

MAZAMA POCKET GOPHER RECOVERY PLAN: RECOVERY IMPLEMENTATION STRATEGY

(DRAFT) 2025 Action Plan

This action plan was developed by the Mazama Pocket Gopher Working Group and is updated each year at the group's annual meeting. The purpose of this action plan is to identify the most important conservation actions that can be conducted over the next 3-5 years to support mazama pocket gopher recovery. Since this list of actions focuses on the near-term, it is not a complete list of all the specific tasks that are necessary to achieve recovery. Additional tasks will be identified as new information becomes available, and completed tasks will be dropped from this list. Text highlighted in gray or green indicates language from the Mazama Pocket Gopher Recovery Plan. Tasks beneath the highlighted rows are specific conservation actions that the working group has identified to support those recovery actions and are updated annually.

Recovery Action/Activity	Implementing Party(ies)	Rank
Recovery Action 1. Protect, conserve, and enhance MPG habitat [Priority 1a]	USFWS, South Puget Sound Partners	
Activity 1.1 Identify and prioritize the creation and protection of Reserves.		1
1.1.1 Map and evaluate land management status & threat of habitat loss in each of the proposed Reserves, including: Roy Prairie PG (min. of 3 Reserves), Olympia PG (min. of 3 Reserves), Tenino PG (min. of 2 Reserves), and Yelm PG (min. of 7 Reserves; 2 in YPG-N, 2 in YPG-E, and 3 in YPG-S).		
1.1.2 Identify and refine Reserve boundaries and prioritize for protection.		
Activity 1.2 Purchase occupied areas and areas of suitable habitat to form Reserves.	South Puget Sound Partners	1
1.2.1 Purchase land or easements.		
1.2.2 Establish endowments or equivalent perpetual management.		
Activity 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).	USFWS, WDFW, WDNR, CNLM, Ecostudies, NRCS, Counties, WSDOT, South Puget Sound Partners	1
1.3.1 Use programmatic approach to streamline implementation of regulatory processes.		
Activity 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, mitigation, research, and monitoring for each subspecies.		2
1.4.1 Develop opportunities to explicitly implement MPG protection through incentive programs and regulatory assistance (e.g., NRCS Farm Bill programs, county conservation districts, Thurston County Voluntary Stewardship Program (VSP)).	NRCS, Thurston Co. VSP, Pierce Co., South Puget Sound Partners	
1.4.2 Explicitly include MPGs/prairie habitat in incentive programs that support MPG habitat protection, (e.g., ACEP, RCPP, WLFW).	NRCS	
1.4.3 Explicitly include MPGs in incentive programs that support habitat management (e.g., FWS Partners Program, NRCS Stewardship Programs/EQIP).	USFWS, NRCS	
1.4.4 Develop management agreements and plans for habitat, restoration, and enhancement at Reserves and other occupied sites.	DoD, WDFW, CNLM, USFWS, Counties, Cities, Ports, South Puget Sound Partners	
1.4.4.1 Assess site-specific habitat conditions to determine status and threats (e.g., vegetation composition and structure, soil, dispersal barriers, predation pressure).		
1.4.4.2 Develop site-specific strategies to improve habitat conditions and abate site-specific threats at each Reserve. Strategies may include vegetation management, prescribed fire, restrictions on use, and others. Use "S.M.A.R.T." objectives for these site-specific strategies.		
1.4.4.3 Develop step-down implementation plans and monitoring plans, where needed.		
1.4.5 Implement habitat restoration, maintenance, and enhancement at Reserves and other occupied sites using management plans developed with partners.	South Puget Sound Partners	3
1.4.5.1 Control pest plants (e.g., trees, shrubs, pasture grasses) and increase habitat quality at occupied sites.		
1.4.5.2 Expand occupied habitat through management (e.g., woody cover removal, increase forb cover).		
1.4.5.3 Maintain infrastructure at conservation areas and control access and uses, if necessary.		
1.4.5.4 Implement other management strategies identified in management planning process.		
1.4.5.5 Monitor effectiveness of the S.M.A.R.T. objectives and report regularly; coordinate with actions under Recovery Action 2.		9
1.4.5.6 Revise management as necessary based on results of monitoring.		
Activity 1.5 For RPPG and YPG, implement the Conservation Crediting Program and the Mission Sustainment Programmatic Biological Opinion to off-set the effects of military training.		
Activity 1.6 Monitor implementation of habitat protection activities for MPG conservation (e.g., set-asides, mitigation banks, EQIP).	WDFW	
1.6.1 Develop conservation performance criteria and compliance monitoring measures for habitat protection established through HCPs and other similar programs (e.g., acres of suitable habitat purchased or protected, number of individuals present (if surveys are conducted))	USFWS, WDFW, Reserve managers, South Puget Sound Partners	
1.6.2 Monitor performance and compliance of habitat protection activities.	USFWS, HCP partners, Reserve managers	

