

Green Visions Plan for 21st Century Southern California: Online Planning Toolkit

LA County of Public Works
16 June, 2009

The image shows a collage of three maps: a street map on the left, a central logo with icons of a bird, a person on a bicycle, and a leaf, and a topographic map on the right. Below the maps is a dark blue banner with white text.

Decision Support Tools for Policymakers



The image features a dark blue background with the title at the top. Below the title are two overlapping, semi-transparent images of documents or reports, one showing a grid and the other showing a map with icons.

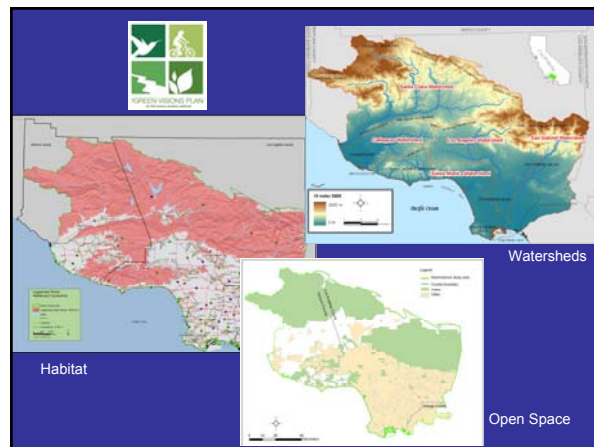


Green Cover **People Per Park Acre**

Planning Toolkit

Fitnessgram & Parks **Historical Ecology** **Population Density and Stream Networks**

This block contains a grid of six images. The top row shows a 3D landscape model, a map of green cover, and a map of people per park acre. The middle row shows the Green Visions Plan logo and a screenshot of the online planning toolkit. The bottom row shows three maps: fitnessgram & parks, historical ecology, and population density and stream networks.



Watersheds

Habitat **Open Space**

This block contains three maps. The top right map is labeled 'Watersheds' and shows a topographic map of a region. The bottom left map is labeled 'Habitat' and shows a map with red and white areas. The bottom right map is labeled 'Open Space' and shows a map with green and yellow areas.



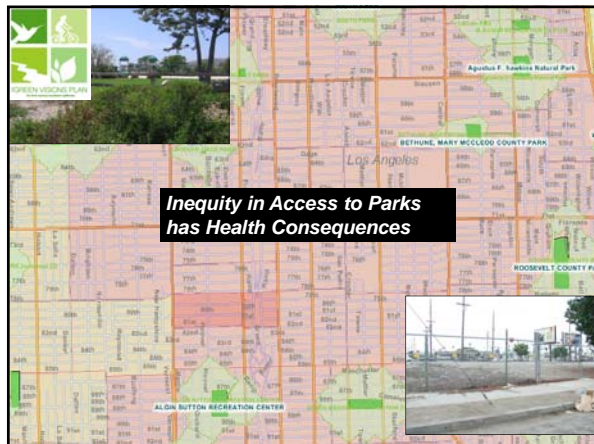
Park Supply and Quality Assessment Tools

The image shows a street map with green areas representing parks. A dark blue banner with white text is overlaid on the map.

Park Supply and Quality



The image features a dark blue background with the title at the top. Below the title is a photograph of a man in a grey shirt and sunglasses looking at a map outdoors. To the right of the photo is a semi-transparent image of a document or report.



