San José's Process of Integrating Smart Growth Planning Principles Into Stormwater Management and Policies**
- **Experience and Lessons Learned**



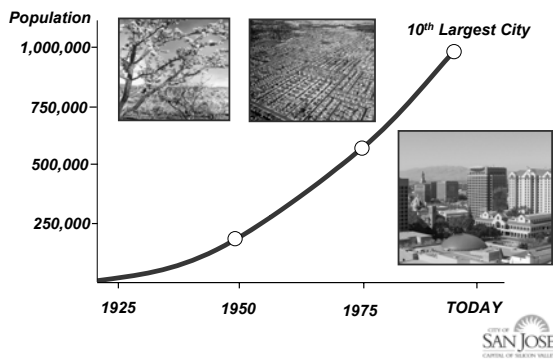
Where is San Jose?



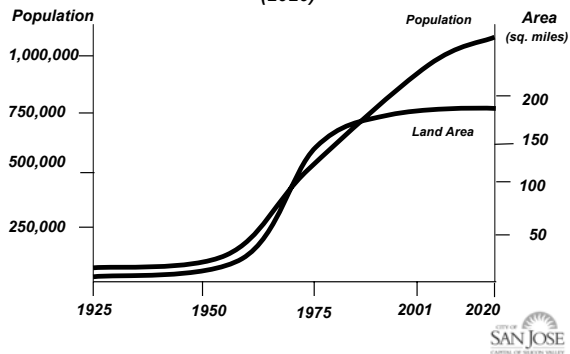
San José, California

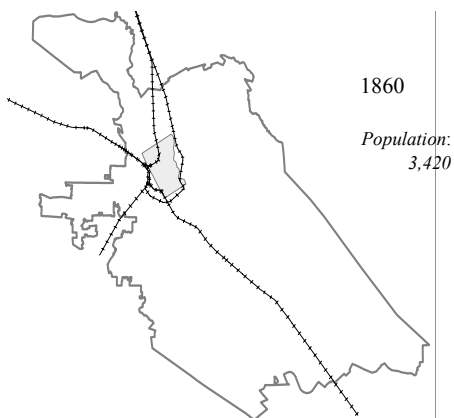


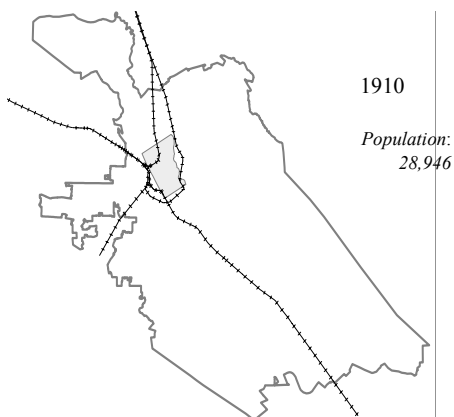
San Jose Development History

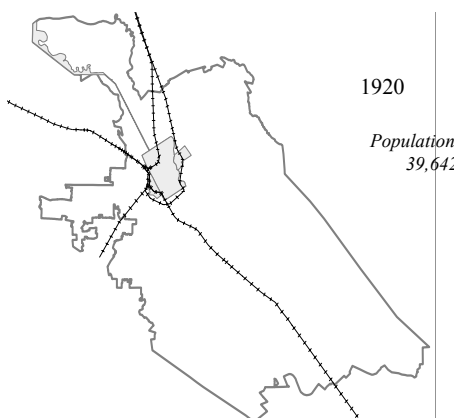


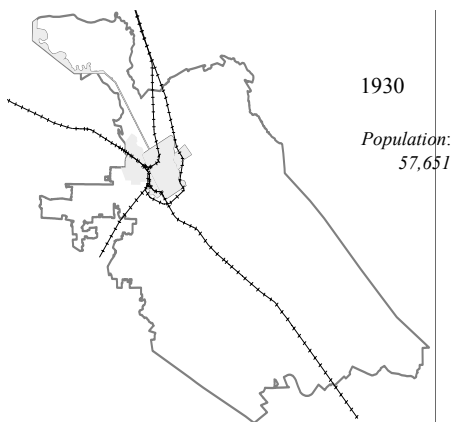
Population vs. Land Area (2020)

