

National Student Summit on Ocean Issues



Presented by:

Robert A. Millikan High School
Long Beach, California

Student Participants

- Caitlin Ott-Conn
- Jazzmin Mason-Berry
- Nathan Kogen
- Rachel Frankenfield
- Samantha Peake
- Annie Gholson

Trip Advisors

- Woody Williams- Robert A. Millikan High School
- Amy Coppenger- Aquarium of the Pacific
- John McCord- Aquarium of the Pacific



Southern California, a great place to live!



More Reasons to Love Southern California!



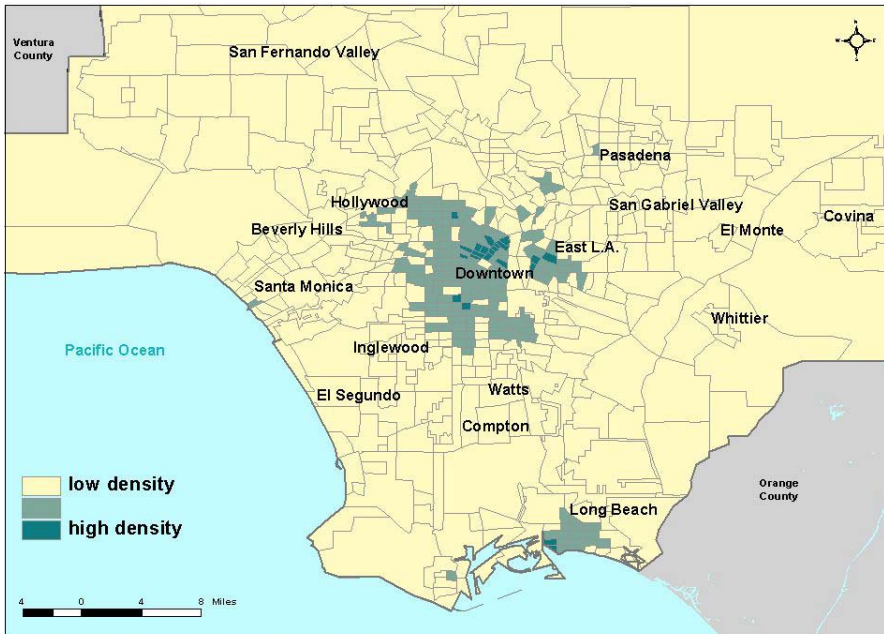
Southern California Population Growth 1800-2000



