

# BROAD BROOK COALITION



[www.broadbrookcoalition.com](http://www.broadbrookcoalition.com)

Volume 26, Issue#2, Fall 2014

## BOARD OF DIRECTORS 2013-2014

Bob Zimmermann, *President*

Dave Hershops, *Vice President*

Alan Marvelli, *Treasurer*

Margaret Russell, *Secretary*

Bruce Hart

Dave Ruderman

Bill Williams

Dick Wynne

## About Us

Broad Brook Coalition (BBC) is a nonprofit, all-volunteer organization incorporated in 1988 with the mission of preserving open space and promoting affordable housing. Under a memorandum of understanding with the Northampton Conservation Commission, BBC is responsible for the day-to-day management of the Fitzgerald Lake Conservation Area. BBC's goals are to maintain and enhance the diversity and integrity of wildlife species and habitat at FLCA, promote outreach and education and provide public access for passive recreation that is compatible with habitat protection.

Our work in trail maintenance, stewardship, education and land preservation to expand FLCA is funded by the generous support of our members and occasional grants.

## Broad Brook Coalition Annual Meeting

**Sunday, November 2, 2014**

**Florence Civic Center • 5 to 7 PM**

*Opening with the guest speaker, Jonathan Way of the Coyote Research Project, followed by a business meeting and awards presentation, and wrapping up with conversation and dessert.*

Please join us in celebration of the 26th year of the Broad Brook Coalition, the all-volunteer organization that manages the 810-acre Fitzgerald Lake Conservation Area for the City of Northampton.

Guest speaker Jonathan Way will give a presentation, including slides and videos, on "The Secret Life of Eastern Coyotes/Coywolves." Mr. Way is a research scientist at Clark University, where he continues his goal of long-term ecological and behavioral research on coywolves, the term he uses because he suggests the eastern coyote is a hybrid between western coyotes and wolves. Mr. Way runs an education organization, Eastern Coyote/Coywolf Research, works seasonally for the Cape Cod National Seashore and is a part-time researcher with the Yellowstone Ecological Research Center.

Mr. Way is the author of two books, *Suburban Howls*, which is an account of his experiences studying coyotes in Massachusetts, and *My Yellowstone Experience*, which details the wildlife and scenery of the country's first national park. He is working on a third book, to be called *Coywolf*. A graduate of UMass at Amherst, he has a master's degree from the University of Connecticut and doctorate from Boston College. More information is available on his website, [www.easterncoyote-research.com](http://www.easterncoyote-research.com).

## 12 More Acres Slated for Preservation

Following on the heels of numerous parcels added to the Fitzgerald Lake Conservation Area in the last three years, the City has signed an option to purchase another lot. Acquisition of the 12.1-acre landlocked parcel, which is owned by the McKown family, would fill in a key piece on the northern end of the conservation area, near the Hatfield town line. The land is wooded with a vernal pool.

The City Council voted in early October to authorize the Conservation Commission to purchase the Mc-Kown property for \$12,100. Wayne Feiden, director of the Office of Planning and Sustainability, will seek \$10,000 in Community Preservation Act funds. Broad Brook Coalition will support the purchase with a donation of \$2,100 from its Land Fund.

Preservation of the McKown property also meets the planning department's goal of creating a continuous Broad Brook Greenway, which includes FLCA.

*Margaret Russell*

## President's Message

---

### *Why We Use Herbicides to Control Invasive Plants*

Non-native plants can invade almost any habitat: fields, forests, pastures, marshes and lakes are all susceptible to infestation by these invaders. A number of different invasive plant species – typically intentional or unintentional imports from Europe or Asia – can be found within the Fitzgerald Lake Conservation Area, and BBC has devoted much time and effort to control or even eradicate them over the past several years. Some of these invasives occur in small patches while others have the potential to spread widely within a given type of habitat. With patience and persistence, the battle can eventually be won. Yet, even after substantial suppression is achieved, year-to-year vigilance is needed to prevent the few survivors from once again overwhelming their adopted habitats.

