NatureServe moved from strength to strength during the year that ended June 30, 2012. We grew our programs while exploring new opportunities for the network that culminated in the publication of our 2012-2016 Strategic Plan.

In FY12, increased charitable contributions from individuals and foundations buoyed NatureServe during a time of mounting government austerity. Overall revenue grew year-on-year thanks to an astounding 250% increase in philanthropic grants and gifts, reflecting an expanding community of supporters who recognize the critical importance of using science to boost the effectiveness of conservation across the globe.

I am deeply grateful for the commitment, dedication, and can-do spirit that our staff has shown in serving our mission. This includes the staff of our network members and collaborators, who work with NatureServe to share their deep knowledge of the Earth’s most vulnerable species and the places they live.

The report that follows offers an annual snapshot of what the NatureServe network has accomplished to advance knowledge of biodiversity, create new capacity, and guide conservation decisions towards more enduring results. Please join us in celebrating our accomplishments and tackling the challenges that remain.

Mary L. Klein
President & CEO

CONNECTING SCIENCE WITH CONSERVATION

NatureServe works around the globe to ensure that the best scientific information guides how people use, conserve, and appreciate the natural world. This year we made great strides in advancing our core mission priorities while turning to the future in developing a new five-year strategic plan. In the process, staff, board, network members, and other stakeholders assessed the status of our network, the context in which we operate, and the driving forces that will shape how we achieve the greatest mission impact.

The programs described in this report represent NatureServe’s extraordinary influence on conservation, as well as the foundation for our future success.

Building Scientific Knowledge

Focusing limited resources on protecting the most vulnerable coastal and marine habitats has gotten easier with the development of the Coastal and Marine Ecological Classification Standard (www.cmecscatalog.org). NatureServe collaborated with the National Oceanic and Atmospheric Administration, the U.S. Environmental Protection Agency, the U.S. Geological Survey, and more than a hundred scientists and coastal managers to create this framework.

CMECS is the first-ever comprehensive standard for classifying and describing “wet-footed” ecosystems. By offering a shared framework for characterizing both natural and human-influenced ecosystems, the classification resolves one of the greatest obstacles to effective ocean conservation. Now formally approved as a U.S. federal standard, CMECS is poised to serve as the basis for several national and multi-national efforts to systematically map these habitats for land use planning and conservation.

Increasing Network Capacity & Effectiveness

Nearly a decade after a Parks Canada’s Species At-Risk Act program manager attended a NatureServe training event, Parks Canada (PCA), NatureServe, and NatureServe Canada, continue to benefit from a vibrant, successful collaboration. The signature achievement is a data system that revolutionizes PCA’s collection of field data for rare and imperiled species. Park staff nationwide access this online system—one fully integrated with NatureServe’s core Biotics platform in Canada and across the Western Hemisphere.

These efforts have saved the agency money and helped it to meet performance targets. A 2008 Auditor General’s report cited Parks Canada as the only agency to make satisfactory progress toward a comprehensive inventory of at-risk species. Lined up as an early adopter of Biotics 5, PCA is exploring ways to extend this collaboration further in areas like coastal and marine conservation.

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Alaska’s giant kelp forests are just one endangered ecosystems that can benefit from NatureServe’s scientific work. Photo courtesy of Mandy Lindeberg, NOAA/NMFS/AKFS (flic.kr/p/8TSjwr).
A Common Platform for the Commonwealth

Funding from Pennsylvania DCNR’s Wild Resources Conservation Program and the Hershey Company led to the launch of LandScope Pennsylvania. Staff from NatureServe and its member, the Pennsylvania Natural Heritage Program identified, acquired, and published a dozen of the state’s most relevant conservation maps, high-quality writing, and compelling photos and videos to spotlight significant places and important conservation themes.

The resulting resource informs and inspires conservation action among land-protection practitioners, planners, public officials, environmentally minded students, teachers, and citizens. By extending the nationwide site developed with National Geographic, LandScope Pennsylvania enables organizations of all types and sizes to bring attention to conservation successes and place their work within the context of broader regional and national efforts. Users from the Commonwealth are now flocking to the site, which has seen a 90% year-over-year increase in visits from Pennsylvania.
PROJECT GALLERY

Anticipating Climate Vulnerability in Wildlife Refuges

The emerging and potential impacts of climate change on biological and infrastructure resources is a major concern for the U.S. Fish and Wildlife Service’s National Wildlife Refuge System. Working with FWS staff, NatureServe developed a comprehensive approach for assessing the vulnerability of refuges and their supporting landscapes. FWS can then use the results to develop adaptation strategies and management alternatives. These assessments help agency staff make better-informed management and planning decisions by providing information on current and future conditions in and around the refuges. NatureServe published a detailed technical guide and a companion manager’s guide that offer high-level overviews of the assessment process along with practical insights on how to initiate an assessment. Though prepared specifically for the refuge system, this process offers practical climate-related considerations and approaches for managers of any site managed for its natural values.

