

2024 Mazama Pocket Gopher Working Group

UPDATES & MEETING MINUTES – MORNING SESSION

Date:	29 October 2024
Location:	NRCS Olympia Office
Notetaker:	Elspeth Kim, Ecostudies Institute

Text in boxes was provided as a written update.

ATTENDEES

Center for Natural Lands Management (CNLM): Sanders Freed

Ecological Land Services (ELS): Michele McGraw

Ecostudies Institute (ESI): Anita Michalak, Elspeth Kim, Kyra Morrill, Sam Bussan

JBLM Fish and Wildlife: Tim Leque

JBLM ITAM: Leif Wefferling

JBLM Sentinel Landscapes: Dan Calvert

Natural Resources Conservation Service (NRCS): Tara Donohoe, Alex Wyatt, Marty Chaney

Thurston County: Marisa Whisman

Washington Department of Fish and Wildlife (WDFW): Julia Trautmann, Abby Sage, Christa LeGrande, Michelle Tirhi, Bill Kronland, Adrian Frediani, Eszter Munes, Julia Smith, Allison Leipold, Emily Butler, Erica Henry

Washington Department of Natural Resources (WDNR): Dave Wilderman

US Fish and Wildlife Service (USFWS): Kim Flotlin, Erin Adams, Erin Gray, Jose Carranza, Zachary Radmer

GENERAL UPDATES

Washington State Update – Christa LeGrande (WDFW)

- New Region 6 Diversity Biologist, Abby Sage, and two new Region 6 Diversity Technicians, Julia Trautmann and Allison Leipold, enhance our regional capacity for species surveys and efforts.
- WDFW will begin updating the Periodic Status Review for MPG starting in 2025 (last update was in 2020 with the publication of the state Recovery Plan).
- WDFW plans to update the [Management Recommendations for Mazama Pocket Gopher](#) document in conjunction with the 2025 PSR update and in cooperation with partners.
- WDFW continues to work with USFWS on compiling list of potential reserve locations and process for evaluating locations to become potential reserves. As part of this process, WDFW will write a monitoring plan for pocket gopher reserves, potential reserves, and priority monitoring areas.
- WDFW is working with landowners to protect a ~740-acre property in the TPG recovery area and a ~1,100-acre property in the YPG East recovery area.

NRCS Olympia Field Office Updates – DaShell Burnham (NRCS)

In FY24, the NRCS Olympia field office issued 21 Project Notification Forms to USFWS, 13 of which have been approved and contracts were obligated. The remaining 8 are still in revision status as of Oct 8, 2024.

- 3 Conservation Stewardship Program for crop/pasture
- 1 Irrigation & Livestock water
- 2 Livestock water
- 1 Fence

- 1 Pump
- 1 High tunnel
- 1 High tunnel & irrigation
- 1 High tunnel, cover crop & irrigation
- 2 High tunnel & hedgerow

Additional Updates

- NRCS update: programmatic agreement and process for using it has been ironed out. Working with Dan Grosboll to set it up. 20-30 projects will utilize this agreement for projects with lower to medium preference soils but no currently occupied sites. These projects can provide a lot of cost share. Current activities are focused on setting up grazing systems with rest periods.
- Michelle (q for later): when do we start doing before and after studies to understand restoration impacts on gopher occupancy/abundance. Loop Sarah H/Stephen B about this.
- Julia S: Wildlife Diversity Grant Program NFO will be released on Friday. Will be a two-year grant cycle. Must be in contact with the appropriate species lead at WDFW before applying.
- Michelle wants to do a study on one of the properties she has a CE on. Talk to Sam and Sarah about this, and check in with Christa.
- USFWS five-year review of MPG will be due next summer.

