



Surfrider Foundation

Ventura County Chapter

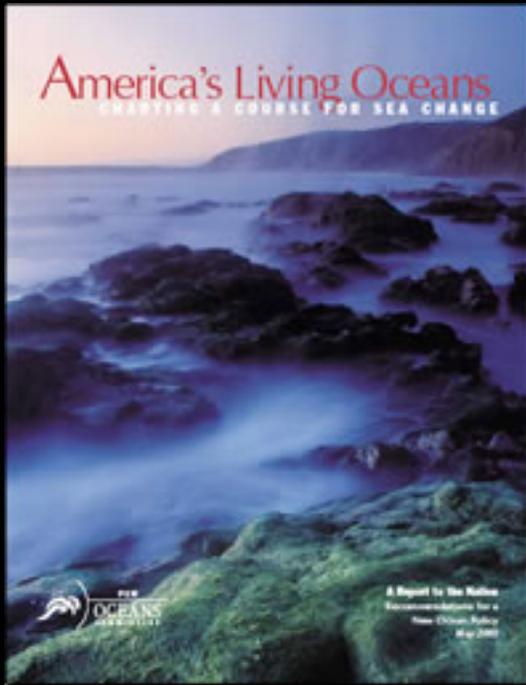


LIQUOR
DRIVE-IN

**PROPHECY
FULFILLED
PACIFIC OCEAN
TSUNAMI!
MORE SOON**

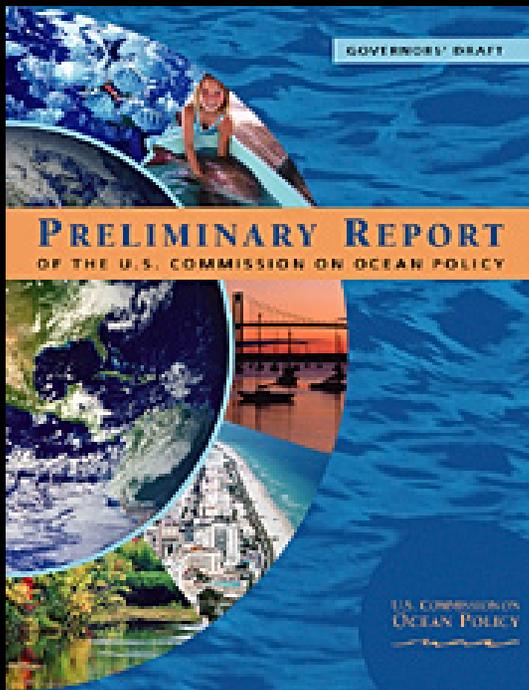


Pew Oceans Commission



Created by the Pew Charitable Trusts

US Commission on Ocean Policy



Appointed by President Bush in 2000

Coasts and Oceans in Crisis

“The oceans and coasts are in trouble and we must change the way we manage them...” - USCOP

“...as much as we love our oceans - our ignorance has been destroying them.” - Pew Oceans Commission

Point & Non-Point Source Pollution



Human Health & Ecosystem Health



Ventura River Watershed
Ecosystem-Based Management

Connectivity
Matilija Dam
“Ecosystem Restoration”

Water supply & Flood control
Ventura River Watershed
“Water Management Plan”

“Thinking Like a Watershed”

Coastal management
Surfers’ Point
“Managed Shoreline Retreat”

NPS Pollution
Urban Watersheds
“Ocean Friendly Gardens”