Los Angeles County: Population Density 1800

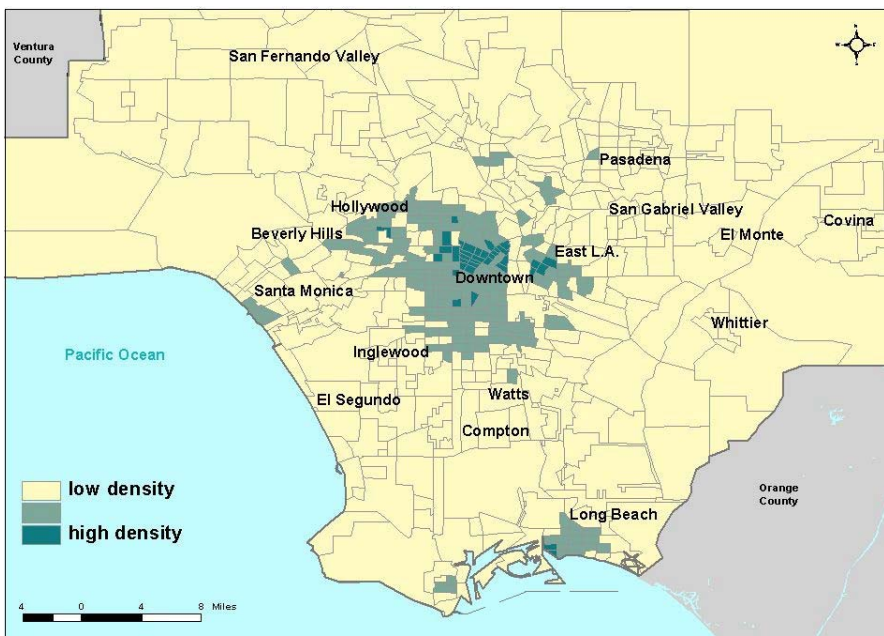


Los Angeles County: Population Density 1930



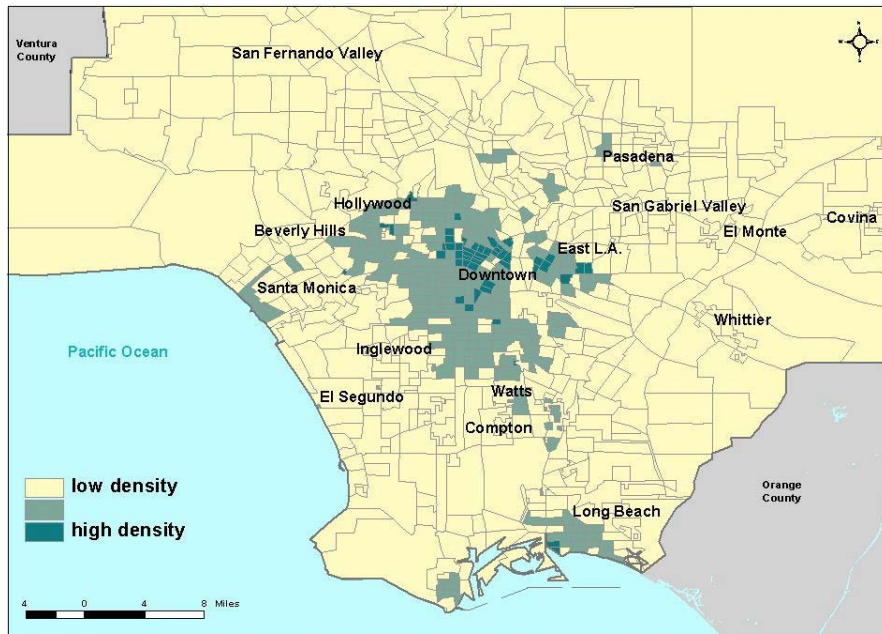
Data Assembled by Michela Zonta and Paul Ong, UCLA Lewis Center for Regional Policy Studies

Los Angeles County: Population Density 1940



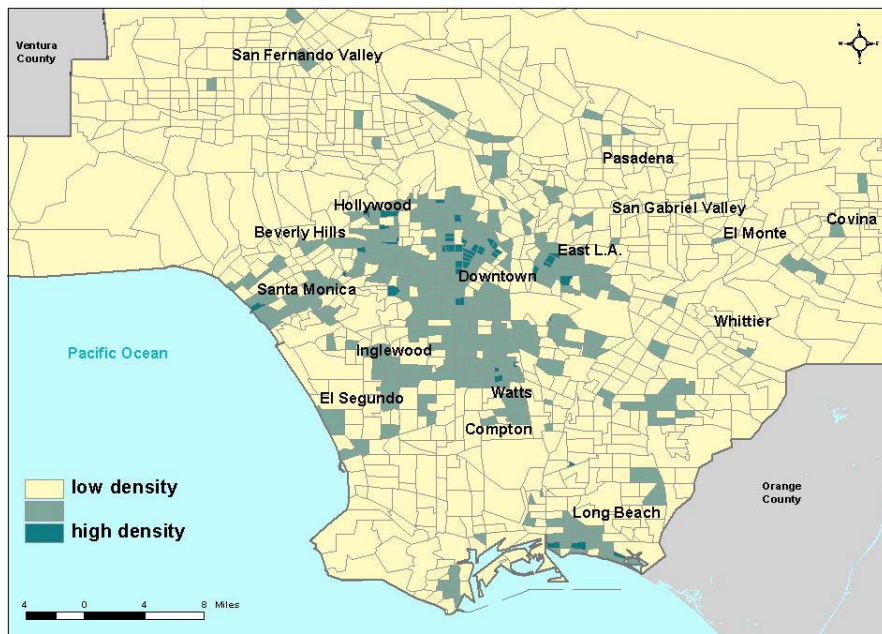
Data Assembled by Michela Zonta and Paul Ong, UCLA Lewis Center for Regional Policy Studies