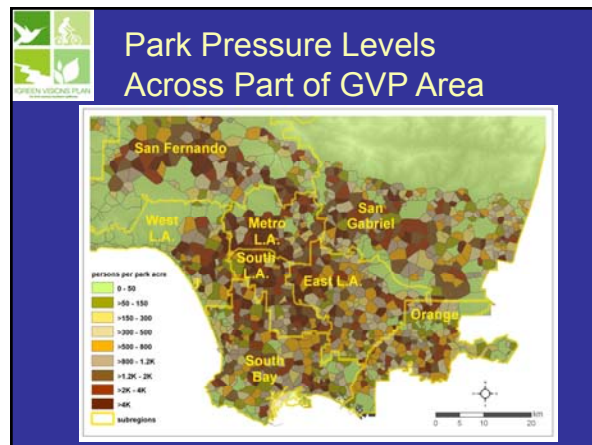
Park Service Area Demographic Analysis

- Not everyone goes to nearest park
- In City of Los Angeles
 - 43% of park users in a sample of parks lived within 0.25 mile
 - 21% lived between 0.25 and 0.5 miles
 - only 13% lived >1 mile away
 - Close parks are used more often than distant parks



Park Service Area Demographic Analysis

- Park service areas created by areas surrounding parks within which residents are closest to that park
- LandScan USA population data used in analysis to create PSA population counts/rates and median income, age, and race/ethnic descriptors
- PSA reports show park acres per 1,000 population and per 1,000 children/youth compared to GVP averages



Park Service Area Report

Generated on Tuesday, March 11, 2008

Park Service Area Report
EXPOSITION PARK
 MENLO AV
 LOS ANGELES CA
 146,213,749000
 Tuesday, March 11, 2008

Park Area:	313.59 Acres
Park Service Area Area:	5001.81 Acres
Persons Served Per Park Acre:	330
Children under 18 Served Per Park Acre:	54



Evaluating alternatives using PSA Interactive Analysis Tool

Evaluating alternatives using PSA Interactive Analysis Tool

Dynamic Analysis Report

Green Visions Park Service Area Analysis

One Step Closer To Making Our City A Better Place To Live

Proposed Parcel

Parcel AIN#	6067014001
Parcel Area in Acres	3.4
Park Service Area in Acres	543.93
Population Served by Park Service Area	9796
Children Under 18 Served by Park Service Area	3903
Population Served per Parcel Area	2882
Children Under 18 Served per Parcel Area	1148
Population Density per Square Mile	65.25
Median Household Income	\$ 13458
Percent of Population Below Federal Poverty Threshold	37.14

Dynamic Analysis Report

Park/PSA Name	Persons served per park area			Children served per park area			Total Park Service Area in Acres		
	Before	After	%Change	Before	After	%Change	Before	After	%Change
NICKERSON, WILLIAM REC CENTER OR 111TH ST	1060	878	-17.13	440	366	-16.86	313.7	241	-23.28
BOGE PARK	5751	5501	-4.35	1992	1904	-4.42	383.26	361	-5.86
CARVER, GEORGE W COUNTY PARK	423	420	-0.7	170	169	-0.7	273.93	271	-1.15
MONA COUNTY PARK	1559	1014	-34.97	609	397	-34.76	676.94	451	-33.42
WATTS SENIOR CENTER	5021	2185	-57.27	3859	3518	-8.84	387.82	356	-8.24
109TH ST REC CTR	2866	2584	-9.84	1180	1048	-11.22	371.68	315	-15.31
STANFORD AVENUE PARK	14741	14629	-0.76	5532	5487	-0.82	1210.61	1200	-0.89
CARNATION PARK	7576	5706	-24.68	2854	2109	-26.11	672.48	553	-17.75
Total	3401.78	3068.43	-9.8	1320.35	1187.53	-10.06	4290.41	3746.48	-12.68

Source: See SAGE (Systematic Audit Of Green-Space Environments) at http://www.greenvisionsplan.net/html/documents/SAGE_Report.pdf for definitions and audit methodology.