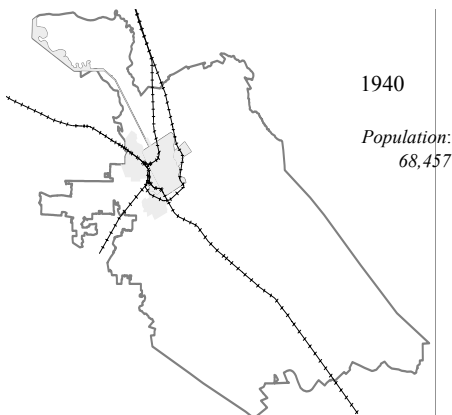


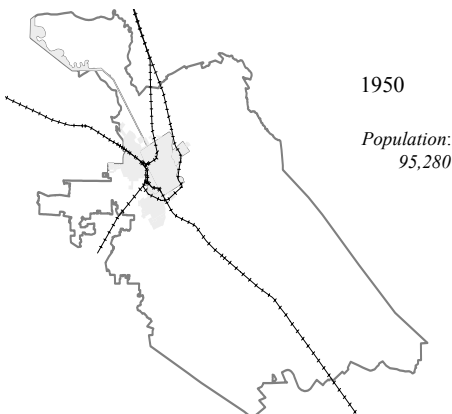


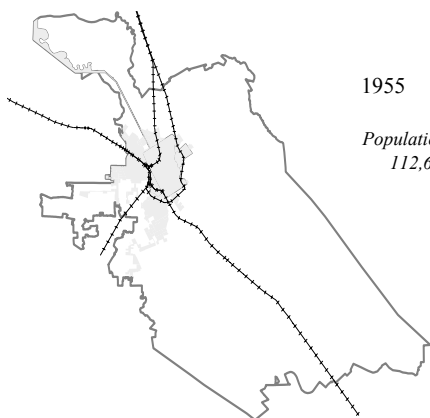






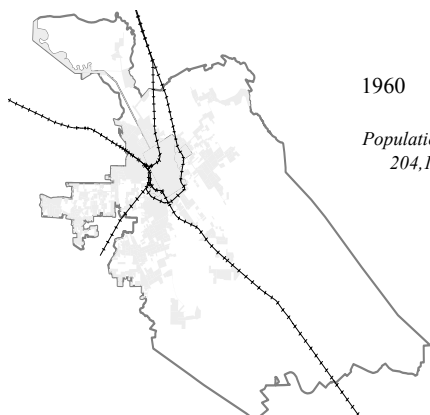






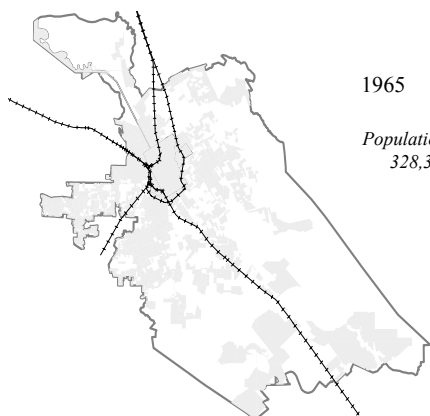
1955

Population:
112,645



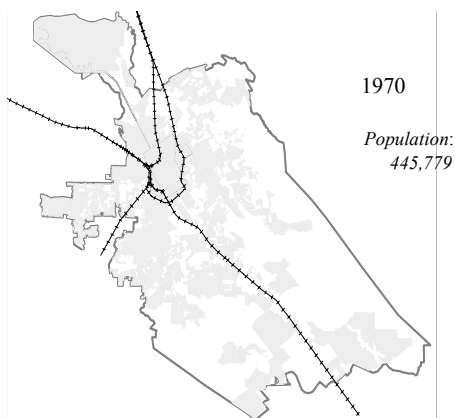
1960

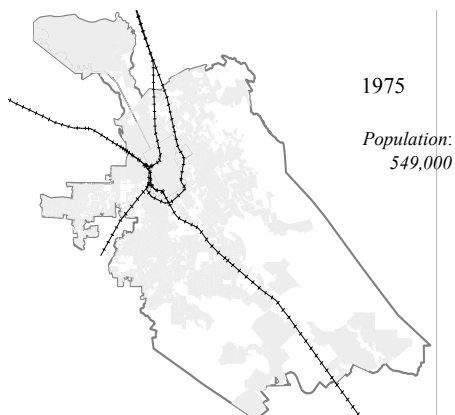
Population:
204,196

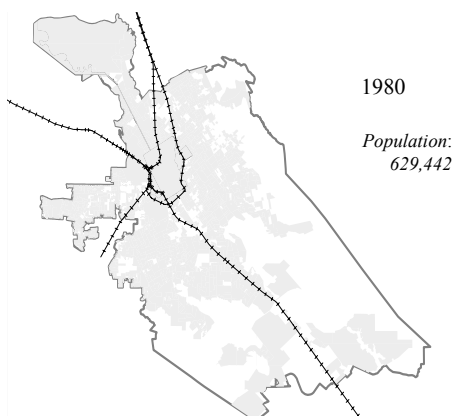


