

**FY2020 Volunteer Projects for the
Wildlife, Fish, and Rare Plant Program
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Many projects could not be accomplished without dedicated volunteers. The following summarizes the skills, effort, duration, and expected timeframes. More detail for each project is also provided.

This should help you choose a project that suits you. Training is provided for those who are interested. Thank you!

<u>Project</u>	<u>Skills Needed</u> G = GPS P = photography H = hiking over varying terrain C = construction F = fence repair/building T = time W = cutting weeds B = botanical interest R = follow-up reporting req'd C = computer 4 = 4X4 driving	<u>Effort</u> L = low M = moderate H = high P = some level of heavy physical labor	<u>Duration</u> O = one time M = multiple visits A = once annually	<u>Timeframe</u>
Peregrine Nest Monitoring	G, H, T, R	M	M	4 visits btw March and July
Agave Population Inventory	G, P, H, R, T	H	M	Year-long
Pollinator photography	P, R	L	M	During blooming season
Adopt A Drop (wildlife waters)	G, P, R	L	O	Flexible
Lehmann Lovegrass monitoring	G, P, R	L	A	Flexible
Johnson Grass eradication at Stagesstop	G, W, T, R	M, P	M	Once every week or two during growing season
Yellow Bluestem eradication	G, W, R	M, P	O-M	Aug/Sept before seedheads open
Cedar Flat Tank Fence Modification	F	H, P	O-M	When it's cool and not gnatty!
Lichen Collection	G, P, H, B,	L-H	M	Anytime
Inspect Woods Canyon drainage for perennial pools	G, P, H,	M-H	M	June
Monarch and Milkweed monitoring	G,P, B	L	M	Summer through Fall

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Roadside Weed Inventory	G,	L	M	Weed species would be targeted for mapping during various seasons
Arizona Toad Paired Surveys and Recording	H, G,	M	M	March and April
Leopard Frog Surveys Red Tank Draw	H, G	M-H	M	May through September
Gartersnake Surveys Oak Creek	H, G	H	M	June through September
Locking/Unlocking Gates for Area Closures		L	A	One visit to lock, one visit to unlock
Bat mist netting		L	M	Various locations each year
Beetle study – office parking lot	T	L	M	Weekly counts
Removal of un-needed range fencing	F	M-H	M	Various locations
Common Black-hawk Surveys in Fossil	H	M-H	O	In May, possibly two days
Landsnail Survey	G, P, H, T, 4	M-H	M	After rain in spring and fall
Adopt An Exclosure	G,P, H, R	M	M	Several times per year
Literature Review by Subject	T, C	M	M	Whenever
NRIS Data Entry Prep	T	M	M	Whenever
Scanning wildlife survey results	T	M	M	M-F 0800- 1600
Updating Species Survey Spreadsheets	T, C	M	M	Whenever
Analysis of toad recordings for bird species	T, C	M	M	Whenever

One Time Projects

Remove old range fencing in various locations

Old fencing needs to be removed in the Walker Creek area and around Apache Maid area. Workdays are usually about four hours, not counting drive time. Downed range fence poses an entanglement hazard for wildlife and is not aesthetically pleasing to forest visitors.

Cedar Flat Tank fence rebuild

FOF volunteer Don GPS'ed the Cedar Flat waterlot. Range staff said the livestock permittee has done some work on the fence. We need a comparison of current condition to Don's documented condition to determine how much work the permittee has completed. If they are making good headway, we will let them finish the work. If not, we may schedule workdays to do it ourselves over numerous work events. The need for this is to make the fence compliant with wildlife standards so that pronghorn in the area have safe access to water.

Black-hawk survey in Fossil in May

I would like to gather enough volunteers to look for common black-hawk pairs and nest in Fossil in May. We could turn this into a several day event and camp down at Homestead. We would divvy up the creek into manageable sections. The goal is to hike assigned sections watching for black-hawks and then once seeing them, watch for them to carry food back to a nest. This project will be possible with lots of volunteers.

Inspect Woods Canyon Drainage for perennial pools

FS bios and fire personnel need to know if there are perennial pools in Woods Canyon drainage. This would involve hiking near the channel in June to see if any pools are persisting during the driest time of the year. Volunteers would be expected to photograph and gps each pool.

Projects Requiring Multiple Visits

Continue peregrine falcon monitoring with volunteers

Monitoring for falcons begin as early as March and goes through June/July. Four visits are recommended either at first light or before dusk. I have several scopes, tripods and binoculars that can be checked out for the surveys. This is a continuation of years of volunteer-led peregrine monitoring. I will provide training and maps for the various sites. Volunteers who want to keep their previous sites, great! If not, I can reassign and I have a few new sites.

