

GORDON AND BETTY MOORE FOUNDATION



2009

YEAR IN REVIEW

Overview

In 2009, our grantees achieved extraordinary results. Their efforts have yielded fundamental new knowledge at the frontiers of science, helped transform the way we manage and use our terrestrial and marine resources, improved nursing-related patient outcomes, and improved the quality of life—for current and future generations—in the Bay Area and around the world. We thank all our partners for their continued and outstanding work.

A sampling of 2009 grantee accomplishments within our initiatives and commitments follows.

Environment

ANDES-AMAZON INITIATIVE

LONG-TERM OUTCOME Maintain the ecological function and representative biodiversity of the Amazon Basin.



- The Tamshiaco-Tahuayo Regional Conservation Area became the first regional conservation area recognized at the federal level in Peru, opening new opportunities for protected area creation with financial and technical support from the national government of Peru. (Grantee: Nature and Culture International)
- Over 2.5 million hectares in new protected areas have been designated from the inception of the Amazon Region Protected Areas project in 2003 through the end of 2009, including areas along the critically located BR-319 highway corridor. (Grantee: WWF)
- The Brazilian government halted plans to pave the BR-319 highway, limiting potential access through that corridor and, therefore, associated deforestation. Grantee research and publications played a critical role in influencing federal policies on this issue. (Grantee: Conservation Strategy Fund)

MARINE CONSERVATION INITIATIVE

LONG-TERM OUTCOME Resilient and productive marine ecosystems in North America, managed sustainably for current and future generations.



- Canada's Department of Fisheries and Oceans (DFO) and Coastal First Nations incorporated critical benchmarks for a good Marine Spatial Planning (MSP) process into a framework for the Pacific North Coast Integrated Management Area (PNCIMA). Contiguous to the Great Bear Rainforest, the

MARINE CONSERVATION INITIATIVE (CONT'D)

PNCIMA can serve as a new international paradigm for both MSP and integrated land-sea conservation. (Grantees: Turning Point Initiative – Coastal First Nations; Tides Canada Foundation; WWF-Canada; Living Oceans Society; David Suzuki Foundation; and T. Buck Suzuki Environmental Foundation)

- At the end of 2009, the final Massachusetts Ocean Plan was adopted, creating the first comprehensive marine spatial plan for state waters in the US. (Grantees: University of Massachusetts Boston (the Massachusetts Ocean Partnership), Conservation Law Foundation)
- In June 2009, the New England Fishery Management Council (NEFMC) voted to create “sectors” catch shares in the groundfish fishery. The vast majority of next year’s groundfish catch is expected to fall under the new management system, which has the potential to improve fishery performance and enhance ecosystem health. The federal government also announced \$35 million in new funding to assist New England in the transition. (Grantees: Gulf of Maine Research Institute, Environmental Defense Fund, Cape Cod Commercial Hook Fishermen’s Association, and The Nature Conservancy-Maine)
- Following the release of President Obama’s draft Ocean Policy in June 2009, grantees gathered insights from states and a broad array of ocean users. Building on these lessons, grantees generated comments to support a national ocean policy, including MSP, and highlighted ways the policy could lead to resilient and productive marine ecosystems that can support healthy communities. The government released a draft interim framework for coastal and marine spatial planning in September. (Grantees: Duke University, Ocean Conservancy, The Nature Conservancy, Conservation Law Foundation, UNESCO)
- Environmental Defense Fund released a “Catch Share Design Manual” based on extensive research, including consultation with commercial fishing interests. The manual highlights the importance of identifying clear social, economic, and biological objectives for a fishery up front, and then crafting a catch share program to meet those goals. (Grantees: Environmental Defense Fund, University of California, Santa Barbara)

WILD SALMON ECOSYSTEMS INITIATIVE

LONG-TERM OUTCOME Maintain a healthy salmon ecosystem at the scale of the North Pacific.



- Grantees successfully convened the second State of the Salmon (SoS) Conference. Attendance was twice that of the first conference. Participants exchanged and gained important new knowledge, including information to help guide conservation and management decisions. (Grantees: Wild Salmon Center, Ecotrust)
- In the Skeena watershed, a large and diverse coalition has formed to address decision-making around resource development, with the potential to affect important wild salmon habitat. First Nations, communities, recreation groups, fishing sectors, and conservation organizations have developed collaborative strategies to facilitate informed social choice based on a full understanding of the cumulative impacts of proposed development projects. (Grantees: Pacific Salmon Forum, Tides Canada Foundation, Northwest Institute for Bioregional Research Studies, Driftwood Foundation, ForestEthics, Pembina Institute)
- The final phase of a conservation agreement protecting 21,000 acres of critical salmon habitat in Southwest Alaska was completed. The agreement covers both surface and sub-surface rights, and preserves the entire length of the four-mile-long Agulowak River and 42 miles of shoreline. The Agulowak River provides spawning grounds for ~200,000 sockeye salmon each year, and provides passage for an additional ~1.2 million salmon that spawn further upstream in the system. (Grantee: The Conservation Fund)
- The government of Kamchatka created a Regional Fisheries Management Council, an unprecedented mechanism allowing for more transparent and participatory management of the region's fisheries resources. In addition, in response to concerns over the negative impacts of interceptions and by-catch, Russia closed the waters of its Exclusive Economic Zone to the high-seas drift-net salmon fishery for the 2009 season. (Grantee: WWF)