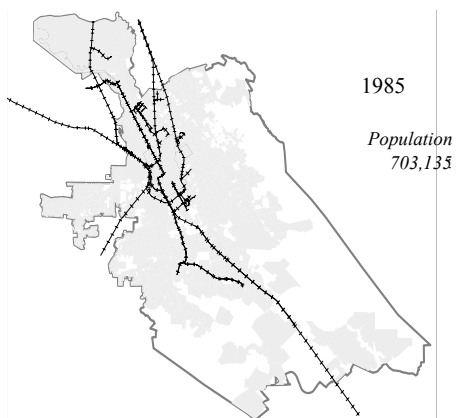
1965

Population:
328,300



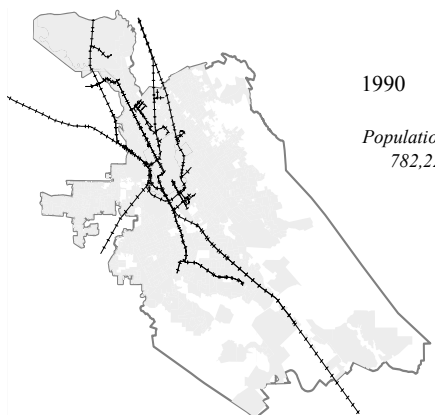






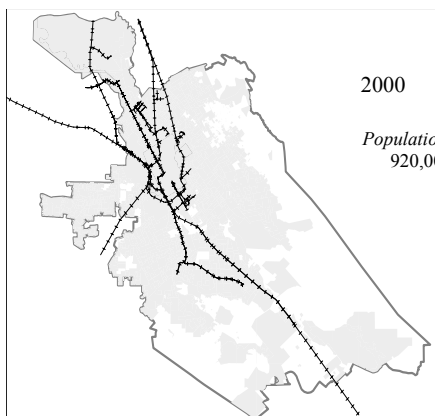
1985

Population
703,133



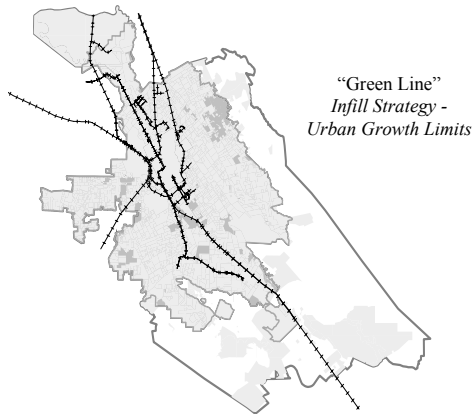
1990

Population:
782,225



2000

Population:
920,000



*"Green Line"
Infill Strategy -
Urban Growth Limits*

What Does Smart Growth Mean in San Jose?