Treat Johnson grass in Dry Beaver Creek riparian

Johnson grass is a highly invasive non-native that began appearing along the wetter roadsides. It has now spread into riparian areas and is devastating the plant diversity in places. This project involves repeat chopping of Johnson grass stand in the Stagesop riparian area along Dry Beaver Creek. Pete has been tackling this effort once every other week or so. We want to continue so that what few seedling and sapling trees don't get chocked out. This would involve up to 5

entries during the growing season (March - October). Any seed heads are bagged and then solarized before disposing. The rest of the material is left on site.

Treating populations of yellow bluestem grass

Manual methods would involve digging up clumps of yellow bluestem where population sizes are very small. For larger populations, we can at least cut the seed heads off. Seed heads are bagged and then solarized before disposing. We may have opportunity to help certified herbicide applicators spray larger populations.

Arizona Toad Monitoring

In March and April, conduct 2 surveys with a second surveyor (new method in 2020) along riparian areas to listen for AZ toads calling after dark. Some of these areas may be accessible by vehicle; others require hiking next to the stream. Toads can be heard up to 500 meters away, so it's not necessary to walk right along the stream. An example would be to hike the Bell Trail listening for toads calling from Wet Beaver Creek or to drive to each of the rec sites in middle Fossil and just listen from near the vehicle.

Volunteers are also needed to help set out and then retrieve recording units in remote riparian areas.

Computer savvy volunteers are also needed to help analyze data for amphibians.

Lowland Leopard Frog Monitoring in Red Tank Draw

Surveys involve walking along the water's edge looking for frog egg masses, tadpoles, and frogs that jump into the water. Crossing of the creek is required but getting wet can likely be avoided. Surveys generally are 4-6 hours and can occur anytime between April and September. In March, we will have a field outing with the forest fisheries biologist to electroshock the creek. We often detect frogs during electroshocking. Waders and gloves provided.

Narrow-headed Gartersnake Monitoring

Interested folks join NAU's monitoring crew walking in and along Oak Creek (very slippery!) looking for gartersnakes and grabbing them. If you are afraid of grabbing a snake, this job is not for you! Very intense work due to the slippery substrate in Oak Creek. Erika's crews also set out minnow traps and check those. Days are long.

Bat Mist Netting

For a white-nose syndrome (WNS) study, Park Service bios and I are mist netting numerous sites in April and May. Captures bats will be swabbed for WNS. Volunteers are needed to help put up and take down nets. Volunteers are also needed to help bat handlers (you have to have the pre-exposure rabies series to handle bats) by holding open the net as they pick bats out, helping with latex gloves (changed with every bat), and helping fill out data forms. We'll start each outing by leaving the station in FS rigs with enough time (say 2 hours) to get to the location and get nets set before dusk. Then we will stay until 10 or so, but if we are still getting bats, we'll keep netting until we get 25 bats. Take down goes faster than set up. Here are nights we will net on NFS lands:

April 21 – Tank off of 618 in Elmore Wash

April 23 – back up night for the two paired sites above, but if we have 25 bats from the 20th or 21st, we'll cancel this night

April 28 – Sheepshead Tank off of Bill Gray Road.

April 29 - Back up night for either the Castle or Sheepshead

May 19 – last FS site, to be determined based on recon results (need vol for that)

May 20 – last FS site

May 21 - last FS site, if needed

May 27 – last site, if needed

Roadside Weed Inventory

Need a 3 person crew; one to drive, one to GPS, and one to take notes. Crew would drive highways and main roads documenting target species. One plant species will be monitored at a time and plant identification training will be given. Crews will work from vehicle (for safety sake, no stopping or walking along right-of-ways). Some species are visible in summer, some in fall, and others in winter. Surveys occur when species are most visible.

Beetle Study

The lights in our parking lots attract many beetles which then fly around until they die of exhaustion. I would like to trade out the bulbs from white to a lower spectrum yellow (which is proven to be less attractive to inverts). But first, I would like to do a weekly count on the number of beetles killed during one season (spring, summer, early fall) before changing out the bulbs. This count would only be conducted in the employee parking area (not the visitor or the warehouse parking). I would then like to repeat after new bulbs to determine if there's a difference. If there's a significant difference, we would invest in changing out bulbs in all our parking areas and publish the results.

I could also use a volunteer to research 1) the type of lights we have in our parking lot; 2) a replacement yellow bulb that is less irritating to flying invertebrates; and 3) cost estimate to replace all the bulbs.

Landsnail Surveys

We have a rare species of landsnail (Oak Creek talus snail) and likely other species. When we get moisture and it's not freezing, I'd like to conduct some searches for land snails. This involves looking under rocks.

Lichen Inventory

Volunteers are needed to help collect lichens on the district. Volunteers would be trained by volunteer and lichenologist Garry and would submit samples to Garry. Work involves hiking, collecting lichens and the substrate to which they are attached (sometimes requires a hammer and chisel), taking notes on site conditions, and submitting samples and photos to Garry.

