



The All-Bird Bulletin

Bird Conservation News and Information

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From the Editor

Finding Common Ground on the Bird Conservation Landscape

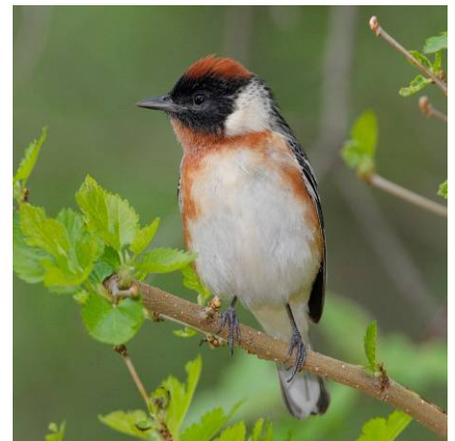
Roxanne Bogart, Wildlife Biologist, U.S. Fish and Wildlife Service

In this 10th anniversary year of the North American Bird Conservation Initiative, it is time to reflect on how far bird conservation has progressed since the initiative first began in the United States in the fall of 1999.

The NABCI goal of “*delivering the full spectrum of bird conservation through regionally based, biologically driven, landscape-oriented partnerships*” is more meaningful now than ever.

For it has become more than just an aspiration. It also describes much of what is happening on the conservation landscape for birds.

As the game–non-game boundaries of the past have faded, diverse communities of partners have emerged—communities that share a concern for habitats and ecosystems and a commitment to work together to strategically conserve these places for birds and other wildlife. While serious challenges still lie ahead, the evolution of our approach to conservation over the last decade gives hope for how much more we can accomplish for birds in the future.



Bay-breasted Warbler has witnessed an overall 70 percent decline. /Jeff Nadler

This special issue of *The All-Bird Bulletin* highlights the creative ways conservationists are serving the needs of all bird species of concern—the full spectrum of bird conservation—in their regions. Partnerships are always the key ingredient.

In its first U.S. vision document, the U.S. NABCI Committee declared the importance of partnerships thus:

The single most important component of bird conservation is partnerships. In any cooperative venture, each partner—federal, state, tribal, non-governmental, or individual—must come to the table voluntarily and be willing to share its resources to achieve common goals. Successful partnerships contain partners that understand and respect each other's independent missions. They also find common ground and follow management actions that result in the most efficient use of resources.

Articles in this issue describe how people across the conservation community are bringing these words to life in their day-to-day work for birds and their habitats. They signal a bright future for bird populations—one that will depend on innovative solutions involving new partnerships, novel perspectives, and cutting edge technologies to tackle the environmental challenges of an ever-changing world.



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21st Century Partnerships Restoring San Francisco Bay and Coastal Wetlands

Beth Huning, Coordinator, San Francisco Bay Joint Venture

As the twentieth century drew to a close, organizations, agencies, landowners, and the business community came together to develop a plan that would completely alter the face of San Francisco Bay and coastal California wetlands. The purpose was to protect and restore 200,000 acres of wetlands and riparian areas for birds and other wildlife. Using the [Baylands Ecosystem Goals Project](#), the scientific community analyzed what habitats were necessary to restore ecological functions, recover endangered species populations, and enhance habitat for other birds and wildlife. The information became the scientific foundation of the newly created [San Francisco Bay Joint Venture](#) (SFBJV) and its Implementation Strategy, Restoring the Estuary.

An unlikely partnership that included state and federal agencies, business and agricultural communities, hunters, and local governments, the SFBJV was launched under the North American Waterfowl Management Plan. At the time, this was a novel concept in the Bay Area: citizen groups were cautiously watching the actions of regulatory agencies and often fighting development projects; but the partners who signed the SFBJV Management Agreement decided to work together. Their aim was to restore wetland and riparian habitats for birds, fish, and other wildlife while enhancing wetland values such as flood control and public enjoyment.

A decade later, this vision is indeed becoming reality and birds are flocking to newly restored wetlands, all due to the power of partnerships. Already the partners of the SFBJV have protected 46,279 acres, restored 10,542 acres, and enhance 6,935 acres. In fact, several of the largest restoration projects in the U.S. are happening right now in the SFBJV region.

This past October, Point Reyes National Seashore completed the 550-acre Giacomini Wetlands Restoration Project at the head of Tomales Bay, partially funded through the North American Wetlands Conservation Act (NAWCA) and the U.S. Fish and Wildlife Service (FWS) Coastal Program. These newly restored wetlands had been diked off from tidal action in Tomales Bay more than half a century ago to create a dairy farm. The hydrology has now been reconnected and habitat has been created for Black Rail and other threatened and endangered species.



The North American Northern Pintail population has been in severe decline over the last several decades. /George Gentry, USFWS

The value of restoring the ranch to tidal wetlands is already apparent in the numbers and diversity of birds and other animals using the site. Wintertime high tides drew thousands of birds to the site, with 25 species and more than 3,400 water birds counted on the morning of December 13, 2008.

Some of the species with the highest numbers were American Widgeon (1,700), Northern Pintail (850), Green-winged Teal (230), and Northern Shoveler (150). Other duck species included Gadwall, Mallard, Cinnamon Teal, Bufflehead, and Ruddy Duck. Duck numbers were higher that fall and winter than prior to restoration probably because the open water area is greater, particularly during high tide. Shorebird surveys conducted between early November and early December noted use by Greater Yellowlegs, Wilson's Snipe, Killdeer, Least Sandpiper, and Short-billed Dowitcher. An ongoing monitoring program will help guide the long term management plans for the site.

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In San Pablo Bay, the northern end of San Francisco Bay, more than 30,000 acres of diked historic baylands have been acquired for restoration, including additions to the San Pablo Bay National Wildlife Refuge. San Pablo Bay shows the ability of partnerships to craft a common vision and represents one of the largest opportunities for protection and restoration on the West Coast. In the past few years, more than 11,500 acres of these newly protected areas have been restored to tidal action, including NAWCA sites at the Napa Sonoma Marshes and other California Department of Fish and Game (DFG)-owned properties, Hamilton and Bel Marin Keys (Coastal Conservancy), and Bahia (Marin Audubon Society) on the Petaluma River.