*Creating livable communities by developing
efficiently within a reasonable growth boundary.*



Key Statistics

Recent Growth Trends-FY '99-'00 to FY '04-'05

- 21,200 new dwelling units (3,500 annual avg.)
- Built approximately 16 million square feet of commercial/industrial development.
- All development located on infill sites with minor adjustments (<5 acres) to the Urban Growth Boundary

ABAG Projections-San Jose 2030

- 240,000 new jobs
- 355,000 new residents

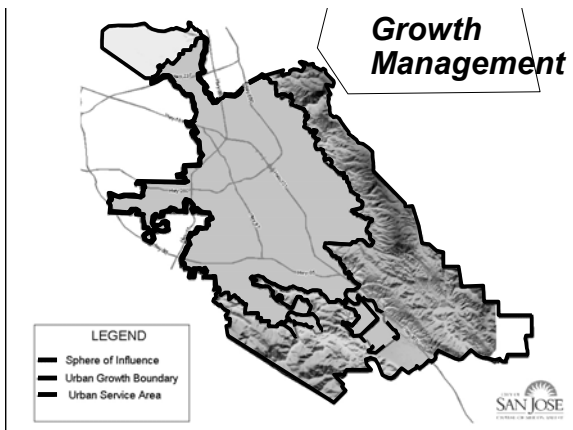
San Jose's Smart Growth Principles

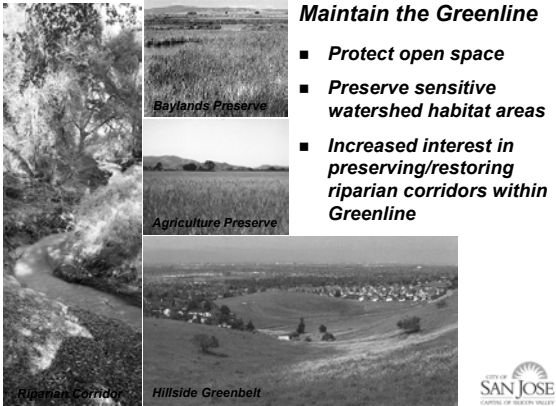


The Big Question:

How do we continue to manage growth without compromising established Smart Growth Principles and also achieve stormwater quality management objectives?

- ✓ Maintain the Greenline
- ✓ Maximize Transportation Choices
- ✓ Encourage Infill Development/Redevelopment
- ✓ Set the Stage for Intensified Development in Key Areas
- ✓ Create a Smart Growth stormwater management policy to guide urban runoff pollution prevention and implementation of BMP Stormwater Control Measures

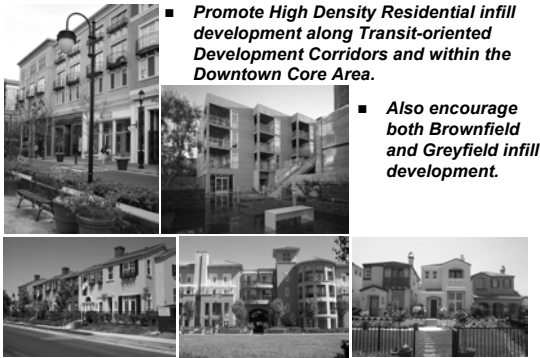




Maintain the Greenline

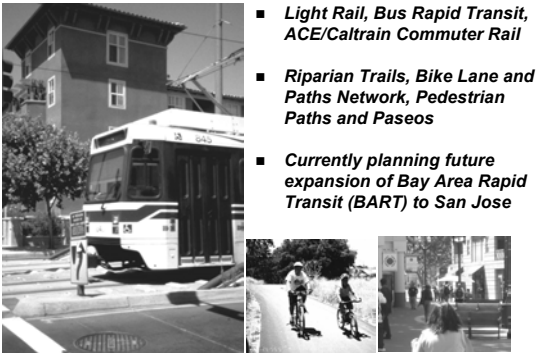
- *Protect open space*
- *Preserve sensitive watershed habitat areas*
- *Increased interest in preserving/restoring riparian corridors within Greenline*

Encourage Infill Development/Redevelopment



- *Promote High Density Residential infill development along Transit-oriented Development Corridors and within the Downtown Core Area.*
- *Also encourage both Brownfield and Greyfield infill development.*

Maximize Transportation Choices

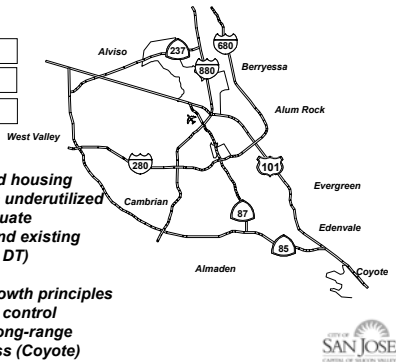


- *Light Rail, Bus Rapid Transit, ACE/Caltrain Commuter Rail*
- *Riparian Trails, Bike Lane and Paths Network, Pedestrian Paths and Paseos*
- *Currently planning future expansion of Bay Area Rapid Transit (BART) to San Jose*