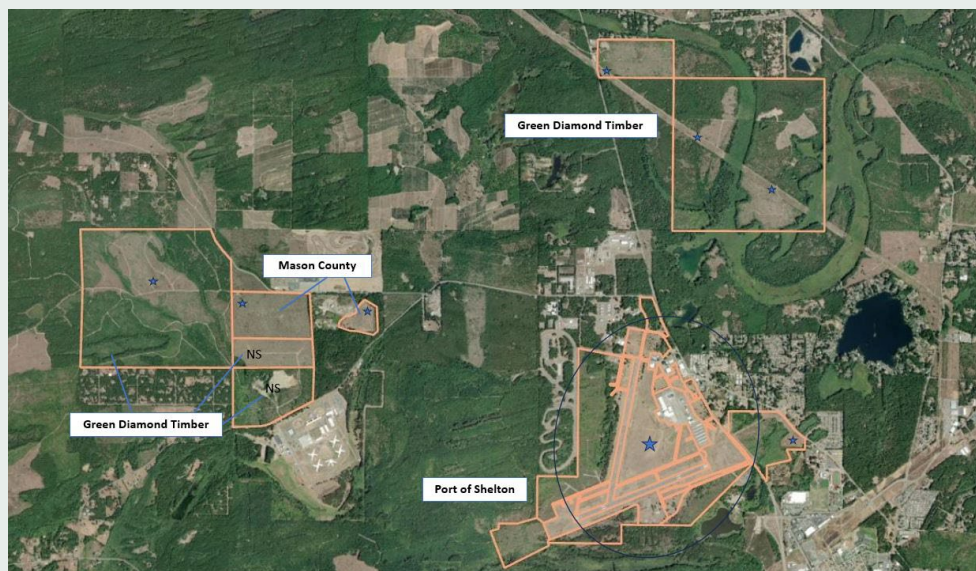


Table 1: Sites surveyed for Mazama Pocket Gopher (MPG) by WDFW using abundance protocol; sites not of sufficient size or gopher density only indicate they are occupied. $\hat{N}$ is the site-wide abundance estimate accounting for a 95% confidence interval.

Site Name	Area (ha)	2020	2021	2022	2023	2024
Century Preserve (mitigation site)	17.4	NS	NS	NS	Occupied – fresh mounds detected	NS
Deschutes Corridor (mitigation site)	21.3	NS	NS	NS	NS	Occupied
Deschutes Prairie Preserve (CNLM)	62.3	NS	NS	NS	NS	Occupied
Green Diamond Timber Co.	366.7	NS	NS	NS	NS	Occupied*
Leitner Preserve (CNLM)	14.5	NS	NS	NS	NS	Occupied – analysis pending
Mason County	50.2	NS	NS	NS	NS	Occupied*
McKenna Meadows (mitigation site)	2.26	NS	NS	NS	Occupied	NS
Olympia Airport	280.04	NS	Occupied (Zone A only)	Occupied (Zones A, B, C only)	$\hat{N}$: 2782 (2376-3434)	NS
Rocky NAP (DNR)	14.61	NS	NS	NS	Unknown – no fresh mounds detected	NS
Scatter Creek North (WDFW)	126.93	$\hat{N}$: 1,620 (1,392 - 1,887)	NS	NS	NS	NS
Scatter Creek South (WDFW)	131.04	$\hat{N}$: 1,261 (1,000 - 1,640)	NS	NS	NS	NS
Shelton Airport & Port of Shelton	314.9	NS	NS	NS	NS	Occupied
Tenalquot Prairie (CNLM)	50.14	NS	NS	NS	NS	Occupied – analysis pending
Tumwater West (mitigation site)	27.12	NS	NS	NS	NS	Occupied – analysis pending
Violet Prairie (WDFW, TC)	<i>See year</i>	N/A	$\hat{N}$: 550 (430 - 733) 34.19 ha**	NS	NS	Occupied – analysis pending 85.07 ha**
West Rocky Prairie (WDFW)	97.50	$\hat{N}$: 389 (263 - 639)	NS	NS	NS	NS
Wildridge (Cons. Easement)	29.17	$\hat{N}$: 275 (201 - 399)	NS	NS	NS	NS
Wolfhaven	13.04	$\hat{N}$: 273 (230 - 380)	NS	NS	NS	NS

*Only select Mason County and Green Diamond Timber Co. parcels were surveyed.