Several years ago, a proposal for a gambling casino spurred SFBJV partners to action. Negotiating with the local tribe, the Sonoma Land Trust was able to acquire the 1,700-acre Sears Point property, now the San Pablo Bay National Wildlife Refuge Headquarters. Other recent acquisitions protected the entire Tolay Creek watershed that drains into the Refuge, and provides an opportunity for restoration of riparian systems and a freshwater lake as well as tidal wetlands. Sears Point and Cullinan Ranch on the Refuge will soon be restored to a mix of wetland and grassland habitats. The vision of restoring San Pablo Bay is taking shape through collective planning and fundraising efforts of FWS, DFG, non-government organizations, tribes, citizens, other private landowners and partners of the SFBJV.

In the South Bay, planning and fundraising is well underway to implement Phase 1 of the South Bay Salt Pond Restoration Project, a cooperative effort between the FWS, California DFG, and the State Coastal Conservancy. Over 14,000 acres of these industrial salt ponds will be restored to a mixture of habitats, including tidal wetlands to help with the recovery of the California Clapper Rail, salt pannes for nesting Western Snowy Plover, as well as tidal flats and managed ponds for shorebirds and waterfowl. This project represents 90 percent of the restoration opportunities in the South Bay and is the largest wetland restoration project on the West Coast. It will undoubtedly take a long time to complete, and an adaptive management plan is in place to help insure that the optimal balance of habitat types will ultimately be restored to achieve the project goals.

The face of San Francisco Bay and nearby coastal wetland habitats is truly changing. While humans cannot reclaim the same historic landscape in this highly urbanized area, we can restore ecological functions while providing beneficial habitats for wintering bird populations and helping to recover endangered species. Stay tuned.



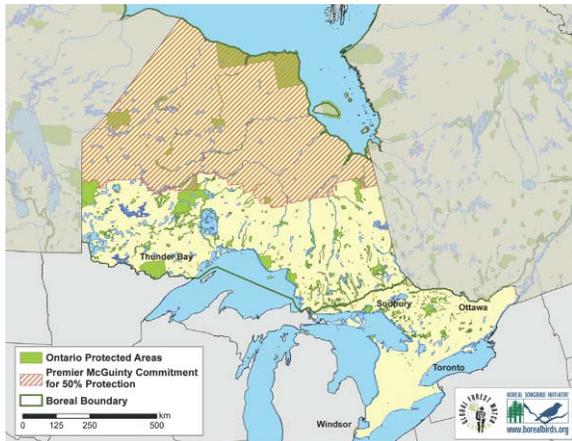
Before (top) and after (right) the Giacomini Wetland Restoration Project at the head of Tomales Bay, which created habitat for Black Rail (far right, Mike Legare, USFWS) and other threatened and endangered species. /Beth Huning, SFBJV



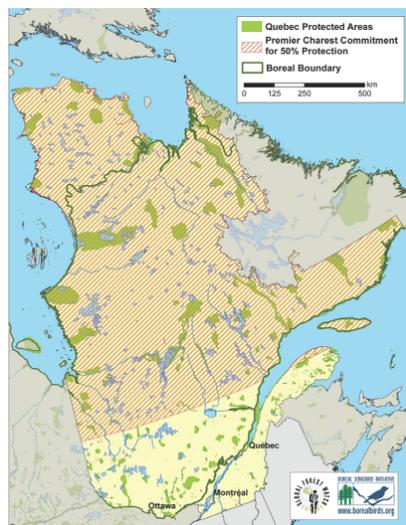
A Bold Vision for Birds in the Boreal

David Childs, Communications Specialist and Dr. Jeff Wells, Science and Policy Director, Boreal Songbird Initiative

A little over a decade ago, the Pew Environment Group (PEG), which manages environmental campaigns around the world, surveyed prospects for protecting a major portion of the world's few remaining old growth forests. Of the three largest—the Amazon Rainforest, Siberian Taiga, and Canada's Boreal Forest, the latter appeared most promising—not only were large chunks of Canada's forest still untouched, but its political climate strongly favored conservation.



Half of Ontario's northern Boreal Forest will be permanently off-limits to development, an area which supports more than 300 million birds. /Boreal Songbird Initiative



Half of Quebec's northern Boreal Forest will be permanently off-limits to development, roughly the size of France. /Boreal Songbird Initiative

Further research by PEG revealed a major, critical connection between Canada and the other nations of the Western Hemisphere: billions, yes billions, of migratory birds.

Every summer a massive wave of birds fly north from the United States and Latin America into Canada's Boreal Forest to breed. As the daylight hours increase and the snow melts, the Boreal emerges as a bird haven: bounties of insects emerge from the dark providing food for billions of songbirds, and millions of lakes return to full form to support magnificent numbers of waterfowl. But without protection, this vital breeding ground would no longer be able to support the up to 5 billion birds that grace us every year.

One of the first actions taken by PEG was the creation of the [Boreal Songbird Initiative](#) (BSI): a science and education-based bird conservation group tasked with organizing the facts about the importance of the Boreal, but perhaps more importantly to educate both the public and government officials about the need to protect this global treasure. While the majority of North Americans had heard about the Amazon, relatively few knew of the Boreal, including many Canadians, despite its similarity in size and importance.

The statistics that BSI and partners were able to compile were staggering: nearly half of North America's bird species (325 to be exact) relied on the Boreal Forest to some degree, including 80 percent of all waterfowl species. Over 300 of these species regularly bred within the Boreal, and for nearly 100 species the Boreal accounted for more than half of their overall breeding range.

Some species were shown to be almost completely reliant on the Boreal, with over 80 percent of their total population found breeding within the region—species like Surf Scoter, Bufflehead, Solitary Sandpiper, Alder Flycatcher, Cape May Warbler, Blackpoll Warbler, White-throated Sparrow, and Rusty Blackbird.

But the campaign knew that birds alone wouldn't bring the type of large-scale conservation desired. Working with partners and building a team vision behind Boreal protection thus became the major driving force. With the creation of the Boreal Songbird Network, a diverse group of sixteen bird and general wildlife groups such as Ducks Unlimited and the National Resources Defense Council, collaboration occurred on a wide range of issues, including caribou habitat, carbon storage, aboriginal rights, and the promotion of sustainably-certified paper.