Intensified Economic & Residential Development

North San Jose
Downtown
Coyote Valley

- Intensify job and housing opportunities in underutilized areas with adequate infrastructure and existing light rail (NSJ & DT)
- Apply Smart Growth principles and stormwater control policies in the long-range planning process (Coyote)



Intensification: North San Jose Employment Center



- **Project Area**
 - 4,700 acres
 - "Greyfield" Development
- **Existing Development**
 - Industrial 42 million sq. ft. (average FAR .35-.40)
 - 8,000 Residential units (average density 38 du/ac)
- **Key Features**
 - Highway 101, Interstate 880 & Route 87
 - Guadalupe River & Coyote Creek
 - Light Rail
 - Airport



Intensification: North San Jose Employment Center



Proposed Development

- Industrial Park add 26.7 million square feet (FAR 1.2)
- Residential add 24,700 dwelling units (average density of 80 dwelling units per acre)

Key Features

- New Building Heights up to 250 Feet
- Pedestrian and Transit Amenities
- Corporate HQ & Landmark Buildings
- Mixed-Use (Retail, Residential, Hotel)
- All new development subject to Smart Growth water policies

Intensification: Downtown Revitalization



- Significantly reduced parking requirements within Core Area
- Mid- and high-rise high density mixed-use residential development
- Development of a riparian park and restoration of floodplain
- Development of "signature" corporate headquarters buildings



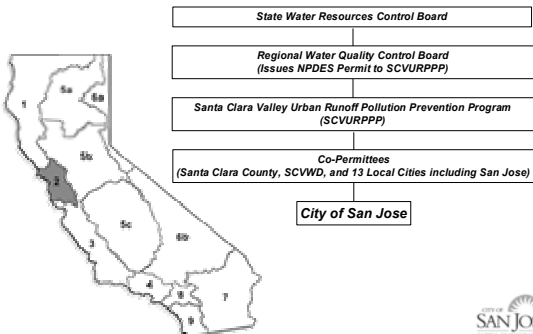


Smart Growth Stormwater Management

- Regulatory Framework
- Watershed Planning
- City Council Policies Development
- Policy Provisions: Water Quality
- Policy Provisions: Water Quantity
- Smart Growth Provisions
- Tools and Resources for Implementation
- Experience and Lessons Learned



Regulatory Framework: Federal, State, and Local Agencies



Regulatory Framework

- *The Stormwater pollution discharge permit is issued by the San Francisco Bay Area Regional Water Quality Control Board to jurisdictions in the Santa Clara County watershed.*
- *San Jose is the first large city in the Northern California to implement these new requirements.*
- *Applies to all "Major Projects" involving 10,000 square feet or more of impervious surface.*
- *Council Policy 6-29 is the City's Policy for implementing this water quality requirement.*

Watershed Planning: General Plan Principles in San Jose

- *Integrate land use, transportation, and natural resource planning*
- *Habitat protection*
- *Water resource protection*
- *Water quality protection*
- *Sustainable development*

Watershed Planning: Best Management Practices (BMPs) for Development

Site Design

Minimize Volume and Peak Flow of Runoff By Designing Less Impervious Surface Area in New Projects

Source Control

Limit the Direct Exposure of Runoff to Pollutant Sources

Treatment Measures

Detain Runoff & Remove Pollutants on Site

- *Requires hydraulic sizing of post construction BMPs to address pollutant loading from new development.*
- *Requires control of flow volumes and durations from new development to address potential impacts from erosion of creeks.*
- *Requires ongoing verification that BMPs are maintained.*
- *Trilogy of BMPs: Site Design, Source Control, Treatment Measures*

City Council Policy Development : Collaboration



- **Public Information**
- **Public Outreach and Input**
- **Developers' Roundtable**
- **On-going Collaboration with Co-permittees**



City Council Policy Development: Initial Implementation

- San Jose began phased implementation October 2003 subject to Post Construction Urban Runoff Policy Policy 6-29 beginning with "Major Land Uses of Concern"
- **February 15, 2005** San Jose began to require hydraulic sizing for developments characterized as Major Projects, Significant Redevelopment Projects, and/or Land Uses of Concern.
- Stormwater Control Plans must clearly show stormwater treatment controls and all sizing calculations as part of the Development Plan set reviewed and approved by the Planning Department.
- The final Stormwater Control Plan must show the stamp of an engineer which certifies that the Plan can be implemented as shown.