CONSERVATION INTERNATIONAL COMMITMENT



- In 2009, Conservation International adopted a new mission: “Building upon a strong foundation of science, partnership and field demonstration, CI empowers societies to responsibly and sustainably care for nature for the well-being of humanity.” CI then began a major change initiative to align all aspects of their organization with this new mission.
- Tropical Ecosystem Assessment and Monitoring (TEAM) increased its reach from five to 16 monitoring sites, developed protocols addressing the full range of ecosystem services in the Millennium Ecosystem Assessment, and built new partnerships with foundations, NGOs, government agencies, and corporations.
- CI’s Atlantic Forest field model in Brazil helped create 26 new protected areas, expand existing protected areas, and publicly launch The Pact for Restoration of the Atlantic Forest—an initiative involving 122 civil society institutions committed to restoring the biome.
- In Madagascar, CI developed the country’s first forest carbon projects eligible for the Clean Development Mechanism and initiated three new projects to guide national REDD strategy development.
- In the Cerrado-Pantanal, CI created the Association of Owners of Private Reserves Properties in Mato Grosso do Sul , helping establish 11 private reserves.

Science

MARINE MICROBIOLOGY INITIATIVE

LONG-TERM OUTCOME Marine microbiology is transformed into an integrated field of marine microbial ecology by applying novel molecular technologies and instruments with the goal of monitoring, modeling, and generating new fundamental knowledge about representative microbial ecosystems in the ocean.



- A team led by MMI Investigator Dr. Penny Chisholm of MIT developed and published a single-cell genome sequencing method after several years of research. Their work revealed fundamental new knowledge about the habitat adaptations of light-harvesting, oxygen-generating marine microbes—and the technique will change how environmental microbiology is conducted.
- The Moore Marine Microbial Genome Sequencing Project, conducted by the J. Craig Venter Institute, reached a total of 177 annotated microbial genome sequences from representative, evolutionarily distinct groups, and from marine ecosystems around the world. This effort is dramatically advancing knowledge of marine microbial diversity. MMI Investigator Dr. Stephen Giovannoni and his team at Oregon State University made significant progress towards understanding the ecology and evolution of some of the most abundant bacterial groups in the surface ocean that consume carbon compounds produced by other organisms. Publications this year helped advance understanding of elemental cycles in the surface ocean.
- A team led by Dr. Farooq Azam at Scripps Institution of Oceanography made great advances towards “seeing” inside the proverbial drop of seawater. Using advanced imaging techniques, the team was able to visualize a completely new kind of transparent particle present in the ocean—a hotspot for microbes to aggregate. The results of this research have important implications for carbon export from the atmosphere to the deep sea.

THIRTY-METER TELESCOPE COMMITMENT



- The design for TMT was completed, and the site selected and endorsed by native Hawaiian authorities. The early construction phase began ahead of schedule, with architects and renovation designers contracted before the year's end.
- In May 2009, Caltech announced plans to remove their oldest telescope from the peak of Mauna Kea.
- Together with the University of Hawai'i and the Board of Land and Natural Resources, TMT initiated discussions of and signed a new long-term lease agreement for the telescope site. The agreement represents a new paradigm, including viewing time for the University of Hawai'i, and providing tangible community benefits for local residents of Hawai'i Island.

CALIFORNIA INSTITUTE OF TECHNOLOGY COMMITMENT



- In 2009, Professor Ahmed Zewail and colleagues at the Physical Biology Center for Ultrafast Science and Technology used four-dimensional microscopy to generate images of electrical fields produced, fleetingly, by the interaction of photons and electrons within nanostructures. Papers describing this new technique appeared in *Nature* and *Science*, and reviewers of the *Nature* paper noted the technique's potential "to change the way scientists see the nanoworld."
- In 2009, Caltech President Jean-Lou announced the formation of a separate Information Science and Technology Department under the Engineering and

CALIFORNIA INSTITUTE OF TECHNOLOGY COMMITMENT (CONT'D)

Applied Science Division. While the Foundation funds the IST researchers' time and equipment, until now scientists and engineers have been physically scattered in buildings throughout the campus. The success of the IST grant helped garner additional funding from the Annenberg and Stephen D. Bechtel, Jr. Foundations, for a new, LEED-certified building to house the IST researchers in one place, formally dedicated in October.