Why should we care if invasive, non-native plants grow to dominate a particular habitat? One good reason is that by dint of early flowering, the absence of natural predators, and abundant seed production, invasive plants can often out-compete native plants, turning a diverse suite of natives that thrive in a particular habitat into a non-native monoculture where only the invaders survive. All of us have seen roadside marshes that have been completely overtaken by purple loosestrife. Beautiful to look at, yes, but deadly for the native plants that once dominated these same marshes. The loss of biodiversity leads to a second important reason for controlling invasive plants. Many animals, whether fish, small mammals or birds, depend upon the leaves, seeds, stems and other sources of nutrients provided by native plants. These interdependencies, which have evolved over millennia, cannot be sustained once non-native plants take over: animal populations decline and biodiversity once again takes a hit.

There are many methods that can be used to control or even eradicate native plants: hand-pulling, mowing, burning, herbicide treatment and biocontrol, which is the introduction of specific plant predators. At FLCA, we have been moderately successful in reducing, by hand-pulling, an infestation of garlic mustard in and around the North Farms Road entrance and curtailing the unfettered spread of water chestnut in Fitzgerald Lake (see article by Dick Wynne). For others, such as *Phragmites*, glossy buckthorn and spotted knapweed, hand-pulling or digging is not an option owing to the large number and wide distribution of these plants. Mowing and burning are either ineffective or impractical in FLCA, and the number of invasive plants susceptible to biocontrol is extremely small because the required agents – usually insect predators from

the invasive plant's native habitat in Europe or Asia – must be exhaustively tested to ensure their host-specificity and ability to survive when transplanted to a new environment on a new continent.

Because of the limitations of other techniques, we frequently turn to herbicides as the only practicable alternative for controlling certain invasive plants. No one, of course, wants to see acres and acres of fields and forests sprayed with herbicides as many of these agents kill a wide variety of plants, native and non-native alike. The key to their successful use is specific targeting, where the herbicide is applied selectively to the intended invasive plants. For instance, several dense stands of *Phragmites* (common reed) in the Broad Brook marsh have been effectively treated with Rodeo, a formulation of the broad-spectrum herbicide glyphosate that is approved by the EPA for use in aquatic environments. While the herbicide was applied to dense, monotypic portions at the interior of the stands by low-volume spraying, plants around the periphery were hand-injected with the herbicide so as not to affect surrounding native species. The results have been reassuring: *Phragmites* has been virtually eliminated from the targeted sites and replaced by cattails, and over three dozen native species (!) have been observed in the treated areas at lower abundance. Moreover, water samples taken at the time of herbicide application showed that the release of glyphosate into the Broad Brook was negligible (<10 parts per billion).

Concerns about the toxicity of agents such as glyphosate have been taken very seriously by scientists as well as those involved in their use. A large number of studies indicate that glyphosate has low toxicity for mammals and birds and moderate toxicity for certain fish when exposed to concentrations many times those used in the FLCA [1]. Moreover, the environmental mobility of glyphosate is very low because it strongly binds to soil particles, especially those rich in clay; in water, it is rapidly removed through adsorption to suspended and bottom sediments. Eventually, glyphosate is degraded to non-toxic products by bacteria and other micro-organisms. On the basis of these findings, we have concluded that the use of glyphosate poses no significant environmental risks. Nonetheless, we look forward to the development of highly selective biological predators for invasive plants such as *Phragmites*, as well as for new invaders such as Japanese stilt grass and mile-a-minute vine, which are expanding their range northward and are already encroaching upon fields and forests in Massachusetts.

[1] Tu, M., Hurd, C. & Randall, J.M., Weed Control Methods Handbook: Tools & Techniques for Use in Natural Areas, *The Nature Conservancy*, 2001.

Bob Zimmermann



Dave Cotton, owner of Cotton Tree Service on Hatfield Road, hauls a huge remnant of a tree that toppled over in the Marian Street lot. Mr. Cotton donated his labor and equipment to help clean up the area. (Bob Zimmermann)



Peter and Ann Pufall collect debris littering the Marian Street trail. (Bob Zimmermann)

## Rehabilitation of Marian Street Lot

As many of you may have noticed, a thick and unsightly stand of invasive Japanese knotweed (*Polygonum cuspidatum*) thrived for several years on a small tract of FLCA land located on Marian St. where it was both an eyesore and a threat to neighboring gardens and lawns. With the aid of a Community Preservation Act grant, and the assistance of Polatin Ecological Services, we began a program of knotweed control in the summer of 2013. The knotweed stalks, which ranged up to eight feet in height, were first cut and removed. In the fall, the stumps were injected with herbicide, a method that limits the herbicide to the target plants and avoids its spread to adjacent lawns and desirable native vegetation. In April of this year, the hulk of a large, fallen oak tree, along with other debris, was removed from the site by Dave Cotton of Cotton Tree Service who generously donated his time – and his excavator