Policy Provisions: Important Definitions

Major Project:

- New development projects that create 1 acre or more of impervious surface.
- New streets, roads, highways and freeways built by the City that create 1 acre or more of impervious surface.
- Projects that create 10,000 square feet or more of impervious surface in a Land Use of Concern.
- Any project requiring direct approval from the RWQCB.

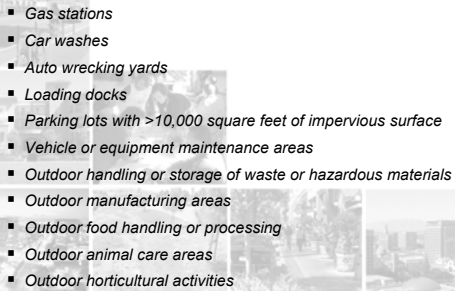
Significant Redevelopment Projects:

A project on a previously developed site that results in addition and/or replacement of one acre (43,560 square feet) or more of Impervious Surface Area; or, if involving a Land Use of Concern, addition and/or replacement of 10,000 square feet or more of Impervious Surface Area.

Note: August 2006 all thresholds drop to 10,000 square feet or more.

Policy Provisions: Important Definitions

Land Uses of Concern:

- 
- Gas stations
 - Car washes
 - Auto wrecking yards
 - Loading docks
 - Parking lots with >10,000 square feet of impervious surface
 - Vehicle or equipment maintenance areas
 - Outdoor handling or storage of waste or hazardous materials
 - Outdoor manufacturing areas
 - Outdoor food handling or processing
 - Outdoor animal care areas
 - Outdoor horticultural activities

Policy Provisions: Post-Construction Urban Runoff Management Policy

Key Provisions:

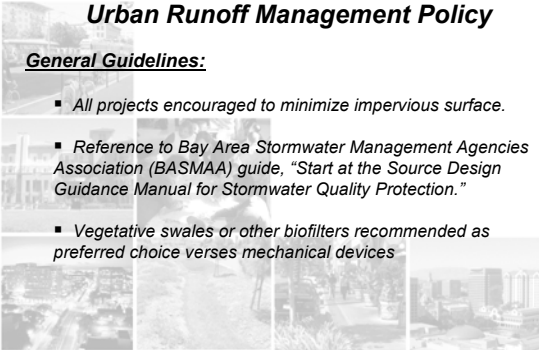
- 
- Based on SCVURPPP Permit and Manual

Standard Provisions:

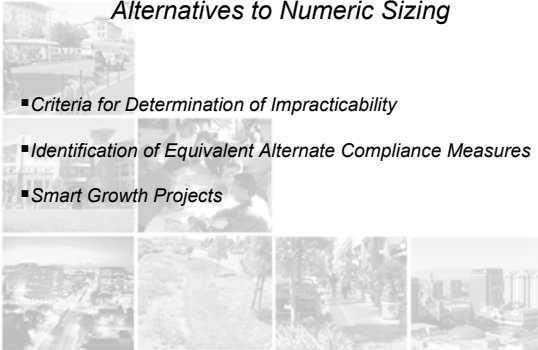
- All new and redevelopment projects are required to implement Post-Construction Pollution Reduction BMPs and TCMs to MEP.
- Establishes specific design standards for Post-Construction TCMs for Major Projects, Significant Redevelopment Projects, and developments categorized as a Land Use of Concern

Policy Provisions: Post-Construction Urban Runoff Management Policy

General Guidelines:

