

Turnbull Wildlife Refuge

Friends Newsletter

Messages from the President by Lorna Kropp

Scenes and Songs for the Refuge

September 21

A Fundraiser for Environmental Education

Our annual Fundraiser to earn funds to support an Intern for the Environmental Education Program this year will be a music and arts event in September. Last year the local music group “Plaid Cat” came to us to offer to play a concert for the Friends group. Since that time, they have been participating on a planning committee to give shape to a new event we are calling: “Scenes and Songs for the Refuge” on Saturday, September 21, 2019, from 12:00 pm – 4:00 pm at Wren Pierson Community Center, Cheney.

Calling all artists, photographers to come to this event with works to sell, and/or samples to take orders. We hope that our talented local photographers will participate. We will also be showing a slideshow of the winners of the Turnbull Photo Contest during the afternoon. You can download a participation form at the website: <http://www.fotnwr.org/auction.html>

Plaid Cat, plus three other bands will each play a set during the afternoon (at 12:00, 1:00, 2:00, and 3 pm). Artists and Photographers will have tables around the room with works on display to sell or take orders to sell. In addition, there will be special themed baskets for birders, tea-lovers, book-lovers and more for silent auction bidding, and two special sets of functional art on a bistro table/chairs set available for auction. Snacks and soft drinks will be available for purchase.

Mark your calendars now, plan to attend. We also need help spreading the word to friends and neighbors to come and join in, spend an afternoon enjoying music and buying/looking over the art works. Members, please volunteer to help with getting snack donations, putting up posters, and with set-up of the venue on Saturday 11-12 am. Please email or call Lorna Kropp at: activities@fotnwr.org or call 509-294-3642.

Annual Meeting August 17, 2019

The Friends of Turnbull Annual Meeting will be held on the 3rd Saturday in August, with a presentation by Mike Rule, Refuge Biologist, about this year’s Channeled Scablands Weed Abatement project. FOT was the fiscal agent for this grant project. Mike has worked with two Refuge volunteers, two SCA (Student Conservation Association) interns, and Dustin and Joe (AmeriCorps Intern) this Spring/Summer to map and treat occurrences of noxious weeds on the Refuge and neighboring lands. Come find out — “Invasive species: What are they? Why are we concerned? and What can we all do?”

Following the program, we will have a potluck lunch of grilled hamburgers/hotdogs/Veggie Burgers and salads, chips, desserts by potluck. Mark your calendars and plan to attend from 10:30 am – 1:00 pm. RSVP to activities@fotnwr.org

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Summer 2019
2nd Quarter
Quarterly Report
Volume 21 Issue 2



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It is summer and we are seeing an increase in temperatures. This has been a positive for the Nature Store. People like to take advantage of nice days to visit the refuge and the store when it is open.

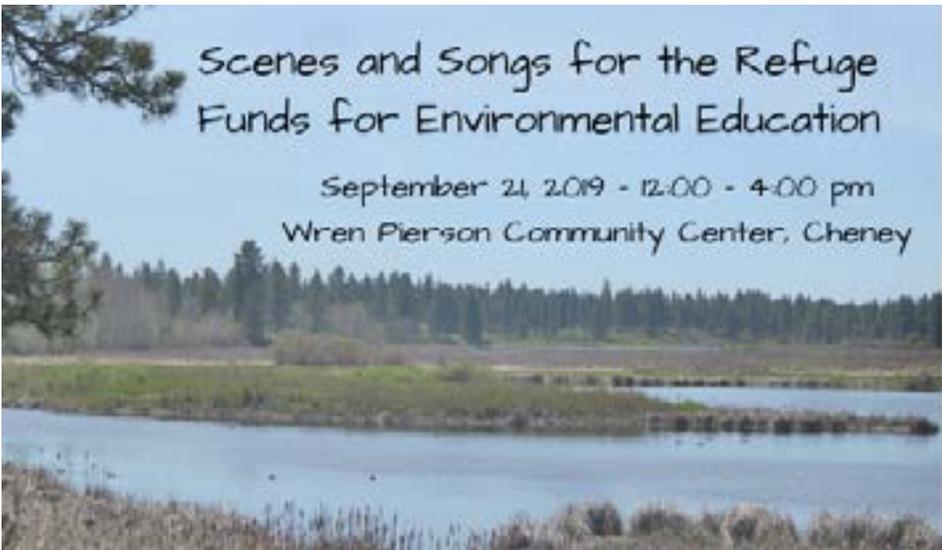
We have been open since the first of April and sales have been very positive except for Father’s Day weekend. Not sure what happened there, but I am not too worried. Our volunteers have really stepped up as usual to keep the store open. Heather Bosch has been at the store almost every Wednesday as well. Makes a huge difference in our bottom line. Our April and May sales have amounted to about \$2300.00. No figures for June yet. We are still in the red because I ordered sweatshirts this year, but they have been selling well so it was a good investment.