– to this effort. He was aided by a dozen BBC volunteers who gathered up smaller branches, cleared away grape vines, and removed a number of lingering invasive plants. The final step in the rehabilitation process was the planting of a number of native shrubs, including mountain laurel, maple-leaf viburnum, spicebush and witch hazel, in June. By the end of the summer, most of the new shrubs had taken hold and another round of selective herbicide treatment was carried out to suppress re-sprouting knotweed. Though we will need to monitor this area closely for knotweed in the future, we hope that this long-neglected tract will be an asset for the neighborhood in the long run.

Bob Zimmermann



The Marian Street cleanup crew of BBC directors and members, from left: Bill Williams, Jim Reis, Cate Vojdik, Dick Wynne, Ivan Oransky, Dave Herships, Len Cohen and Dave Ruderman. (Bob Zimmermann)

## Putting Norcross Grant Funds to Work

Past newsletters have mentioned the Norcross Wildlife Foundation grant that BBC received last fall. What has BBC done with the \$2,500 grant over the past year?

Several projects have been completed. BBC purchased a wood router to make trail signs for the Broad Brook Gap parcel. The Trails Committee, including Jim Reis, Rufus Chaffee, and Steve Harding, routed 24 signs for the new parcel and the trails leading to it. The signs, made of cedar, were first stained. After routing, the letters were hand painted by numerous BBC volunteers. Finally, the signs were mounted on trees. In some places, where suitable trees were not available, posts were dug with another tool, a Seymour auger, purchased with funds from the Norcross grant. When carrying the materials into the woods, the Trails Committee used a garden cart, also purchased with grant funds, to carry the eight-foot-long pressure treated posts, trail signs, and various tools. The garden cart made it much easier to haul large amounts of heavy material into the back woods.

The Norcross grant was also used to purchase lumber and fasteners for seven new bog bridges that were installed across wetlands on the newly named Pines Edge Trail and Middle Path. It should be noted that with one exception, no new trails were cut. On existing trails, there were many downed trees that needed to be cleared. The one new trail, approximately ¼ mile in length, was mandated by the City Council when authorizing the purchase of the Broad Brook Gap parcel. The trail is from Coles Meadow Road into an existing woods road in the Fitzgerald Lake Conservation Area.

To receive occasional email alerts regarding BBC Walks and Talks and Volunteer Work Days, go to the website and look for “join the listserv” under the events tab at the top of the page.



*Peter Haas, from left, Steve Harding and Rufus Chaffee display two of the signs they made and erected to direct hikers in the conservation area. (Jim Reis)*

In addition, a new sign was built for the North Farms Road entrance to announce events being held at FLCA. The existing kiosk at the parking lot is set back against the trees, making it hard to see from the road. The new event sign allows passing motorists to read about forthcoming events.

*Dave Herships*

## Volunteer Trail Stewards Needed

The Trails Committee is looking for a few more volunteers to help keep an eye on the roughly 10 miles of trails in the Fitzgerald Lake Conservation Area. The volunteer land stewards “adopt” a specific trail for a year and commit to walking the trail every three to four weeks to trim branches, pick up trash and inform the Trails Committee of fallen trees or large branches blocking the trail or areas where trail improvements are needed. Stewards are not responsible for major tasks like clearing trees off the trail; that work, and organizing work days to make improvements, is the responsibility of the Trails Committee.

The stewardship program was launched last year to expand the ability of the Trails Committee to maintain all the walking paths and bog bridges in the conservation area. The program was very successful. Six volunteers signed up last year, and with a few stepping down after their year’s commitment, new stewards are needed.

Anyone interested in adopting a trail may contact Trails Committee Co-Chairman Jim Reis at [reis13@comcast.net](mailto:reis13@comcast.net).