Mapping the Contributions of Easements to the Conservation Estate

NatureServe joined four nonprofit partners—Defenders of Wildlife, Ducks Unlimited, Conservation Biology Institute, and Trust for Public Lands—in developing and launching the National Conservation Easement Database (NCED). This first-ever compilation of data on U.S. conservation easements includes records from land trusts and public agencies throughout the United States. NCED offers a unique body of knowledge to organizations eager to understand how—and, most importantly, where—private lands contribute to conservation success.

As a voluntary, secure, and publicly available resource, NCED respects landowner privacy and does not collect landowner names or sensitive information about easement properties.

NatureServe staff collaborated with our network members to gather data in 11 states and led the development of formal metadata. We continue to engage in fundraising, data management, and data delivery.

IN BRIEF

Assessing Pesticide Risks to Endangered Species

This past year marked the tenth year that the NatureServe network has delivered a U.S. species data-set to FESTF, a pesticide-industry task force. The group supports mandatory risk assessments meant to minimize the impacts of pesticides on federally threatened and endangered species. FESTF relies on NatureServe network data as the “best available” data to comply with U.S. Environmental Protection Agency regulation of the Federal Insecticide, Rodenticide and Fungicide Act, the Endangered Species Act, and other federal and state laws.

Identifying High-Quality Longleaf Pine Forests

Working in partnership with government, non-profit, and academic partners, NatureServe’s Southeast office developed a standard approach for determining the condition of longleaf pine forests. This shared framework identifies high-quality stands and improves understanding of the remnants of the once-dominant forests of the Atlantic and Gulf coastal plains.

Infrastructure & Mining Impacts on Biodiversity in the Peruvian Amazon

Ongoing mining development in the Peruvian Amazon led senior ecologist Carmen Josse to analyze potential zones of conflict between key areas of biodiversity and infrastructure development in the region. This study used information on endemic plants and animals known from the eastern slope of the Andes developed earlier by NatureServe, along with pressures and threats documented by collaborators Matt Finer (CIEL) and Clinton Jenkins (North Carolina State University).
Three landscape-scale projects are calling on all the deep knowledge and expertise of NatureServe network scientists, planners, spatial modelers, GIS analysts, and IT staff, and consulting experts.

A NatureServe-led team is currently assisting the U.S. Bureau of Land Management (BLM) with Rapid Ecoregional Assessments for the Central Basin and Range, Mojave Basin and Range, and Seward Peninsula-Nulato Hills-Kotzebue Lowlands ecoregions. These comprehensive “REAs” will provide BLM and its partners critical context for updating management plans in the coming decades.

“By developing the first round of REAs, we’re breaking new ground in landscape-scale conservation,” says Pat Comer, chief ecologist, who is guiding the project from the Boulder, Colo., office with conservation planning director Patrick Crist.

“The first challenge was to understand BLM’s information needs, so each of our subteams devised new methods to work effectively with available data on ecological integrity and climate change. We have cataloged, processed, and delivered more than 800 distinct data sets for each assessment—quite an amazing accomplishment in just two years.”

To protect, manage, and monitor at-risk species, the U.S. Department of Defense (DOD) needs up-to-date information on where they occur on their lands. Armed with this knowledge, DOD can then prioritize species and facilities where effective management could preclude the need for federal listing, which could result in restrictions on an installation’s training activities.

NatureServe evaluated DOD holdings by completing two analyses of globally imperiled (G1 & G2) species and “candidate species” not yet formally listed as threatened or endangered under the U.S. Endangered Species Act. The first examined species occurring mostly or exclusively on military lands along with those whose survival requires DOD management. The second identified military installations that provide habitat for high numbers or high densities of imperiled species. DOD planners, managers, scientists, and policy-makers can apply these results in stewardship that ensures both military readiness and biodiversity conservation.