I finally received a shipment for our jewelry. We had some delivery issues that caused a delay but things look better. Maybe a couple of new items as well. More exciting than the jewelry is the new shipment of Audubon birds. I will have them on the shelf by Sunday night. Some new birds there for sure. Also, in this shipment are some new items. There are mini stuffed animals, little clips of birds, and some polytonal owls. Cute, cute every one. My challenge will be finding the best way to display them. Reorders of books are on the way. Books have been a big seller this year, more than usual it seems. No complaint from me.

Be sure to visit the store soon to see what’s new and bring your friends or at least brag to your friends about the refuge and the store.

Must include a bit of bad news that you all will be concerned about. Barb Kehr, one of our volunteers, had a terrible bicycle accident when one of her tires blew out going downhill. She has a number of broken bones and a concussion. She will be laid up for many, many weeks. I am taking the liberty of wishing her well and a speedy recovery from all of the store volunteers. Hurry back to us, Barb.

That’s all for this time. Hope you have a joyous summer.



4 bands - new band each hour
 Artists and Photographers
 Select Silent Auction items
 Sodas and Snacks
 Fun, good times, bring Friends!





Your purchase of a Federal Duck Stamp is one of the most effective ways to conserve wildlife (www.friendsofthestamp.org). The Federal Duck Stamp costs \$25.00, with 98% of these funds directly helping to acquire land and easements that provide critical habitat for wildlife. These lands are part of the National Wildlife Refuge System and you can access many of them.

The Federal Duck Stamp program began during the era of the Depression and Dust Bowl as a way to curb the widespread destruction wetland habitats vital to the survival of America's waterfowl. At the turn of the 20th century, America's wildlife was under immediate threats. Market shooting to supply food to restaurants; bounty hunting and unregulated sport hunting; and feather-collecting for the fashion industry contributed to the loss of million of birds and other wildlife. Additionally, millions of acres of wetlands were drained for agriculture and development, greatly reducing waterfowl nesting habitat.

In 1934, President Franklin D. Roosevelt signed the Migratory Bird Hunting Stamp Act (or "Duck Stamp Act"). The Duck Stamp Act requires anyone 16 or older to purchase a Federal Duck Stamp for waterfowl hunting. Of course, you do not have to be a waterfowl hunter to purchase a Federal Duck Stamp! Anyone who values wildlife and the habitats they depend on can help conserve habitat by purchasing a Federal Duck Stamp.

Artists and stamp collectors have also taken great interest in the Federal Duck Stamp. In 1949, the first Federal Duck Stamp art contest was held. Today, 70

years later, the tradition of hosting a nationwide contest, open to anyone and sponsored by the US government, continues. A Junior Duck Stamp Program was initiated in 1989 to encourage education and participation, again, nationwide for students in Kindergarten through 12th-grade!

And, in addition to the waterfowl hunting license, conservation benefits, appeal to collectors and artists, the current Federal Duck Stamp also grants you free entrance into any National Wildlife Refuge that charges an entry fee!

Federal Duck Stamps are available online, in post offices, and in many sporting goods and large-scale retail stores that sell hunting and fishing licenses and equipment. Many refuges sell Federal Duck Stamps, as well. Federal Duck Stamps are also available from Friends of the Migratory Bird/Duck Stamp.

Per the Migratory Bird Conservation Fund, the winning designs for the 2019-2020 Duck Stamp Contest became available for purchase on June 28, 2019. Scot Storm, a native of Freeport, MN, was selected as this year's winning artist of the Federal Duck Stamp Contest, and 16-year-old Nicole Jeon of Scarsdale, NY was selected as the winner of the Junior Duck Stamp Contest. The Federal Duck Stamp costs \$25, and the Junior Duck Stamp is \$5.

