

Turnbull Wildlife Refuge



Winter 2017 4th Quarter

Friends of Turnbull N.W.R. Quarterly Report

Issue 33

Report from the President - Lorna Kropp

Winter Fest 2017 Fun and Challenge

December 9, 2017, was the annual FOT Winter Fest celebration with 2 Closed Refuge Van tours, a presentation by Brian Henning, Professor of Philosophy and Environmental Science at Gonzaga University, and the annual Chili Contest. A large crowd was present to enjoy all aspects offered.

Dr. Henning presented a thorough background with scientific data of how and how much climate change has happened and challenged us to take on responding to the crisis as our generation's "Great Work" to accomplish. There are several ways to become involved = adopting personal behavior changes to reduce carbon footprint; advocating for 0 carbon increase; sharing concerns with friends and neighbors; sharing concerns with lawmakers in our locally and nationally. We have included a listing for his book and suggested websites on our links page so that those who were unable to come could go to those links and do some reading and listening (videos) for yourself. <http://fotnwr.org/links.html>

Thanks to Mike Rule and staff who shared their wildlife observational knowledge and driving skills in mud with a total of 36 people in the two van tours. Congratulations to Priscilla Bowen who won the basket of gifts from the Nature Store Plus for the Chili Contest Winner.

Looking Ahead to 2018 Happenings

The major task for the Friends of Turnbull Board is to "Build Capacity" for the organization. What does this mean? This is the terminology in the Strategic Plan put together a year ago in a planning session led by two mentors from the USF&W and the National

Refuge Association who came to Turnbull to meet with the Board plus other volunteers.

1. Build Capacity to become a vibrant, active, effective Friends group.
 - a. Full and Diverse Board
 - i. Revise By-laws (limiting board to 7)
 - ii. Financial person(s)
 - iii. Develop Committees
 - iv. Board Recruitment Policy
 - v. Succession Plan
 - vi. Board Binder
 - vii. Board training plan
 - b. Diverse membership of 200+
 - i. Have a supply of membership brochures available
 - ii. Provide brochures at food line at planting events
 - iii. Membership Committee
 - iv. Retain members
 - c. Adequate Funding to accomplish goals
 - i. Develop a budget
 - ii. Update Store technology
 - iii. Ad hoc Store Committee



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Full and diverse Board - This past year we did accomplish: Updating the Bylaws, completing a Board Binder, and Training plan. We have not found a Financial person and therefore you may have noticed that our President, Molly Zammit, is now listed as Treasurer and the Vice-President, Lorna Kropp, is now Acting President. The organization now owns a copy of the Quickbooks software to manage the records, which were created by the previous Treasurer, CPA Mike DeCoria. Molly Z. has been learning to use it and the financial records, as of this month, are up-to-date.

The goal for this year has to be Board Recruitment and finding the necessary talent to carry out our mission and goals. Last year we also lost our Fundraising Chair, Kellisa Owen, who has moved to Moscow, ID, and is no longer on the FOT Board. We need to establish a Fundraising Committee. Everyone reading this, please consider this an invitation! New fundraising ideas are wanted -- perhaps an "Online Auction" and other kinds of Fundraising events.

Diverse Membership of 200 – The annual membership year is from July 1 – June 30 of each year. We called, and mailed renewals to every member during June and are happy to say that most of the members from the past 2-3 years have renewed. Current membership is 122 membership units (some families). We are developing ways to invite and encourage new memberships among the people who participate in activities on the Refuge. Again, the Membership Committee could use some help.

Adequate Funding to accomplish goals – The Board has worked this year to facilitate the Nature Store transition and update in leadership and technology. The transition from leadership of Marion and Russell Frobe to Priscilla Bowen has happened through great dedication and cooperation. Thanks to the Frobés for their many years of service and organizational skill to create and run the Nature Store. The Board organized a small group to research updating the technology for the store. We have decided to continue and expand the use of Square.com and have purchased an iPad and stand including the credit card readers necessary, plus a receipt printer for use in the store. The Friends is a separate Non-

profit organization and therefore has to have its own Internet connection for the technology in the Nature Store. This has proven to be more difficult in the location than was anticipated. We are currently hoping that a satellite connection will be made to the Nature Store within the next two months so that the Store will be connected by the Spring opening date.