Ecological Assessment and Target Species Tools

Multiple Species Approach Allows Ranking of Sites

Habitat Cost-Distance Tool

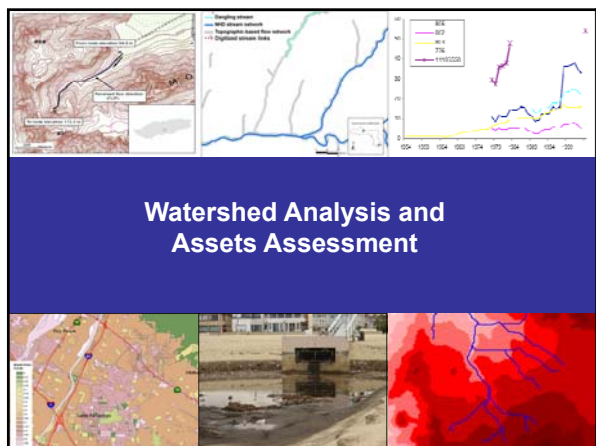
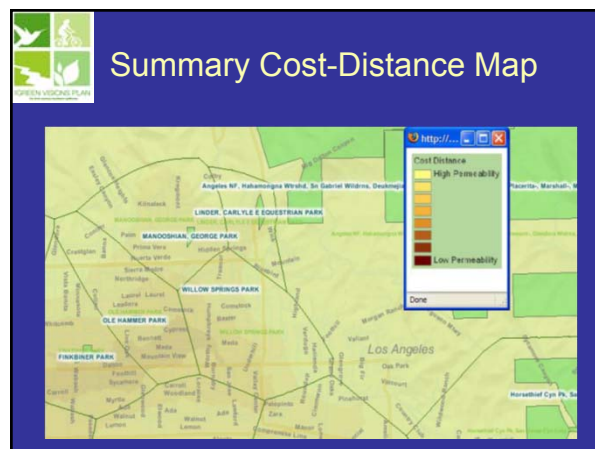
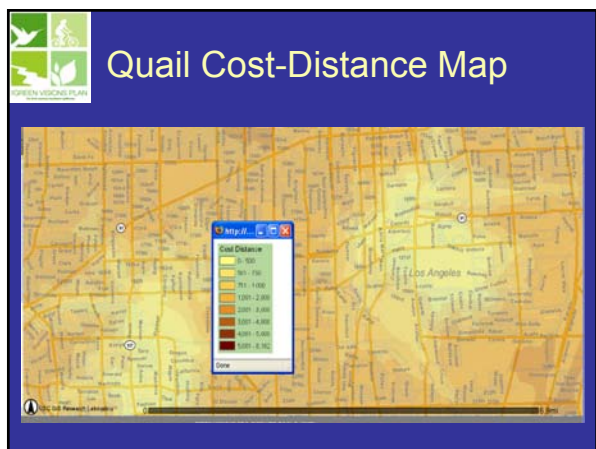
- Tools built for five target species representing different habitat types plus an umbrella, keystone species
- *California quail* -- scrublands
- *Loggerhead shrike* -- grasslands and scrub
- *Lorquin's admiral* -- riparian
- *Acorn woodpecker* -- oak woodland
- *Coyote* -- umbrella, keystone

Tool Development

- Developed habitat models for each species based on habitat associations in California Wildlife Habitat Relationship (CWHR) Database and CALVEG coverage
- Prepared scripts to link predicted habitat and closest neighbors within dispersal distance of species
- Developed combined land use/land cover GIS coverage that replaces "urban" category in CALVEG coverage by triangulating with SCAG land uses
 - Used spectral similarity and expert opinion to assign wildlife values to some land uses
 - Example: "arboreta" treated like "mixed exotic woodland"

Tool Development (continued)

- Habitat values from CWHR used to create a "friction" layer for each species
 - Land use/land cover map represents the difficulty of crossing the cell by the species
 - For each cell in the study area outside the predicted habitat for a particular species the "cost distance" was calculated to the nearest habitat
 - Path minimizes the distance traveled – is not necessarily a straight line – and maximizes the suitability of cells traveled through
- Five separate maps plus summary map available on web-based toolkit