Please be a part of this great American tradition and buy a 2019-2020 Federal Duck Stamp.

Refuge Happenings

by Sandy Rancourt
Visitor Services Manager

Cheney High School

Environmental Education Stewardship Program

Our spring field trip season began in early April with well over 600 Cheney High School students participating in a 4-day EE stewardship program. Normally 300 plus sophomore biology students participate over a 2-day period, but this year was a little different. CHS is going through a transition period this year and biology will now be taught to freshmen. To accommodate this transition, refuge staff and volunteers spent four days educating sophomores and freshmen biology students on wildlife, habitat and conservation. The students learned about aquatic invertebrates through hands-on activities, went on nature walks, potted bare root seedlings, and planted native saplings in a riparian area. Fortunately, two of the days during early April were pleasant. Despite experiencing torrential rain on the first day and intermittent rain on day two, the students were up for the task and enjoyed their experience. Many thanks to refuge staff Mike Rule, Dustin Cousins, Brian Walker, Steve Fox, Darold Hagedorn, AmeriCorps members Jennifer McGovern and Joseph Stewart, EE Contractor Kylie Gaard, SCA intern Tina Penny, and long-term refuge volunteers Marian and Russell Frobe, Chuck Kerkering, Sarah Valverde, and Diane Latta.



Students sampled aquatic invertebrates in both stream and wetland habitats. (S. Rancourt)



A little wary of going over their waders at first, but the stream's current proved more challenging for sampling than the wetland (S. Rancourt)



Although the weather started off a little rough, conditions did improve as the week went on (S. Rancourt)



Under the protection of the canopies, students learned about what they caught in the waters (S. Rancourt)



Bio-tech Dustin Cousins, demonstrates how to dig with several giant leaps. (S. Rancourt)



Rain or shine, no matter what the project, the Frobes have always been willing to lend a helping hand. (S. Rancourt)



AmeriCorps member Joseph Stewart preps the fence panels that will be installed to protect the newly planted saplings. (S. Rancourt)



Mike instructs the students on riparian management and how to plant. (S. Rancourt)



Hundreds of native saplings were planted with CHS's help. (S. Rancourt)

Environmental Education and Outreach

Field Trip Program

I spent some very enjoyable days training new EE staff and volunteers on the Field Trip Program. Long term refuge volunteer Chuck Kerkering really doesn't need any additional training since he is an exceptional facilitator, but he loves to come out for a refresher and see the aquatic invertebrate species found in the early spring. We actually have a lot of fun exploring the wetlands and looking for all those amazing aquatic treasures.



SCA member Tina Penny and Kylie hand out binoculars to CHS students for the nature walk. (S. Rancourt)



Left to Right; Peggy Goodner-Tan, Chuck Kerkering, Tina Penny and Sarah Valverde (S. Rancourt)

Greenheart

On May 10th Merle Barr brought her international high school students participating in Greenheart Exchange to learn about the refuge and participate in a work project. Students from Kazakhstan, Spain, Germany, the Republic of Georgia, Bolivia and Tunisia worked with staff and potted 1,000 willow stakes for future plantings.



Merle Barr with her foreign exchange students (S. Rancourt)

Our Field Trip Program has come and gone and once again we were booked through this busy season. Hundreds of students went on nature walks, discovered aquatic invertebrates and learned about refuges, habitat conservation and animal adaptations. In addition to refuge staff, AmeriCorps member Jennifer McGovern, SCA intern Tina Penny, EE Contractor Kylie Gaard, and several long term-refuge volunteers assisted with facilitation making it much easier for us to handle the larger classes. Without everyone's support we would have had a little trouble accommodating all those teacher requests. Our deepest appreciation to Fran Haywood and Brad, Chuck Kerkering, Sarah Valverde and Joyce Alonso.