Priscilla Bowen is gathering a Store Committee and work is starting on a few alterations for the store space. Additionally, when the Store scheduler, Lizzie Reisenberg, had to step down, I was able to set up an online app for volunteer scheduling and Joanne Powell has taken on the task of coordinating volunteer sign-up. Please email Joanne if you are interested in being a Nature Store Volunteer. The store is open on the Weekends with two shifts: 11:00 am – 1:30 pm and 1:30 – 4:00 pm. We have training and mentoring available for this volunteer position.

Members are welcome to attend the monthly Friends of Turnbull Board meetings, usually on the 3rd Thursday of the month at 5:15pm at Wren Pierson Community Center, 615 4th St, Cheney.

Enjoy the rest of Winter and the Refuge. Please get ready to say yes to joining in the Mission of Friends of Turnbull NWR—

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

Friends of Turnbull Nature Store

Priscilla Bowen

Happy New Year from the Nature Store.

2017 was an interesting year with the transfer of supervision from Marian to me. Since the transfer I have been familiarizing myself with all aspects of the store operation. I will admit it has been a great challenge, the biggest part being trying to understand a laptop computer. Not there yet.

Changes have begun to take place. Some new merchandise has been introduced and has been well received. Overall sales were good and we ended the year on a positive note, which I didn't expect to happen because of the expenses of new purchases. We had two special openings for a convention group that visited the refuge plus WinterFest when we had good sales for all three which helped our bottom line. Special recognition needs to be given the volunteers who gave of their time to keep the store open. There are not enough words to truly express my appreciation for each one of you. The store could not exist without your dedication.

New fixtures have been purchased to change the presentation of the T shirts. New shelves have been provided by the refuge for displays and merchandise. I still hope for expansion of the store into the store room area. We need a volunteer carpenter and an electrician to help us work out the possibilities and plans for this to happen.

I will be ordering books and other items for the store in the near future and am hoping to introduce some new items. I am looking for bookmarks, playing cards, key chains, and posters for now. Suggestions are always welcome.

We usually open the store in April, but I am considering a March opening if all the details can be worked out.

A change is in the works for how we process credit sales and keeping track of inventory. As that unfolds we will plan some training sessions for the volunteers. Stay tuned for more information.

Best wishes to all. Remember we are always needing new volunteers. Contact me or Joanne. (priscilla.bowen@ymail.com, jopowell39@aol.com)



Activities Report

Lorna Kropp

For activities or other information you would like to let Lorna know about, contact her at activities@fotnwr.org

We will be holding the series of Beginning Bird Watching Classes once again, on the first Saturday of April, May and June. This series led by Joyce Alonso, a member of both the Friends of Turnbull and Spokane Audubon Society, has been totally subscribed each time offered. Joyce presents basic information in the classroom; then the group goes on a Bird walk with scopes to help observe and listen for birds on the Refuge.

The Friends group will have an advocacy and activity presence at both Earth Day in Spokane in April, and MayFest in Cheney on May 11. Watch for more programs for Spring and Summer on the website: <http://fotnwr.org/activities.html>

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Visit our great website!
www.fotnwr.org

Refuge Happenings

by **Sandy Rancourt**
Visitor Services Manager

Riparian Restoration

Fall Community Planting Event

Overall, we had a really nice community planting event on Saturday, October 14, 2017. Cooler temperatures and partly cloudy skies made for ideal planting conditions. Over 90 volunteers, representing Spokane Falls Community College (SFCC), SFCC AmeriCorps, several Boy and Girl Scout Troops of America, Washington Connections Academy, Friends of Turnbull (FOT), Spokane Audubon Society, Spokane Community College, Washington Trails Association, Community Colleges of Spokane, Work Source Spokane, and numerous individuals worked diligently with refuge staff, long-term refuge volunteers and AmeriCorps members throughout the morning. Over 125 native trees and shrubs were planted, 2 new exclosures protecting a ¼ acre planting area were erected, 3 existing exclosures were repaired from moose damage, and numerous larger trees were caged to protect them from marauding beaver. Russell and Marian Frobe signed in the volunteers, which can get very hectic at times, so this is always appreciated. Priscilla Bowen contacted Yoke's Fresh Market store which

