

CALIFORNIA WATERSHED COALITION

California Watershed Network
Sacramento River Watershed Program
Salmonid Restoration Federation
Sierra Nevada Alliance
Sonoma Ecology Center
California Urban Streams Partnership
Northern California Council of
Fly Fishers
California Association of Resource
Conservation Districts

What Are Watershed Jobs and Why Does California Need them?

Creating “Blue-Green” Watershed Jobs

When the topic of creating a new “green” jobs economy for California comes up most people think of the opportunities associated with the alternative energy businesses and training new entrants into the work force to install solar panels, insulate housing and further develop wind energy. These are important aspects of the new green jobs economy, however, few are aware that there are green jobs for which there is immediate demand that produce even more jobs for the dollars invested and have an important role in reducing carbon emissions and preparing us for climate change. These are referred to as “blue-green” jobs which address watershed needs for water conservation, treating polluted runoff, reducing flooding and fire risks, reducing urban summer heat, and providing habitat for endangered wildlife and fish.



Photo: Salmonid Restoration Federation



Photo: CCC archives

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How Do Watershed Projects Help Reduce Carbon Emissions?

The California Climate Action Team recognizes the need to reduce carbon through reforestation, urban forestry activities, and modification of farm practices to reduce methane gases. The California Climate Action team also recognizes the role of water conservation in reducing carbon emissions because water conservation is energy conservation. 19% of electricity and 30% of natural gas use in California is for treating and transporting water supplies. Effective carbon sequestering and reduction can be provided by:

Greening Cities: tree planting and green space stormwater runoff treatment.

Floodplain and Wetland Restoration: stream channel restoration and flood plain recovery - revegetation, and recovery of brackish and freshwater wetlands.

Water Conservation: water saving fixtures and devices, rainwater harvesting, rain infiltration, conserving landscaping and composting.



Photo: Sierra Nevada Alliance

How Do Watershed Projects Help California's Infrastructure Needs?

The Association of California Water Agencies (ACWA) has issued a report that downgrades the condition of the state's infrastructure for water supply, storm-water runoff and waste water treatment from a C to a C-. The state needs \$4.6 billion over ten years to bring the score up to a B with immediate funding gaps of \$60 billion. Californians used to spend 20 cents on every dollar on capitol projects. This has dropped to 5 cents per dollar.

California's needs for floodplain management have been summarized in a recent "Flood Safe" report jointly prepared by the California Department of Water

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Resources, the County Engineers Association, the Army Corps of Engineers and FEMA which indicates that 7.3 million Californians live in floodplains with one in five exposed to flood risks amounting to \$580 billion in assets at risk. Over 300 sensitive wildlife species are also contained in these environments and need to be part of our state's integrated flood management activities. Innovative flood management projects, such as the Yolo Bypass, offer multi-benefit solutions to the higher-peak flood flows expected with climate change. They also provide carbon and pollutant sequestration, habitat areas for sensitive species, and adequate space to initiate innovative adaptive management projects as new or changing impacts emerge.



Photo: Wellborn Archives

Can Watershed Projects Help Local Agencies With Public Works Needs?

One of the most pressing and difficult responsibilities of counties and cities is to meet new federal and state stormwater treatment requirements under the federal Clean Water Act administered by EPA, the State Water Resources Control Board and the Regional Water Quality Control Boards.

The Los Angeles Water Board adopted a new Municipal Regional Permit in the Fall of 2012 which means that 78 cities will soon likely come under more stringent stormwater management regulations soon.

The San Francisco Bay Water Board has under existing regulations 76 local governments developing 10 pilot green-stormwater projects – more pilot projects are expected in the future to meet Municipal Regional Permit requirements.

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Rural areas are also coming under regional board requirements for addressing polluted run-off under a second phase of stormwater regulations.

Watershed projects offer multiple benefits – including meeting Municipal Regional Permit requirements – while being funded from numerous sources and providing a collaborative solution for public agencies, regulators, and community groups.

What Are The Employment Needs and Opportunities for Watershed Jobs?

Addressing High Unemployment Rates

California has the third highest unemployment rate in the nation hovering at around 10%. The Central Valley unemployment rates are ranging from 13% to 16% with the Fresno-Bakersfield-Delano region among the top 5 regions in the country with the highest percentage living below the poverty line. Cities are not exempt from these economic woes with Los Angeles at an unemployment rate of over 11%, Oakland at over 13% and Stockton at 17%.

One of the most productive state programs to assist employment in natural resources work has been the California Conservation Corps. The California Conservation Corps - Green Corps was discontinued after federal stimulus funds were expended. The Watershed Stewardship Project has been dependent on the involvement of federal Americorps funding for the past nineteen years and now must apply to California-based programs for funding.



Photo: San Diego River Park Foundation

We Need to Support Cost Effective Jobs

Alternative energy jobs on the average require an investment of a million dollars to create 13.3 to 13.7 jobs. In contrast, an investment of a million dollars in

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watershed jobs produces a range of 11 to 30 living-wage jobs at an average of over 18 jobs per million dollars expended.

Check out the facts:

Environmental habitat restoration: NOAA Restoration Center in California; 20 jobs created for every \$1 million spent (2009-2010).

Wetland restoration: 29 indirect, direct and induced jobs created with wetland restoration projects. Environmental Defense Fund (2010).

Conversion of woody materials from forests to woody biomass for fuel - 17.4 jobs for every \$1 million (Center for American Progress and the Political Economy Research Institute (2011 CAPPERRI)).

California Watershed Stewards Project creates 30 jobs for each \$1 Million (California Conservation Corps 2012).

Green stormwater projects: 13.1 person/years for each \$1 million (Economic Roundtable of Los Angeles 2011).

Water Conservation projects: 16.6 person/years for each \$1 million (Economic Round Table of Los Angeles 2011).

Simple but large-scale river revegetation projects: \$1 million provides 10 jobs (Waterways Restoration Institute 2012).

Alternative water supply: grey water and cisterns: \$1 million produces 11 jobs. Training costs are \$46,000 per 120 students (Waterways Restoration Institute 2012)

Energy Comparison:

Wind energy: 13.3 jobs per \$1 million (CAPPERRI 2011)

Solar industry: 13.7 jobs per \$1 million (CAPPERRI 2011)

(Most figures include direct, indirect and induced jobs.)



Photo: Sonoma Ecology Center