Chuck's enthusiasm for aquatics never wanes. (S. Rancourt)



Jennifer shows a close-up of a red-winged blackbird that landed 40 meters away. (S. Rancourt)



Fran talks about the badger adaptations. (S. Rancourt)



A perfect warm day for getting a whiff of vanilla from that big old Ponderosa Pine. (S. Rancourt)



SCA intern Tina Penny grabs the students' attention before she leads them on the hike. (S. Rancourt)



1st grade students and parents from Shiloh Hills Elementary participating in a refuge field trip. (S. Rancourt)

MayFest

Although Turnbull did not host the Floods, Flowers and Feathers Festival this year, the refuge, and several of our partners, participated in the MayFest Event in Cheney on May 11th. MayFest coordinator Debbie Anderson estimated approximately 2400 participants

on Saturday, and Turnbull's interactive animal track booth saw a good portion of those participants. We interacted with hundreds of folks and made more animal tracks than in the past. Many thanks to Ameri-Corps members Jennifer and Joe and Project Leader Alice Hanley for staffing this booth with me. Refuge biologist Mike Rule hosted a Private Lands booth for the Refuge and also one for the Cooperative Weed Management Area. Refuge partners hosting booths included Ice Age Flood Institute Cheney-Spokane Chapter, Inland Northwest Wildlife Council, Friends of Turnbull, West Plains Bee Keepers Association, Spokane Carvers, Washington State Parks Inland NW Area, and the City of Cheney Water Conservation Program. The talented Spokane Carvers impressed everyone with some pretty amazing inedible treats. Inland Northwest Wildlife Council brought material to build hundreds of bluebird nest boxes. They did not stop making them with the public for the entire event. It was a great opportunity for the Refuge and our partners to outreach about conservation of our natural resources.

Turnbull NWR and partners at MayFest. (S. Rancourt)



Biological Program

It has been a busy spring and summer so far for the refuge biological programs. Our annual surveys are underway or have been completed by refuge staff Mike, Sandy and seasonal biological technician Dustin Cousins, Bio-AmeriCorps member Joe Stewart and several able volunteers. Besides their much-appreciated assistance with riparian restoration, Marian and Russell Frobe have again contributed numerous hours on marsh birds, point counts, breeding bird surveys, and assisting Mike and Sandy with our banding station. I believe this is their 26 year as refuge volunteers. Kim Thorburn, Nancy Curry and Lisa Langelier have also assisted us with monitoring songbird populations in pine and aspen stands. Dustin, Joe, Joyce Alonso, Jerry Hickman, Charmaine Gural, Mark Bareither, Sara and Esteban Valverde, and Tom Watson are keeping tabs on our 157 bluebird boxes. Mark and Tom have also been helping us to map invasive species. We have 2 new Student Conservation Association interns, Jared

Lamm, recent graduate student from EWU and Benjamin Nolen from Virginia. Jared has been helping to map weeds and spray medusahead wild-rye, an invasive annual grass that has been increasing on the refuge. Jared has also been assisting the private lands program by helping to construct artificial beaver dams to help restore a portion of Upper Crab Creek. Ben has been mapping weeds and assisting our bio-tech Dustin Cousins and AmeriCorps member Joe with monitoring of our catchfly restoration efforts and water levels of our managed wetlands. The catchfly restoration has also benefited from the help of University of Washington Rare Care staff and volunteers, Lorna Emerich and Julie Jose.

Marian & Russell Frobe extracting a black-headed grosbeak from a mist net at the banding station. (S. Rancourt)



Celebrate National Wildlife Refuge Week



*with a Community Work Day
at Turnbull National
Wildlife Refuge!*



RAIN or SHINE



Turnbull National Wildlife Refuge, Spokane Audubon Society and Friends of Turnbull will host a community work party on Saturday, October 05, 2019. This is part of an ongoing community effort to restore native riparian habitat to benefit birds and other wildlife species. We have hundreds of native saplings to plant and fencing to erect to protect the trees from deer, elk and moose browsing.

Attention Groups: Please call in advance to register. It helps us in our planning if we know how many are coming. The Refuge will also host a “potluck” lunch. Friends of Turnbull will provide hamburgers, hotdogs and vegetarian alternatives. Please feel free to bring your favorite dish. Ask for Sandy (509) 559-3034.

Planting Time: 9 am to 12 p.m.

When: Saturday, October 05, 2019

Lunch: Potluck 12 p.m. (Friends of Turnbull will supply the hamburgers, veggie burgers and hotdogs)

Where: Turnbull NWR Headquarters, 5 miles south of Cheney on Cheney-Plaza Road: turn left on Smith Road and drive 2 miles on gravel road to headquarters.

Clothing: Long-sleeved shirt, work pants, gloves, sturdy boots or shoes.

Equipment: (If you can) shovels and pliers.

Everyone is Welcome!