generously donated 6 dozen donuts for this event. FOT provided 6 dozen more donuts, hamburgers, hotdogs, grill and the cooks for the potluck following the event. Food after a hard morning's work digging in rocky soils is always well received, and our Environmental Education classroom was packed. It is always a great way to end the day.



Buck and Sandy Domitrovich make a protective cage out of hardware cloth in preparation for their planting. (S.Rancourt)



AmeriCorps members Hans Lohmeyer and Jennifer McGovern worked side by side with many volunteers. (S. Rancourt)



SCA intern Michael Ploegman, Bio Tech Dustin Cousins and SCA intern Chance Figueroa erecting protective fencing. (S. Rancourt)



Everyone did a great job with planting at our annual community event. (S. Rancourt)



Long term refuge volunteer and veteran Seth Maier has participated in many community plantings. (S. Rancourt)



Long-term refuge volunteer Joyce Alonso worked with a group placing protective cages around the larger trees (S. Rancourt)

Environmental Education & Outreach

Connecting People to Nature Grant

The refuge received a Connecting People to Nature grant in FY 2017. Since we connect several thousand students annually to nature on the Refuge, the grant was put to good use. Sampling for aquatic invertebrates is an important hands-on activity for students and many of our nets were long overdue for replacement. We purchased 20 high quality nets that should last a few years.

Environmental Education

After a very busy fall Field Trip Program, we have been immersed in presenting programs for schools off refuge during this winter. In late October, I sent out an email to educators announcing our Winter Outreach Program, which pretty much opened the flood gates for requests. We are making presentations nearly every weekday. Many teachers also saw this as an opportunity to lock in a date for our Spring Field Trip Program. Popular Winter Outreach Programs presented to date include: Habitat, Animal Tracks, Owls, Now You See It, What is Wild, Creature-Feature, Endangered Species, and Birds. Environmental Education AmeriCorps member Jennifer McGovern is doing a good job getting up to speed on the various programs. Returning Biological AmeriCorps member Hans Lohmeyer has provided great assistance to Jennifer by co-leading presentations a couple of times of week.



Hans and Jennifer presenting the Winter Outreach Animal Tracks program to Kindergarteners at Hutton Elementary. (S. Rancourt)

Camp Wooten

Turnbull was invited back to participate in St. Thomas More Outdoor Education Camp this fall. This is a 2-day event at Camp Wooten in Pomeroy. Hans and Jennifer instructed over 90 students on aquatic invertebrates sampled in a nearby stream and pond. We provide all the sampling equipment, including waders for the students, and the School provides housing and food for our interns during their stay.

Outreach

NASA Climate Workshop and NAI Road Show

Turnbull hosted 2 very important outreach events in November, a NASA Climate Change Workshop and a National Association for Interpretation (NAI) Road Show that corresponded with a large NAI conference in Spokane that week. Anita Davis from NASA Terrestrial Sciences in Maryland brought a group of NASA scientists, Earth to Sky alumni, who present examples of interpreting climate change and /or EE on climate, including interpretation/EE methodology. Their workshop includes a great deal of interaction where participants develop action plans which provide an outline for using the content in their own environment. A field trip component is also included at a local setting. Thirty individuals participated. I provided a presentation on NWRS, Environmental Education, Volunteer, Partnerships and the Turnbull's Stewardship Programs. Mike Rule provided a presentation on climate change and possible impacts to refuge habitats. After our talks, Mike and I took the group on a refuge tour in a rather large bus NASA provided. Fortunately they had a very skilled bus driver who was able to maneuver the vehicle on some very narrow roads. The following day, the NAI Roadshow group led by Brian Thill, Director of Education at the South Carolina Aquarium, arrived to meet with staff and check out the refuge. Following a PowerPoint presentation on the Refuge's EE and Volunteer Programs that was provided for the climate workshop folks, the group asked staff questions, went on walks, explored facilities and checked out the FOT Nature Store. The Refuge received a generous check from NAI for being part of their Road Show Tour. FOT bookstore coordinator Priscilla Bowen staffed the nature store on both days. She provided information about the Friends group and made quite a few great sales.