**In 2024, WDFW only surveyed suitable soils on the west side of the Violet Prairie property and thus acreage and area surveyed is different than in 2021.

SURVEY & MONITORING UPDATES

WDFW Survey Updates – Christa LeGrande (WDFW)

- WDFW visited a variety of sites in Thurston and Mason County, with a focus on visiting sites that hadn't been surveyed yet or hadn't had the new abundance protocol yet. Handful of CNLM managed properties. Christa plans to collect data from partners next year for all sites receiving the abundance protocol. Many Thurston sites had big enough acreage that estimates should be possible. At Shelton Airport, although there are gophers present, they are spread out so much that there likely won't be an abundance estimate. Green Diamond timber site north of Shelton airport is full of fresh gopher mounds. Going to get in touch with the timber company to understand their management approach since it's so effective. Will be discussing reserve system set up and how that works into the abundance protocol survey rotation. See written summary for outcomes. Plan to do surveys at potential sites in Mason over the next few years.
- WDFW hosted a training day for partners planning to implement the MPG abundance protocol, specifically highlighting the differences between the WDFW abundance protocol and the USFWS screening protocol, outlining the survey design and analysis methods, and answering questions about protocol implementation.
- Final abundance protocol document anticipated in 2025.
- WDFW will coordinate with partners in the region planning to conduct surveys to facilitate regional survey start time and season survey conditions.
- Moving forward, WDFW plans to clean abundance data collected in the fall survey season by approximately February the following year with a subsequent report brief summarizing results and analysis no later than May.
- WDFW completed abundance surveys for MPG at Olympia Airport in 2023 and summarized results for the Port of Olympia in a report brief. There are currently no plans for follow-up MPG surveys at the Olympia Airport.
- Visited DNR seed farms (Webster and Meridian) this year to determine presence and extent of presence at those sites. Gophers were found at both sites, with Olympia PG occupying select units at the Webster seed farm and Yelm North PG occupying most units (other than more mature rows) at the Meridian seed farm.
- Sites surveyed for MPG in 2024 include: Violet Prairie, Tenalquot Prairie Preserve, Tumwater West mitigation site, Leitner Preserve, Deschutes Prairie Preserve, Deschutes Corridor mitigation site, Shelton Airport and surrounding Port of Shelton property, Mason County-owned parcels, Green Mountain Timber Company-owned parcels, and DNR seed farms (Webster and Meridian; map images shown below).
 - Gophers were found at all sites visited in 2024, though at varying extents and densities. Because of this, not all sites had abundance surveys (see table above).

JBLM Survey Updates – Tim Leque (JBLM)

- First round of abundance surveys on JBLM, across 1300 acres. Finished in mid-October and will work with WDFW to review data. Ecostudies crew implemented most of the surveys.

2024 Abundance Surveys (JBLM's YPPG Population)

- Training Area 20
- Training Area 21 (Upper and Lower Weir Prairie)
- Training Area 22 (Johnson Prairie)
- Training Area 23 (South Weir Prairie)

Survey Locations & Outcomes

- Kim: sorting out how to set up reserves – can be a group of sites or can be a complex connected by corridors. As these abundance surveys continue, it will help inform where to set up reserves. Reserves will need to be managed for gophers. Core sites will be made up of purchased lands or CE lands, many purchased as a result of mitigation from an HCP.
- Bill: points out that basing population status on the abundance numbers is not fully appropriate because of the fluctuations of the population from so many factors – predation, disease, etc. From a management perspective, how animals are distributed across the landscape is way more useful than how many are on a footprint. Gophers

are at the bottom of the food chain and thus very vulnerable to fluctuations from multiple factors. Kim says this is understood and incorporated into the reserve system language. Michelle notes that with this new abundance protocol, we're entering a new era of understanding what's happening on a site. This survey approach will allow us to say something about the sites, it's an important new tool – will keep testing it and adjust as needed.