Early Morning at Turnbull

by Carlene Hardt, Nature Photographer

When was the last time you saw a dirty swan? Never, right? I was thrilled to watch a Trumpeter swan getting a good bath and having fun - doing barrel rolls and slapping its wings on the water for lots of splashes!



Speaking of growing up fast, look at the size of the goslings in the pictures and the markings on their faces. They will be able to fly when they are about 2-3 months old. They will stay with their parents and follow them back the following year to the same place where they were born. Then they will form flocks with other young geese.



The Pelicans were still hanging around which surprised me. These three broke off from the group for a few minutes. A group of pelicans can be called a "brief", "pod", "pouch", "scoop", or "squadron". Did you know that pelicans do not store fish in their pouch, but simply use it to catch them and then tip it back to drain out water and swallow the fish immediately. The American white pelican can hold some 3 gallons of water in its bill!



Walking along the path I heard lots of birds singing including this Marsh Wren. Males sing a rapid series of gurgling and buzzy trills. Though each note may only last for 1-2 seconds, they can carry on for up to 20 minutes, hardly ever repeating the same pattern!



Usually the dragonflies are flying around so fast I can't take a picture of them. But this Blue-eyed Darner rested on a blade of grass long enough for me to take a few shots.



Butterflies don't stay still very long either. I spotted this one stopping to eat among these small wild flowers.



Afterwards, I read up on the characteristics of Mink and this animal should not be underestimated. They are extremely violent and will attack almost anything! The American Mink is carnivorous and eats muskrats, chipmunks, mice, rabbits, fish, snakes, frogs and waterfowl. They are excellent swimmers and their dens may be an abandoned beaver den, a hollow log, or a burrow dug by the Mink. All dens are temporary because Mink move frequently.

I was thrilled to see and capture a picture of my FIRST Cedar Waxwing at Turnbull! They are named for their wax-like wing tips and sometimes they have red tips on the secondary flight feathers of each wing. They are known to be a social bird and I did see three of them flying around. A group of Cedar Waxwings is known as an “ear-full” or “museum”. They produce high-pitched trills and wheezy, thin whistles for communication.



As I was walking past Winslow Pool to go home, I heard a ruckus and I turned quickly and raised my camera to capture a quick shot of my FIRST Mink! It took one look at me and turned to disappear into the water. Right behind the Mink was a Virginia Rail bird that shot out of the reeds after the Mink and was screaming up a storm!

I think this was the same Virginia Rail that I saw several weeks ago with three chicks. It looked like it was chasing the Mink but I can't be sure. All I saw after the Mink dove away was that the Virginia Rail continued to run deep into the reeds and screamed loudly for about 10 minutes after the encounter. I think she was pissed!



As you can tell I am excited that I photographed animals that I've never before seen at Turnbull!

All photographs by Carlene Hardt

Invasive species: What are they?, Why are we concerned?, and What can we all do?

by Mike Rule
Wildlife Biologist

Invasive, exotic, noxious, weed, non-native are all terms used to describe plant species and animal organisms that are out of place or at unnaturally high numbers. Invasive species are typically non-native and cause economic or ecological damage. Invasive species cost Americans over \$137 billion dollars a year (https://invasivespecies.wa.gov/should_you_care.shtml). Nearly half of the listed threatened or endangered species are impacted by these species (<https://www.fws.gov/invasives/faq.html#q2>). Invasive species significantly alter wildlife habitat by displacing native species through competition, altering soils, and changing frequencies of natural disturbances such as wildfire. Invasive species are an existential threat to not only the biological integrity, diversity, and environmental health of refuge ecosystem, but to the entire global landscape.

Since the very first acre of land was purchased to create Turnbull National Wildlife Refuge, the impact of invasive plant species on habitats and wildlife have been a concern of management. A review of annual narrative reports documented a nearly continuous effort to locate invasive species and implement management actions to control their spread. Early control efforts dating back to the 1940's relied heavily on the use of herbicides primarily on those species considered significant agricultural pests (leafy spurge, St. John's wort, Dalmatian toadflax, knapweeds, and rush skeletonweed). As early as 1956, the use of bio-control organisms was initiated on the refuge with the introduction of the "goatweed beetle" to control St. John's wort. In the 1960's, cheat grass began to receive more attention as it spread from croplands into western rangelands. The refuge applied chemical control on heavily infested areas along roadsides for several years. As new chemicals were registered or biocontrol organisms were made available several test trials were conducted to identify the most effective strategies for control. Several of these trials have involved graduate students from Eastern Washington University who have studied the use of several different herbicides, the application of carbon as a soil amendment to favor native plants over invasive annual

grass species, the use of fire and reseeded with native species, and the application of a soil bacterium that impacts annual grasses. The results of these studies have helped refine the refuge's invasive plant management program.