Bus for the Climate Change Workshop and Refuge Tour (S. Rancourt)



A short walk to the van that was emptied to get it unstuck. (S. Rancourt)

FOT Winter Fest

Friends of Turnbull hosted their annual winter festival at the refuge on the ninth of December. The refuge set up the classroom for the event, which 45 people attended. The Friends provided chili, cornbread, coffee, and other treats for the participants, and of course they had their nature store open for the visiting public.

The festival started with a refuge tour provided by Mike with Han's assistance. Vans were filled. Elk and other wildlife were spotted. There was an short walk in the brisk weather when one of the vans was high-centered on a narrow dike. This particular model van had low clearance which made crossing a dike with deep ruts and a high center impossible without some assistance. Refuge Law enforcement officer Brian Czulinski was quick to lend a hand to help them on their way. Fortunately this was near the end of the tour. The participants were all good sports and the group made it back in time to see a climate change presentation provided by Gonzaga Professor of Philosophy and Environmental Studies Brian Henning. After Dr. Hennings's presentation, another refuge tour was provided without a hitch.



Priscilla used her talents to create an upper torso display out of cardboard to make more room in the nature store in preparation for the FOT Winter Fest. (S. Rancourt)

Spokane Falls Service Learning Fair

The refuge also participated in Spokane Falls Service Learning Fair. This is a great opportunity for the interns to network with other students and solicit volunteer help for the refuge.

Biological Activities *Mike Rule, Refuge Biologist*

This fall and winter the primary biological projects have been completing weed surveys, setting up plots and planting threatened Spalding's catchfly seedlings and seed as part of our Cooperative recovery efforts, monitoring water levels, and entering all that important wildlife and habitat monitoring data into refuge computer databases for summary and analysis.

This summer and fall over 1,500 acres of the refuge were mapped for weed presence by interns and volunteers. Chance Figueora was hired as an SCA intern to help with the work, using a grant received from our regional Office. In addition to Chance's help, biological technician Dustin Cousins, SCA intern Michael Ploegman, AmeriCorps member Hans Lohmeyer and a new volunteer Tom Watson conducted many days of mapping weed using handheld GPS receivers. Tom Watson is a retired botanist from Texas who spends his summers in Spokane.

The refuge also received part of large grant along with other partners to speed-up recovery of the threatened plant species Spalding's catchfly that is endemic to the Palouse and adjacent grasslands in Washington, Oregon, Idaho, and Montana. The project involves improving the biological integrity of prairie habitats and reintroducing this catchfly species to 5 different areas to build stable populations of more than 500 plants. The plant will be considered recovered when there are 27 separate populations of this size spread throughout its historic range. This year with the help of our biological field crew and volunteers from the University of Washington Rare Care Program, we set up 56 plots near existing populations. We planted 8-10 seedlings in 26 plots and direct seeded the other 28 plots using seed collected on the refuge. Half the plots are in an area we burned in October to prep sites for planting. We had planned to plant more, but our grow-out from seed collected at the BLM Fish trap unit last year was fairly unsuccessful. We hope to plant 1,500 seedlings next fall using seedlings grown from a new batch of seeds collected this year. Hans has been monitoring wetland water levels every 2 weeks, and levels are excellent with many wetlands near or at capacity.

Hans and Michael have entered most of the data from the 2017 field season and data has been

summarized for bluebirds, marsh birds, coyote population surveys, our banding program, point counts, aspen habitat condition, and browsing monitoring. It has been a busy and productive year. We are already ramping up for the 2018 field season.



