

Arid Lands Green Infrastructure

Regional Examples + Tour

Green Infrastructure and Low-Impact Design for Stormwater Management

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Biohabitats/Natural Systems International

Principles of GI/LID

Think like a watershed

Infiltrate, evapotranspirate and slow down runoff

Minimize erosion and sediment transport

Treat stormwater close to the source

Use pervious areas for stormwater Treatment

Water Harvesting within the landscape

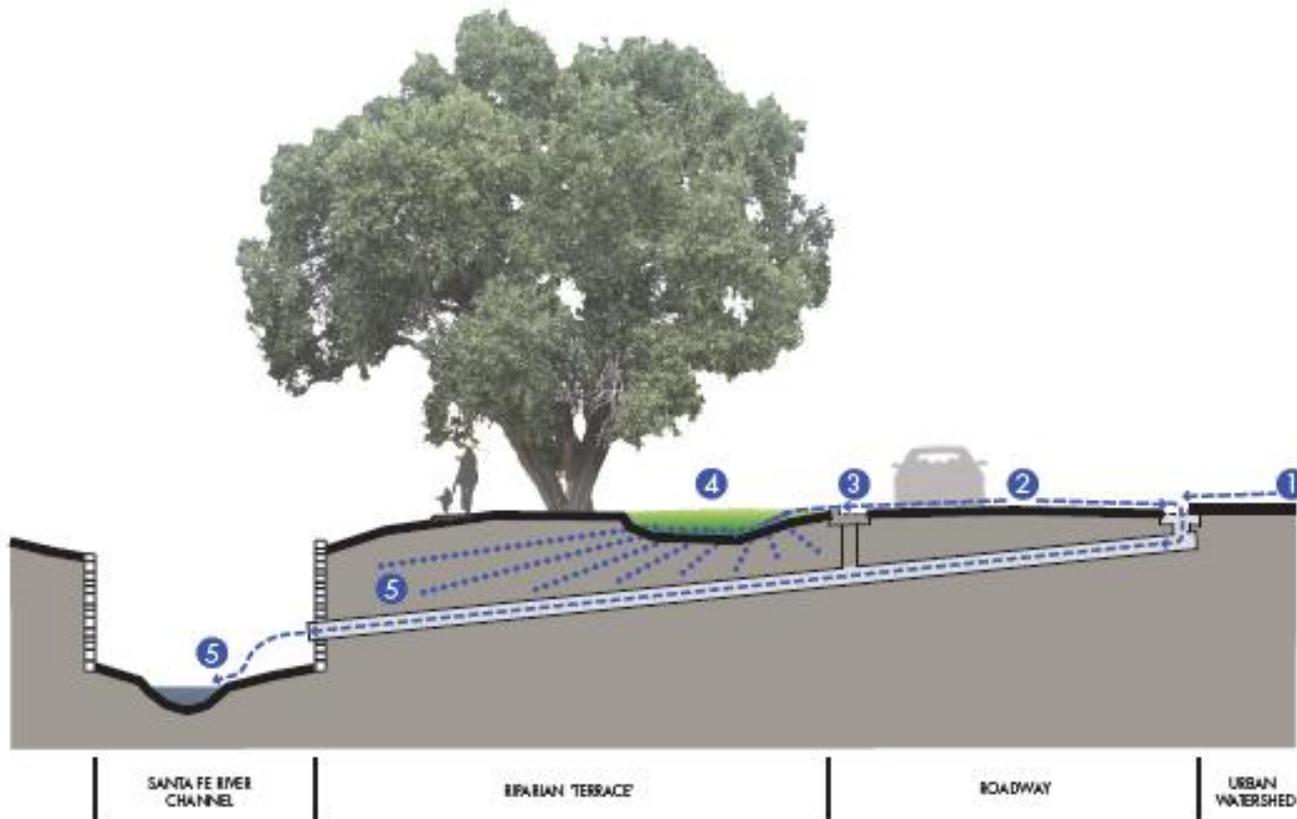
Regional Examples

- Emerging approach in the southwest
- Santa Fe & Albuquerque have a few examples, with more emerging over time
- City and County of Santa Fe are beginning to incorporate GI/LID in work in restoration efforts for the Santa Fe River
- Organized an overview presentation and tour for LANL staff of local examples