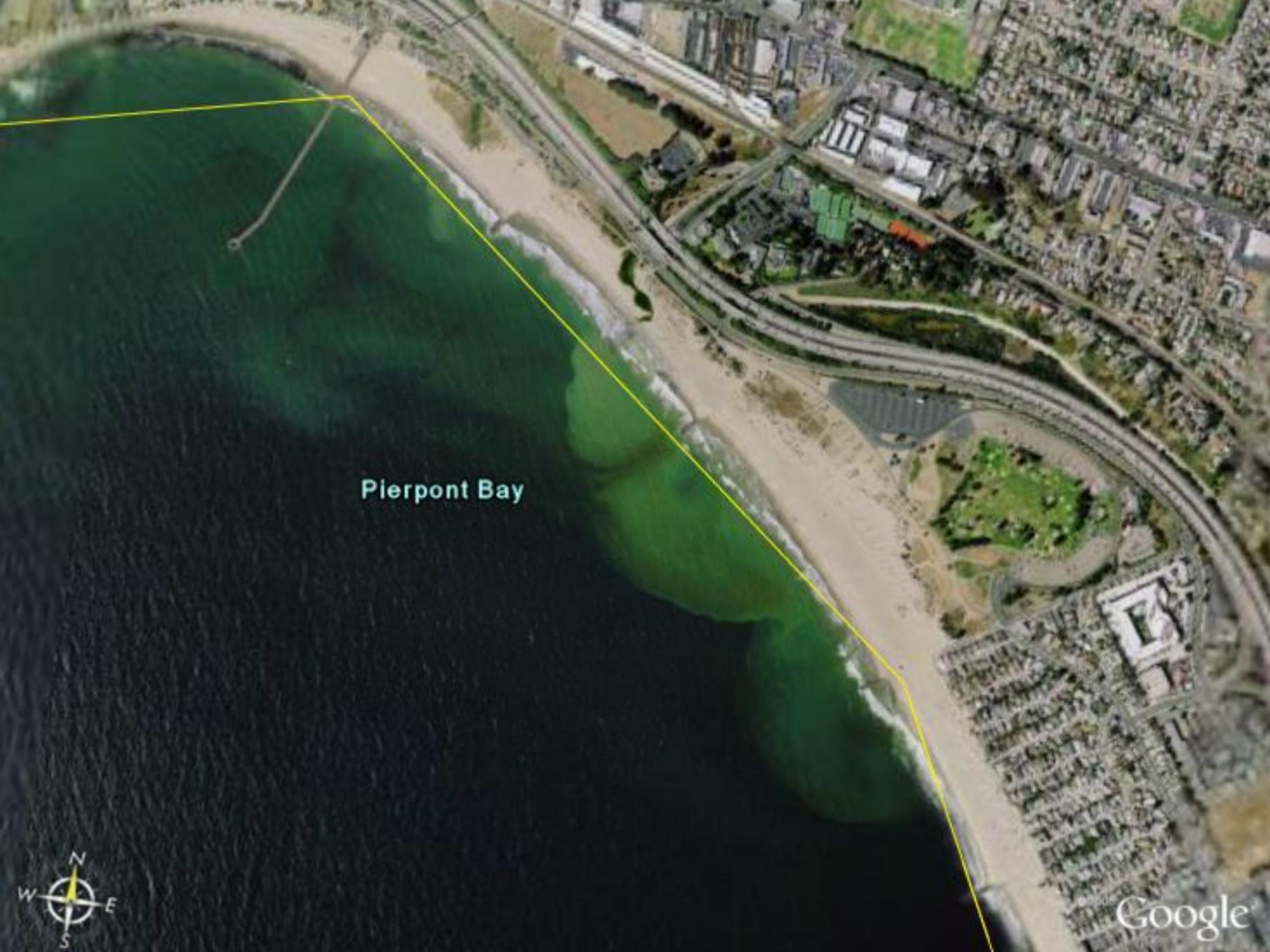


Coastal management
Surfers' Point
"Managed Shoreline Retreat"

City of Ventura Urban Watershed







Pierpont Bay



Google

WARNING!
RUNOFF / STORMDRAIN WATER MAY
CAUSE ILLNESS - AVOID CONTACT WITH
PONDED OR FLOWING RUNOFF AND THE
AREA WHERE RUNOFF ENTERS THE OCEAN



¡ AVISO !
CORRIENTE DE AGUA / AGUA DEL
DRENAJE DE TORMENTA PUEDE
CAUSAR ENFERMEDADES
EVITE CONTACTO CON AGUA DE
DESAGUE QUE ESTE ESTANCADA
O CORRIENDO Y EL AREA
DONDE DESEMBOCA AL OCEANO

VENTURA COUNTY ENVIRONMENTAL HEALTH DIVISION
FOR RECORDED INFORMATION UPDATES, CALL 805 662-6555
WEBSITE: WWW.VENTURA.ORG/ENVIRONMENT



12/08/200









WARNING!
PLEASE DO NOT FEED THE BIRDS.
FEEDING BIRDS IS ILLEGAL AND CAN BE PENALIZED.

¡AVISO!
NO ALIMENTAR A LAS AVES.
ALIMENTAR A LAS AVES ES ILÍCITO Y PUEDE SER PENALIZADO.