Chance conducting a weed survey. (S. Rancourt)



(From L to R) Dustin, Chance, Michael, and Mike working on a planting plot (S. Rancourt)



Rare Care volunteers planting Spalding silene. (S. Rancourt)

Status of the Turnbull Elk Herd

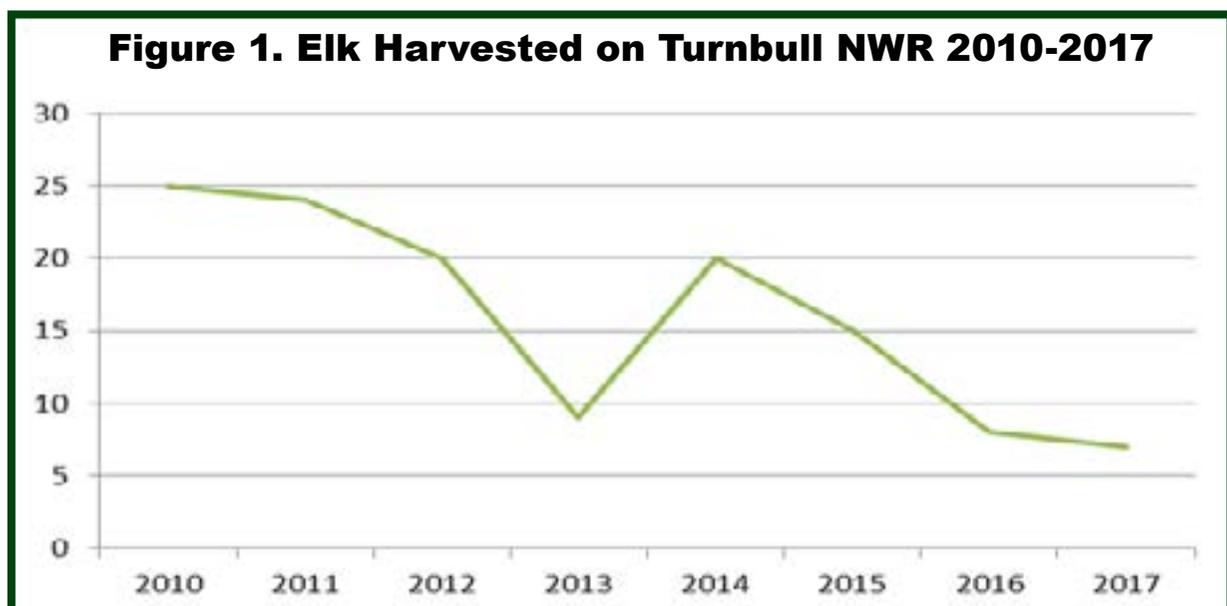
Mike Rule

As many of you who have been involved with the refuge for more than a decade know, elk and their impacts on aspen and other deciduous trees and shrubs have been an issue we have been dealing with since refuge elk populations increased in the early 2000s. This increase was believed to be the result of both a growing herd and the increased use of the mostly undisturbed and non-hunted refuge as sanctuary from increasing hunting pressure off refuge and rural development. The associated impacts to aspen were documented by studies conducted using several enclosures erected in 2000 and measured by EWU graduate student Nathan Albrecht in 2001 and Cheney High School honor student Rachel Rule in 2007. These studies documented severe browsing impacts in high elk use areas and areas that had recently been burned. These impacts prompted us to open portions of the refuge to elk hunting to both reduce the size of the herd and redistribute elk throughout the refuge vicinity by reducing the relative security of the refuge from hunting and disturbance.

