



Richard Slack

Natural resources encompasses all of the things we take from nature and use in our economy; such as minerals and fossil fuels, as well as ecosystem services such as harvestable fish stocks and renewable energy. Protected open space, which is associated with habitat values and wildlife corridors, is also included. Natural biological diversity, including both terrestrial and aquatic plants and animals, is also lumped into this domain, making it a very large and all-encompassing one.

Human activities are placing increased stresses on the planetary ecosystem. It is now generally recognized that, if we are to transition to a sustainable economy, we must become much more efficient in our use of materials and energy. A transition to sustainable fishing practices is clearly needed to avoid a collapse of fisheries on a wide scale. Extensive conversion of natural habitats into farms and urban uses, plus the effects of pollution, has resulted in the listing of many plants and animals under federal or state endangered species laws.

WASTE AND RECYCLE TONNAGE

WHAT IS THE MEASURE?

The measure is the total tons of solid waste disposed of in Ventura County and the recycle tonnage collected by major waste disposal companies in the county's ten cities, and in unincorporated areas.

WHY IS IT IMPORTANT?

Waste and recycle tonnage diverted from landfills are good indicators of how efficiently we are using materials from nature. Waste disposal has a significant impact on air pollution. Increased recycling is vital to the transition to a sustainable economy. Consumer choice also has major effects on waste.

HOW ARE WE DOING?

We are steadily improving, but must do much better. In 2000, nearly every city in the county exceeded one-ton waste disposal per capita, ranging from a low of 0.71 tons per capita in Fillmore to 1.48 tons in Ojai. This means that, on average, each of us is contributing over six pounds of trash every day of the year to landfills. The percentage diverted from landfills increased from an average of 34% in 1995 to 39% in 2000. This still falls short of state law, which requires that half of all waste be diverted to recycle or greenwaste programs.

PERCENT WASTE RECYCLED (DIVERTED) IN 2000

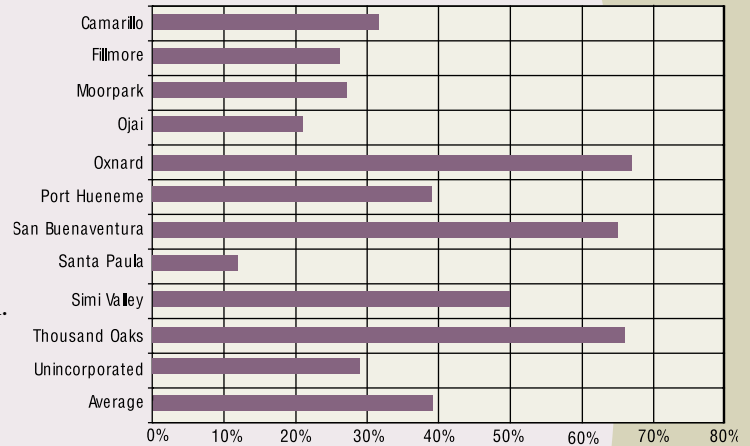


Chart NR-1

RESIDENTIAL ENERGY CONSUMPTION IN 2000
- kWh PER RESIDENTIAL ACCOUNT

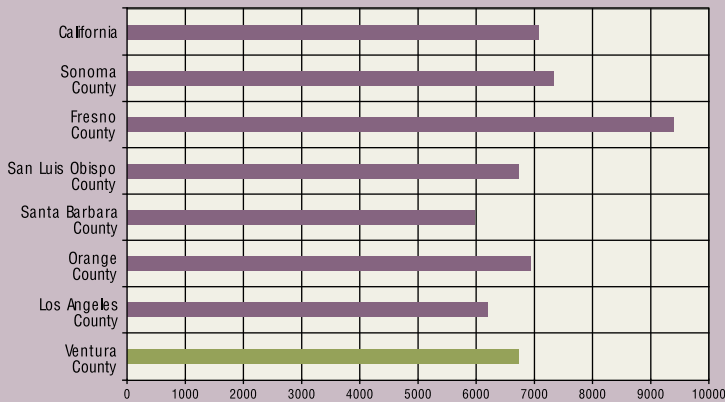


Chart NR-2

RESIDENTIAL ENERGY CONSUMPTION PER HOUSEHOLD ACCOUNT

WHAT IS THE MEASURE?

The measure is the amount of residential energy consumption in kilowatt-hours per residence.

WHY IS IT IMPORTANT?