Regional Examples

- Presentation on river park work by Kenneth Francis of Surroundings Studio
- Overview of tour sites by Aaron Kaufman of Southwest Hydrology





PROPOSED **STORMWATER TREATMENT** OF PARKLANDS ALONG SANTA FE RIVER

- 1 SURFACE RUN-OFF FROM UPPER URBAN WATERSHED FLOWS INTO STORMWATER INLETS
- 2 STREET SURFACES CARRY HIGH QUANTITIES OF WATER AND UNTREATED POLLUTANTS TO INLETS
- 3 LATERAL INLET DIVERTS LOW FLOWS OF WATER AND POLLUTANTS AWAY FROM EXISTING STORMWATER SYSTEM
- 4 RIPARIAN PARKLAND CARRIES SURFACE RUN-OFF INTO SWALES TO SLOW DOWN FLOW AND CLEAN WATER
- 5 REDUCTION OF POLLUTANTS AND HIGH VELOCITY WATER FLOWS ENTERING RIVER THROUGH INFILTRATION AS WELL AS THROUGH TRADITIONAL STORM DRAIN

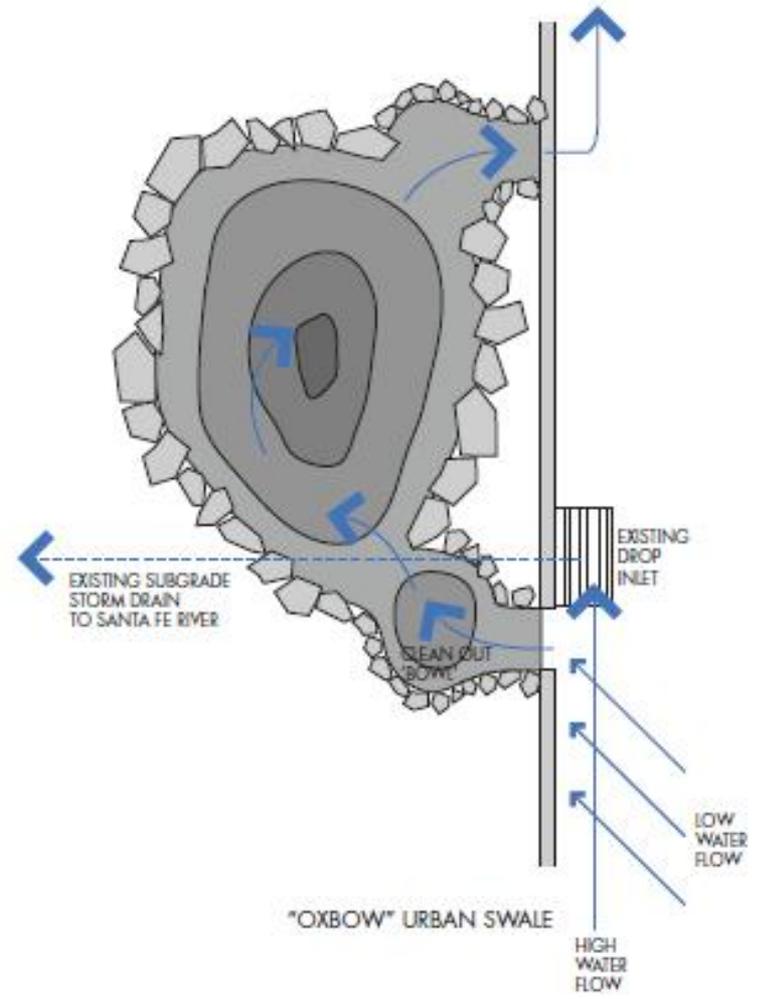
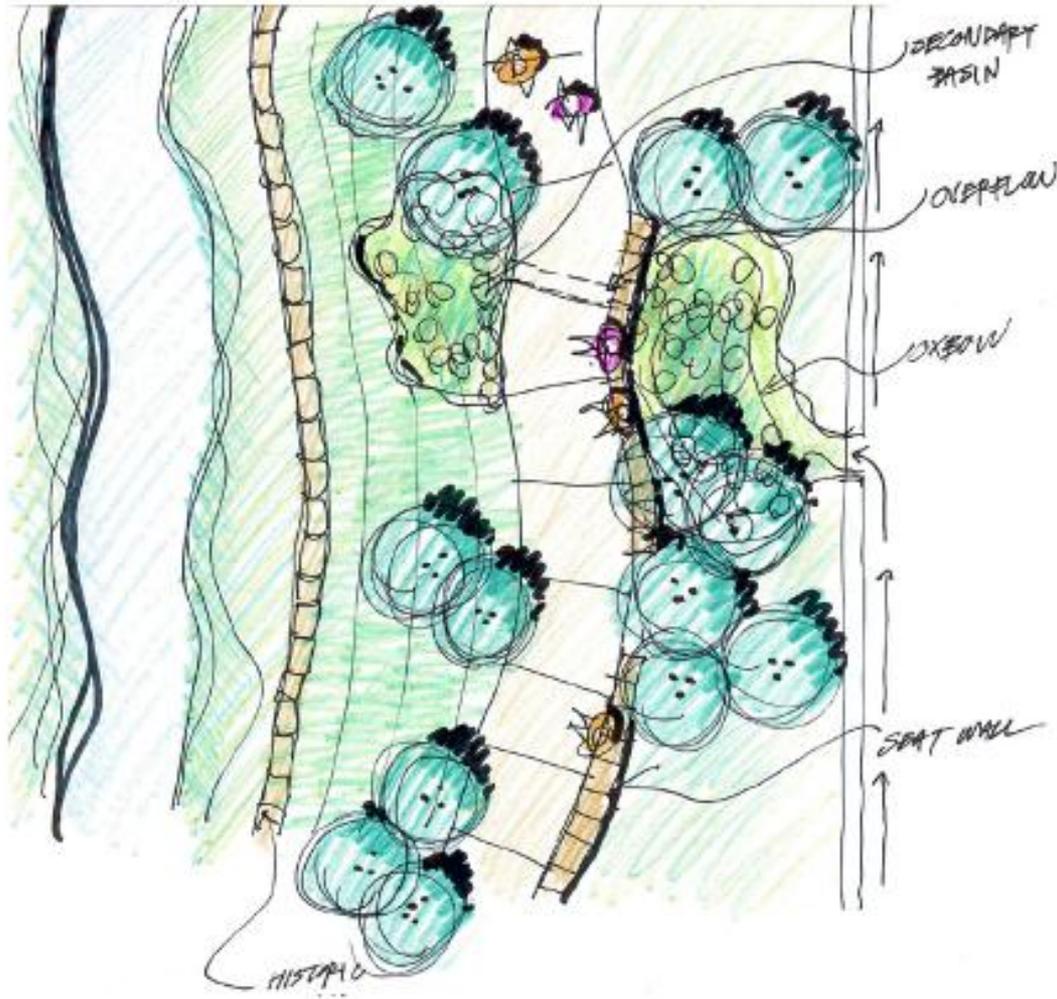
EL PARQUE DEL RIO
city of santa fe new mexico