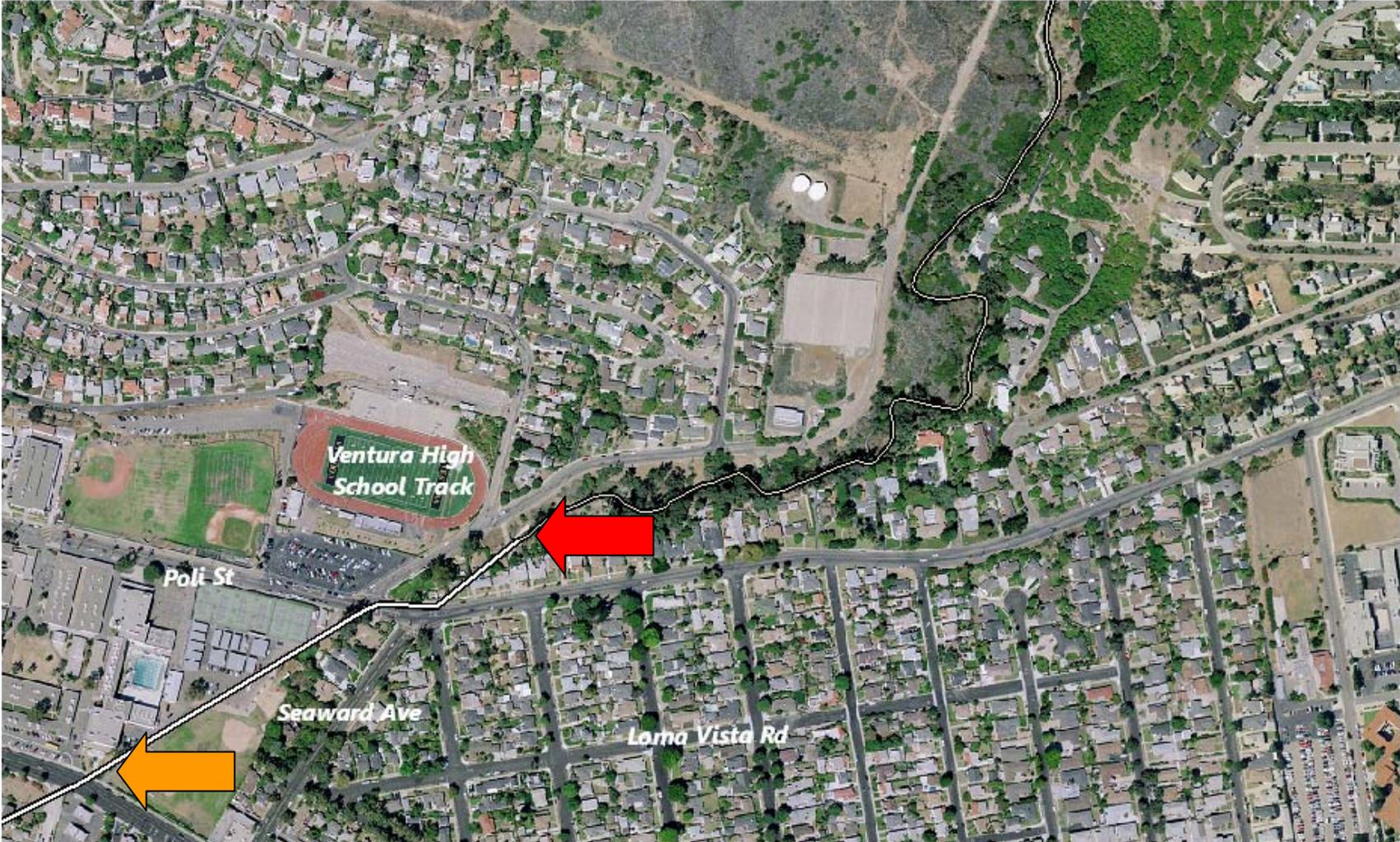
**City of Ventura
Urban Watershed**

Barranca

- Open
- Underground

 Sanjon Barranca - 100yr flood

 Prince Barranca - 100 yr flood

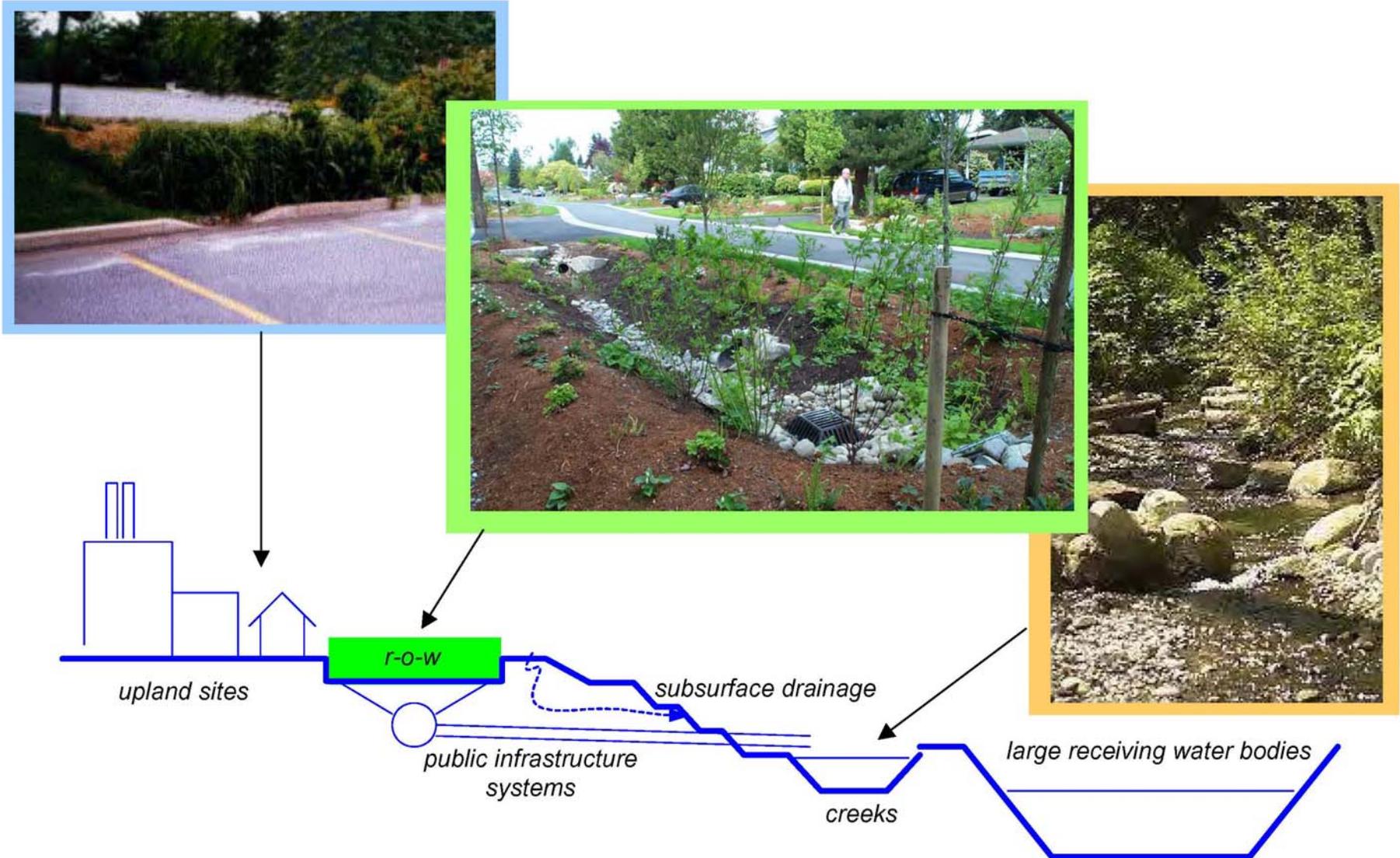


Prince Barranca

- Open
- == Underground



Opportunities within a watershed





1. Thompson Blvd.



1. Main St.



2. School playing field



3. Missed opportunity: 2007 street repaving



4. High school stadium parking lot



2. Ocean Blvd. Park



1. Parking lots along business corridors



7. Sanjon estuary



6. Prince Barranca: concrete channel



3. Wide residential streets



5. Asphalt alleys

Existing Drainage

-  Concrete Storm Drain
-  Natural
-  Open Concrete Channel



Low Impact Development: Design Specifics and Case Studies



**SEA Street
monitoring results
for two years:**

98%

**reduction in
total runoff
volume**



Vancouver's first Country Lane installed in 2002.

From: [courtesy of City of Vancouver, Vancouver](#)