Abundance Protocol Updates (see slides) – Christa LeGrande and Erica Henry (WDFW)

- Focus is on estimated gophers, not mounds. Transects detect mounds within ½ meter on either side of each transect. Two distances – close together is one gopher, farther apart are separate gophers. Use an algorithm in the model to determine where a mound falls on this curve. Then those two distances are put into an algorithm to determine how many gophers were on a transect into abundance. Lots of field validation by Gail and many in the working group. Transects need to be long enough to include mounds from multiple gophers, and dense enough to allow estimation of site abundance. Key reminder: anyone setting up survey design and transects should correspond with WDFW during that process. Protocol should be conducted Sep-Nov based on weather windows. Christa checked in with land managers about what site conditions were to get a good sense of when to start surveys.
- Erica responds to a question from Erin to say that transects will be fairly consistent at each site across years because of the requirements of the transect. Marty agrees that keeping transects in the same spot year after year is critical. Christa clarifies that transects will be analyzed separately within a site if there's a barrier or two stages of restoration that impact how info can be extrapolated. The spatial map does provide additional info beyond abundance (such as where on a site there is higher density, where there are areas that need management, etc.).
- Erica responds to a question from Eszter about threshold needed to use this protocol. Responds that it's being determined as they implement it. For a very low protocol, where you don't need to sort out which mounds belong to who, you can just count them. Christa adds the requirement that there need to be multiple groups of mounds on each transect to be able to run it. Sites less than 10 acres are typically not dense enough to have enough mounds to get the between gopher distances. Have also discussed how spaced out transects can be on very large sites (such as within JBLM). Can't stretch it out too much. Current minimum transect distance is 30 m and 50 m is the current max.
- Elspeth: can we overlay the SR veg monitoring results over the gopher surveys? Ask Adam/Sarah.

