

2016-2017 Streaked Horned Lark Action Plan

The purpose of this action plan is to identify the next-best conservation actions that can be conducted over the next 3-5 years to support SHLA recovery. [Ranking Key: The top 15 tasks are ranked. The tasks

Cat.	Ref#	Task [Note: An asterisk (*) indicates a newly added task.]	Rank	Implementing Party
1. Determine population status, current distribution and limiting factors	1.1	1. Develop WV component of survey protocol in order to finalize range wide standardized survey and monitoring protocols that address occupancy, abundance, trends, use and spatial distribution.	3	Working Group
	1.2	2. Identify threats to population viability.		
	1.2.a	a. Determine factors limiting juvenile and adult survivorship in OR & WA (e.g. predation). Does adult and juvenile survivorship (esp. females) limit population growth?	4	OSU, WDFW, CNLM, JBLM, ...
	1.2.b	b. Evaluate need to control predators (e.g., at airports) and if implemented, evaluate the effect of predator management (e.g., at Coast, McChord) and its influence on population trend.	8	
	1.2.c	c. Evaluate existing data and ID information gaps regarding the role of disturbances (e.g., recreation, military activities, industrial uses, researchers, habitat enhancement actions, dredge material deposition, airfield management actions, agricultural activities) that may affect survival in all life stages (i.e. nests, juveniles, adults), and prioritize development of BMPs for certain actions.	*	WDFW, OSU, CNLM, JBLM
	1.2.d	d. Evaluate effect of chemical applications (e.g., zinc phosphide, maki, herbicide) to larks (i.e., are they affected?) and if so, are there different application techniques that can eliminate negative effect?	11	OSU, FWS, Port of Portland
	1.2.e	e. Identify potential sink habitats and identify a process for potential management actions (e.g., creating recipient habitats, dissuasion at current sites), use qualitative approach as first step.	*	
	1.2.f	f. Track current climate change science to inform the role of climate change to streaked horned lark conservation decision making, e.g. northward expansion of prairie habitat		WDFW, OSU, USFWS, CNLM
	1.2.g	g. Examine genetic variability and population structuring.		WDFW, Smithsonian
	1.2.h	h. Determine factors limiting reproductive success in private working lands of the Willamette Valley.		
	1.2.i	i. Evaluate effect of different crops and agricultural management techniques to larks.		
	1.3	3. Utilize and collect data from color band resights.		
	1.3.a	a. Collect and integrate existing color banded resight information from Oregon and Washington to inform conservation planning and habitat management.		OSU, WDFW, CNLM
	1.3.b	b. Inform and mobilize citizen science efforts (e.g. Audubon) to collect lark locations and new color band resights, especially in winter.		
	1.4	4. Develop SHLA ID training program/materials and consider a certification process that integrates potential surveyors with (to be) established protocols.	*	To be implemented: FWS and working group
	1.5	5. Survey and monitor for larks.		
	1.5.a	a. Monitor occupied breeding sites.	*	WDFW, OSU, CNLM, JBLM, PDX, ODFW, FWS
1.5.b	b. Survey new and historic sites. Potential examples: Willamette Valley, Rogue River valley, Roger's Washington townships, OR Coast, Cowlitz River, regional airports.	10	Portland Audubon, WDFW, CNLM, Port of Portland, ODFW, FAA	
1.5.c	c. Develop a range wide map of potential breeding and wintering habitat.			
1.5.d	d. Understand migratory and wintering movements.*	12		
1.6	6. Identify important features that affect habitat quality and lark productivity.			
1.6.a	a. Determine the effect of habitat parameters and seasonality on nest success on working lands in OR (e.g., grass seed, clover, mint, xmas tree, row crops, pasture).	*		
1.6.b	b. Understand habitat quality in relation to food availability, including wintering habitat quality.			
1.6.c	c. Understand juvenile habitat use.*			
1.7	7. Address the need for coordinated and consolidated database for lark data.		CNLM, WDFW, OSU, FWS	
2. Evaluate and Enhance Populations and Habitats	2.1	1. Secure sites dedicated to lark conservation (e.g. lark preserves).	1	Working Group, Land Trusts, NRCS, WWMP, FWS, JBLM, Thurston Co.
	2.1.a	a. Engage with state lands (i.e. DSL, WDNR) to ID opportunities for protection (e.g. full to capacity dredge placement sites) on the Columbia River and Washington Coast.*		
	2.2	2. Secure protection commitment on priority occupied sites (e.g. management plans, Safe Harbor).	2	Working Group
	2.3	3. Define and identify core sites for recovery.	*	
	2.4	4. Work with the regulatory community to identify mitigation and conservation opportunities.		
2.4.a	a. Develop mitigation strategies and standardized criteria. Incorporate new USFWS mitigation policies and lark recovery objectives.	14	FWS	