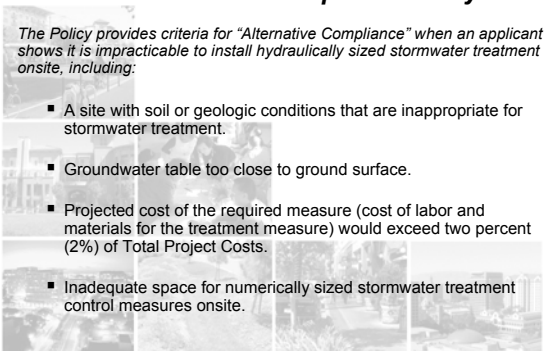
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- All projects encouraged to minimize impervious surface.
 - Reference to Bay Area Stormwater Management Agencies Association (BASMAA) guide, "Start at the Source Design Guidance Manual for Stormwater Quality Protection."
 - Vegetative swales or other biofilters recommended as preferred choice versus mechanical devices

**Policy Provisions:
Alternatives to Numeric Sizing**



- Criteria for Determination of Impracticability
- Identification of Equivalent Alternate Compliance Measures
- Smart Growth Projects

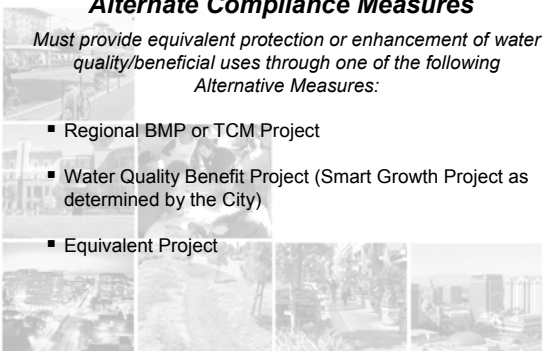
Determination of Impracticability



The Policy provides criteria for "Alternative Compliance" when an applicant shows it is impracticable to install hydraulically sized stormwater treatment onsite, including:

- A site with soil or geologic conditions that are inappropriate for stormwater treatment.
- Groundwater table too close to ground surface.
- Projected cost of the required measure (cost of labor and materials for the treatment measure) would exceed two percent (2%) of Total Project Costs.
- Inadequate space for numerically sized stormwater treatment control measures onsite.

**Identification of Equivalent
Alternate Compliance Measures**



Must provide equivalent protection or enhancement of water quality/beneficial uses through one of the following Alternative Measures:

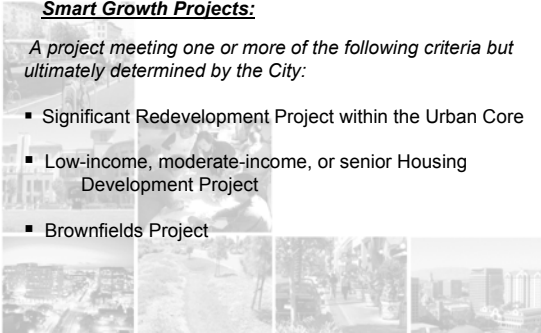
- Regional BMP or TCM Project
- Water Quality Benefit Project (Smart Growth Project as determined by the City)
- Equivalent Project

Smart Growth Stormwater Management

Smart Growth Projects:

A project meeting one or more of the following criteria but ultimately determined by the City:

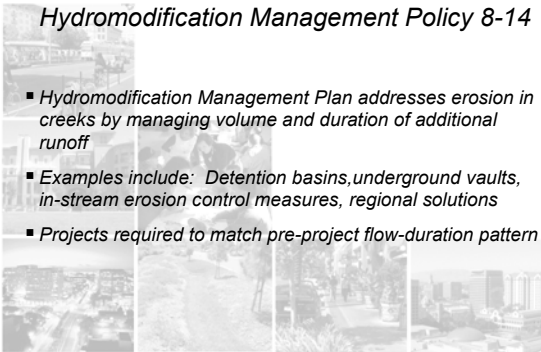
- Significant Redevelopment Project within the Urban Core
- Low-income, moderate-income, or senior Housing Development Project
- Brownfields Project



Policy Provisions: Post-Construction

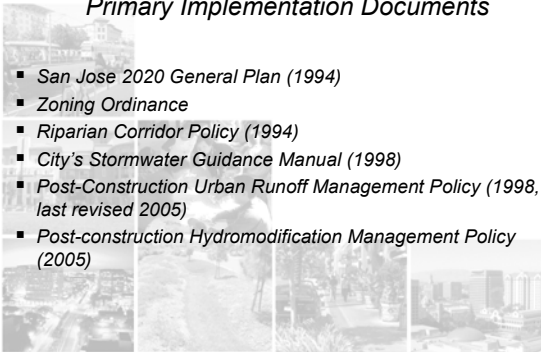
Hydromodification Management Policy 8-14