Los Angeles County: Population Density 1950



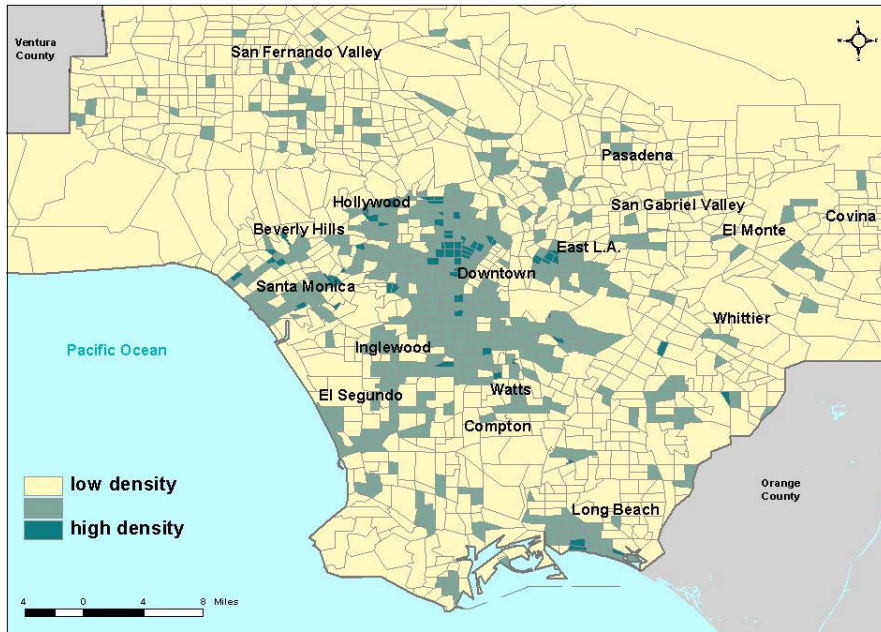
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Los Angeles County: Population Density 1960



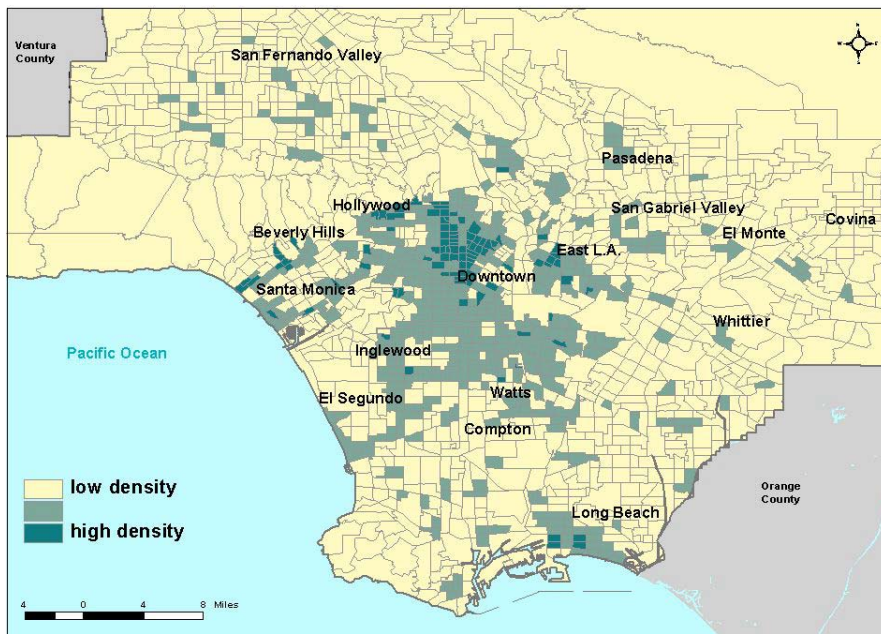
Data Assembled by Michela Zonta and Paul Ong, UCLA Lewis Center for Regional Policy Studies