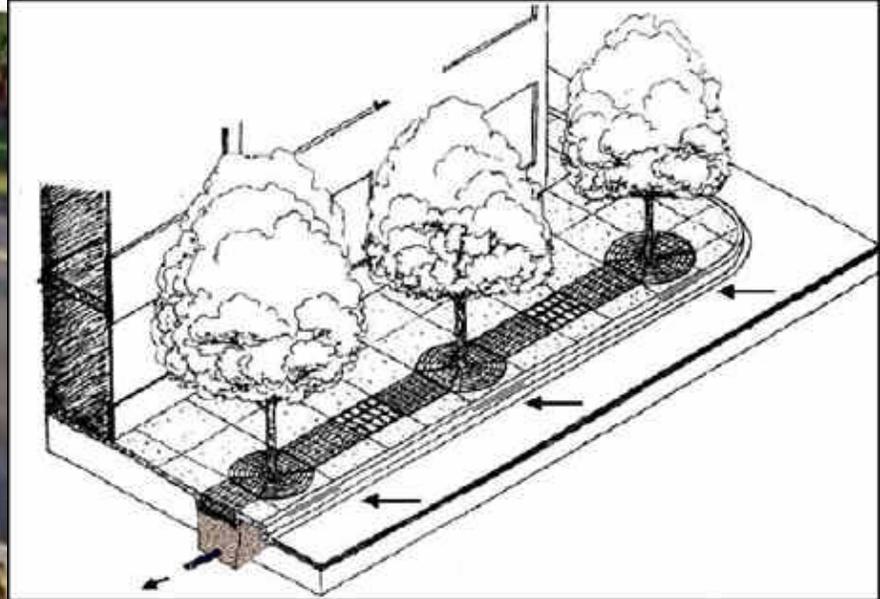
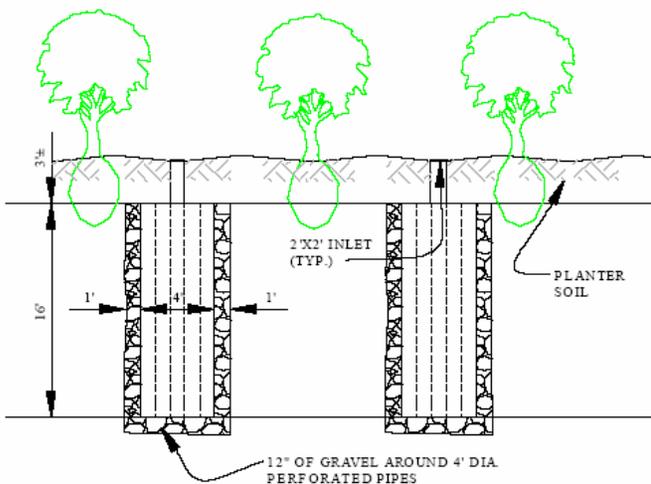


Figure 22
 Example of Trees and Drywells in Parking Lot Planter



Street planters in Portland, OR, are used in highly developed urban areas to introduce green space and manage stormwater runoff. PHOTO COURTESY OF THE PORTLAND BUREAU OF ENVIRONMENTAL SERVICES

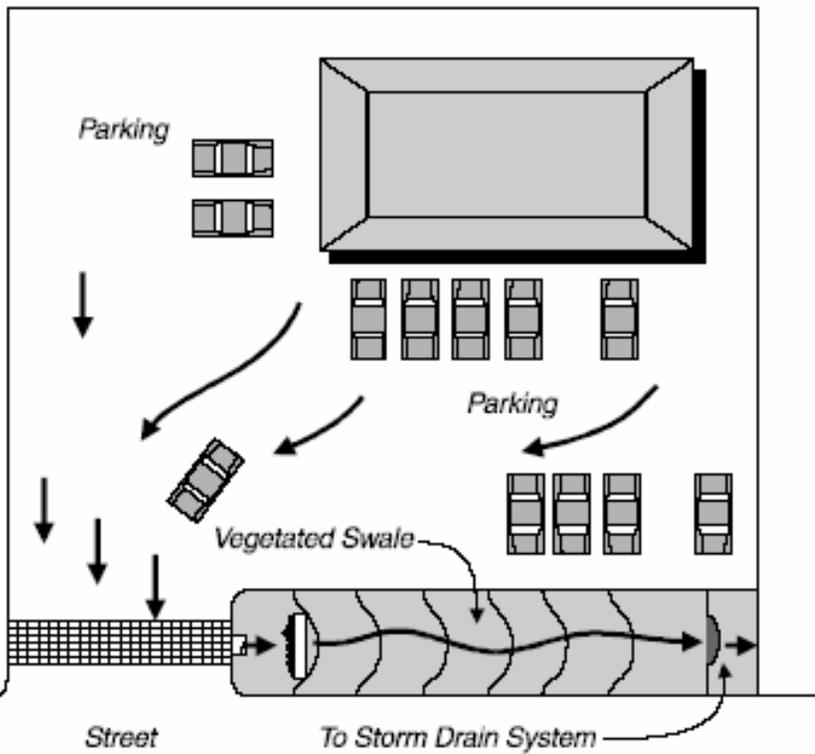
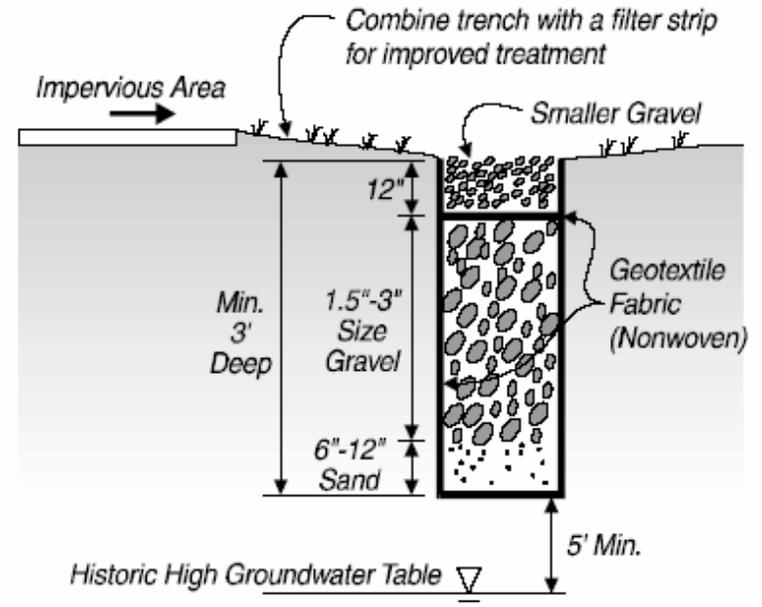