As the science of weed control improved over the years, the refuge has adopted a more integrated pest management program that incorporates mechanical, chemical and biological control strategies. In recent years we have introduced new biological control agents for Dalmatian toadflax and knapweed species, the former being highly successful. We have refined our use of chemicals to utilize the least impacting but most effective herbicide to minimize the area needing treatment and the frequency of application. We currently treat between 100-200 acres per year with chemicals. We also use mowing to prevent seed production and in the case of small isolated populations we have used hand pulling. In some worse case scenarios, where the native plant community has been nearly lost, we have utilized disking and reseeded with native plants to replace invasives.



Dalmatian Toadflax

Another change in our approach to invasive species management is the application of preventive best management practices (BMPs) and the use of an early detection and rapid response program (EDRRP). Prevention is not a new concept, but it has not always received the attention it deserves. All refuges in Region 1 have recently completed a prevention plan that includes BMPs to reduce the threat of new introductions and the spread of existing populations of invasive species. Some of these practices include; thorough cleaning of equipment before and after it is used on the refuge, use of weed free materials such as top soil, gravel and seed when available, minimizing disturbances that create bare ground allowing weed introductions, reseeding newly disturbed areas as soon as possible, and simply cleaning clothing and gear before moving from one place to another on or off refuge. An EDDRP is an essential component of prevention. The idea behind an EDDRP is to locate new invaders and apply control actions early enough to prevent a more widespread infestation. Although it takes time and money to implement, it is worth every penny in terms of preventing losses to the biological integrity of the refuge and the high cost of controlling a widespread infestation that may become impossible to eradicate.

Prior to the refuge formally adopting an EDDRP, infestations were located incidentally during normal operations of the refuge. Infestations near roads and facilities or around frequently visited portions of the refuge were usually identified, but the status of vast areas of the refuge remained unknown. In 2003, the refuge adopted a mapping protocol designed to systematically inventory and map 25 invasive plant species across the entire refuge to assess the current biological integrity of terrestrial plant communities and identify areas in need of control and management. The protocol requires the surveyor to navigate to waypoints on a 50-meter grid using GPS. Once at the waypoint the cover of each invasive species is estimated in a 12-meter radius circle around the point (0.1-hectare plot) and recorded using Trimble's Terra Sync Software on a Windows-based data logger. If an occurrence of any Class A or B weed species (deemed the most noxious by the Spokane County Weed Board) is encountered when navigating between waypoints an additional point is recorded. If an infestation is highly dense and larger than 0.1

acre, the perimeter of the infestation is mapped. It is a tedious task, but it has provided the refuge with invaluable information about the location and extent of infestations and has allowed us to tackle new threats before they get out of hand. Implementing our mapping program has required the help of seasonal biological technicians, AmeriCorps members, SCA interns, independent contractors, and community volunteers. The Friends of Turnbull NWR have been instrumental in providing financial assistance through cooperative agreements that have funded AmeriCorps members and an independent contractor. The value of our EDDRP is illustrated by the location of a new infestation of yellow starthistle in 2008. Our immediate response has nearly eradicated this species from the refuge. Medusahead wild-rye, an invasive annual grass species, was first located in 2011 by our mapping teams. Subsequent mapping has located several additional populations on new acquisitions that we have actively treated this spring. We have been working hard at controlling these early detections and are optimistic we can prevent further expansion.