Los Angeles County: Population Density 1970



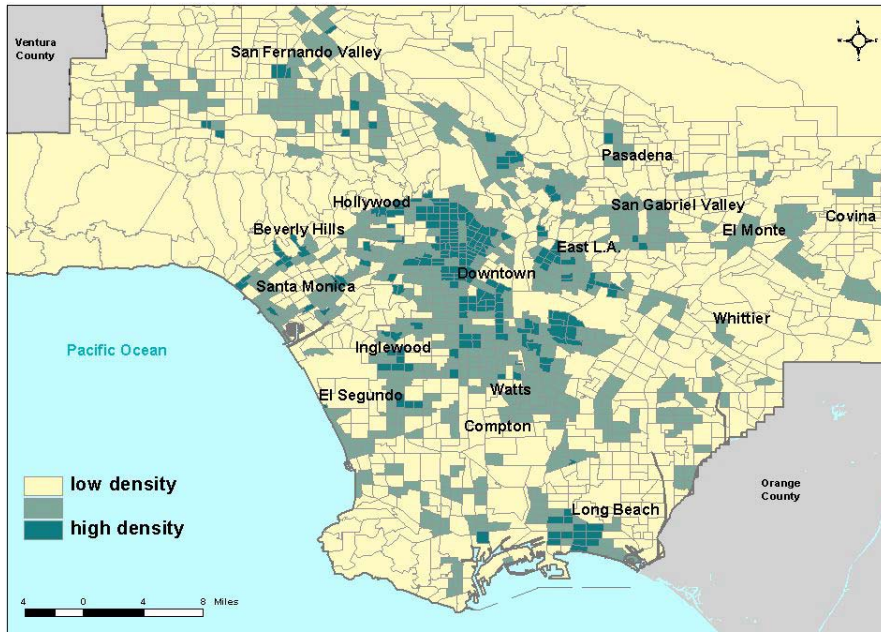
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Los Angeles County: Population Density 1980



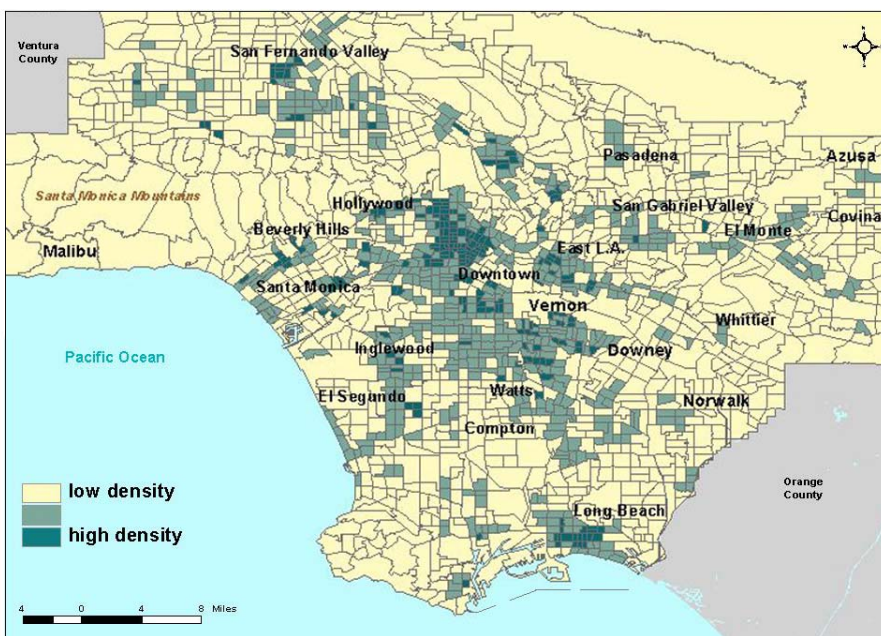
Data Assembled by Michela Zonta and Paul Ong, UCLA Lewis Center for Regional Policy Studies

Los Angeles County: Population Density 1990



Data Assembled by Michela Zonta and Paul Ong, UCLA Lewis Center for Regional Policy Studies

Los Angeles County: Population Density 2000



Data Assembled by Michela Zonta and Paul Ong, UCLA Lewis Center for Regional Policy Studies

An effect of population growth...



