San Jose Flea Market: A Regional Approach to Urban Village Stormwater Management

ANNUAL C.3. STORMWATER WORKSHOP

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San Jose
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Approved Land Use Plan – Entire Project
Site Plan – North Village
Macro-Scale Treatment Control Sizing

Ruled out:
- Extended detention basin – non-LID (would require under drain)
- Standard biotreatment cell - would be too big (4% x 50+ acres = massive!), would require too much surface ponding

Solution:
- Combination detention basin & biotreatment cell

• Basin provides required storage function in a separate component – reduces surface ponding in biotreatment cell
• Biotreatment cell size minimized – sizing based on metered flow from the basin and infiltration rate of the treatment soil.
Stormwater Control Plan – North Village

- Outfall to Coyote Creek
- High flow bypass
- Storm drain pump station
- Treatment volume to basin
- Detention basin / biotreatment cell within riparian setback area
landscape details

treatment facility / creek topo
Planting plan illustrating existing riparian dripline and proposed riparian interface, biotreatment cell and Coyote Creek Trail entrance feature plantings
Details of basin/biotreatment cell wall, biotreatment cell surface treatment
Riparian edge prior to construction
Early excavation of the detention basin – viewing south toward Berryessa Rd.

- July 2013
- September 2013
- March 2014
Installation of the wet well and pump station
Installation of the basin liner – January 2014
Rough grading of the biotreatment cell area
Phase I – Residential
(Currently Under Construction)
Advantages of Regional vs. Onsite

- North Village Basin provides storage and treatment capacity that exceeds the project’s minimum requirements under C.3.
  - Designed to accommodate future development on adjacent easterly property

- Long term operation & maintenance assured through establishment of a Community Facilities District

- Direct discharge of treated runoff to receiving water – no mixing with other sources of polluted runoff

- Flexibility of design could allow HM storage
North Village basin / biocell facility design can be duplicated for South Village site
Potential for Offsite Treatment – Example

Mixed use development site

14.5 ac.

(Basin/biocell treatment facility – 150,000 cu. ft. storage capacity)

Additional (existing) area potentially treated

industrial 49.2 ac.

residential 36.1 ac.

Total 99.8 ac.
Riparian setback zones suitable as potential regional facility sites are abundant throughout Santa Clara Valley.
San Jose Urban Villages and Major Stream Corridors
Discussion / Questions?