The refuge was first open to hunting in 2010 after completion of the refuge Comprehensive Conservation Plan and a more detailed step-down Sport Hunting Plan. This year represents the eighth year that elk hunting has been allowed in three units

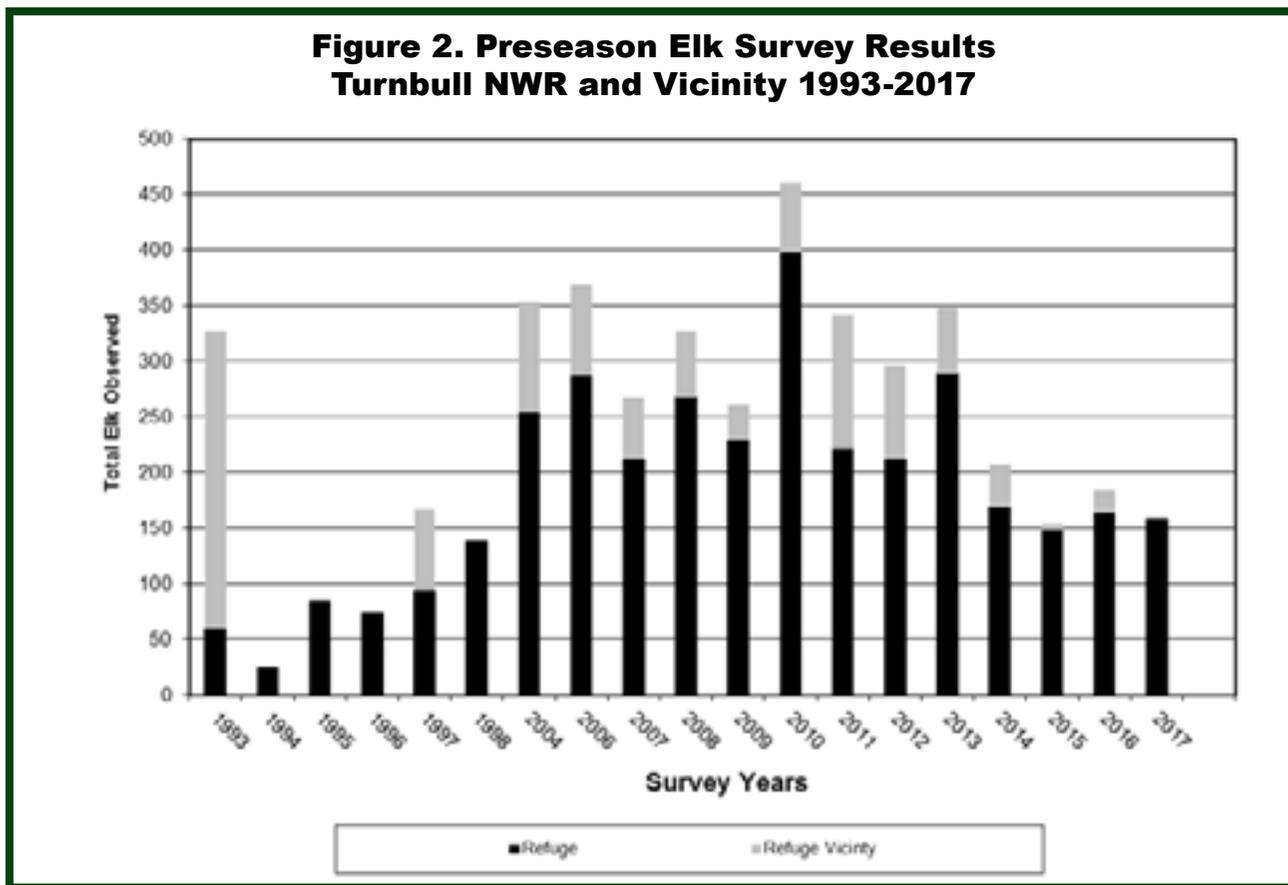
of the refuge. A total of sixty-three permits have been issued annually on a lottery basis for archery, muzzleloader, modern fire arm, disabled and youth hunters and advanced hunter education participants. The seasons roughly match those offered by the state off-refuge. Annual harvest has averaged 16 elk, with the most harvested in the first year (Figure 1). The last 2 years have seen dramatically lower harvest, with less than half averaged taken by hunters.