Proposed Stormwater Management

surroundings
landscape
architecture
urbanism

OXBOW SWALE

- Organic form easily shapes to existing contours and character of Rural areas along el parque
- Less compact but larger infiltration capacity
- Can be lined with stones or bermed naturally





EL PARQUE DEL RIO
city of santa fe new mexico

East Side Stormwater Acequia Photomontage

surroundings
landscape
architecture
urbanism

The Lofts on Cerrillos – Santa Fe





OCT 4 2004



La Farge Library – Santa Fe







Don Jose Storm Drain/Erosion Control













Photopoints for Infiltration Gallery at Don Jose Arroyo



<http://youtu.be/stoulRWJKJw>

Above: View downstream from bottom of culvert elevation on Don Jose stormdrain (September 2010)

Below: Completed Don Jose Infiltration Gallery during a storm event downstream (May 13, 2012)

To view a video of the infiltration gallery in action go to:

https://picasaweb.google.com/lh/photo/Rm_cH4xR8cGBZeQkmmQpMDQ05A7WcU3hkbjy1RL5JN9w?feat=directlink

or

<http://youtu.be/stoulRWJKJw>





Above: View upstream of Don Jose
(September 2010)

Below: Completed Don Jose Infiltration
Gallery upstream during a storm event(May
2012)



Santa Fe Railyard Park & Plaza

- Permeable asphalt blends into gravel tree wells in highly pedestrian areas
- Permeable strips are alternated with impermeable surfaces
- Extensive rainwater harvesting – above and below ground.