Spotted knapweed



Yellow Starthistle

Beyond Our Borders

Weeds are notorious trespasser with no respect for landownership boundaries. Winning the war on weeds requires that all landowners and managers in the region cooperate to address existing infestations and to prevent the introduction and establishment of new species. County Noxious Weed Control Boards have primary responsibility to locate and enforce control of noxious weeds within their counties. They maintain a list of noxious species, hire weed inspectors and notify landowners of weed infestations and their responsibilities to control them. It is a difficult job and really more than one agency can handle. In order to build a strong collaborative effort, a group of individuals representing several land management, advisory and regulatory agencies and private landowners came together in 2008 to form the Channeled Scablands Cooperative Weed Management Area (CWMA). CWMA's have been established throughout the country and have been very effective in providing mapping of weeds, outreach and education to landowners, and cost sharing with landowners to manage weeds. The Channeled Scablands CWMA has received several grants that have helped to fund a series of public workshops on invasive species identification, management and emerging science on new control strategies. These grants have also provided several years of 50% cost share funding to over 50 landowners to manage weeds on over 10,000 acres of the channeled scablands. The CWMA has also undertaken mapping weeds by conducting a road-based survey throughout the area and works with a software developer, KIO-MIO, LLC, to create a smartphone app to help build a network of citizen scientist mapping the location of weeds throughout the area. This citizen science project has been developed in partnership with Citscl.org, a non-profit organization dedicated to supporting citizen science projects throughout the U.S. Information on this program can be found on the Lincoln County Conservation District's website (<https://www.lincolncd.com/weed-mapping-area>).

What Can You DO?

So you might be asking yourself at this time what you can do to help. Nearly every web resource dealing with invasive species explores this topic. The short answer, there is more you can do than you may realize. Below are just a few suggestions of actions you can take to help prevent the spread of noxious weed species:

Be better informed. The most important knowledge for landowners to gain is how to identify invasive species that have been designated by the County as having the greatest potential to harm the environment. The next is learn about BMPs for both prevention and control. You can accomplish this by attending workshops sponsored by the CWMA and other organizations and visiting websites maintained by County Weed Boards and regional invasive species organizations.

Adopt your own prevention BMPs. Several organizations have posted these on their website. Play-CleanGo.org has suggested BMPs for recreationist to prevent and stop the spread of invasive species. When purchasing materials for landscaping such as soil, gravel and seed and hay for livestock, check with the vendor about their BMPs for minimizing weed seeds in their product. Even if they insist their product is weed-free, you need to check the area you applied their product for at least 2 years to make sure you haven't introduced any invasive species.

Help Locate Weeds. Organizations such as the CWMA and many agencies including the refuge have programs in place for the volunteers to map weed species in our area in order to direct our collaborative efforts. The refuge program is more intensive than most and is usually conducted by seasonal staff, interns, and volunteers who can commit a considerable amount of time to surveying a portion of the refuge. The CWMA mapping program is more flexible. If you have access to land where you can map weeds, the CWMA CitSci.org app is an excellent choice. Directions on how to use it can be found on the Lincoln County Conservation District web site or by downloading the CWMA weed mapping app, Inland NW Weeds.

Control Weeds. If you own land, even a small city lot with weeds, controlling them is good for wildlife and the environment, and it is the neighborly thing to do. There are many resources available to help you apply control strategies correctly. This especially important when using chemical controls. Professional applicators and many larger landowners have gone through a state certification programs in order to become licensed. Many herbicides require a license to purchase and apply. For those that can be purchased over the counter, read the label carefully before using.

All herbicide products have a label that spells out its usage and safety concerns in detail. Labels are readily available on the internet and must be followed when applying a chemical. When in doubt, ask a professional.

Below are some web resources that maybe helpful;