*Bob Rundquist does the drill work while his co-workers, Steve Harding, Lewis Popper, Jim Reis and Jon Sass, look on. The bridge repair, while no small engineering feat, is not a permanent fix. (Bob Zimmermann)*



*Volunteers raise the bridge to level the structure, which was listing badly. (Bob Zimmermann)*

## **Bridge, Boardwalk and Dock Rehab**

After almost 20 years of steadfast service, the Bridge-over-the-Brook and the adjacent Board Walk and Canoe Launch, which were built by BBC volunteers in the mid-1990's, are showing signs of age. Erosion of the stream bed as a result of recent storms, and flooding of the boardwalk last year due to the blockage of the Fitzgerald Lake dam drain, have taken their toll on these structures. Several posts supporting the bridge, for instance, had to be replaced this past summer, and sections of the boardwalk and dock are sagging. As a result, the BBC Board of Directors is considering various options for their repair, or possible replacement.

Proposals for the rehabilitation of the boardwalk are: leveling, and possibly extending, the existing boardwalk and canoe launch; building a new boardwalk and canoe launch several hundred feet to the east along the lakeshore; and construct-

ing a new canoe launch and viewing platform at the mouth of the cove off the Fishing Place Trail. To get a sense of the cost of each of these alternatives, as well as for replacement of the bridge, we have engaged Conservation Works LLC, a local company that offers a wide array of environmental services, to provide us with preliminary estimates for the proposed work. At the same time, we are consulting with the Conservation Commission, which must ultimately approve any new design for its consistency with wetlands regulations.

To meet the standards of universal accessibility, we plan to engage a professional contractor with experience in wetlands trail building, although we envision that at least some of the labor will be contributed by volunteers. The feasibility of these projects will depend on obtaining grants to cover the construction costs; we intend to submit the necessary grant applications early next year.

*Bob Zimmermann*



*Dick Wynne, from left, Dave Pritchard, Bob Zimmermann, and Christian Smith-Ahearn cut back brush on the overgrown path to the South Pasture, to allow access for a mower.*



One of the new signs made by the Trails Committee provides direction to the Pines Edge Trail and Middle Path.

## Updated Map, New Signage Help Visitors to FLCA

New trails on the eastern side of the Fitzgerald Lake Conservation Area that take advantage of an old logging road and an unmarked path now link the recently purchased 84-acre Broad Brook Gap parcel to the existing trail network. After clearing a new access trail into the Broad Brook Gap parcel from Coles Meadow Road, the Trails Committee worked throughout the summer to erect new signs to help visitors navigate the trails. The new trails are featured in an updated map of the conservation area available on the kiosks at the North Farms Road, Cooke Avenue, Marian Street, and Coles Meadow Road entrances. The map is also available on our website, [www.broadbrook-coalition.org](http://www.broadbrook-coalition.org).

Most of the 24 signs were designed to direct hikers to the new trails. "A lot of people didn't hike the eastern side of FLCA," said Jim Reis, co-chairman of the Trails Committee. Visitors can access the Gap parcel from Coles Meadow Road, where there is a sign and kiosk but no off-street parking, or they can take a longer route from Marian Street, where there is a parking area. The Pines Edge Trail on the east side and Telephone Line Trail on the west side also boast new signs.

Eighteen BBC volunteers did the time-consuming work of routing, painting and erecting the signs. "It was more time-consuming than we thought it would be," Jim said, "We now have more appreciation for the work" making signs several years ago by the workers at the Hampshire County Jail under the supervision of Wally Hiava.

In addition to the printed brochures that include a trail map, BBC will try a pilot program this year to reduce the cost and paper of the 1,000-plus brochures picked up at the entrances every year. A handful of laminated maps will be provided at the North Farms Road and Marian Street entrances for use by hikers, with a request that the maps be returned at the end of the visit.