Figure BF - 2
Biofilter Placement



Adapted from NAHB, Colo DOT

Figure IN - 1

Quick Tips for the Garden.....

CONSERVATION

Water Wisely: From 30 to 70% of your household's water is used outdoors. Water early in the morning and preferably on less windy days to reduce evaporation. Use sprinklers only when needed – less on overcast days and never when it rains.

Get Smart: Install a "smart timer" on your automatic sprinkler system. These timers can dramatically reduce water use and improve the health of your plants. Check with your water supplier for possible rebates.

Let it dry: About every three months let the top three inches of your garden's soil completely dry. Drying allows the soil to breathe, filling it with oxygen, creating healthier plants and landscapes.

Go Native: Use native or drought-resistant plants and grasses – and adjust your watering to take advantage of the less-thirsty plants.

Little at a time: You don't have to replace your entire lawn, but try replacing areas not regularly used. Santa Barbara daisy, Dymondia, gazania, and thyme are just a few of the many colorful substitutes for grass.

Get old fashioned: Opposed to blowing or hosing, sweeping hard surfaces is far better for the ocean. Don't forget to get the gutters in front of your house too.

Home remedy: For aphid infested plants, try spraying them with a solution of onions and garlic (both pureed and strained), mixed with a bit of liquid dish soap. Make sure to get the undersides of leaves. Chives, garlic, mint, nasturtium, rosemary, sage, and thyme are a few of the plants that help deflect unwanted pests away from more susceptible ones.

Heap it on: Put a layer of mulch around trees and plants. Chunks of bark, peat moss or gravel slow evaporation.

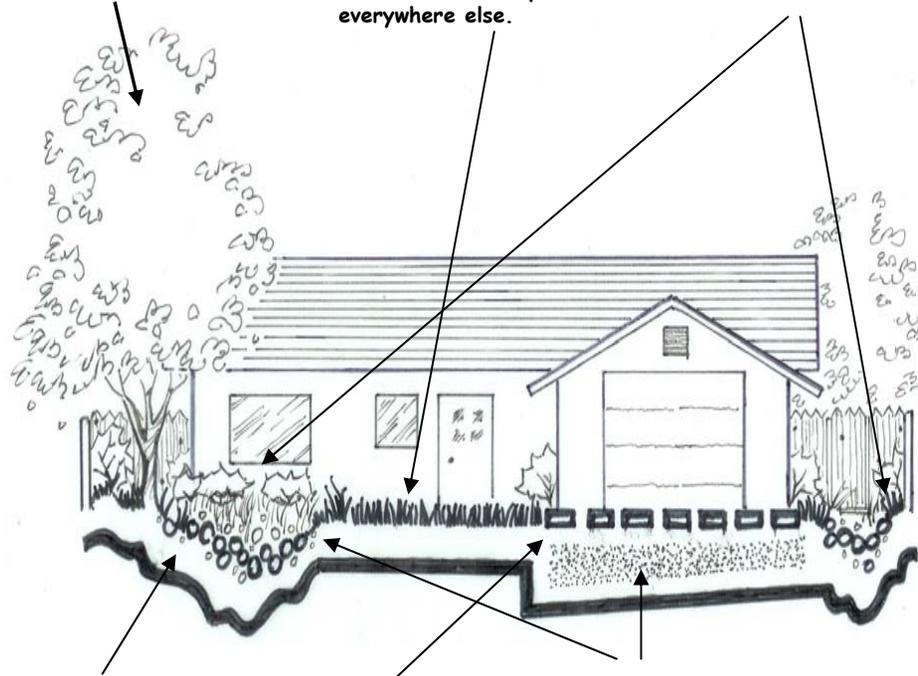
Fill it in: Rills and gullies are signs of fast moving water and erosion. Fill in these crevices with rock and then identify the sources of water to stop or slow the flow.