Another boost came when the [Canadian Boreal Initiative](#) (a partner of BSI) created an overarching framework for Boreal protection. It called for fifty percent protection of the Boreal Forest from development and only sustainable development in the rest. Signed by industry leaders, environmental non-government organizations (ENGOS), and First Nations, the framework symbolized a chorus behind this bold vision and set the cooperative tone which would ultimately embody the movement as a whole.

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Major efforts in the Northwest Territories were already underway. Plans to develop a pipeline linking the Arctic with the heart of Canada had been on the table for decades, but were opposed by many aboriginal communities in the region. Working hand-in-hand with these communities and the government, major breakthroughs were achieved when the government agreed to protect large chunks of native land prior to any pipeline development. A series of announcements over the coming years resulted in more than 50 million acres permanently protected from development, much of which considered to be vital bird breeding ground and caribou habitat.



With 52 percent of the entire species breeding in the Boreal Forest, American Black Duck has witnessed an overall 79 percent decline. /Jeff Nadler

While this was good news for the north, it was a different story in the south. With over thirty percent of the Boreal designated for development, the southern Boreal was being eaten up at an increasingly elevated rate. Clear-cutting was pervasive in places like Ontario and Quebec, with many of those trees being turned into pulp for catalogues and junk mail. A coalition of market groups began targeting both timber companies and distributors to change their policies. Immediately making an impact, books like Harry Potter and catalogues like Victoria's Secret began using sustainably certified paper. Today over 70 million acres have achieved Forest Stewardship Council certification in Canada.

This approach of bringing all parties to the table had worked with aboriginal land rights and increasing sustainable forestry practice, but the framework had yet to receive endorsement from any major governing body within Canada. It was quickly realized that one particular party had not been fully utilized: scientists.

Any legitimate case for protection must have science supporting its bottom line. While the science was already there, the message hadn't been fully delivered. A 2007 letter endorsing the framework as scientifically sound was circulated and signed by over 1,500 international scientists. Gaining instant attention within the media and among insiders, governments had no choice but to acknowledge this immense opportunity.

It proved to be an immediate boost, as the following year Premier McGuinty of Ontario announced that half of Ontario's northern Boreal Forests, around 55 million acres and home to 300 million birds, would be off limits to development, citing the very same reasons elaborated in the letter and the framework. Within months, Premier Charest of Quebec announced the protection of half of northern Quebec through a series of parks—over 140 million acres of vital bird, caribou, and wolf habitat.

Both provinces are currently working on formalizing these commitments, and in Ontario the campaign is working directly with government and local aboriginal groups to ensure successful collaboration and planning. In Quebec the campaign has formed a coalition with several local ENGOS to dissuade government from calls to quickly bring development to the available half.

Working together with ENGOS, First Nations, industry, and government to create a unified vision has proven to be effective, with over 300 million acres slated for protection over the last 8 years including Ontario and Quebec. The importance of the Boreal Forest as a bird sanctuary has remained one of the major scientific drivers, but it was when all of the forest's values were articulated that success on such a grand scale became achievable. The campaign as a whole remains in full steam with the hope that other provinces soon follow this bold vision—for us, but also for the birds.



With 63 percent of the entire species breeding in the Boreal Forest, Rusty Blackbird has witnessed an overall 90 percent decline. /Jeff Nadler

Designing Forest Landscapes for Birds in Bird Conservation Region 14—the Atlantic Northern Forest

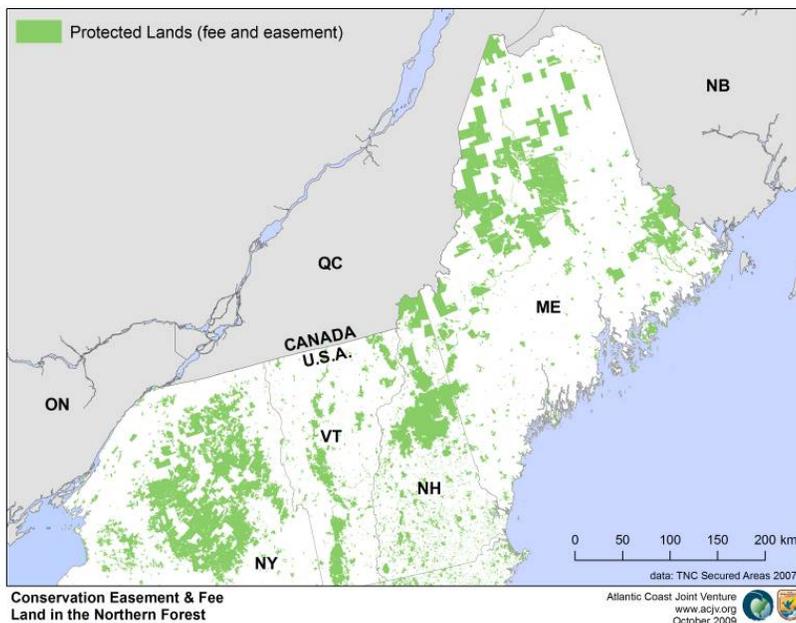
Mitch Hartley, North Atlantic Coordinator, Atlantic Coast Joint Venture

To the casual observer, land cover across the Northeastern corner of the U.S. may not seem to have changed much in the last few centuries, especially in comparison to the rest of the country. The 26 million-acre Northern Forest—the U.S. portion of Bird Conservation Region 14, the [Atlantic Northern Forest](#)—encompasses most of Maine, New Hampshire, and Vermont, as well as the Adirondack region of New York. This region contains the largest block of undeveloped land in the Eastern United States and has always been dominated by forests.

The persistence of so much undeveloped and uninhabited forestland is a direct result of this region's history as an "industrial forest" landscape. By the early 1900s, and for most of the 20th century, land ownership

across the Northern Forest was dominated by large paper companies. This changed dramatically starting in the early 1980s as manufacturers began acquiring raw materials for forest products from diverse new markets, including foreign sources. By 2005, the forest product companies that had once owned most of this region represented only 15 percent of ownership. Today most large landowners are timber investment management organizations, which own and manage land on behalf of insurance or other financial companies.