Margaret Russell

## Storybook Project



A young visitor checks out one of the posters of the Storybook Project installed at the North Farms Road entrance. (Bob Zimmermann)



Rona Leventhal tells a story to a rapt audience. The story teller was featured in the opening in June of the Storybook Project at the North Farms Road entrance, developed by Joan Robb with support from the Massachusetts Cultural Council, Broad Brook Coalition and the Kestrel Trust. (Bob Zimmermann)



Face painter Ilene Goldstein starts a decoration during the family celebration of the Storybook Project, which depicted the children's book *Over the Forest, Come and Take a Peek*, by Marianne Berkes. (Bob Zimmermann)



Volunteers in canoes and kayaks pull water chestnut from Fitzgerald Lake. BBC holds two work days in the summer to keep the invasive plant in check. In July, volunteers filled 16 trash bags with water chestnut hauled from the lake. (Jim Reis)

## Variation On A Summer Cruise

Picture yourself on a summer cruise: it is late July, warm and sunny with a gentle breeze; friends are on your right and left; the waters are calm, as flat as a lake's...and indeed, you're on a lake, our own Fitzgerald Lake. Not your traditional cruise, you're tucked in a canoe or kayak, not waiting in line at a buffet table. Rather than roast beef or eclairs, our quarry is an inedible plant called water chestnut, *Trapa natans*, no relation to the delicious Chinese water chestnut, or to the chestnuts roasting on an open fire. This one is a nasty invasive introduced to the US from Asia in the late 19th century. Twice a summer, BBC volunteers take to our lake and look for it, once in late July and again in mid-August. It is not easy to spot the plant in the company it keeps, nestled among water lilies and surrounded by duck weed. But we are there to seek out and remove the newly emergent water chestnut plants.

For eight years Bruce Hart has been the driving force and chief organizer of our water chestnut work days. (Can a cruise be considered work? Perhaps better to call them "work and play" days.) He believes BBC first became aware of the invasive when Bob Packard was BBC president, and indeed Norma Roche, BBC secretary at that time, confirmed that. Her email records indicate that Bob was first to discover water chestnut on Fitzgerald Lake in 2005.

We don't know how water chestnut found its way to our lake, but we do know why it's in so many places in New England. Sometime before 1879 a well-meaning gardener at the Cambridge Botanical Garden planted it in several area ponds, thus introducing it to the wild. Included was a pond adjacent to the Sudbury River. The horse was out of the barn: water chestnut is now found in 11 states, and counting.

You'd think that after nine years of biannual culling in Fitzgerald Lake we'd have eliminated this pest, but if nothing else, water chestnut is mightily tenacious. Consider this from the University of Maine Cooperative Extension website: "Each seed can give rise to ten to fifteen rosettes, and each rosette may produce as many as twenty seeds. Growth can be explosive." Miss one plant and you might find 120 in its place next year. To make matters worse, while most plants germinate in the first two years, others can remain viable for up to 12 years.

So why do we care? Why do we pick on this plant and allow others to thrive in the lake? For one, the seed of the plant is enclosed in a nutlike fruit, one inch long, which is attached below the rosette and drops off in the fall to bury itself on the lake bottom. Mature, the nut is very hard and has four needle-like 1/2 inch spines protruding from it. Step on one wearing rubber soled sneakers and it will easily penetrate the sole, and it will most definitely get your attention. But while that is an inconvenience to the recreational lake user, the risk to the lake itself posed by water chestnut is far greater. Left unchecked, water chestnut in just four or five years will form dense mats that compete with native plants and gradually choke them out. By depleting available oxygen in the water, it results in fish kills and harm to other aquatic organisms. In 10 years, unchecked, you could likely leave your boat on the shore and walk across what was once your lake.

I've been participating in our work/play days for the past four or five years. I see familiar faces who bring their kayak or canoe from year to year and join in the stewardship of the lake. Among them, besides Bruce and his formidable canoe, I regularly see Bill "Hawkeye" Williams, Mary Jo Stanley, Stan Pollack, Joanna Varadi, Dave Hershops, Keith Davis, Norma Roche, our president Bob Zimmermann, David Pritchard, Dave Ruderman, Jim Reis, Steve Harding, Len Cohen, Brian and Mauri Adams, Patricia Jung and her daughter Nava Chevan, Lola Reid, Susan Young, Helen Symons and Holly Baumgardner. We invite you to join us next time. Come for a pleasant two or three hours of exercise; come for the camaraderie; come to experience a lapful of slimy plants as you paddle your kayak back to shore. Come join the fun!

