CENS 2.0
a SENSE of the FUTURE

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environmental stewardship

Use ENS to ensure

food
air
drinking water
recreational spaces
energy

are

safe
secure
affordable
sustainable
San Joaquin Valley
Salt Accumulation
275 tons/hour

CENS Application Domains

- Terrestrial Ecology
- Aquatic Microbiology
- Contaminant Management
- Seismology
- Urban Sensing
Emerging Opportunities: Contaminant Management

- First quantitative contaminant flux, source, and sink maps
- Complete urban watershed contaminant map
- Agricultural water resources at plant level
- Spatially resolved biological contaminants

“It never rains in California...”

AgSan Joaquin River

Coastal Water

Lake Fulmore

Medea Creek

Palmdale

Urban Watershed

San Joaquin River

Lake Ecosystem
Emerging Opportunities:
Aquatic Microbiology

- Coastal water quality
- Marina & harbor surveillance
- Aquaculture
- Drinking reservoirs
Emerging Opportunities:
Terrestrial Ecology

- NEON
- EcoPDA
- Training courses
Emerging Opportunities:
Seismology

GeoNET

Structural Engineering
Emerging Opportunities: Participatory Sensing

Participatory Sensing

- Use cell phone infrastructure
- Classify and verify automatically
- Credibility & privacy
- Inspire algorithms for the sampling process

Public Health

- Assist field data entry
- ASAP data validation
- Analyzable images
- Municipal health factors, e.g., air quality
- Analyze causes of chronic health problem

Personal Health

- Home testing
- Conformance
- Activity measures
- Adaptive protocols

Municipal health factors, e.g., air quality
Analyze causes of chronic health problem

UCLA USC UCR CALTECH UCM