The last two decades of land ownership changes entailed an amazing pulse of land conservation. In 1998, The Nature Conservancy (TNC) became one of the region's largest landowners overnight by purchasing nearly 200,000 acres of land from International Paper. In 1999, the New England



Forestry Foundation and Pingree Associates announced the largest conservation easement in U.S. history on 762,192 acres of timberland in Maine. Similar deals representing nearly 1.3 million acres unfolded across the region in subsequent years. Another 400,000 acres of forestland in Maine is proposed for protection. Conservation groups like TNC and the Appalachian Mountain Club now own large tracts of forest, as do some wealthy and conservation-minded individuals. Most of the forest lands were conserved via "working forest" conservation easements that provide for continued timber management.

Over the last three centuries of shifting land use and ownership, the composition of forest habitat types has changed dramatically. Certain habitat types became more or less common and so did the bird populations that depend on them. In general, forest conditions in any given patch change over time due to natural processes (i.e., growth and disturbance) or timber harvesting. This may not be a problem, as long as the landscape functions as a "shifting mosaic" of different habitat types that vary in space and time. The key to sustaining healthy bird populations is to maintain large, unfragmented blocks of forest distributed across the region, containing a balance of forest types and age-classes.

The [Atlantic Coast Joint Venture](#) partners are developing a conservation design model for the Northern Forest to guide strategic conservation and inform management decisions within an ecological framework. Conservation design involves translating knowledge of the specific habitat features birds need and what is

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available on the landscape into decision support tools. The most common tool is a map or blueprint that identifies the most important areas to conserve and manage for species of concern. Combine maps for individual priority species and you have priority areas, or 'focus areas,' for multiple focal species.

In the Atlantic Northern Forest, focal species selected will represent all the major habitat types such as coniferous forests (spruce, fir, and pine), deciduous forests (maple, beech, and birch), and mixed conifer-deciduous forests. Within these types, focal species must represent the different structural habitat conditions associated with different forest ages or seral stages. Examples include Canada Warbler (young spruce-fir forest), Bay-breasted Warbler (mature spruce-fir forest), Ovenbird (mature deciduous forest), and Blackburnian Warbler (mature mixed forest). Focal species for conservation design may also include American Black Duck for wetlands and American Woodcock for early successional habitat. Both species share their habitat with many other species of conservation concern. For example, young forests are prime habitat for Ruffed Grouse, Wild Turkey, Eastern Towhee, Blue-winged Warbler, Magnolia Warbler, and Chestnut-sided Warbler.



Breeding Bird Survey results for Canada Warbler show a 1.9 percent average annual decline from 1966-2002 and 3.2 percent annually from 1980 onward, with the most severe declines in the Northeastern U.S. //Jeff Nadler

Some forest types—both young and old—are now distinctly underrepresented in different parts of the region. For example, spruce-fir and other conifer forests once comprised more than 60 percent of Maine and most was old-growth (i.e., more than 150 yrs post-disturbance). Today only about 40 percent of Maine forest is dominated by conifers and a very small percentage of land—only about 5 percent—has mature, older-growth forest. Meanwhile, in the Adirondacks and other parts of the region, most forestland has increased in maturity for several decades, as timber harvesting has become less prevalent. As a result, the region has seen a sharp decrease in populations of birds tied to early successional habitat or disturbed forests. Many species of conservation concern would actually benefit from an increase in timber harvesting across some parts of this region, with both intensive (i.e., large clearcuts) and extensive (i.e., many small cuts sprinkled across the landscape) harvests favoring different suites of species.

Research has shown that many bird species associated with mature forests continue to breed in partially harvested forests. Furthermore, forest-interior birds often move into disturbed patches as soon as their young fledge, presumably because dense, shrubby patches of young forest provide better cover or food. As long as large blocks of mature forest remain common across the region, and timber harvesting is done in a sustainable manner at the landscape scale, forest management is compatible with the conservation of mature forest birds.

Providing a better balance of forest habitat types at the regional scale requires both more and less timber harvesting in different parts of the region. A conservation design framework can help identify those areas and species that would benefit from more or different habitat management, and helps partners implement the most effective and efficient (i.e., highest return for the lowest cost) actions.

Ultimately, land managers need to predict future forest conditions based on anticipated management actions and climate change. The fruits of conservation design—decision support tools—can assess the impacts of planned or unplanned events (e.g., hurricanes or fires), and predict the responses of bird and other wildlife populations to various habitat and landscape changes. Those predictions are needed to make strategic, proactive conservation investments that are effective at meeting bird population goals today and into the future.

Where Woodcock and Warblers Meet

Scot Williamson, Vice President, Wildlife Management Institute; David Buehler, Professor-Wildlife Science, University of Tennessee; Daniel Petit, Bird Conservation Initiative Director, National Fish & Wildlife Foundation

In bird conservation, the last 20 years could be called the “Era of the Plan.” Publication of Partners in Flight physiographic area plans, the North American Waterfowl Plan, the U.S. Shorebird Conservation Plan, the Ruffed, Prairie, and Spruce Grouse Plans and the North American Waterbird Conservation Plan created the vision for reversing declines of land birds, waterfowl, shorebirds, and wading birds. Habitat goals were developed, in some cases in parallel with population targets, and habitat managers tried—often in vain—to figure out how to manage their specific landscapes to best meet the needs of the greatest number of priority species.

With such a diversity of habitat-based goals, the artificial distinction of game and non-game birds has been gradually replaced (in most cases) by the idea of managing for guilds—groups of species that require similar habitat. Key to success is implementing management actions in the right ways, in the right places, and at the right times.



A bird of early successional forest. American Woodcock is a National Audubon Society Watchlist species and a U.S. Fish and Wildlife Service Bird of Management Concern and Focal Species. /Charles Fergus

American Woodcock are highly sought-after game birds and a popular species among birders. Wildlife watchers across the U.S. and Canada look for woodcock as harbingers of spring and delight in the birds’ vernal breeding displays. In order to reproduce, woodcock require active disturbance of forested habitats. Historically those disturbances came in the form of fires caused by lightning strikes or Native Americans, defoliating insect outbreaks, beaver activities, and tornadoes or other blow-downs that killed mature forest trees and re-established forest openings.