REGULATORY PROTECTION STRATEGIES

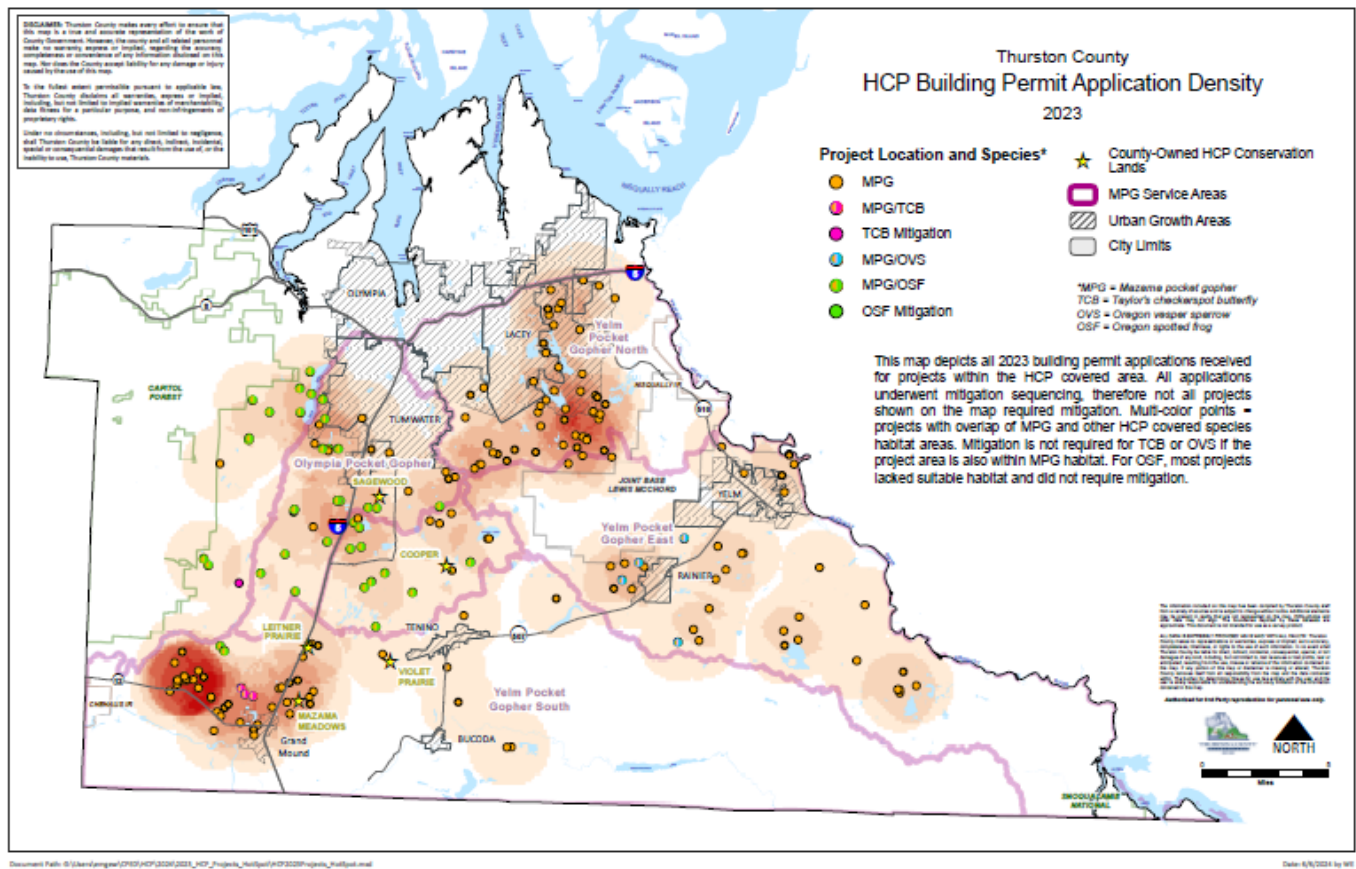
HCP Updates – Marisa Whisman (Thurston County)

We are nearing the closure of the second implementation year of the county's HCP. During Year 1 2023 of the HCP implementation, a total of 111 projects took place in HCP covered species habitat and required mitigation, resulting in a total of 25.66 acres of impact and issuance of 37.29 credits. An additional 43 projects met avoidance and didn't require mitigation. Data from the 2024 permitting process is still ongoing.

Building our HCP Conservation Land System is an ongoing process, and we are currently exploring some recent potential land acquisition options in the OPG and YPG E services areas where conservation land is needed. In addition to the Mazama Meadows YPG S properties which were acquired in collaboration with CNLM prior to HCP implementation, we have acquired six properties so far: three to cover the YPG S, in the Violet and Leitner Prairie areas, one of which will also be managed for the TCB, as well as a 5-acre property in the Tenino pocket gopher service area, described at last year's workshop. The 25-ac conservation land for the OSF previously described has also since been acquired by the county. After a long process of Board approval and contract development, three firms have been selected to manage the Thurston County HCP conservation lands: Capitol Land Trust, Ecostudies Institute, and Center for Natural Lands Management. The final pieces are being put into place to finalize contracts in order to begin assessment, monitoring and mitigation for the HCP conservation land system.

- Michelle asks if WDFW could survey a potential site in a way that doesn't influence permitting/acquisition. Would be good info to have. Kim says that would be helpful to add to our understanding of where gophers

occur. Marisa says she'll look into it. County staff do document if they come across mounds while doing prairie plant review of sites. Michelle and Kim ask if they can share that data. Follow up this afternoon on this portion.



Heat map showing locations of all 2023 HCP building permit applications, by MPG service area and color coded by species (see legends and descriptions in map). Not all projects required HCP mitigation. Stars indicate current HCP conservation lands acquired by the county.