Recovery Action 2. Identify MPG Limiting Factors and Sources of Mortality or Harm, and Implement Best Management Practices to Minimize Impacts [Priority 1b]		
Activity 2.1 Evaluate the effects of actions that affect vegetation on MPGs and their habitat.		
2.1.1 Identify the level and type of disturbance (e.g., fire) that is beneficial to MPGs and/or their habitat (e.g., source, frequency, intensity, duration, and spatial extent). May vary from site to site.	WDFW, DoD, CNLM, Ecostudies	
2.1.2 Identify type and intensity of land uses (e.g., recreation, military training, grazing) that are compatible with MPG occupancy.	USFWS, DoD, WDFW, CNLM, Ecostudies	5
2.1.3 Evaluate feasibility and value of tree removal for creating MPG habitat, including forest stand attributes and forestry techniques associated with successful prairie reclamation; develop BMPs for this action.	USFWS, DoD, CNLM, Ecostudies, WDFW	
2.1.4 Evaluate effectiveness of prairie restoration in maintaining or enhancing MPG habitat.	USFWS, NRCS, WDFW, DoD, CNLM, Ecostudies	
2.1.5 Evaluate the effects that application of herbicides, rodenticides, pesticides, manure, etc., has on MPGs. Consider timing, location, intensity, frequency. Develop BMPs as appropriate.		
Activity 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.		
	USFWS, WDFW	
Activity 2.3 Identify landscape features that influence MPG dispersal and distribution.		
	USFWS, WDFW	8
Activity 2.4 Evaluate impacts of other anthropogenic stressors affecting MPGs (e.g., cats, dogs, recreational uses, etc.).		
	WDFW, USFWS, CNLM, Ecostudies, DoD	5
Activity 2.5 Evaluate natural factors affecting population health and distribution within and between sites.		
2.5.1 Determine relationship between MPG occurrence and soil type and structure.	USFWS, WDFW	
2.5.1.1 Explore feasibility of utilizing soil analysis to determine and map suitability (NRCS lead Habitat Potential Soil Interpretive Factors).	NRCS, South Puget Sound Partners	
Activity 2.6 Conduct demographic and genetic studies.		
2.6.1 Collect and analyze genetic information to inform delineation of management units appropriate for the range of each subspecies.	WDFW	11
2.6.2 Determine population vital rates (e.g., survival, reproduction, etc.) and factors affecting those rates to inform determination of sustainable population size relative to habitat patch size and quality.	WDFW	4
Activity 2.7 Revise PVA when new genetic or demographic information becomes available.		
	USFWS, WDFW	
Activity 2.8 Develop and implement best management practices to avoid and minimize effects of activities in occupied MPG habitat.		
	USFWS, WDFW, South Puget Sound Partners	
2.8.1 Develop and implement BMPs regarding use of mechanical equipment, particularly heavy equipment operations.		
2.8.2 Develop and implement BMPs regarding use of restoration tools and techniques, including use of prescribed fire and use of pesticides and herbicides.		
2.8.3 Develop and implement BMPs regarding management of predation by domestic and feral dogs and cats.		
2.8.4 Develop and implement BMPs regarding minimizing incidental or intentional MPG mortality resulting from control of fossorial animals (such as moles and voles) as pest species, e.g., due to poisoning and trapping.		
Recovery Action 3. To Achieve Reserve Targets for Each Subspecies, Evaluate the Subspecies' Biological Need to either Create New Local Populations or Increase the Number of Individuals in Existing Local Populations within each Recovery Area or Recovery Unit. If Biologically Needed, Create New Local Populations or Increase Current (2022) 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 [Priority 2]		
Activity 3.1 Evaluate the range-wide biological need to increase the number of populations.		
	USFWS, WDFW	
Activity 3.2 Evaluate the range-wide biological need to augment existing populations.		
	USFWS, WDFW	
Activity 3.3 If biologically needed (as determined in 3.1 or 3.2), evaluate and modify methods of captive breeding, handling, transport, and translocation.		
	USFWS, WDFW	
Activity 3.4 If biologically needed, identify source populations for captive breeding or translocation.		
	USFWS, WDFW	
Activity 3.5 If biologically needed, develop and test best practices for habitat expansion.		
	USFWS, WDFW	
Activity 3.6 If biologically needed, evaluate sites for suitability and prioritize for habitat expansion.		
	USFWS, WDFW	
Activity 3.7 If biologically needed, evaluate sites for suitability (including genetic appropriateness, habitat quality, threats, and other factors) and prioritize sites for translocation.		
	USFWS, WDFW	
Activity 3.8 If translocation or habitat expansion is biologically justified, evaluate legal aspects and complete compliance analysis and documentation (permitting, NEPA, etc.).		
	USFWS	
Activity 3.9 If biologically needed and appropriate, establish additional populations within unoccupied areas of the historical range.		
	WDFW	
Activity 3.10 If biologically needed and appropriate, implement and monitor habitat expansion through vegetation manipulation (tree and shrub removal, mowing, restoration, grazing, etc.).		
	South Puget Sound Partners	
Activity 3.11 Monitor population status, trend, and distribution prior to final monitoring requirements in Common Criteria 2.		

