An aerial photograph of the San Francisco Bay Area. The foreground is dominated by dense green trees and foliage. In the middle ground, a large body of water (the bay) is visible, with a city skyline (San Francisco) in the distance. The sky is a clear, pale blue with some light clouds. The overall scene is a wide, panoramic view of the region.

Bay Area Early Detection Network

2008 - 2009 Report

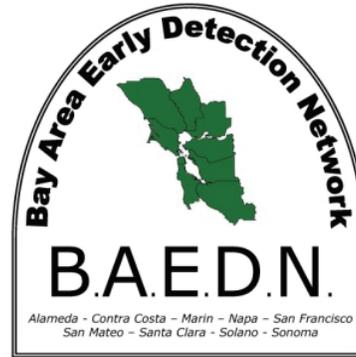
PARTNERS

BAEDN Partner Organizations

Audubon Canyon Ranch*
Bay Area Open Space Council*
Calflora Database*
California Association of Resource Conservation Districts
California Department of Fish and Game
California Department of Food and Agriculture
California Invasive Plant Council *
California Native Plant Society
California State Parks
Contra Costa County Department of Agriculture
Contra Costa/Alameda Weed Management Area
Friends of Corte Madera Creek
Golden Gate National Parks Conservancy
Gold Ridge Resource Conservation District
Invasive Spartina Project
Laguna de Santa Rosa Foundation*
Marin County Open Space District
Marin Municipal Water District*
Marin/Sonoma Weed Management Area
Midpeninsula Regional Open Space District
Napa Weed Management Area
National Park Service - San Francisco Bay Area Network *
National Park Service - California Exotic Plant Management Team
National Park Service - Point Reyes National Seashore
National Park Service – Golden Gate National Recreation Area
Presidio Trust
San Francisco Estuary Invasive Spartina Project*
San Francisco Natural Areas Program
San Francisco Weed Management Area
San Mateo Weed Management Area
Santa Clara County Department of Agriculture
Santa Clara Weed Management Area
Sonoma Ecology Center
University of California Cooperative Extension
University of California Davis
University of California Santa Cruz
United States Fish & Wildlife Service – SF Bay NWR Complex*

*Organization has signed an MOU in support of common goals. There are no financial obligations associated with the MOU. Please let us know if your organization would like to become a signatory as well.

Please contact BAEDN staff if your organization should be listed here, or if you know of an organization that should be involved.



BAEDN Co-Chairs

Daniel Gluesenkamp
Audubon Canyon Ranch

Andrea Williams
Marin Municipal Water District

2008-2009 Steering Committee

Giselle Block
United States Fish and Wildlife Service

Peggy Olofson
Invasive Spartina Project

Cindy Roessler
Midpeninsula Regional Open Space District

Cathy Roybal
Contra Costa County Department of Agriculture

Christina Sloop
Laguna de Santa Rosa Foundation

Lisa Wayne
San Francisco Natural Areas Program

Eric Wylde
Santa Clara County Department of Agriculture

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For information or to get involved, contact:
<http://BAEDN.org>
888-427-4447

MISSION AND SCOPE

The Bay Area Early Detection Network (BAEDN) is an initiative which coordinates and organizes Early Detection and Rapid Response to plant invasions across the nine counties of the San Francisco Bay Area. BAEDN works to proactively deal with the highest priority outbreaks before they grow into large and costly threats. BAEDN partners work together to develop a scientifically rigorous list of the most harmful invasive plants, train each other in detection techniques, make detections and report them to the shared database, and then prioritize individual patches so that the most dangerous outbreaks can be removed before they spread and cause harm. We remove the easiest and most harmful first, while removal is cost-effective and before ecosystems have been harmed.

This "stitch-in-time" approach minimizes the environmental and economic damage caused by invaders, and dramatically reduces the need for planning and resources required to control large, established invasive plant populations. This approach also educates citizens, both by involving them in Early Detection and Rapid Response (EDRR) activities and also by providing transparent objectives and outcomes which can be communicated clearly. With strategic goals and responsible evaluation of outcome, we hope the BAEDN will serve as an example of the change we must make if we are to succeed in our conservation commitment.



Bidy-biddy (*Acaena novae-zelandiae*) disperses on clothes and fur. Photo courtesy of California Department of Food and Agriculture.