In order to evaluate the effect of hunting on both elk and aspen, the refuge has conducted research using radio-collared elk and monitoring of browsing intensity in refuge aspen stands. The refuge worked with the Washington Department of Fish and Wildlife to capture 34 cow elk in early 2010 prior to the first hunt. The Elk were outfitted with radio-transmitters and were tracked by EWU graduate student Chris Dwight through the next 18 months. For the next 6 years graduate and undergraduate students, volunteers and refuge staff continued to monitor elk distribution throughout the year. The collar data showed that some elk tended to shift their home ranges away from the most intensely hunted portions of the refuge and began either using the closed portions of the refuge, areas off-refuge or moved outside the survey area completely.



We also have cooperated with the Washington Department of Fish and Wildlife to conduct an aerial survey of the refuge and an area approximately 2-3 miles adjacent to the refuge just prior to the opening of the hunting season. This survey has provided us the best estimate of elk populations on the refuge and surrounding area since 2004 (Figure 2). This is the third year that the annual aerial elk survey has shown that the number of elk using the refuge are near objective levels that we had hoped to meet by opening

the refuge to hunting. This decline in observed elk numbers is likely related to increased harvest of elk on and off refuge since opening the refuge (Figure 2) and emigration of elk outside the survey area. Although not a scientific survey, folks that participate in our backcountry refuge tour in December can attest that elk are becoming more difficult to see compared to the years prior to hunting. Several hunters have reported this year that they saw no elk during the time they were on the refuge.

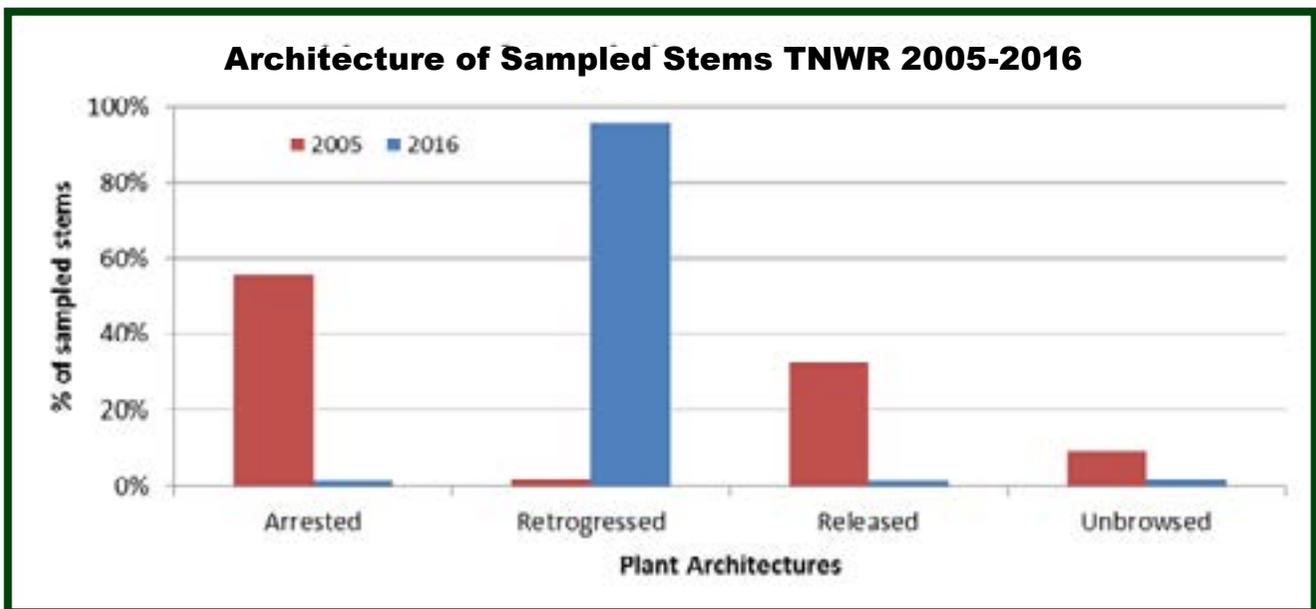
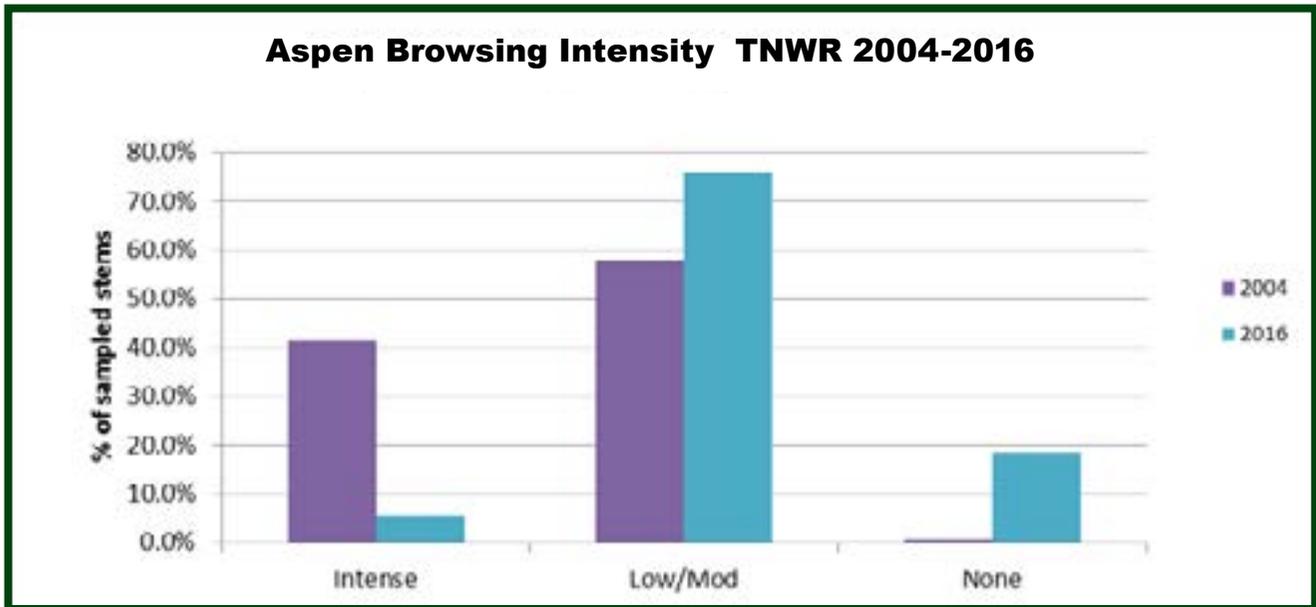