- *Hydromodification Management Plan addresses erosion in creeks by managing volume and duration of additional runoff*
- *Examples include: Detention basins, underground vaults, in-stream erosion control measures, regional solutions*
- *Projects required to match pre-project flow-duration pattern*



**Tools and Resources for Implementation:
*Primary Implementation Documents***

- *San Jose 2020 General Plan (1994)*
- *Zoning Ordinance*
- *Riparian Corridor Policy (1994)*
- *City's Stormwater Guidance Manual (1998)*
- *Post-Construction Urban Runoff Management Policy (1998, last revised 2005)*
- *Post-construction Hydromodification Management Policy (2005)*



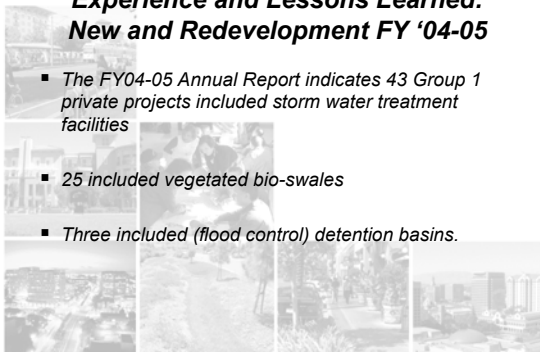
Tools and Resources for Implementation Resources:
Guidance Documents for Incorporating BMPs into Projects

- Start at the Source
- Guidance Manual on Post-Construction Stormwater Quality Controls
- Design Guidelines
- Landscape and Irrigation Guidelines
- Riparian Corridor Policy Study



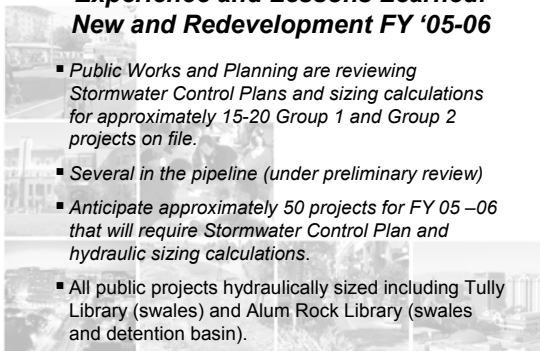
Experience and Lessons Learned:
New and Redevelopment FY '04-05

- The FY04-05 Annual Report indicates 43 Group 1 private projects included storm water treatment facilities
- 25 included vegetated bio-swales
- Three included (flood control) detention basins.



Experience and Lessons Learned:
New and Redevelopment FY '05-06

- Public Works and Planning are reviewing Stormwater Control Plans and sizing calculations for approximately 15-20 Group 1 and Group 2 projects on file.
- Several in the pipeline (under preliminary review)
- Anticipate approximately 50 projects for FY 05 –06 that will require Stormwater Control Plan and hydraulic sizing calculations.
- All public projects hydraulically sized including Tully Library (swales) and Alum Rock Library (swales and detention basin).



Experience and Lessons Learned:

Integrating stormwater pollution prevention & hydromodification design into land use development review & approval process:

- Requires extensive training for all participants.
- Is a slow, methodical process of changing paradigms and gaining buy-in.
- Requires education of decision-makers/regulators.
- Requires a variety of design solutions for different projects.
- Requires extensive re-tooling of local government design review and approval process.

Experience and Lessons Learned:

- Ultimately, implementing Smart Growth Land Use Policies can produce water resource protection benefits
- Policy is always evolving, for example in 2006 the sizing threshold for all projects in dropping from 1 acre to 10,000 square feet and a revision to the City's Parkland Dedication Ordinance is being considered that would allow 50% credit for multi-purpose park facilities that can function as both stormwater detention basins and recreational facilities

Mixed-use intersection



Mixed-use intersection - existing



Mixed-use intersection - proposed