A growing partnership. The Bay Area Early Detection Network was formed in 2006 by a Memorandum of Understanding which brings together partners from the nine counties in contact with San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Solano, Santa Clara, and Sonoma. Since its inception, the BAEDN has expanded partnerships and increased its capacity. With the accomplishments described in this report, the project is now poised to conduct early detections and fund rapid response in its first nine-county field season.

Classic early detection deals with invasive species which are not yet widespread.

Local early detection deals with populations of widespread invasive species, but in areas where they are not yet abundant.

Eradication is the elimination of all plants from the area in which a species is invasive. Eradication is generally considered successful if no plants are seen for at least five years.

Extirpation is the elimination of all plants from a single site or population, with no plants seen for at least five years.

What you can do. There are several ways to participate. First, you can detect and report unusual or harmful invasive plants; please go to <http://BAEDN.org> and use the Google maps driven database right now! Second, please help to spread the word; tell your colleagues and suggest groups who should be invited to participate. Finally, we hope you will help us to build a BAEDN which is truly collaborative, which you can trust, which you can own. Please subscribe to the Partners email list so you can participate in efforts to build and refine this important system.

Invasive weeds are important, not because they are out of place but because they diminish and degrade the biodiversity of lands we love. Humans have introduced these species, and humans have disrupted ecosystems so that weeds can thrive. We have the moral obligation to right what we have wronged, and we have the responsibility to make our actions strategic and effective. Please join us in this effort! Your help can really make a difference.

2008-2009 ACCOMPLISHMENTS

BAEDN Staffing. In 2009 BAEDN was fortunate to bring onboard two very talented biologists to serve as Early Detection Coordinator and Rapid Response Coordinator. These positions provide dedicated staff to support Early Detection and Rapid Response throughout the nine-county San Francisco Bay Area.

Aviva Rossi, Early Detection Coordinator

Aviva is an ecologist and project manager specializing in natural resource project management within California's diverse ecosystems. She is a proven successful project manager and field team leader for surveys and natural resource projects, including both staff and contractor management. She holds a Masters Degree in Environmental Management from the University of San Francisco, with her graduate work focusing on anthropogenic effects on tidal wetlands in the San Francisco Bay. She obtained her undergraduate Biology degree from the University of California, Santa Cruz. She began her career with invasive species removal and native habitat restoration in the Santa Cruz and Monterey area. Since that time she has obtained over ten years of experience in the San Francisco Bay Area, as a consultant and volunteer, working primarily with regulated species through both field surveys and facilitating regulatory compliance.



Mike Perlmutter, Rapid Response Coordinator

Mike brings over ten years of experience in the field of ecological restoration and environmental management. Mike holds a Master of Environmental Management from the Yale School of Forestry & Environmental Studies and a Bachelor's of Science in Environmental Studies and Psychology from Tufts University. Mike has worked on a variety of environmental restoration, education, and management projects within the San Francisco Bay Area through agencies and non-profits such as the National Park Service, the Golden Gate National Parks Conservancy, and Audubon California. He's conducted projects within a variety of habitat types in California including tidal marsh, dunes, coastal scrub, prairies, oak woodlands, Redwood forests, riparian zones, and coastal bluffs. Mike brings a diverse skill set of program management and administration, project and volunteer management, supervision, ecological monitoring and restoration, data analysis, and G.I.S. Mike is practiced in monitoring techniques for plants, birds, soils and has designed, implemented and carried out a variety of scientific field studies.

Fiscal Sponsors

Through 2009 BAEDN was administered in partnership with Sonoma County's Gold Ridge Resource Conservation District (GRRCD). Gold Ridge's guidance has been critical to establishing BAEDN and we thank them for their partnership in this project.

As the scope of BAEDN expanded to include areas outside the jurisdictional boundaries of GRRCD, BAEDN began seeking a fiscal sponsor with more regional focus. BAEDN recently entered into agreement for the California Association of Resource Conservation District (CARCD) to act as fiscal sponsor for any new grant programs. CARCD has unique experience supporting a diversity of organizations, and their partnership provides valuable experience in natural resource conservation efforts throughout California.

Support for the BAEDN Initiative

BAEDN would not be possible without the tremendous in-kind expertise, equipment, and capacity donated by partners. In addition, BAEDN has been awarded generous grant funding from the following sources:

- California Department of Food & Agriculture (CDFA),
- National Fish and Wildlife Foundation (NFWF),
- U.S. Fish & Wildlife Service Coastal Program (USFWS),
- U.S. Forest Service (USFS),
- American Recovery and Reinvestment Act (ARRA)

Please thank these funders for their generosity and vision. Their support ensures strong regional coordination and makes possible BAEDN's first Rapid Response field season!