Since the vast majority of energy production at the present time is based on the burning of fossil fuels,

electrical energy use is a primary indicator of the depletion rate of this natural resource. It also reflects the efficiency with which electrical energy is used. Incorporating more efficient home appliances, such as air conditioners, would decrease per capita energy use. Because of the exhaust products associated with burning fossil fuels, energy use also has negative impacts on air quality and global warming.

HOW ARE WE DOING?

Ventura County's use of electrical energy is similar to surrounding counties, which in 2000 averaged about 7,000 kilowatt-hours per residence. Peak electrical energy consumption in California during the critical summer months diminished about 10% from 2000 to 2001 due to energy-saving measures.

PROTECTED OPEN SPACE

WHAT IS THE MEASURE?

The measure is the combined acreage of parklands, lands protected within land trusts including agricultural land, and major protected habitats owned by various conservancies. Because of the difficulty of assembling data, small parcels donated by developers within cities for open space are not included. National Forest lands were not included, since the degree of protection varies with federal policies governing national forests.

WHY IS IT IMPORTANT?

Open space, including farms and natural habitats, is important to both humans and wildlife. Open space provides corridors for wildlife movement, which is essential to maintaining viable populations of large mammals such as mountain lions. Humans also need open space. Studies conducted in the relatively new field of environmental psychology during the past 30 years point consistently to the fact that people prefer to be in natural environments, especially in savanna or park-like habitats.

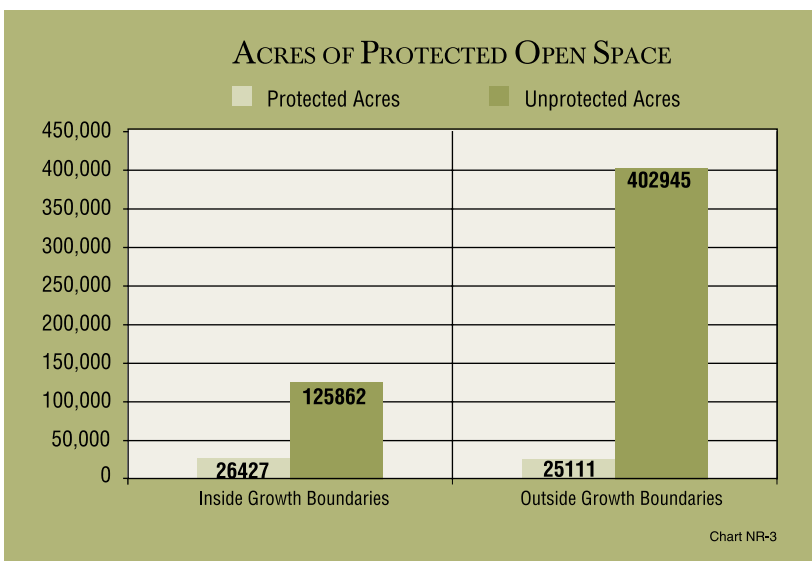
HOW ARE WE DOING?

Ventura County currently has approximately 49,500 acres of permanently protected open space, or about 7.5% of the land in the county that is outside the boundaries of Los Padres National Forest. Approximately half of this land is located inside the urban growth boundaries created by the cities' SOAR initiatives, while the other half is outside those boundaries. The county has outstanding natural areas in the Santa Monica Mountains Recreation Area and Point Mugu State Park. Combined efforts of The Nature Conservancy and the California Coastal Conservancy have resulted in protection of large acreages at Ormond Beach, along the Santa Clara River and in the Santa Susana Mountains. Though not included in the statistics above, Mugu Lagoon at the Naval Weapons Center is considered to be protected as long as the military controls the area.

“TRUE COST ECONOMICS” means including in the price charged for a product all environmental costs, something not generally done in today’s market system. For example, when buying a gallon of gasoline, customers in effect pay for getting the oil out of the ground, transporting the crude oil to the refinery, refining it into gasoline, and delivering it to the local station.

But they do not pay the health care costs of treating respiratory illness from air pollution, or the costs of climate disruption. As another example, the cost of a piece of lumber reflects the cost of cutting the tree, transporting it to the sawmill, milling, and delivery of sawed lumber to a yard. But the cost in lost salmon populations, caused by siltation of streams associated with large-scale timber operations, goes unpaid by the board’s buyer.

Transitioning to an economic system in which true costs are accounted for in the price of a product is an essential element of sustainability. A local indicator reflecting progress in this area would be difficult to define and track, but would, nevertheless, be highly desirable.



WHAT IS THE MEASURE?