Channeled Scablands Cooperative Weed Management Area

<https://www.lincolncd.com/cwma>

Spokane County Noxious Weed Control Board

<https://www.spokanecounty.org/1095/Noxious-Weed-Control>

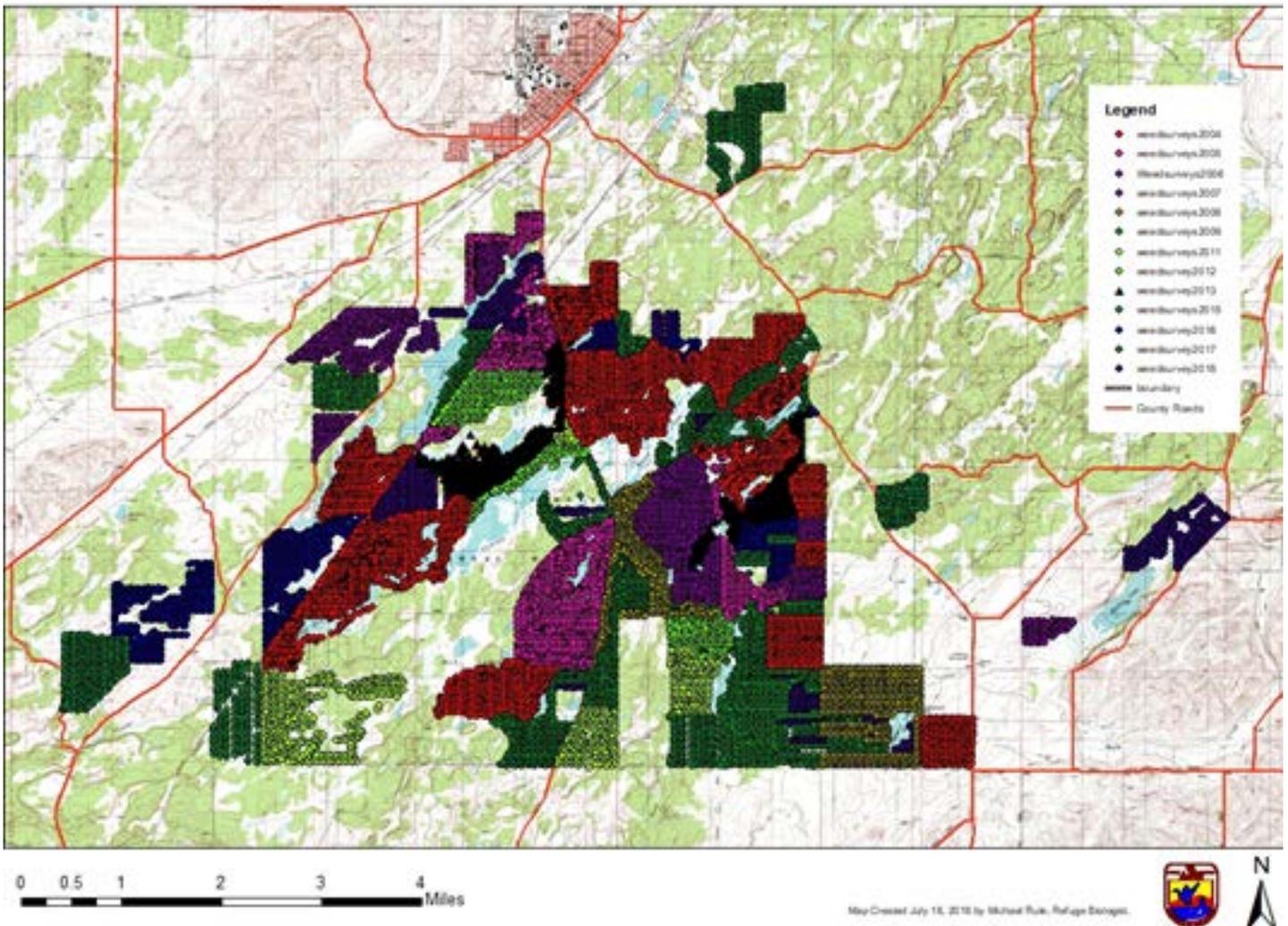
Lincoln County Noxious Weed Control Board

<https://www.co.lincoln.wa.us/weedboard/>

Pacific NW Invasive Plant Council

<https://www.pnw-ipc.org/>

Turnbull NWR Weed Survey Points 2004 - 2018.



Areas of the refuge that have been mapped by our EDRRP.

Friends of Turnbull NWR
P.O. Box 294
Cheney, WA 99004

The Friends of Turnbull National Wildlife Refuge, a nonprofit organization, supports the mandate of the refuge to protect and enhance wildlife and their habitats through education, research, habitat preservation and restoration.

Got email? Add it to your membership form for quick activity updates!

Membership Application

YES! I want to support the Friends of Turnbull National Wildlife Refuge and its programs with my membership.

Name _____

Address _____

City, State, and Zip _____

Daytime Phone _____

E-mail _____

Annual Membership: (Circle one)

Individual \$15

Family \$25

Business/Group \$35

Patron \$100

Benefactor \$500

Donation \$_____

Endowment Fund Donation \$_____

Amount Enclosed _____

New _____ Renewal _____

I would like to volunteer _____

Nature Store _____

Committee _____

Environmental Education _____

Where needed _____

My check is enclosed payable to

Friends of Turnbull N.W.R.

P.O. Box 294

Cheney WA 99004