Dick Wynne



*BBC Board member Bruce Hart participates in the annual spring cleanup of the North Farms Road entrance to FLCA. (Bob Zimmermann)*



*Jeannie Jones, left, and Deb Jacobs cut back growth in the parking lot on North Farms Road in the cleanup of the area last May. (Bob Zimmermann)*



*With their baby sleeping, Kara McLaughlin and Justin Kaput pause in the task of pulling invasive weeds along the paved path into FLCA. The couple joined the spring cleanup of the North Farms Road entrance. (Bob Zimmermann)*



*Naturalist Laurie Sanders points out features of the swamp forest in the Broad Brook Gap parcel. The guided walk led by Ms. Sanders in the spring was one of several in the Walks and Talks series that highlight the natural diversity at FLCA. (Jim Reis)*



## Conservation Lands

---

There is a soul in the City of Northampton  
It is not found in the well-trodden sidewalks of downtown  
It is not found in the businesses and restaurants  
It is not found in the car dealerships and commercial areas  
It may be mentioned within the educational community  
But the soul is not found there  
And yet this soul has a feeling  
A deep-rooted sentiment that is supple, yet powerful  
A sense that seems to whisper in your mind

Walk the wooded trails and open meadows  
As you explore Northampton's conservation lands  
The feeling in the soul is much stronger here  
It's a feeling that warms your entire being  
A feeling that tickles your ears and makes you smile  
A feeling that smells like rich earth after a sudden shower  
A feeling that greens your eyes with the new leaves in spring  
And relaxes your heart with the warm lazy days of summer

In the forests, wetlands, grasslands, and ponds  
In the rivers and burbling brooks  
The feeling is always with you  
Like sunlight on your face  
And a soft breeze fluffing your hair  
Like the first taste of snow lightly drifting down  
And a slow twisting leaf falling in a golden autumn

The soul is in the earth  
But the earth has a low soft sound  
A murmur that everyone hears or perceives  
A quiet sense that everyone remembers  
But remembers in different ways  
And sees in different things

Walk the conservation lands  
The soul has pervasiveness, awareness  
A feeling that seems to control your thoughts  
A rapture that lightens your steps  
And emotions that bring fond remembrances  
Immerse yourself in nature's beauty  
Feel the soul of the city  
The soul will embrace your very heart  
And envelop your mind with its presence

The soul has a soft, calming whisper  
Like a breeze through a tall stand of pine trees  
And dappled sunlight on a cool forest floor

The whisper transcends even the sounds of nature  
As one traverses the city's conservation lands

Tread lightly on these lands, for the whisper is everywhere

*C. Mason Maronn*

(Mason Maronn is a member of the Northampton Conservation Commission.)

## Overdue Thanks

---

For many years, our friend Jim Lawrence has generously plowed the snow from the FLCA parking lot on North Farms Road. Whether a dusting or a blizzard, he always got the lot cleared off shortly after the storm passed. Thank you, Jim!

As Jim indicated he would like to "retire" from this job last winter, we contacted Ned Huntley, Director of the Northampton Department of Public Works, who kindly agreed that his department would take on the plowing of the parking lot this winter, ...and hopefully beyond. It may be a day or two after the storm, however, as the City has to make sure that the streets are clear before they get to the smaller jobs.

*Bob Zimmermann*

Broad Brook Coalition  
P.O. Box 60566  
Florence, MA 01062

[www.broadbrookcoalition.org](http://www.broadbrookcoalition.org)

NONPROFIT ORG.  
U.S. POSTAGE  
**PAID**  
NORTHAMPTON, MA  
PERMIT NO. 45

*Current Resident or:*

---

---

## **Already a member? Consider passing this page on to a friend!**

### ***Please Join Us!***

If you're not already a member, please complete this form and return it with a check to:

**Broad Brook Coalition, P.O. Box 60566, Florence, MA 01062**

\$25 for Individual membership     \$35 for Family membership. *All contributions are tax deductible.*

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Please sign me up for a paperless newsletter (email address required).

I prefer to receive a printed newsletter by mail.

I've included an additional tax-deductible contribution to the Land Preservation/Stewardship Fund.

Please do not include my name on any listing of contributors to BBC.

### ***Broad Brook Coalition needs your help, too!***

We appreciate membership dues, but want you know that you can contribute in other ways.

Members and friends are needed to help carry out our goals.

***Please consider one or more of the following volunteer opportunities:***

Trail Committee or Trail Steward     Stewardship Committee     Occasional Work Days

Clerical Help     Newsletter Writer     Walks and Talks     Fundraising Campaigns