2020 SHLA Working Group Updates and 2021 Small Meeting Discussion Notes

Working Group Survey Results Overview

Table 1. Maximum counts of male streaked horned larks from annual surveys following standardized protocols as described in Pearson et al. 2016. *Please note that these numbers are uncorrected for detectability and transect length; (NS = no survey). Population estimates (and error values) are generated using N-mixture models (Keren and Pearson 2016*).*

	Site	2018	2019	2020	+/-	Notes
Washington	**South Puget Sound**					
	13th Division	15	16	**20**	+	
	Gray Army	28	12	**15**	+	
	McChord	21	21	**30**	+	
	91st Range 76	18	17	**27**	+	
	Range 50	1	2	**2**	=	
	Range 53	1	2	NS		
	Olympia	21	27	31	+	WDFW conducted survey
	Shelton	6	6	3	-	CNLM conducted survey
	Tacoma Narrows	3	NS	2	-	WDFW conducted survey
	SPS Total	*114*	*n/a*	n/a		
	Washington Coast					
	Damon Point	0	NS	0	=	WDFW conducted survey
	Graveyard Spit	NS	NS	NS		One nest discovered hatched 3-chicks
	Johns River Island	NS	NS	NS		
	Leadbetter Point	5	7	6	-	Three nests were found w/in 10 territories. Survey effort reduced by half due to staffing and pandemic limitations. Additional occupied areas were unsurveyed.
	Midway Beach	6	NS	2	-	WDFW conducted survey
	Oyhut Spit	0	NS	NS		
	WC Total	*n/a*	*n/a*			
WA & OR	**Columbia River**					
	Austin Point	0	1	**0**	-	
	Brown Island	15	13	**19**	+	
	Crims Island	4	3	**6**	+	
	Howard Island	7	5	**8**	+	
	Hump Island	0	1	**1**	=	
	Lower Deer	3	4	**5**	+	
	Martin Bar	2	1	**3**	+	
	Miller Sands Island	10	9	**10**	+	
	Pillar Rock Island	2	3	**3**	=	
	Rice Island	17	31	**31**	=	
	Sand Island	1	2	**5**	+	
	Sandy Island	5	4	**6**	+	
	Tenasillahe	1	3	**2**	-	
	Welch Island	1	3	**0**	-	
	CR Total	*68*	83	***99***		
	Other Sites: Larks also detected at Austin Point and Hump Island in 2018 as well as one pair detected on James River in 2020 on the lower Columbia River following occupancy protocol.					

*Keren, I.N. and Pearson, S. F. 2016. Research Progress Report: Streaked Horned Lark Abundance and Trends for the Puget Lowlands and the Lower Columbia River/Washington Coast, 2010-2015: Washington Department of Fish and Wildlife, Wildlife Science Division, Olympia, Washington. 25 pp.

Table 2. Estimated pairs of streaked horned larks based on annual surveys following various protocols in Oregon *(NS = no survey)*. *Please note that these numbers are uncorrected for detectability and effort.*

	Site	2018	2019	2020	+/-	Notes
Oregon	**NW Oregon**					
	SW Quad PDX	1	0	0		
	PDX Airfield	3	2-3	3		Breeding pairs
	Rivergate	1	0	0		
	St. Johns (Metro)	1+/-	0	NS		2018: One verified report of singing male at SHLA vocal attraction plot 1.
	Fort Stevens	0	1			2019: At least one pair, up to 4 individuals. Larks not seen here in ~30 years
	Sauvie Island	0	0	0		2019: 1 unverified report of SHLA at Gilihan Road
	NWO Total	*6*	*2-3*			
	WV Airports					
	Corvallis	60+	83+	26+		There was not a complete count in 2020. These numbers reflect only those pairs holding territory along the two main runways. The true number is much higher than this as there was still significant fallowed agricultural land that was available and fully occupied at CVO in 2020.
	Eugene	NS	NS	NS		
	Independence State	0	16			
	McMinnville	8	NS	NS		
	Salem	0	NS	NS		
	WVA Total	*n/a*				
	Other					
	Ankeny	6	6	4	-	Max of 4 monthly surveys (May, June, July, August)
	Baskett	37	35	41	+	Max of 4 monthly surveys (May, June, July, August)
	Finley	10	11	3	-	Max of 4 monthly surveys (May, June, July, August)
	Private Lands - WRPs	8	7	10		7 breeding pairs in the North Valley, 3 in the South Valley
	Herbert Farm	0	2	3	+	3 confirmed nesting pairs
	Coyote Creek South	4-5	5	4		
	Erion Wetlands		2-3	2-4		
	WVR/other Total					

Working Group Partner Updates

Personnel Updates

US Fish and Wildlife Service (USFWS)
Cat Brown retired and Kris Sclafani was hired as the new lark lead and is based out of the Oregon Fish and Wildlife Office in Portland. Terry Frederick, who used to be based out of the Lacey Field Office, is now at the Regional Office, and although not directly linked to lark field work, is responsible for reviewing Habitat Conservation Plans, Safe Harbor Agreements, and Candidate Conservation Plans that may involve larks.