2. Protect Existing Pop	2.5	5. Encourage partners to include management for larks in land protection plans when opportunities are available (e.g. America's Great Outdoors Initiative, Willamette Wildlife Mitigation Program, SWAPs, legislative initiatives).		
	2.6	6. Work with NRCS and others to ensure larks are a priority for funding programs (e.g., easements) and landowner assistance (e.g. Partner Biologists).		FWS, ODFW, WDFW, CNLM
	2.7	7. Identify mechanisms to establish long-term management funding (e.g. endowments) for important sites.		
	2.8	8. Address identified threats range-wide: Initiate protection measures, reduce predator impacts, redirect recreation, airport disturbance.	5	Working Group
	2.8.a	a. Redirect, adapt, or modify timing of incompatible aspects of land uses, e.g. airshows, police training, dog trials, model airplane use, ATVs, dredged material placement, airport management practices, coastal recreation activities.		OSU, WDFW, FWS, CNLM, JBLM, ACOE, POP, WA Parks, DSL
3. Enhance viability of extant populations and habitats	3.1	1. Enhance existing habitat and increase amount of available habitat in the Willamette Valley.	9	OSU, WDFW, FWS Refuges
	3.1.a	a. Implement habitat restoration activities on breeding and wintering grounds.		NRCS, Private, Refuges, USFWS
	3.1.b	b. Refine and implement management prescriptions to create breeding habitat and develop winter habitat prescription in agricultural matrix and understand effect on lark vital rates.		FWS Refuges
	3.1.c	c. Investigate the value and feasibility of conservation burning for larks and its potential as an incentive for private landowners.		OSU, USFWS, NWR, NRCS, TNC
		d. Align SHLA habitat enhancement with Rx training needs.*		
	3.2	2. Conduct genetic rescue aiming at stabilizing South Sound population. Evaluate success.		WDFW, ODFW, OSU, CNLM
	3.3	3. Evaluate appropriateness and feasibility of population augmentation, relocation or reintroduction (e.g., investigate lark colonization, captive rearing, hacking, cross fostering).	13	WDFW, OSU, Oregon Zoo, CNLM
		a. Implement strategies to move larks from high risk areas.*		
	3.4	4. Conduct habitat restoration in South Puget Sound to increase and improve lark habitat.		
	3.4.a	a. Implement habitat restoration activities on breeding ground using all available tools (e.g., herbicide, fire). Focus on invasives that change the structure of the habitat - ongoing.	*	JBLM, CNLM, FWS, WDFW
	3.5	5. Conduct habitat restoration on the Columbia River and Coast to increase and improve lark habitat		
	3.5.a	a. Implement habitat restoration activities on breeding and wintering grounds (e.g. Damon Point, Midway Beach), remove beach grass (use Leadbetter HRA as demo).	7	FWS, WDFW, WSP, CNLM, WDNR
	3.5.b	b. Implement and monitor effectiveness of created lark habitat by dredge material deposition and implement complementary strategy to control structure-modifying vegetation.	*	ACOE, CNLM, Port of Portland, FWS
3.5.b.i	i. <i>Test and refine habitat suitability model for dredged material sites.</i>		ACOE, CNLM	
3.5.c	c. Implement habitat restoration activities on unoccupied sites within the breeding and wintering range (e.g. St. Johns, Sauvie, Gov't island).		Metro, City of Portland, Port of Portland, OSU, USFWS, NRCS	
3.6	6. Evaluate the effect of habitat enhancement actions on lark vital rates.		CNLM, OSU, JBLM, WDFW	
3.7	7. Work with appropriate partners to develop and implement airport management guidelines to minimize take.		CNLM, Ports, FAA, WDFW, ODFW, OSU, JBLM	
4. Coordination, Education, and Outreach	4.1	1. Facilitate lark-beneficial habitat management on WV private lands through incentive programs or other means.	6	
	4.1.a	a. Support partner biologist to work on agricultural related lark issues (e.g. actions 1.2.d, 2.1, 2.2, 2.6, 4.1.b, 4.1.c, 4.2.b, 4.3.a)		
	4.1.b	b. Disseminate lark information to NRCS and SWCDs and brainstorm on how to implement programs (first).		Ongoing
	4.1.c	c. Encourage federal & state agencies to promote incentive programs.		WDFW, FWS
	4.2	2. Facilitate coordination and information sharing.	15	
	4.2.a	a. Maintain range-wide working group and coordination.		Working Group
	4.2.b	b. Open and maintain working groups/informational sharing forums about larks revolving around industry-specific issues (e.g. airports, water ports, agriculture, developers/land use planning).		CNLM, FWS, Ports, WDFW
	4.2.c	c. Increase coordination between habitat managers for larks and other grassland species (e.g. workshop).*		
	4.3	3. Develop outreach and educational materials.		
	4.3.a	a. Package existing habitat prescriptions specifically for agricultural producers (i.e., abridge Tech Note for lay audience) and distribute to agricultural community.		WV Partner Biologist
4.3.b	b. Conduct outreach to permitting entities (e.g. counties/cities, ODSL) regarding potential for lark impacts from development and other permitted activities.		FWS, DSL	
4.3.c	c. Develop materials on habitat management and restoration for land managers including habitat targets.		CNLM, JBLM	
4.3.d	d. Reach out to additional partners by promoting regional recovery and habitat management (e.g. WA/OR State Lands, WA/OR State Parks, land trusts, mitigation banks, SWCDs, Pacific Birds Habitat Joint Venture, North Pacific LLC, LCREP).			