NatureServe Canada has partnered with one of the country’s largest volunteer organizations, the Canadian Wildlife Federation, to develop Naturally Connected, an online system that engages citizens in gathering and sharing information about Canada’s natural heritage. Validating contributions through training, expert groups, and NatureServe standards and methods, the platform will enable Canadians to track birds, butterflies, dragonflies, flowering plants, mammals, freshwater fish, and invasive species through a personal portal, leveraging increasing use of handheld devices to enhance biodiversity knowledge available to decision-makers, researchers, and on-the-ground managers.
Improving Large-Scale Transportation & Mitigation
NatureServe organized a multi-agency workshop to improve decision-making and permitting in large-scale transportation and infrastructure planning.

The workshop evolved out of the EcoLogical Framework that NatureServe and network members in Oregon and New York developed for the U.S. TRB’s Strategic Highways Research Program 2. This work provided specific recommendations—like multi-agency data integration—that could streamline processes and improve environmental outcomes for state departments of transportation, metropolitan planning organizations, and resource and regulatory agencies.

By identifying where species are not only likely to occur but also likely not to occur, predictive distribution models from the NatureServe network provide transportation and infrastructure planners with more focused and specific options for avoidance, minimization, and mitigation than traditional models (inset).

Mobilizing Observations Data
NatureServe released a mobile observations system, built with support from the National Science Foundation. Rather than building a new end-to-end solution, this system identified the gaps in creating an effective digital workflow and developed a suite of tools that fulfilled the unmet needs.

The system includes a flexible desktop application suite and an online template library that collaborators like the Parks Canada, Saskatchewan Conservation Data Centre, and the New Jersey Natural Heritage Program already use to create, edit, and share templates for handheld devices. The system’s software and its source code are available as free downloads through Google Code (http://code.google.com/p/ns-mos/), where open-source developers can contribute to future releases.
We wish to extend our sincere appreciation to the patrons and clients whose support helped NatureServe advance our shared mission between July 1, 2011, and June 30, 2012.

INDIVIDUALS & FAMILIES

Deborah Albert
Kenneth and Gail Albert
Michael Andrews
Anonymous
Ted and Calvert Armbricht
Rachel Ascher
Madge Baker
Ralph Barba
Doug Barker
Kristin Barker
Robert O. Blake
Christopher Boebel and Glenna Eaves
Herman and Mary Breden
Nancy, Carolyn, and Amy Breden
Zachary Brown
Stephen and Janet Breden
Elaine T. Broadhead
Mark Brodkey
Betty and Howie Burke
Elizabeth Byers
Steven Carter-Lovejoy
Lee Casebere
Steve Chaplin
Erin Chen
Combined Federal Campaign
Robert Chipley
Ann Coburn
Karen Coda
Carmen Converse
Edwin and Mary Crist
Richard and Mary Crouch
Greg Czarnecki
Gwen Davis
Joyce Davis
Kevin Davis
Edward Dayton
Carol and Barry Dickman
Holly D. Doremus and Gordon E. Anth
Hamilton and Lin Emmons
Don and Kathy Faber-Langendoen
Russ Faucett
David Ferrell
Jerry Franklin
Joy Gaddy
Lydia Garvey
James E. Geringer
Audrey Godell
Kathy and John Goodin
Barbara Goodman
Craig R. Groves and Victoria Saab
Henry and Barbara Hahl
Dr. Benjamin Hammett
David Harrison
Cloyce Hedge
Bonnie Heidel
Ronald Hellmich
Leslie Honey
Phil Hoose
Sherry Huber
Kate Ireland Foundation
Anna Johnson
Robin Johnson
Andrew Kaiser
Edward Kfouri
John K. Kirsch
Jacquelyn Kiszewski
Brian Klatt
Mary and Bert Klein
Fredric R. Kutner
Erin Largay
Jeanette Largue
Mary Ann Lawler and Neal Sigmon
Yu Man Lee
Bob and Dee Leggett
Betty K. Lemon
John and Madeline Leonard
Barbara Lipscomb
Keith Loring
Orie & Elinor Loucks
Tom Lovejoy
Dr. Deborah J. Lucas
Chris Madden
David T. Mayo
John and Lucille Mayo
Annmarie McAninch
Jack McMillen
Jason and Alison McNees
Patricia Mehlhop
Marianne Mooney and Joseph Sasfy
William Murray
Deirdre Neilen
Emily Nelson
Carl Nordman
Gordon and Elizabeth Orians
Mary Ann Ormes
Marlyn Ort
David Pasco
Phil and Janet Pasco
Mary Elizabeth Peck
Michael Penskar
Robert Popp
Ann C. Price
Ron Pulliam
Milo Pyne
Chuck and Yvonne Richards
The Grace Jones Richardson Trust
Rob Riordan
J. Douglas Ripley
Eleanor and Rosario Rizzo
Julia and Derrick Robinson
Crystal H. Rogers
Renee Rondeau and Gordon Rodda
John Sall
Rick Schneider
Edith Schwarz
Loring Schwarz
Lori Scott
Henry and Peggy Sharpe
Sharpe Family Foundation
Barbara and Jonathan Sheline
Sandra Simmons
Linda Simon
Jocelyn and Bill Sladen
Tom Smith
Adam Sonfield
Judy and Robert Soule
Bruce Stein
Hannah Sukonick
Jon and Ann Sundstrom
Hillary Swain
TisBest Philanthropy
Sabra Tonn
Gene M. and Charlyne Tucker
Rita Irene Varley
Marvalse & David Wake
Carol Foster and Gary Waldron
Elizabeth Wellman
Joseph Williams
Dottie and Kenneth Woodcock
Henry Woolsey
Bruce Young
Jean Young
Karen Young and Paul Robie
Nicholas T. Zann