Monarch and Milkweed Monitoring

Volunteers are needed to help monitor milkweeds at the station and Crescent Moon Ranch for the presences of monarch eggs, larvae, pupae, and adults. This occurs weekly throughout the summer and fall months.

In Oct/Nov we net monarchs and tag them at Crescent Moon Ranch. We can use volunteers to help with netting and data recording.

Projects that Occur Annually

Monitor Lehmann's Lovegrass in Bill Gray grasslands

Lehmann's Lovegrass is a non-native grass that is quickly spreading across the district. It has been advised to choose the demarcation where Lehmann's is approaching out in the Bill Gray area, mark with a repeatable point (rebar, t-post, landmark) and photo document every 2-5 years.

Continue Adopt-an-Exclosure program and exclosure maintenance

This involves checking fencelines and the area within the exclosure for breaches to livestock, vehicles, etc. Each exclosure has a different purpose so site-specific details will be supplied. Volunteers who want to keep their "adopted" sites, great! If not, I can reassign and I have a few new sites.

Exclosures that need an overseer: Jack's Canyon behind station, Verde/Wingfield Mesa, and West Clear Winter Pasture (a bit of a hike).

Adopt A Drop

Volunteers would adopt a wildlife truck tank to check on and report maintenance needs.

Locking/Unlocking Area Closure Gates

The Ladder's Bald Eagle Closure gate on FR500 is locked on Dec 1 and opened June 30 (unless nest fails and closure is opened early). A few gates along Stoneman Lake Road are locked on Aug 15 and opened on December 31.

Office/Computer Projects

Literature Review by Subject

For various project analyses, I need more recent literature on the effects to wildlife from various activities (recreation, livestock grazing, OHV, etc). I could provide volunteers with my outdated lit reviews so they have a better understanding of what literature is outdated and needs replacing with newer peer-reviewed articles.

NRIS Data Entry Prep

In order for data to be ready for entry into the FS's database of record, NRIS, I need a volunteer to take survey data results for a particular species and organize them by year and by site. There are many species and all taxa groups to do this for. I would have the volunteer come into my office to get the files, then they can take them home and work on them there. I would provide files, dividers, etc. Scanning the survey forms would be a bonus – see next project

Scanning wildlife survey results

Linked to the NRIS data entry prep, I need all my species survey result files scanned so I can file them in our corporate electronic filing system. That way I can retire without guilt in 8 years! Volunteers can use their own scanners at home or can work in our office (but will be interrupted when others come in to use the printer/scanner).

Updating Species Spreadsheets

Once all my survey forms are organized and scanned (positive thinking), I would like my species-specific spreadsheets updated. These are quick reference documents for myself and other bios so we know which sites were occupied each year.

Analysis of Toad Recordings for Bird Species

Computer savvy volunteers are needed to analyze recordings for bird calls. Training is necessary and can be provided. Once a bird call is detected, the file is clipped. The clipped files then can be compiled into an email and sent to birders for identification. Volunteers would then need to take their responses, and organize the findings by site. If a really unusual bird is detected, we may ask for the recordings to be reanalyzed to determine the beginning and end of the calls so we know how long the species was present at a site.

Projects Requiring Many Visits

Mapping and photo documentation of domesticate agaves

In the central and southern portions of the Verde Valley, all agaves are one of four rare domesticate species that were tended and propagated by indigenous people. These agaves are important both biologically (they are all sensitive species) and culturally (they are often associated with ruins). Now that there is no longer any tending of the plants, the populations are starting to decline. We would like to map and photograph (for identification to species) the various agave populations. We can break up the Verde Valley into manageable pieces so there is no accidental overlap by volunteers. Folks can go out at their own convenience, any time of the year.

Wendy Hodgson from Desert Botanical Garden wants to label all the agaves in a couple of locations and will need help. This will involve hiking to the population and inserting metal tags at the base of each plant – lots of bending over!

Agave stalks are being illegally cut. Wendy would like volunteers to adopt populations and perform frequent visits in the early fall to see if/when agave stalks have been cut.

Downloading data from temp loggers in various streams

This involves downloading data from that temperature data logger (installed in streams) once per month. FS will train vols on how to download data. We don't yet have these loggers installed, but will soon.

Projects That Can Be Worked On Anytime

Photographing pollinators

Here's a simple project that anyone can informally help with. I am looking to document pollinators on plants. If folks can get a very clear and up close photo of a pollinator (remember it can be flies, beetles, bugs, spiders, native bees, wasps, etc), then I'd also like a few photos of the plant so we can identify the plant. The photos would be emailed to me. The pollinators and the plants will be identified and added to a database to track pollinators (which are declining and may be why some plants are not doing so well). If a volunteer wants a specific location to go to, I can assign that as well. It's important that the photographs be of great quality for identification purposes. I can provide training on pollinators for those interested.