Changes in land use patterns, suppression of natural fires, and negative attitudes toward even-aged timber management began to increase in the 1960s, such that the extent of early successional forest declined dramatically throughout the Eastern U.S. Due to the loss of this habitat type, populations of American Woodcock have fallen by 1-2 percent each year since the early 1970s.

Woodcock population trends are well-known, thanks to the annual international Singing Ground Survey (SGS) conducted by the U.S. Fish and Wildlife Service and its partners since 1968. SGS data represent the best long-term, statistically valid population trend indicators for any early successional forest species.

The [American Woodcock Plan](#) is a good example of how a successful plan evolved. The Plan is based on science, with goals driven by sophisticated monitoring programs—of both population and habitat—and received extensive peer review. The plan lays out the habitat goals required to sustain desired population levels in the foreseeable future: the numbers are staggering. To restore the woodcock’s population to that of the 1970s, we need to add over 20 million acres of early successional forest to the current landscape. Thus the challenge is to identify practical, economical ways to maintain a certain portion of the landscape in the early stages of forest succession.

The task force that worked on the American Woodcock Plan represented federal, state, and nongovernmental organizations, and even included private landowners to help ground the planning targets in reality. Planning team members quickly realized that meeting early habitat goals for American Woodcock would also help the many other species in the early successional forest guild. The publication of many state wildlife

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action plans confirmed this reality, with plans from Eastern states identifying more than 80 Species of Greatest Conservation Need that depended on this forest type.

One of the closest overlaps is between the American Woodcock and the Golden-winged Warbler. The Golden-winged Warbler is a Neotropical migratory songbird that breeds in Eastern North America, principally in the Appalachian Mountains from northern Georgia to New York; in the Great Lakes region (Michigan, Wisconsin, and Minnesota); and in adjacent areas in Canada. Golden-winged Warbler spends the winter in Central America and Northern South America. Over the last 40 years, Golden-winged Warbler populations have fallen rangewide by 3.1 percent per year, with declines of up to 16 percent per year in some states. The Golden-winged Warbler is one of the most critically threatened non-federally listed species in Eastern North America.



A National Audubon Society Watchlist Species and a U.S. Fish and Wildlife Service Bird of Conservation Concern and Focal Species, Golden-winged Warbler has been in a serious long-term decline since at least the mid-1960s, with recent losses especially acute. /Charley Eiseman

The overlap between Woodcock and Golden-winged Warbler, and numerous other species, was so clear that it created a unique opportunity for the [National Fish and Wildlife Foundation](#) (NFWF) to establish an Early Successional Forest Keystone Initiative. The developing Keystone business plan combines the technical expertise and land management experience of the American Woodcock Task Force, the technical assessment capability of the [Golden-winged Warbler Working Group](#), and the conservation vision of NFWF. The initiative lays out an ambitious strategy to restore American Woodcock, Golden-winged Warbler, and other species' populations by increasing the quality and availability of the early successional habitat that these species require. It identifies the places of highest importance, what sorts of actions need to take place at those locations, and the population outcomes that are anticipated to result from those combined actions. Within the next decade, we expect to see not only stabilization of these populations, but also an upturn in those trajectories.

Central to the approach are developing best management practices; creating on-the-ground demonstration areas; monitoring the species' populations on both continental and local levels; and educating land managers on how to best help these birds. Conservation efforts for both species have begun at many sites, both private and public, in the Midwest, the Southeast, the Northeast, and in adjacent Eastern Canada.

The Golden-winged Warbler Working Group is now completing a four-year evaluation of the distribution, genetic integrity, habitat requirements, and limiting factors for the warbler. That information already is being used by biologists working with federal, state, and private landowners to benefit early successional forest species.

Golden-winged Warbler and other Neotropical migrants conservation requires the added challenge of planning and implementing strategies on the wintering grounds in Central and South America. Success in this arena is likely to be as critical as meeting habitat requirements on the breeding grounds. This component of the conservation strategy—also included in the Keystone business plan—involves engaging new partners (for example, ProAves Colombia) and addressing different land management issues.



A prescribed burn in the Cumberland Mountains of Tennessee to restore early successional habitat for American Woodcock and Golden-winged Warbler— and elk! /Kelly Caruso, University of Tennessee.

Prairie Grouse: Flagship Species for Grassland Conservation

Jonathan Haufler, Executive Director, Ecosystem Management Research Institute

Grasslands of the Great Plains are among the ecosystems at greatest risk in the United States. These habitats are threatened by direct conversion to croplands and other uses, as well as the indirect effects of changes to historical ecosystem processes and dynamics. In particular, changes in historical fire and grazing regimes have seriously altered many native ecosystems in areas not converted to other uses.



At one time abundant, Lesser Prairie-chicken, a candidate for endangered species listing by the U.S. Fish and Wildlife Service, is now uncommon and found only in a few local concentrations. /Michael Schroeder

The impacts of reduced and altered grasslands to native ecosystem biodiversity have been dramatic. Various species of grassland birds, especially those adapted to grasslands produced under light grazing regimes, have shown precipitous declines over the past 10-20 years. Fifteen species of landbirds that breed primarily in grasslands have been identified as Species of Continental Importance in the U.S. and Canada by Partners in Flight, including Baird's and Henslow's sparrows, Sprague's Pipit, and Lesser and Greater prairie-chickens. Much less is known about how other species groups such as mammals, reptiles, and insects have responded to the loss of native grasslands. Due to these concerns, many states have set goals for restoring native grassland ecosystems to maintain their biological diversity.

Prairie grouse populations have declined significantly from historical levels throughout the Great Plains of North America. Recognizing this and the severity of grassland declines, the [North American Grouse Partnership](#) launched a large, collaborative grassland conservation planning initiative focused on providing native grassland ecosystem diversity. The resulting [Grassland Conservation Plan for Prairie Grouse](#) (Grassland Plan) involved a steering committee from the North American Grouse Partnership, technical support on ecosystem diversity from the [Ecosystem Management Research Institute](#) (EMRI), and input from numerous biologists from state and federal agencies and other organizations.