So what is the effect of these reduced numbers and redistribution of elk? To answer this question, we must look at our aspen communities. It was the need to reduce impacts on this important habitat that prompted the opening of the refuge to hunting for the first time. To quantify these effects a browse survey was conducted in 2016 and 2017 that allowed us to compare both changes in aspen architecture or growth form and the intensity of browsing to a year prior to opening the refuge to hunting. This comparison showed that fewer aspen stems were intensely browsed. The tip of the stem

called the terminal leader was completely consumed, preventing any increase in height. Repeated intense browsing results in an arrested growth form in which an aspen tree cannot grow higher than 0.5 meter. Both figures below show that browsing intensity certainly has declined resulting in increased height growth and the release of more stems to grow out of the reach of most browsers. Eventually this will allow the regeneration of aspen stands. Elk hunting has had its benefits, but a good portion of the refuges aspen stands are still being impacted by browsing. The majority of monitored aspen saplings in 2017

exhibited a retrogressed architecture. This growth form indicates that aspen were, at some time, released from browsing pressure, allowing them to grow higher than the arrested level. However, they were still being prevented from achieving heights where they are safe from browsing. We know based on our surveys that elk still use the refuge, and we have other browsing animals (deer and moose) that

prefer aspen. In order to better understand the role of all these species, we recently have purchased several remote cameras which we will be placing at randomly selected aspen stands. Analysis of the captured images will help us to identify the frequency these species browse aspen species throughout the year.



Notable wildlife observation

The swans are back due to recent thaws that opened up Middle Pine Lake. The pair that nested on the refuge last year still has all four cygnets with them. Three other adults have been seen with the group.

Friends of Turnbull NWR
P.O. Box 294
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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.
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