Be creative – have fun! A garden responds to energy and creativity – like surfing, the more fun you have, the better the time and results.

Plant a Tree: Trees can slow wind and water erosion, regulate temperatures -- and once established many trees do not require supplemental water.

Use Grass Sparingly: While grass may beautify a yard, and there is no substitute for playing on grass, keeping it green takes a lot of water and treatment. Use grass to extend the living areas, but nowhere else. Substitute drought-resistant ground cover and native species everywhere else.

Diversify & Group Your Plants: Using a wide range of plants in a garden will deter pests and lower the need for fertilizers. Group your plants by water needs and adjust your watering cycles in those zones.



Create Contours: As good for aesthetics as the ocean, an irregular ground surface will capture more water and allow it to slowly seep into the soil.

Permeate with Pavers: Instead of solid concrete, use spaced pavers with gravel and other permeable material. Driveways, patios and walkways are all good candidates.

Dig Deep: An infiltration basin is typically the lowest point in a garden and designed to capture and retain rainwater, allowing it to infiltrate.

Below ground and easy to install, an infiltration trench at the end of the driveway gives the water a place to collect and quickly seep into the ground.

APPLY CPR TO YOUR LANDSCAPE

CPR is a method of gardening that protects coastal waters. It is a technique that not only reduces residential run-off, but helps purify the water that does leave. CPR revolves around Conservation, Permeability, and Retention.

CONSERVATION: Conserving the use of water, fertilizers, and pesticides can reduce and improve run-off. Using less water creates a drier landscape, allowing it to hold more rainwater. Applying fewer fertilizers and pesticides, and/or using non-toxic alternatives, improves the condition of the water that does run off a landscape. Restricting grass to the living areas; planting with a diverse range of plants; and selecting plants adapted to the climate are all conservation orientated design strategies.

PERMEABILITY: A landscape's ability to slow and hold water is related to the amount of permeability. Any increase in the amount of permeable surfaces, how ever small it may seem, will reduce the amount of run-off. Permeability is increased by changing surface materials, such as substituting concrete areas with brick, stone, or decomposed granite. Creating an irregular ground surface will also improve permeability by putting obstacles in water's path.

RETENTION: For either infiltration or use, retention involves strategies that help landscapes collect water. Bio-retention basins and infiltration trenches are commonly constructed devices for rainwater collection, and eventual infiltration. A rooftop, rainwater collection system, designed to capture and store water, is another example of retention.