3.11.1 Develop a comprehensive survey/monitoring scheme to address probability of occurrence, assess site occupancy and abundance, and monitor trends at multiple scales.	WDFW	6
3.11.1.1 Conduct a workshop to review and discuss survey/monitoring methodologies, frequency, analysis, and responsible parties.	USFWS, WDFW	
3.11.1.2 Identify the type, number, and timing of surveys required to determine occupancy, including refining process to determine area occupied.	WDFW, USFWS	
3.11.1.3 Identify the type, number, and timing of surveys required to determine abundance and/or trends.	WDFW	
3.11.2 Implement survey/monitoring scheme prior to monitoring final population goals required in Common Criteria 2.		
3.11.2.1 Monitor abundance, distribution, and population trends of all subspecies biennially to determine status and trend of populations prior to final monitoring requirements in Common Criterion 2.	USFWS, WDFW, South Puget Sound Partners, CNLM, Ecostudies	
3.11.2.2 Determine distribution of RPPG subspecies throughout its range.	DoD	
3.11.2.3 Determine distribution of TPG subspecies throughout its range.	WDFW, USFWS	
Recovery Action 4. Strengthen Outreach and Cooperation with Stakeholders and Partner Agencies [Priority 2]		
Activity 4.1 Facilitate coordination and information sharing.		
4.1.1 Maintain active MPG working group, information sharing, and collaborative action.	USFWS, Ecostudies, South Puget Sound Partners	12
4.1.2 Open and maintain working groups/informational sharing forums about MPGs pertaining to industry-specific issues (e.g., airports, agriculture, developers/land use planning).	USFWS, Ecostudies, South Puget Sound Partners	
4.1.3 Update, clarify, and explicitly link private, federal, county, and state online information (i.e., cascadiaprairieoak.org).	CNLM, Ecostudies	
4.1.4 Develop and utilize a single coordinated database for MPG data (broader than just occurrence).	CNLM, Ecostudies, South Sound Partners	
Activity 4.2 Implement outreach and education.		
4.2.1 Improve public perception and understanding of MPGs and gopher-related conservation actions that may be taken, through positive public relations, outreach materials, and other means.	USFWS and South Puget Sound Partners	10
4.2.2 Educate public on regulatory and incentive programs (e.g., ESA, CAO, HCP, Farm Bill, Futures).	Thurston Co., Pierce Co., NRCS, USFWS, WDFW	
Recovery Action 5. Monitor Subspecies Population Status and Trend Biennially to Determine if Population Goals Required in Common Criterion 2 Have Been Met [Priority 3]		
	USFWS, WDFW, DoD, CNLM, South Puget Sound Partners	
Recovery Action 6. Develop and Implement a Post-Delisting Monitoring Program [Priority 3]		
	USFWS	
Activity 6.1 Evaluate monitoring to determine appropriate frequency and sampling framework.		
Activity 6.2 Conduct monitoring.		
Activity 6.3 Evaluate abundance and trends.		