- Seed research funding for the Center for Sustainable Energy Research helped attract substantial new sources of funding in 2009, including the seeding of a new Institute for the Science of Energy. Caltech was also selected for a Department of Energy (DOE) Energy Frontier Research Center, and Dow Chemical Company funded the launch of a groundbreaking Energy Research Initiative.

San Francisco Bay Area

BETTY IRENE MOORE NURSING INITIATIVE

LONG-TERM OUTCOME Improvement in nursing-related patient outcomes in adult acute care hospitals.



- Improvement in patient outcomes demonstrated in the San Francisco Bay Area hospitals include 24 hospitals in the zero zone* for ventilator-acquired pneumonias, and 29 hospitals in the zero zone* for Central Line Blood Stream Infections. 97% of San Francisco Bay Area hospitals voluntarily participated in Beacon, the Bay Area Patient Safety Collaborative, working together to achieve these outcomes. (Grantee: Hospital Council of Northern and Central California)
- The eight San Francisco Bay Area hospitals participating in the innovative Integrated Nurse Leadership Program reported dramatic and significant reductions in medication administration errors in 2009 (a 65% improvement in medication administration errors in 57 units across 8 hospitals). (Grantee: University of California San Francisco, Center for the Health Professions)
- In 2009, the collective efforts of our grantees to build a larger and better educated hospital RN workforce resulted in 48 new faculty graduated or teaching in the San Francisco Bay Area, 289 new registered nurses (RNs) graduated and available to work at the bedside in San Francisco Bay Area hospitals, and the effective implementation of risk mitigation strategies to address the economic downturn and its impacts on nursing school enrollment and hospital hiring. (Grantees: City College of San Francisco in collaboration with California Pacific Medical Center, Ohlone College in collaboration with Washington Hospital, Samuel Merritt College, San Jose State University, the University of San Francisco, the University of California, San Francisco, Dominican University, and Holy Names University)

*Zero zone = ≤ 1 infection for at least 2 of the previous 4 quarters of reported data. Data reported through Q2 2009.

BETTY IRENE MOORE SCHOOL OF NURSING COMMITMENT



- The UC Board of Regents formally approved the Betty Irene Moore School of Nursing in March 2009, and Heather Young, RN, PhD, titled founding dean.
- The Nursing Science and Health-Care Leadership doctoral and master's degree programs were approved by the University of California at Davis (UCD) Academic Senate in May 2009 and are currently under review by the University of California system-wide Academic Council.
- Deborah Ward, RN, MS, PhD, was appointed associate dean in October 2009.
- In addition to the nursing faculty at the Betty Irene Moore School of Nursing, 24 other faculty members from a wide range of disciplines at UCD, committed to the Nursing Science and Health-Care Leadership Graduate Group.
- Over the past year, school leadership hosted a number of town-hall style meetings to collect input and suggestions from local residents and nurse leaders from across the nation to further develop the nursing education model and lead the transformation of health care across the region.

LAND CONSERVATION



- Grantees helped improve the quality of conservation through the development of science-based planning at a regional scale. As an example, Santa Cruz County initiated its first countywide conservation blueprint and joined the Bay Area Open Space Council in 2009, augmenting regional conservation structures and coordination. (Grantee: Santa Cruz Country Land Trust)

- The pace of efforts to assemble large-scale conservation networks of protected areas, critical to maintaining ecosystem function, accelerated in 2009. Grantees reconnected 565 acres of wetlands to the hydrologic processes in Tomales Bay, and permanently protected 5,851 targeted acres in Sonoma’s Jenner Headlands and on Mount Diablo’s Fox Ridge. (Grantees: Sonoma Land Trust, East Contra Costa County Conservancy, Point Reyes National Seashore Association, and National Park Foundation)
- To help build connectivity and long-term sustainability in the Bay Area, a groundbreaking new partnership among scientific experts, the Bay Area Open Space Council, and public policy specialists began delineating and implementing critical wildlife linkages in the region. (Grantee: Science and Collaboration for Connected Wildlands)