PERMEABILITY

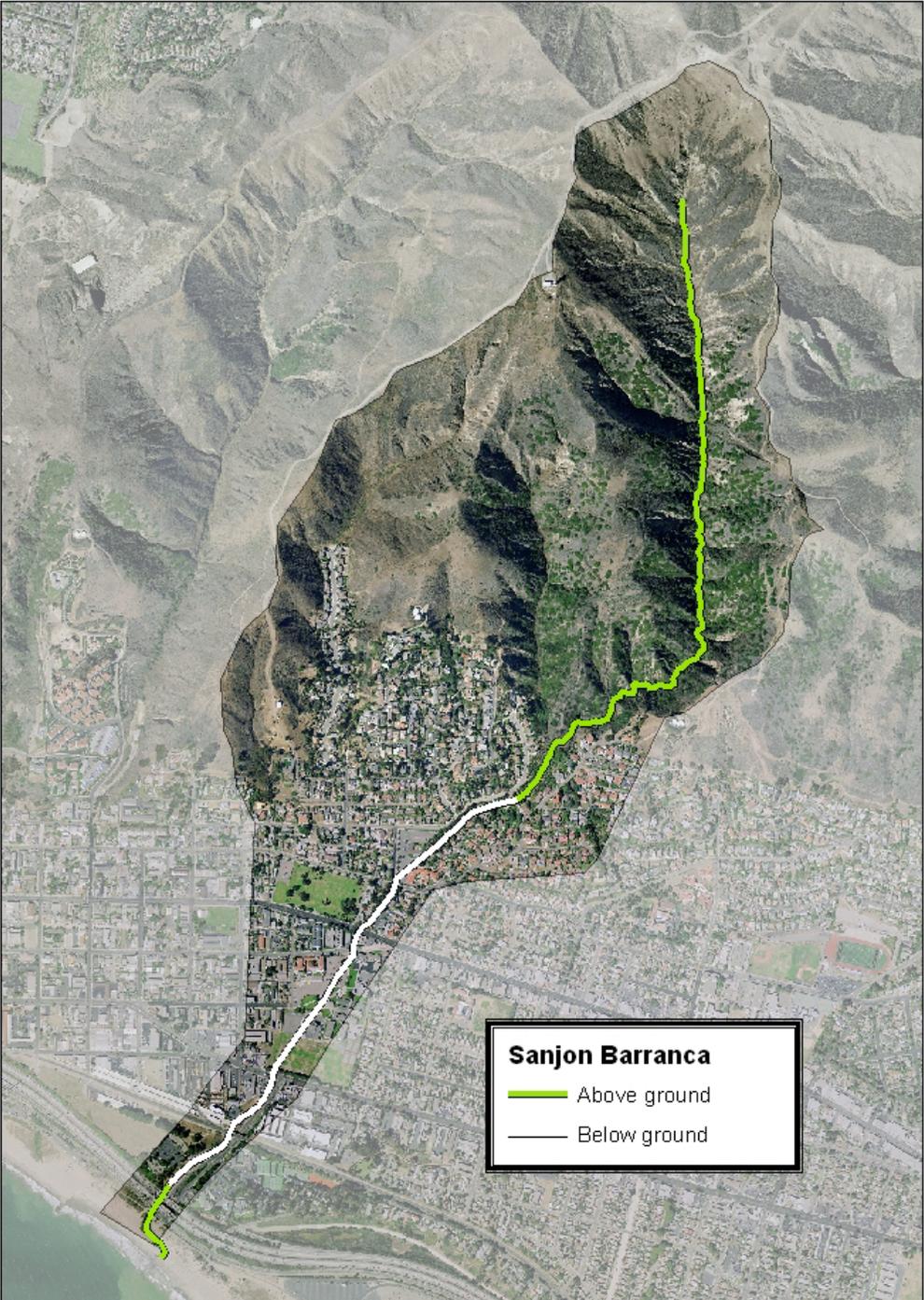
RETENTION



86

HOME
TOUR
PROVIDED BY SIGNS OF DISTINCTION







Cemetery Park

ALICE HOBSON
JUNE 24 1857
MAY 31 1927

MAKEY HOBSON
JANUARY 15 1863
DECEMBER 27 1943

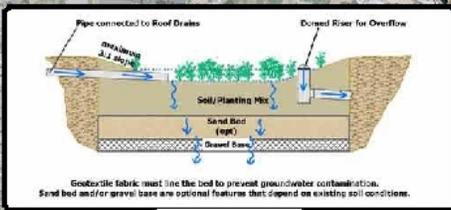
WILLIAM WALTER
HOBSON
AUGUST 18 1838
FEBRUARY 28 1916

ELIZABETH HOBSON
JUNE 6 1844

WILLIAM WALTER
HOBSON
APRIL 2 1844
APRIL 11 1905

WILLIAM WALTER
HOBSON
AUGUST 18 1838
FEBRUARY 28 1916

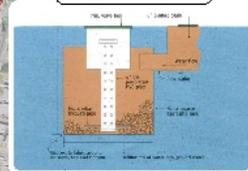
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FEBRUARY 28 1916



**Bioswale
Cross Section**



Bioswale



**Underground
Cistern**

**New overflow
storm drain**

**Urban
Creek**



**Wetlands
restoration**



Existing Drainage

- Open Concrete Channel
- Estuary
- Natural
- Underground Storm Drain

Proposed Drainage

- Bioswale
- Underground
- Urban Creek
- Wetlands Restoration



Thompson Blvd.

New Bike Path

Railroad

Urban Creek

Sanjon Rd.
2 lanes only

Parking

Wetland

101 Fwy

Bike Path

Ventura River Watershed Ecosystem-based Management

Connectivity
Matilija Dam
"Ecosystem Restoration"

Water supply & Flood control
Ventura River Watershed
"Water Management Plan"

INTEGRATION
Implementation

Coastal management
Surfers' Point
"Managed Shoreline Retreat"

NPS Pollution
Urban Watersheds
"Ocean Friendly Gardens"

DROUGHT “Our Natural
Climate Change Community”

MS4 STORMWATER PERMIT

Re-Development Ocean illness

TRAIL Reports

walkable

“New Urbanism” Communities

Bike Paths Recreation

Street Maintenance FLOODING

IDENTIFICATION