2008-2009 ACCOMPLISHMENTS

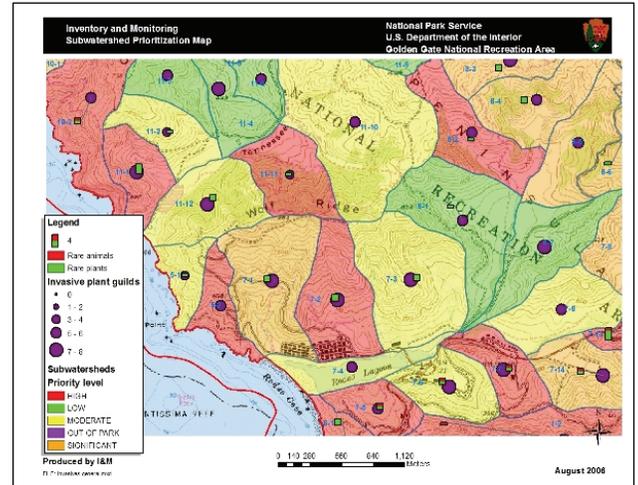
Early Detection Protocol Published

BAEDN Co-Director Andrea Williams led the effort to develop the “*Early Detection of Invasive Plant Species in the San Francisco Bay Area Network: A Volunteer-Based Approach*,” published in 2009 by the National Park Service. This protocol is the basis for BAEDN’s EDRR strategy.

The protocol covers the following key areas:

- Ranking species by invasiveness and eradication feasibility
- Ranking areas to search by highest-risk and highest-quality
- Matching amount of data collected to skill of the observer and priority of the target species
- Recruiting, training, mapping, data collecting, and reporting standard operating procedures
- Revising the species list and the protocol

The protocol also contains field manuals and instructions for GeoWeed, BAEDN partner Sonoma Ecology Center’s modification of The Nature Conservancy’s Weed Information Management System. Negative data are tracked through the use of the “Survey Area” portion of the database. Please see the BAEDN website or www.weedwatcher.org for more information, to obtain the protocol, or to download materials for the volunteer-based program it details, including an instruction manual, data sheets, maps, and plant ID cards.



A map of prioritized subwatersheds in the Marin Headlands. Colors show priority level; three ranking elements—rare plants and animals, and number of work-performed guilds—are also shown.

Partner Profile: Marin-Sonoma WMA EDRR Project

The Marin-Sonoma Weed Management Area initiated an EDRR program in 2009, designed to serve as a pilot for BAEDN’s nine-county effort. The program was coordinated by Noelle Johnson of Gold Ridge RCD, who developed a list of occurrences, prioritized them for treatment, and initiated CEQA compliance. Noelle then subcontracted with a Pest Control Advisor and a Licensed Applicator with a field crew for treatment.



Invasive plant removal was conducted at priority treatment sites for the following species: gorse (*Ulex europaea*), oblong spurge (*Euphorbia oblongata*), perennial pepperweed (*Lepidium latifolium*), mayten (*Maytenus boaria*), Cape ivy (*Delairea odorata*), and yellow starthistle (*Centaurea solstitialis*).

Future program efforts include coordinating with Caltrans and county road departments, public outreach, and additional detection and treatment of priority invasive plant occurrences.

Outreach and Trainings

The BAEDN project was publicly launched July 2009, scheduled to coincide with California’s “Invasive Weeds Awareness Week.”

The public launch included a media campaign designed to increase awareness among potential partners, including articles in more than 15 newsletters and publications.

As a result of this very successful outreach campaign, BAEDN has received numerous invitations to make public presentations and provide trainings in the early detection database. BAEDN staff and partners presented the project at numerous professional conferences and public meetings, including the California State Weed Management Areas conference, most of the San Francisco Bay Area Weed Management Area member meetings, membership meetings of Audubon and Native Plant societies, and workshops for private ranchers.



2010 GOALS

2010 is the year in which our efforts begin to make a difference on the ground. It is also the year we complete construction of BAEDN early detection infrastructure, and work with neighboring regions to build allied multi-county early detection networks. We hope that you will look back to 2010 as the year in which everything started to change for the better, the year that you helped to build a strategic and effective system for saving wild California.