SCIENCE AND TECHNOLOGY MUSEUMS

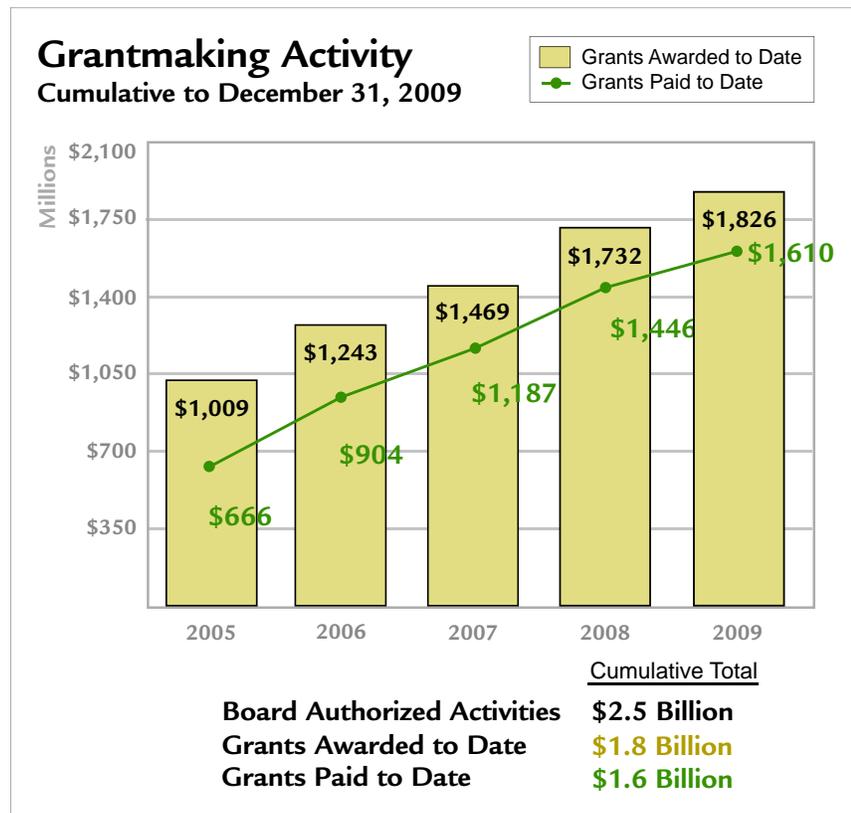


- Planning efforts were launched to build a robust field of research investigating the most effective ways to help students in grades K-5 develop and sustain critical inquiry in science learning. (Grantee: Lawrence Hall of Science at the University of California Berkeley)
- The design and fabrication of Bill Nye’s Climate Laboratory—an exhibition to increase climate change science literacy and engagement in youth ages eight to fourteen—commenced in 2009. Installation will begin in 2010. (Grantee: Chabot Space & Science Center)
- To teach Bay Area students about fundamental physical and earth sciences concepts, ten interactive exhibits and user-generated instructional videos have been designed for a future “Innovator Gallery.” (Grantee: The Tech Museum)

Financial Highlights

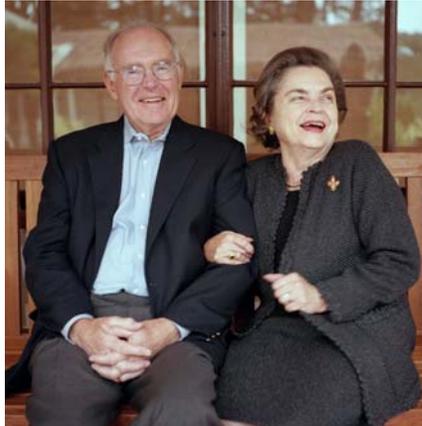
The Foundation's financial statements are audited annually by Ernst & Young, LLP and published on our website at www.moore.org. Additional information is also available on the website in our annual information return called the Form 990-PF, Return of Private Foundation.

The Foundation has grown rapidly from its establishment in 2000 and currently employs more than 75 people, manages over \$4 billion of assets, and has an annual operating budget of approximately \$26 million. The Foundation intends to pay out at least five percent of its endowment annually, which equates to an annual grant budget of approximately \$183 million.



Foundation Leadership

OUR FOUNDERS



Gordon and Betty Moore

A rule-of-thumb prediction made by Gordon Moore in 1965, later dubbed “Moore’s Law,” became a guiding principle for the delivery of ever more powerful semiconductor chips at proportionally lower costs. Today, this standard continues to set the pace of technology development and progress. Gordon has been committed to technological progress throughout his career as a leader in the new semiconductor industry, first as cofounder of Fairchild Semiconductor in 1957 and then as co-founder of Intel Corporation, creator of the world’s first microprocessor, in 1968.

Betty met Gordon at San Jose State College where she received her bachelor’s degree in Journalism in 1949. Gordon and Betty were married the following year. While Gordon attended graduate school at the California Institute of Technology in Pasadena, Betty worked for Consolidated Engineering Corporation in advertising and public relations before joining the Ford Foundation.

By establishing the Gordon and Betty Moore Foundation together in 2000, the Moores’ philanthropic contributions build on the work they have dedicated to science and the environment for decades, both at home and abroad. Today, Gordon and Betty are active on several philanthropic and corporate boards. They reside in the Bay Area and in Hawaii, and have two sons and four grandchildren.

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