Because of the public's interest in these charismatic birds, prairie grouse make excellent flagship species to garner support for grassland conservation. Moreover, because prairie grouse require substantial amounts of habitat to support their populations, the Grassland Plan uses prairie grouse, specifically Lesser Prairie-chicken, Greater Prairie-chicken, and Sharp-tailed Grouse, to demonstrate restoration needs in terms of ecosystem types, amounts, and distributions.

The full biodiversity of North American prairies, including prairie grouse, was adapted to the native grassland ecosystem diversity of the U.S. and Canadian Great Plains. Rather than taking a more traditional species approach, the Grassland Plan is designed to maintain and restore a representation of this ecosystem diversity using a scientifically based historical reference to define it. Providing a representation of grassland ecosystem diversity is an effective way to supply the habitat needs of not only prairie grouse, but also other prairie-dependent species, many of which we know little about.

The Grassland Plan emphasizes the maintenance and restoration of grassland ecosystem diversity within a 550 million-acre planning area of the Great Plains. The current distributions of the three species of prairie grouse were mapped using input from grouse biologists with the states and provinces. Based on these distributions, goals were set for representation of native grassland diversity within individual planning units.

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The large planning area was divided into smaller planning landscapes based on Major Land Resource Areas (MLRAs), delineated by the Natural Resource Conservation Service for the Great Plains in the U.S., and Soil Conservation Areas (SCAs), delineated for the Great Plains in Canada. Native grassland diversity was described for each of the 46 MLRAs and 9 SCAs based on what existed in these areas historically. Ecosystem diversity was characterized according to different ecological sites (based primarily on soil features) and different historical disturbance regimes (e.g., fire, grazing, and their interactions), which together determined the plant communities that occurred within each planning landscape. The ecological sites were mapped for each MLRA and SCA, as were the current land uses. These maps allowed objectives to be set for maintaining or restoring specific grassland ecosystems within each MLRA. Objectives were further aggregated into restoration needs for each Bird Conservation Region.

Conservation or restoration goals are expressed as 10, 15, or 20 percent of historically occurring amounts of plant communities based on the existing population status of grouse in specific areas, with higher amounts occurring in areas supporting higher grouse numbers. Altogether, this totaled an overall representation goal of 65 million acres across the Great Plains of the U.S. and Canada. While this is a sizable goal in terms of restoration, it is consistent with many other conservation planning efforts in other areas, and represents a minimum conservation need.

The Grassland Plan is a strategic document that identifies specific goals for grassland conservation as well as a series of action steps. These steps include developing the necessary partnerships, securing needed funding, developing better monitoring programs for both grouse and their grassland ecosystems, educating agencies and the public about the importance of the Plan, and coordinating research efforts to determine information pertinent to grassland bird conservation.

The Grassland Plan was adopted for implementation by the Association of Fish and Wildlife Agencies in 2008, with additional support from a large number of cooperating agencies and organizations. The Plan also provided the impetus for the formation of the [Prairie Grouse Partners](#), a growing collaboration of the North American Grouse Partnership, Pheasants Forever, The Teddy Roosevelt Conservation Partnership, the Mule Deer Foundation, American Bird Conservancy, and EMRI.

The Nebraska Chapter of the North American Grouse Partnership (NAGP) was recently awarded a \$68,000 grant by the Nebraska Environmental Trust to help landowners restore and manage grassland habitat to benefit Greater Prairie-chicken in southwest Nebraska's Sandsage Prairie. EMRI was recently awarded a \$650,000 NRCS Conservation Innovation Grant to implement grassland restoration with matching funds and cooperation provided by South Dakota Department of Game, Fish and Parks, Nebraska Game and Parks Commission, and Pheasants Forever. Other partners on this project include the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program, South Dakota Grasslands Coalition, North American Grouse Partnership, Teddy Roosevelt Conservation Partnership, Ducks Unlimited, and The Nature Conservancy. Grassland restoration may involve prescribed burning, seeding of desired native species, control of exotic species, alteration of grazing regimes, or other practices.

The Plan gives focus and direction to state and federal agencies, conservation organizations, and others interested in conserving grassland ecosystems and associated species. Through the restoration and management of prairie grouse habitat, it is hoped that conservation of all North American grassland species and the integrity of grassland ecosystems can be assured for future generations. The plan is available online at www.grousepartners.org.



Baird's Sparrow is listed by the U.S. Fish and Wildlife Service as a Bird of Conservation Concern. /David Cree

But common goals alone cannot impact habitat at the scale required to make a difference for these imperiled birds. A new, more aggressive strategy was needed to deliver both traditional and novel grassland management capable of reversing declining trajectories of grassland bird populations over broad areas of the United States. No small task!

Consistent with the collaborative history of NBCI, and with the leadership of the Wildlife Management Institute and others, two groups stepped forward to help put the new strategy on the ground.

The University of Tennessee was identified as the permanent “home” of the NBCI due to the presence of Center for Native Grasslands Management (CNGM) and other resources. The CNGM provides scientific and practical foundations for using native grasses in regional agricultural production systems and for restoring native grassland communities.

Native grasses such as big bluestem, little bluestem, indiagrass, and switchgrass once grew throughout much of the Eastern United States and provided forage and habitat for buffalo, elk, turkey and—grassland birds. Using market-based incentives that rely on the biofuel and forage qualities of these native grasses could translate into millions of acres being planted. The intent of the new NBCI strategy is for the grasslands to make a big comeback and with them the restoration of declining grassland bird species.