SANTA FE RAILYARD

FLYING STAR CAFE

Port on

- 75,000 gallons of underground storage
- Irrigates 400 trees



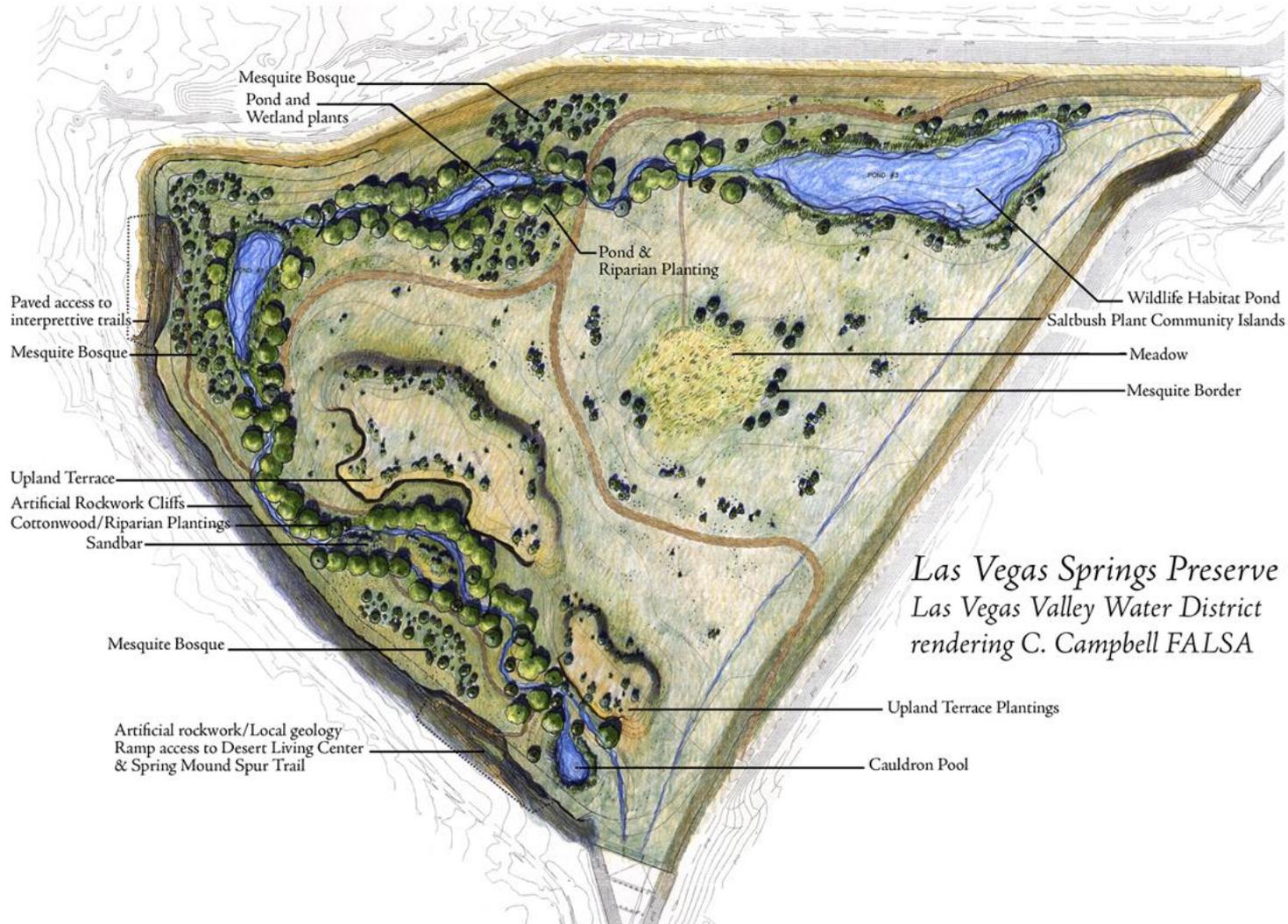
New Belgium/Odell's Breweries (CO)







Las Vegas Springs Preserve, NV



Las Vegas Springs Preserve Cienega
Las Vegas Valley Water District
rendering C. Campbell FALSA





Published Resources

Green Infrastructure for Southwestern Neighborhoods



Version 1.0
July 2010

USEPA: Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices (2007)

Albuquerque Area LID Site Tour doc

Denver Storm Drainage Criteria Manual