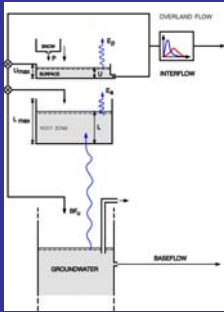
MIKE BASIN

- Determined quantities of contaminants entering stream network
- Simulated transport of contaminants in reservoirs, rivers, and groundwater
- Predicted water quality by stream catchment

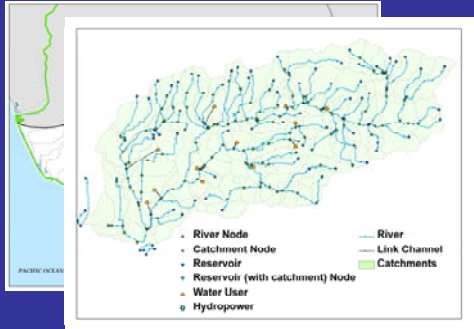
From LASGRWC

Model Implementation

- Prepared model & data
- Calibrated rainfall-runoff relationships
- Calibrated delivery & transport of contaminants
 - NO₃-N, NH₃-N
 - Total P
 - Fecal Coliform, BOD
- Validated rainfall-runoff & water quality predictions
- Generated final predictions



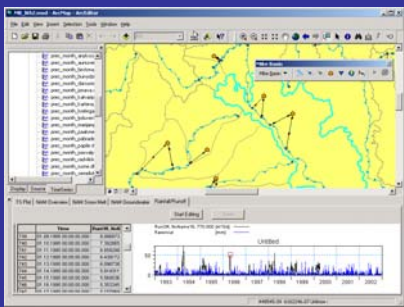
Subwatershed Delineation



Rainfall-Runoff Analysis

Basic Inputs

- Initial conditions
- Rainfall, potential evaporation, & temperature time series
- Stream flow data for model calibration & validation




Monitoring Data



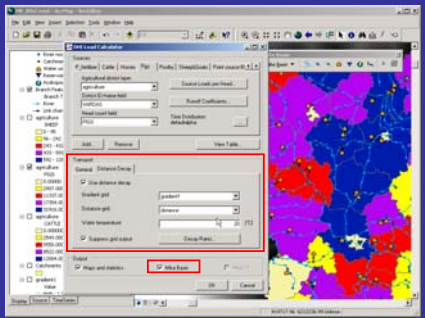
Validation Results – Stream Gauge 800 - Arroyo Conejo above Hwy 101

Summary	Model Predictions	Observed Flows
Total in-stream flow	1,294.97	1,321.35
Total of the highest 10% flows	562.99	550.14
Total of the lowest 90% flows	329.08	344.52
Summer flow volume (months 7-9)	198.03	188.67
Fall flow volume (months 10-12)	294.02	297.23
Winter flow volume (months 1-3)	279.95	142.00
Spring flow volume (months 4-6)	272.95	224.56

Error (Predicted-Observed)	Error (Absolute)	Assessment
Error in total volume	-2.73	very good
Error in 10% highest flows	2.34	very good
Error in 90% lowest flows	-40.18	poor
Volume error - Summer	19.82	poor
Volume error - Fall	-4.44	very good
Volume error - Winter	-6.79	very good
Volume error - Spring	3.74	very good



Water Quality Module



Contaminant Sources

- Fertilizer Sources
 - Crop data from Ventura County Agricultural Commissioner's Office
 - Fertilizer application rates from literature
 - Distance decay (reduction) factor from calibration results
- Livestock Sources
 - Very few
- Domestic Sources
 - Revised LandScan population estimates
 - Sewage data from Ventura County Resource Management Agency
 - Distance decay (reduction) factor from calibration results
- Point Sources
 - Five major NPDES

NO₃-N Predictions

Water Quality Validation

MIKE BASIN Predictions_San Gabriel Watershed

Green Visions Plan Spatial Decision Support Tools

Parcels / Analysis / Action

<http://www.greenvisionsplan.net/>
http://gv-server.usc.edu/GVWebTools_public_v2/imapa_test/app.asp