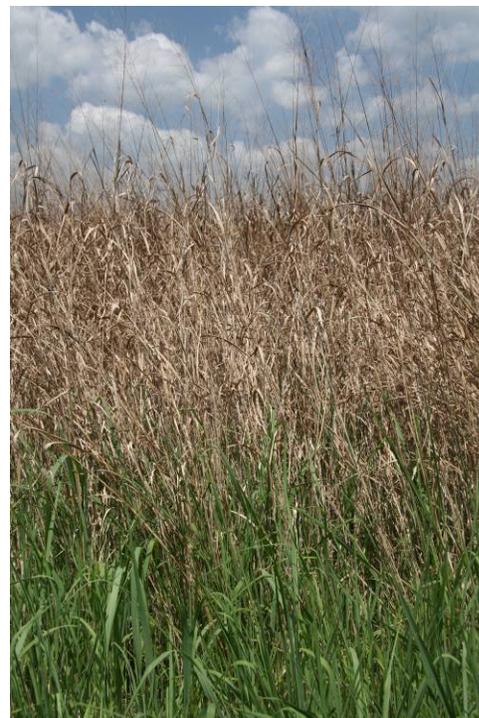
Switchgrass, for example, is the focus of a tremendous amount of research regarding its role as a feedstock for renewable energy—cellulose-based ethanol. This attention has made ‘switchgrass’ a household word in parts of the Southeast and have many wondering how else this “new” grass can be used.

The CNGM has launched a major research project exploring how native grasses can fit into regional grazing systems. Stockmen in the region typically rely on fescue, a non-native cool-season grass that provides limited forage during hot summer months. Native grasses such as switchgrass and bluestems, on the other hand, produce extremely well at that time of year, are highly drought tolerant, and require little fertilizer. These traits all suggest that native grasses could play an important role for livestock production.

Recovery of grassland birds also needs to maintain its focus in traditional areas and, in the Southeast, those areas include open pine forests with a grass-dominated understory, which serve as key habitat for quail, shrikes, Brown-headed Nuthatch, and other species such as gopher tortoise and indigo snake. The well-established conservation efforts already underway in these “working” pine forests—those by the U.S. Forest Service, U.S. Fish and Wildlife Service, state agencies, and industry, such as Southern Company’s Longleaf Legacy Program—allow the initiative to remain true to its roots, yet explore new, innovative ways to reverse the declines of birds.

It is this vision—integrating grassland bird conservation into working agricultural and forested landscapes—that caught the attention of the National Fish and Wildlife Foundation (NFWF). In 2008, NFWF recognized that the collaborative efforts of the NBCI, PIF, and CNGM offered a unique opportunity to invest in innovative conservation. The Southeastern Grassland Bird Keystone Initiative is now an integral part of NFWF’s portfolio for bird conservation. Through its funding support, NFWF is helping provide the on-the-ground capacity needed to affect tens of millions of acres of habitat for grassland birds.

This innovative grassland bird partnership will not resolve these problems overnight, but it is the beginning of a vitally important journey. One that, with the continued dedication and support of partners, will give us the chance to hear those grasslands break into song again.



The Center for Native Grasslands Management is conducting research to better understand how native grasses such as switchgrass (above) and big bluestem can be used in the region. One study is examining how these grasses could be used in a dual system that would allow producers to harvest the crop for both biofuels and forage. Forage quality, weight gains for cattle, stand vigor, and biofuel yields are all being monitored in this three-year study. The study is also examining how the different management approaches will effect wildlife habitat. /Laurel Barnhill, SCDNR

Rainwater Basin Partners Bring Back a Prairie Wetland

Doreen Pfost, Communications Director, Rainwater Basin Joint Venture

Amid the gently rolling plains of south-central Nebraska, a transformation is slowly unfolding at Macon Lakes Waterfowl Production Area (WPA), as an apparent lost cause becomes a cause for hope. With a half-million dollars in federal and state grants, partners in the Rainwater Basin Joint Venture are turning an impossible tangle of trees and shrubs back into what it used to be: a vast prairie wetland where migrating waterfowl, shorebirds, and perhaps Whooping Cranes can stop to feed and rest.

The wetland complex that local homesteaders named “the Macon Lake” was once among the largest of about 4,000 shallow, mostly-seasonal wetlands scattered across the Rainwater Basin region.

At the moment, however, Macon Lakes WPA doesn’t look much like anything; there is no water and not a bird in sight. The trees that covered much of the property lie heaped in ragged brown piles...dozens and dozens of piles.

Former Rainwater Basin Joint Venture coordinator, Steve Moran, grins and shakes his head in wonder. “One hundred and sixty-two burn piles!” he exclaims. “When they’re burned this winter, that’ll be something to see.” But even after the piles are burned and the remains buried in an adjacent upland, Macon Lakes still won’t look much like a wetland.



Bobcats pull and stack trees under six inches in diameter at Macon Lakes Waterfowl Production Area. /Ducks Unlimited, Inc.

It will look like progress, though, to Gene Mack, Project Leader for the U.S. Fish and Wildlife Service Rainwater Basin Wetland Management District (District), which manages 59 WPAs in the region. When the Service acquired Macon Lakes WPA, says Mack, the land had all been farmed or intensively grazed. A network of ditches and culverts drained the wetland and diverted water to a roadside ditch. Then things got worse: “Once they quit farming the ground,” says Mack, “it was invaded with trees.”

Many local WPAs had similar stories. The majority of the acres were purchased in the 1960s and ‘70s, when the Wetland Management District had little or no staff to manage habitat, so the idled land became choked with invasive plants, including trees.

A 1983 survey found that over 90 percent of Rainwater Basin wetlands had been drained, leveled, or otherwise altered, so that they no longer provided habitat for waterfowl, shorebirds, and other wetland-dependent birds. Furthermore, virtually all the remaining wetlands—public and private—had diminished in size or function.

As District staff expanded, wetland management activities grew apace; tree cutting, prescribed fire, chemical application, and appropriately timed grazing and haying checked the growth of undesirable plants, and encouraged native plant communities. Here and there, wetlands opened up, but not at Macon Lakes. The WPA was so overrun with trees, and so large—at 1,109 acres, it was two or three times the District’s average property—that funds were never sufficient to clear it. “When we had an extra \$10 thousand, we’d hack away at the trees,” Mack recalls. “Then we’d run out of money, and it’d be five or six years before we got back there. Our ability to ever restore Macon Lakes was zero. It was just too costly.”