Structured Decision Making on JBLM ([learn more](#))

Additional Discussion

- Marty asks if REPI funds can be used to pay a rental rate to private landowners to encourage rotational grazing, etc. Zach says might be okay on a case-by-case basis.
- Follow up this afternoon about Bill's concerns and how those can be incorporated into the survey protocol (as time allows).

HABITAT MANAGEMENT

Habitat Management and Planning – Christa LeGrande (WDFW)

- Violet Prairie Wildlife Area Phase 3 site officially acquired for an added ~40 hectares of potential gopher habitat with suitable soils.
- Grazing lease with Colvin Ranch at Violet Prairie complete mid-October 2024 with grazing plans to start again in 2025.
- WDFW prescribed fire team and partners successfully implemented burns at Scatter Creek Units and West Rocky Prairie Units to benefit multiple species, including gophers.
- Phased Restoration Pathway oak release at Scatter Creek WLA to restore 52.5 acres with Spanaway and mixed Spanaway/Yelm soils (see photos below, courtesy of Richard Tveten).

Table 2. 2024 burns implemented by the WDFW prescribed fire team and partners.				
Location	Dates	Acres	Units Burned	Assisting Partners
Scatter Creek	8/28/24, 9/10/24	39	J &K; B1 & D1	JBLM, State Parks, DNR Rx Team, DNR WF, Ecostudies
West Rocky Prairie	9/24/24	24	B, C, D	State Parks, DNR NAP, DNR WF



Declining oak woodlands at Scatter Creek North about to wink out after being surrounded by conifers for 50 years (Before treatment).



Oak woodlands released from conifer encroachment on Scatter Creek North (After treatment – one week after previous photo).

A lot of challenges with implementing fire this year because of DNR burn bans. When the ban was lifted, a lot of burns were implemented and objectives met. Eight-year rotation on burning. West Rocky needs to have 25 acres burned/year to keep up with the rotation schedule. Hit that target this year. Scatter Creek – would need to be 85 acres/year – only hit less than half that target. Just not enough days and resources to get fire on the ground. Also need to be more comfortable with larger fire units. Expanding acreage as WDFW forester clears more habitat. The 8-year rotation is a good starting place, will continue to be discussed but don't want to burn too frequently and also can't be based on the resources and capacity availability. Dave Wilderman adds that prairies likely burned every 3-5 years historically but not in the same spot each time and with climate change impacts that needs to be reduced as well. Sites get too dried out. Sanders agrees that 7-10 years on a high-quality site seems appropriate.

- Bill adds that grazing was conducted on Violet Prairie this year, learning year and effects were promising. Also conducted an oak release across 100 acres at Violet Prairie. Will start burning those acres in 2026/2027. Anecdotally, seeing gophers move into the areas where oak release has occurred.

JBLM Restoration Updates – Tim Leque (JBLM)

Focused on Johnson, Weird, Marion, and TA6 prairies for gopher habitat. Burned 290 acres of gopher habitat across the installation and 270 of those acres were seeded. Continuing annual work of scotch broom control and targeted herbicide treatments for exotic annual grasses. (Lief): ITAM did a bit of seeding and revegetation work in restricted training areas. 300 lbs of seed into 14.6 acres in TA6. Big training in Range 76 that they plugged into.

DPW – Fish & Wildlife

- On JBLM this year we targeted the following occupied Mazama pocket gopher areas for restoration: Johnson Prairie, Upper Weir, Lower Weir, Marion Prairie, and TA 06. While we have wrapped up our prescribed fire season, other restoration activities such as mowing, herbicide application, and seeding are currently in progress.

Rx fire

- We burned 291 acres of Mazama pocket gopher habitat.

Herbicide

- Scotch broom spot treatments are being applied in burned and non-burned units, totaling 632 acres. Exotic grass and forb treatments are being applied by boom spraying or backpack spot treatments, totaling 422 acres.