Giving at the office? NatureServe is proud to participate in the Combined Federal Campaign—the official giving program for federal employees. Pledge your support to NatureServe using our CFC number #10299. You can also donate to NatureServe through EarthShare, which connects hundreds of workplaces with the most respected environmental organizations in America.
In June 2011, NatureServe received one of just four Dimensions of Biodiversity grants awarded by the National Science Foundation, which supports a five-year effort to complete the IUCN Red List assessment for all reptile species in the Western Hemisphere. But this prestigious award also cemented partnerships with four U.S. and one Brazilian university—relationships emblematic of efforts to enrich NatureServe’s scientific work through stronger creative collaborations with academic institutions.

17 network members operate in university settings, but NatureServe’s Northeast Office just joined them, too, with their relocation to the biology department at University of Massachusetts Boston (http://www.umb.edu/academics/csm/biology/natureserve). Our formal relationship extends into the environmental science, earth and ocean sciences, and computing departments, with whom we are pursuing interdisciplinary projects at the interface between biology and computer sciences and supporting student research on and analysis of network data.

Elsewhere, the NatureServe Southeast office has been exploring various collaborations with the University of North Carolina Chapel Hill, and the NatureServe home office has established a connection with George Mason University that brings in project interns, appoints our scientists to visiting positions, and encourages joint research. Each of these exciting relationships offers a spark of innovation to our traditional delivery of biodiversity knowledge, tools, and expertise.
NatureServe and our 2012 co-host, the Oregon Biodiversity Information Center, welcomed more than 250 attendees to Portland, Oregon for Biodiversity Without Boundaries 2012 in April. Two ceremonies highlighted the four-day event, recognizing the achievements of one individual and three NatureServe network members.

Both before and after his tenures as the first and fifth administrator of the U.S. Environmental Protection Agency, William D. Ruckelshaus demonstrated a forthright commitment to science in guiding policy and decision-making. The award acknowledges the unique character, scale, and diversity of his contributions to protect the natural environment throughout the course of his distinguished career.

During his engaging and disarming remarks, Mr. Ruckelshaus made a point of citing the importance of NatureServe’s “advanced technical assistance that is so helpful in making rational public policy.” He is the award’s third winner, joining biologist and Pulitzer Prize-winning author Dr. Edward O. Wilson (2011), and Dr. Robert E. Jenkins, founder of the NatureServe network’s natural heritage methodology (2010).

Meanwhile, the NatureServe network recognized outstanding work by three members. The Washington National Heritage Program received the Scientific and Technical Advancement Award for increasing access to reliable scientific information on the state’s rare plants, its nearly 100 ecological systems, and the ecological integrity of its important natural areas—efforts that have help make natural resource planning, policy, and management more cost-effective.

SalvaNATURA and the Florida Natural Areas Inventory (FNAI) won the 2012 Conservation Impact Award. As a founding member of the Sustainable Agriculture Network, the El Salvador-based SalvaNATURA promotes sustainable forest stewardship by improving agricultural practices and advancing the science and practice of bird and ecosystem conservation. FNAI earned praise for its publication of The Atlas of Florida’s Natural Heritage and its leadership in developing the state’s Critical Lands and Waters Identification Project.