Complete BAEDN's First Nine-County Field Season. Thanks to strong support from our funders, BAEDN begins the year with actions to prepare for the 2010 rapid response field season. Integrating lessons learned from Marin-Sonoma WMA's pilot 2009 field season, BAEDN staff are working with Partners on several key outputs, including:

- ❖ Publish the 2010 species list, so that detection partners can report occurrences of the most harmful invaders.
- ❖ Obtain new detections reports for occurrences of priority species, and obtain existing datasets from partners.
- ❖ Prioritize individual occurrences so that the most harmful and cost-effective infestations can be treated first.
- ❖ Complete environmental compliance, and develop contract specifications for rapid response treatment actions.
- ❖ Identify local rapid response partners and fund their work to remove the highest priority occurrences.
- ❖ Complete post-season evaluation of outcomes, assess needs, and adaptively revise plans prior to 2011 field season.

The March 2010 Annual Partners Meeting will kick off preparations for the 2010 field season. This first-ever region-wide Partners meeting brings together experts and professionals to make the important decisions required for a successful field season. At the meeting partners will participate in several working groups; these groups are sub-groups of the Advisory Committee and will guide the network in technical decisions and developments. Working Groups include:

- *Priority Weed List Group* – develops the 2010 priority species list.
- *Data-mining Group/Mapping Group* – obtains invasive plant occurrences, builds mapping tools, and produces maps of Rapid Response targets.
- *Rapid Response Group* - prioritizes infestations for treatment, determines allocation of response funds, and supports effective treatment efforts.
- *Training, Protocols, and Methods Group* - refines detection protocols and methods, develops and teaches workshops or trainings.



Invasive castor bean plant (*Ricinus communis*).
Photo by Neil Kramer.

Build Technical and Organizational Infrastructure. BAEDN has grown rapidly in recent years, with addition of new partners, staff, organizational structure, technical infrastructure and tools, and funding. However, there is still work to be done to build BAEDN. Outputs for the coming year include:

- ❖ Obtain matching funds to support EDRR in non-forested lands. Much of BAEDN's current funding is restricted to protecting state and private forests, and additional funds are required to extend EDRR service to all habitats.
- ❖ Identify suitable office space for BAEDN Coordinators, ideally shared with a partner organization.
- ❖ Mobilize and train citizen detection partners, via outreach such as the "Weed Watchers" training franchise.
- ❖ Expand capability of the database, including adding polygon capability, record history, and smart phone functionality.

Collaborate with Partners in the Efficacy Revolution. In addition to BAEDN-specific tasks, BAEDN will continue to work toward a future in which biological invasions are managed responsibly and effectively. Specific tasks include:

- ❖ Collaborate with the California Invasive Plant Council, which is mapping invasive plant distributions statewide through an American Reinvestment and Recovery Act funded project. We will coordinate on San Francisco Bay Area efforts, via actions such as integrating the BAEDN occurrence database with other mapping efforts.
- ❖ Work with partners in other regions of California to advance the development of systematic and transparent EDRR networks across California and beyond— please plan to join us in early 2011 for a Gathering of the Networks.



PLACE
STAMP
HERE

RETURN SERVICE REQUESTED

THE BAY AREA EARLY DETECTION NETWORK

BAEDN is a collaborative partnership of regional land managers and invasive species experts. We coordinate Early Detection and Rapid Response to infestations of invasive plants, proactively dealing with new outbreaks before they can grow into large and costly environmental threats. This “stitch-in-time” approach prevents the environmental and economic damage caused by these invaders; educates citizens regarding natural resource stewardship; and dramatically reduces the need for the planning and resources required to control large, established invasive plant populations.

The Bay Area Early Detection Network:

- ❖ Identifies the invasive plant species that most threaten the San Francisco Bay Area, and promotes a list of these detection targets.
- ❖ Provides a user-friendly online database that standardizes reporting and tracking of priority invasive plant species.
- ❖ Develops detection protocols and reporting guidelines; promotes recruitment and training of citizen and professional Detection Partners in the use of these tools.
- ❖ Prioritizes occurrences for eradication; gives eradication recommendations to responsible land managers; and provides assistance to ensure eradication of prioritized occurrences.
- ❖ Provides scalable templates for adoption by other regional Early Detection Networks, and encourages establishment of coordinated networks serving every region of California.