MPG area seeding

- We are seeding this year's burn units with a prairie grass and/or forb mix, totaling 267 acres.

Integrated Training Area Management (ITAM)

- Seeding: Seeded 300 pounds into 14.6 acres in TA06, the RTA, TA18, and Range 76 since December 14, 2023.
- Plugging: Plugged 14,300+ plugs in TA18 and the R76 entrance area.

Additional Discussion

- Marty gave a brief update on the soil surveys and how to interpret the descriptions. Use the Web Mapping, paper ones are outdated at this point. When you look at the 'Typical profile' look at the bottom categories to see how deep they are – if it's <60" or so, that's pretty shallow soil. Past the bottom category is bedrock. Look at the 'Minor components' – what other soils there are. If there are pockets of those that are more preferable gopher soils, they may occur there. Take home message – are there gopher soils in an area? Yes. Are they throughout all potential sites – no.
- Michelle says this brings into question how accurate the relationship of soil type to gopher occurrences line up. Kim says samples were taken to understand the specific soil types, so this has been addressed. Report identifies how often those did not align with what was mapped.
- Sanders (CNLM): WDFW did surveys for most sites and results are pending. Wolf Haven has lots of gophers, did a burn this fall and will seed it. Same at Tenalquot. Not as many gophers at Violet Prairie, haven't moved in as quickly as at other sites – lots of soil manipulation from ag over the years. Deschutes Prairie has a long history of farming and grazing, gophers are moving in as native forbs are seeded in. Mitigation sites are doing well and being surveyed by WDFW. Deschutes Corridor finally got a burn and gophers are moving in from the edges. Not enough for an abundance estimate but will hopefully in future years. Century Preserve is difficult to survey

because of such thick vegetation. Will seed the last bit of the mitigation site this year and is making progress – may be too wet to ever have gophers.

- Dave (WDNR): Rocky Prairie Preserve, continues to be occupied by Tenino pocket gopher. Managing for CALE population for the most part. With that population dwindling, ramping up management which should be consistent with gopher habitat. Once again unable to burn at this site due to various reasons. Seeding even though the burn didn't happen.
 - Elspeth added that Ecostudies shared resources crew has been out on the landscape supporting restoration and monitoring at these sites.
 - Christa: eager to pick up discussions around land protection in Mason County. Key sites that could be great for Shelton pocket gopher as well as OVSP and SHLA, and likely prairie butterflies. Connect with Christa if you're interested.

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RIS REVIEW | SECTIONS IN GRAY NOT ACTIVELY DISCUSSED DURING MEETING

General discussion:

- Note from Julia Smith: how can we better relate the updates in the minutes to the action plan?

RECOVERY ACTION 1: Protect, conserve, and enhance MPG habitat.

1.1 Identify and prioritize creation and protection of Reserves.

Underway, but need to sit down with WDFW, USFWS, others to define criteria and check boxes on how each site meets the criteria.

1.2 Purchase occupied areas and areas of suitable habitat to form Reserves.

Note of concern around ‘purchase’ versus ‘protection’. Keep purchase for grant application purposes.

1.3 Implement other short- and long-term strategies to protect Reserves and other important MPG sites from development pressure (e.g., mitigation lands, interim permitting strategy, in lieu fee, programmatic HCPs, municipal HCPs).

Discussion around non-programmatic approach to long term protection strategies. Adrian/Christa might have language next year on this.

1.4 Develop and cooperatively implement programs for the protection and conservation of MPGs, South Puget Sound prairies, oak savanna, and other prairie-dependent species. This can include, but is not limited to, grant funding, habitat acquisition, habitat restoration, regulatory reform programs and policies, management plans, zoning, migration, research, and monitoring for each subspecies.

1.4.4.1 and 1.4.4.2 may need to be merged.

1.5 For RRPg and YPG, implement the Conservation Crediting Program and the Mission Sustainment Programmatic Biological Opinion to off-set the effects of military training.