Pollution

“An undesirable change in the environment, usually the introduction of abnormally high concentrations of hazardous or detrimental substances, heat, or noise.”

[Dictionary of Ecology and Environmental Science](#)



Nonpoint sources



“Pollution producing entities that are **NOT** tied to a specific origin such as an individual smoke stack.”

Dictionary of Ecology and Environmental Science

Examples of Nonpoint Source Pollution

Runoff



Nonpoint Source Pollution Effects

Habitat Destruction



Nonpoint Source Pollution Effects

Marine Life Ingestion



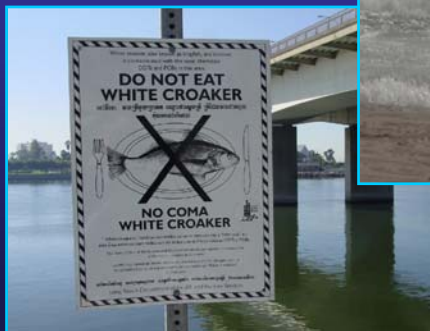
Nonpoint Source Pollution Effects

Marine Life Entanglement



Nonpoint Source Pollution Effects

Effects on Humans



It all starts at the gutter...



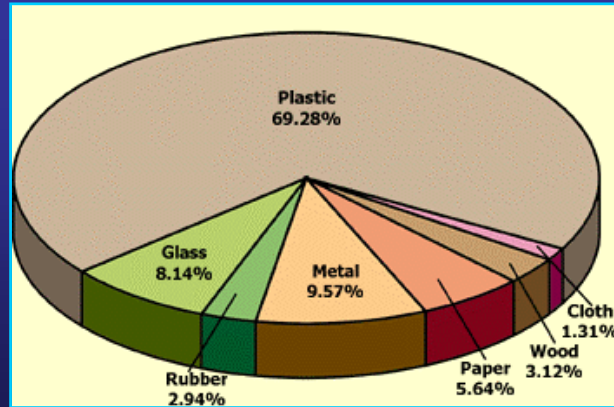
which lead to the storm drains...



...and flows to the ocean.



Components of Nonpoint Source Pollution



* Graph indicates results from a typical beach cleanup

Plastic: an indiscriminating polluter

90% of all floating marine debris are plastics

Plastic Problems

- Animal impairment
- Animal ingestion
- Habitat destruction
- Indefinite decomposition
- Large concentrations adrift



Solutions start with you!

Four solutions from our high school to yours.



Marketing Awareness Campaign

Addressing the Issue of
Pollution Through Information



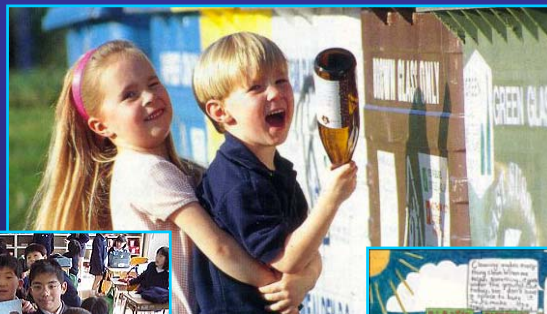
Golden Can Award

Award designed to recognize and reward good "Green Behavior"



Elementary Education Program

Students Teaching Students



On Campus Recycling Program



"Never doubt that a small group of thoughtful, committed people can change the world. Indeed it is the only thing that ever has."

-Margaret Meade

Thank you!



Thank you for believing in the potential of students.