The measure is the annual commercial harvest of bocaccio, or red snapper, the best known rockfish of local offshore waters.

WHY IS IT IMPORTANT?

Commercial harvest of fish and other ocean life is a vital source of human food supply; but our vast ocean resource does have limits. Ocean fisheries off the California coast have been under pressure from excessive harvesting for some time.

HOW ARE WE DOING?

Catch of rockfish species, in particular, has plunged dramatically. The indicator shown reflects the decline of the bocaccio harvest from 1980 to 1999. From a peak of almost 12 million pounds in 1982, the harvest dropped to about 60,000 pounds in 1999. A recent emergency action by the federal government closed the continental shelf area to commercial fishing for some types of rockfish, including bocaccio. In our own region, a Marine Reserve (no fishing zone) is in the process of being established around the Channel Islands off Ventura County shores.

ANNUAL BOACCIO ROCKFISH HARVEST

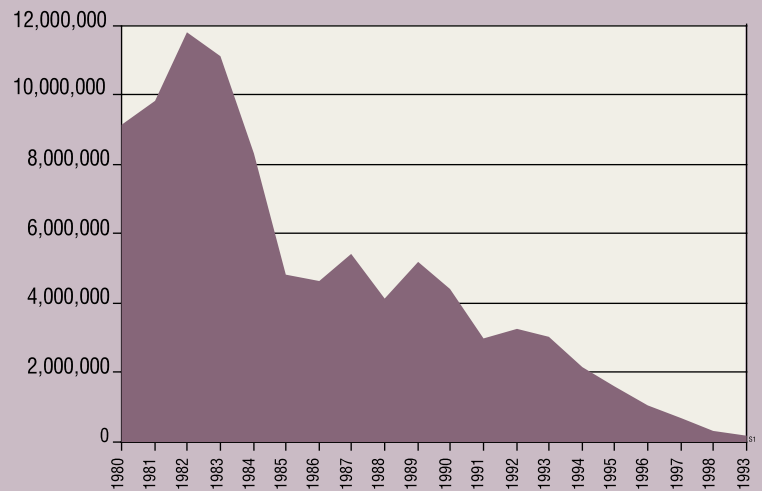


Chart NR-4

TERRESTRIAL BIODIVERSITY

WHAT IS THE MEASURE?

The measure is the number of pairs of least Bell's vireo, an endangered songbird, nesting along the Santa Clara River.

WHY IS IT IMPORTANT?

Restoring viable populations of all native species is central to the biological health of our region. The least Bell's vireo is one of the most important endangered species locally, as well as an important "indicator species" pointing to the overall health of our ecosystems. The vireo breeds in dense streamside thickets of willow and wild rose and is migratory, arriving from the south in March or April, and departing in August or September for wintering grounds in the southern part of Baja California. Removal of riparian vegetation by farmers, urban development, flood control projects and water diversions, and lowered water tables due to groundwater pumping destroyed vast areas of vireo habitat. Nest parasitism by brown-headed cowbirds has also contributed significantly to the vireo's decline.

HOW ARE WE DOING?

Between 1999 and 2002, the number of vireo pairs nesting along the Santa Clara River grew from 90 to 115, an increase of 28%. Some of this increase is likely due to restoration of riparian habitat used for nesting. Programs by the U.S. Fish and Wildlife Service aimed at controlling cowbird populations are also considered to be major factors contributing to the upward trend in vireo numbers.

NESTING PAIRS OF LEAST BELL'S VIREO ON THE SANTA CLARA RIVER

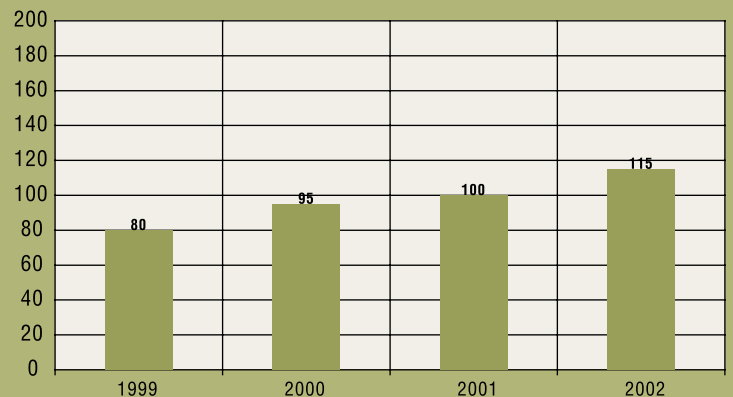


Chart NR-5