Then Ducks Unlimited (DU) called. Steve Donovan, Manager of Conservation Programs for DU in Nebraska was writing a North American Wetlands Conservation Act grant and wanted to know if Mack had a

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wetland project for which he needed funds. “Steve is a guy who makes things happen,” says Mack, “so I thought, ‘Why not give him our biggest challenge?’” The Nebraska Environmental Trust (NET), a program funded by the state lottery, provided matching dollars for the project through a grant to the Friends of the Rainwater Basin. The NET grant is being administered by the Joint Venture, which also committed funds toward the expenses for engineering provided by DU.

The restoration began in 2008, as District employees resumed “hacking away” at trees. Most trees, however, were pulled up or pushed over by a local contractor, who worked for weeks beginning in April 2009, first with a Bobcat for trees under six inches in diameter, then with a bulldozer and backhoe for larger trees. “It’s the largest tree removal project we’ve ever done in the Rainwater Basin, that’s for sure,” says DU’s design engineer, Mitch Messmer.

And still there are more trees. Even as 162 burn piles lay drying this year, thousands of volunteer cottonwoods began to sprout in the wetland footprint. The District will tackle them with aerial spraying next spring. The final steps in restoration will be installation of water-control structures to stop water from draining out of the wetland, and construction of embankments along several property lines to ensure that water does not back up onto neighbors’ farmland. In autumn, the District will re-seed the uplands with a high-diversity mix of native seed collected from other Rainwater Basin WPAs.

The following spring, depending on snow and rain, a foot of water may spread over about 500 acres. A wetland of this size will be a significant addition to a region that supports so many important bird species.

Several million waterfowl stage for spring migration each February and March. Clouds of snow geese are perhaps the most dramatic sight during migration, but the Rainwater Basin must also meet the nutrition and energy requirements of over a dozen other species of waterfowl, including Mallard, Northern Pintail, Canada Goose, and White-fronted Goose.

April will bring the possibility of a Whooping Crane sighting. Whooping Cranes regularly use the Rainwater Basin wetlands during spring and fall migration and the potential to provide habitat for these endangered birds was a major motivation for the Macon Lakes restoration.

The Nebraska Partnership for All-Bird Conservation was a partner in creating a model that identified Macon Lakes WPA as a high-priority site for Whooping Crane habitat restoration. Two ‘whoopers’ visited a neighboring farm field last year, when it was flooded by heavy rains.

Up to 200,000 shorebirds migrate through the region in April and May, contributing to the Rainwater Basin’s recent designation as a Landscape of Hemispheric Importance by the Western Hemisphere Shorebird Reserve Network. Over 40 species have been identified on local wetlands; the most common include White-rumped Sandpiper, Wilson’s Phalarope, Long-billed Dowitcher, and Stilt Sandpiper.

After a few growing seasons, the newly-planted upland—free of trees—will begin to provide habitat for grassland birds, such as Grasshopper Sparrow, Dickcissel, Western Meadowlark, and Upland Sandpiper.

Midway through a multi-year project, Joint Venture partners are working patiently, but are eager to see the final result. They’re confident that eventually, with birds circling above shallow water and wind-blown grass, the Macon Lake will look like a prairie wetland again.



The Rainwater Basin is a Western Hemisphere Shorebird Reserve Network Landscape of Hemispheric Importance; Long-billed Dowitcher. /Lee Karney, USFWS

The North American Bird Conservation Initiative (NABCI) is a coalition of organizations and initiatives dedicated to advancing integrated bird conservation in North America.

The vision of NABCI is to see populations and habitats of North America's birds protected, restored, and enhanced through coordinated efforts at international, national, regional, state, and local levels, guided by sound science and effective management.

The goal of NABCI is to deliver the full spectrum of bird conservation through regionally based, biologically driven, landscape-oriented partnerships.

The All-Bird Bulletin is a news and information-sharing publication for participants of NABCI.

For subscription or submission inquiries, contact the Editor, Roxanne Bogart, U.S. Fish and Wildlife Service, 802-872-0629 ext. 25 or Roxanne_Bogart@fws.gov. To download back issues, visit <http://www.nabci-us.org/news.html>.

The All-Bird Bulletin publishes news updates and information on infrastructure, planning, science, funding, and other advancements in the field of integrated bird conservation and management. Include author's name, organization, address, telephone and fax numbers, and e-mail address. Pictures are welcome but not necessary.

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Biologists also are learning to take advantage of overlap in habitat dependency between birds and other creatures. For instance, conservationists working to improve American Woodcock habitat in coastal New England have quickly partnered with federal, state, and private entities working to keep the New England Cottontail off the Endangered Species List. Both species depend on early successional habitat and both require private and public land management focused on creating, rejuvenating, and maintaining shrublands.

The lessons learned to date—use good science, build partnerships, prioritize actions, and focus funding—will work anywhere to help species in trouble and to keep common species common. Promoting diverse partnerships through shared interests is critical.

While it's clear that progress is occurring, we can't downplay the substantial challenges that still must be overcome. Meeting our goals will require nothing less than a shift in our society's ability to understand that early successional forest is an important component in promoting and safeguarding biodiversity.

If the 1980s represented society's change in its attitude toward wetlands, the '90s toward old growth forests, and the 2000s toward native grasslands, then we must hope that the 2010s will be the decade during which people come to see the critical importance of managing forests so that species that have evolved in tandem with disturbance regimes can continue to persist and thrive.

Building Community for Early Successional Habitat Bird Communities

Amber Roth, Contractor, Wildlife Management Institute

Creating an early successional habitat management demonstration area requires building partnerships within the local community. For example, the demonstration area on the Northern Highland-American Legion State Forest in northern Wisconsin was based on research that identified this area as easily accessible by the public and productive for Woodcock, Ruffed Grouse, Golden-winged Warbler, Veery, Whip-poor-will, and many other priority birds. The first step required the support of the forest superintendent and associated foresters. The project is now underway. The plan is to expand habitat management to adjacent properties, including private landowners, a hunting club, and an electric transmission company. Other organizations such as the Ruffed Grouse Society and a local birding club may help with bird monitoring to evaluate the implemented management practices. We hope that a greater sense of community will grow among local partners working together to improve habitat for this community of imperiled birds. *Photo, right:* An eight-year-old aspen clearcut with red and white pine retention; Golden-winged Warblers have nested in the foreground opening the last two seasons. /Amber Roth, WMI