Good as is.

1.6 Monitor implementation of habitat protection activities for MPG conservation (e.g., set-asides, mitigation banks, EQIP).

These are developed on a case-by-case basis so it's an ongoing activity. Add HCP applicants (and reserve and land managers) to the implementing partner for 1.6.1.

RECOVERY ACTION 2: Identify MPG limiting factors and sources of mortality or harm, and implement best management practices to minimize impacts.

2.1 Evaluate the effects of actions that affect vegetation on MPGs and their habitat.

- Addition: review existing data and conduct analyses or identify necessary data.
- 2.1.2 will be addressed with the USFWS/JBLM Biological Opinion in ways that haven't been able to be in the past.

2.2 Determine if and how translocated populations within the range of TPG are affecting demographic and genetic characteristics of this subspecies; develop solutions if needed.

2.3 Identify landscape features that influence MPG dispersal and distribution.

2.4 Evaluate impacts of other anthropogenic stressors affecting MPGs (e.g., cats, dogs, recreational uses, etc.)

2.5 Evaluate natural factors affecting population health and distribution within and between sites.

2.6 Conduct demographic and genetic studies.

- This gets at all the 2.1 questions.
- Erica is not sure she's the one to lead small mammal vital rate estimation work. Needs to be addressed and could be done at WDFW.

2.7 Revise PVA when new genetic or demographic information becomes available.

2.8 Develop and implement best management practices to avoid and minimize effects of activities in occupied MPG habitat.

Much of this info is in established docs (Biological opinions and HCPs) so this could be draft compiled by a grad student and refined by group with facilitation from Ecostudies.

RECOVERY ACTION 3: To achieve reserve targets for each subspecies, evaluate the species' biological need to either create new local populations or increase the number of existing local populations within each recovery area or recovery unit. If biologically needed, create new local populations or increase current local population sizes through habitat creation and population augmentation. Monitor reserves as needed to determine status and trend prior to final monitoring requirements in Common Criterion 2.

3.1 Evaluate the range-wide biological need to increase the number of populations.

3.2 Evaluate the range-wide biological need to augment existing populations.

3.3 If biologically needed (as determined in 3.1 or 3.2), evaluate and modify methods of captive breeding, handling, transport, and translocation.

3.4 If biologically needed, identify source populations for captive breeding or translocation.

3.5 If biologically needed, develop and test best practices for habitat expansion.

3.6 If biologically needed, evaluate sites for suitability and prioritize for habitat expansion.

3.7 If biologically needed, evaluate sites for suitability (including genetic appropriateness, habitat quality, threats, and other factors) and prioritize sites for translocation.

3.8 If translocation or habitat expansion is biologically justified, evaluate legal aspects and complete compliance analysis and documentation (permitting, NEPA, etc.).

3.9 If biologically needed and appropriate, establish additional populations within unoccupied areas of the historical range.

3.10 If biologically needed and appropriate, implement and monitor habitat expansion through vegetation manipulation (tree and shrub removal, mowing, restoration, grazing, etc.).

3.11 Monitor population status, trend, and distribution prior to final monitoring requirements in Common Criteria 2.

- 3.11.1: Survey method developed, monitoring methodologies still needed. Check with Erica for any edits/updates.
- 3.11.1.3 Completed.
- Change language to 'monitor population status and trend in reserves' (Kim's suggestion).

RECOVERY ACTION 4: Strengthen outreach and cooperation with stakeholders and partner agencies.

4.1 Facilitate coordination and information sharing.

4.1.3 and 4.1.4: remove CNLM and mention of SouthSoundPrairies.org; update to CPOP website.

4.2 Implement outreach and education.

Meeting need as is, may be a push in Mason and Pierce Counties down the road.

RECOVERY ACTION 5: Monitor subspecies population status and trend biennially to determine if population goals required in Common Criterion 2 have been met.

RECOVERY ACTION 6: Develop and implement a post-delisting monitoring program.