Federal Aviation Administration (FAA)
Janell Barrilleaux has retired. While Janell's position has not been filled yet, in the meantime, the two contacts at the FAA regarding larks are Ben Mello and Ilon Logan.

Ecostudies Institute
Much of the staff from the Center for Natural Lands Management's Washington office, including Gary Slater, Elspeth Kim, and Jerrmaine Treadwell, transitioned to Ecostudies Institute (ecoinst.org) in October 2020. Their work, including lark monitoring, the streaked horned lark working group, the cooperative agreement at Joint Base Lewis McChord, and the Cascadia Prairie-Oak Partnership made the transition with them. Work conducted in the 2020 field season while at CNLM is included below.

Recovery Planning Status Update- Kris Sclafani, USFWS
When Kris made the transition from the US Army Corps of Engineers to USFWS she helped prepare the streaked horned lark Species Status Assessment. The USFWS's proposed rule to list the lark as endangered is due back to the judge by the end of March 2021. It will then go out for public review. There may be delays with the change in administration but hopefully the rule will be out for public review in March or April 2021. Kris wants to wait until summer to edit recovery plan, while wrapping up the litigation piece.

August 2021 update: the proposed rule was released in April 2021, proposing to continue listing the streaked horned lark as *threatened* with a revised 4(d) rule. Public comments on the proposed rule were received in June 2021. USFWS is currently addressing comments and preparing to finalize the ruling.

WA Field Office Update- Martha Jensen, Kim Flotlin, USFWS
JBLM Pilot Project- The Pilot Project is JBLM and USFWS's voluntary effort to implement the principles of the Conservation Policy Initiative. The Conservation Policy Initiative (and the related Recovery and Sustainment DOD-DOI Partnership) is an effort by DOD to reduce regulatory burdens and attain better conservation outcomes for listed and rare species that occur on military installations. The Pilot Project effort was initiated in mid/late 2020. There are two Pilot Projects Nationwide. The Pilot Project will create a long-term biological opinion that replaces the current programmatic biological opinion (2017). For more information contact the Pilot Project Coordinator, Zach Radmer (Zachary_Radmer@fws.gov).

McChord Airfield Reinitiation of Section 7 Consultation - In August 2020, McChord Airfield experienced high bird-aircraft strike rates of all birds, not just larks, with the key bird of concern being swallows. In response, they declared an emergency and mowed the Buffered Active Nesting Areas (BANA) at McChord. Also in 2020, a major culvert under the South end of the runway failed, which led to a large construction project. Third, the total allowed lark strikes on JBLM continues to exceed the number authorized in the 2017 biological opinion. The reasons for the observed bird strike rates, and how they relate to previous years, are not clearly understood. In order to streamline mowing and BANA requirements on McChord, and to provide a safety backup for Bird Aircraft Strike Hazard (BASH), the USFWS and Ecostudies have been working with McChord to reinitiate the 2017 Biological Opinion and add necessary provisions and incidental take authorization. For example, the reinitiation will shorten the vulnerability period for larks based on new flush response information, and therefore allow larger mowing windows between active BANA.

JBLM Consultations - The 2017 JBLM programmatic biological expires January 2022 and will need to be extended or replaced. As noted above it will likely be replaced by the Pilot Project, and any interim period could be solved by an extension. The FWS is also actively working on a framework biological opinion for the Conservation Crediting Program, which will enable JBLM to turn off-installation conservation success into on-base regulatory relief. This program may also eventually be replaced or dove-tailed with the Pilot Project.

Tacoma Narrows Airport Construction Project - The Tacoma Narrows Airport and FAA have requested ESA Section 7 consultation for 3 years of major infrastructure upgrades, including new taxiways and projects in lark habitat. Consultation is under way and work is unlikely to start in 2021.

Bush Prairie Habitat Conservation Plan - The Port of Olympia (including the Olympia Airport) and the City of Tumwater are developing an HCP with the FWS that will include expansion of infrastructure (hangers, buildings, businesses) at the Olympia Airport. The Olympia Airport has the largest population of larks outside of JBLM in Washington.

JBLM Breeding Monitoring Update – CNLM

In 2020, CNLM continued to assist Joint Base Lewis-McChord with efforts to minimize human impacts to larks from airfield management and training and to collect demographic monitoring to investigate limiting factors. This year was the 8th year of intensive nest monitoring at two sites (40 pairs at Gray Army Airfield, 51 pairs at McChord Airfield), and the 10th year at one site (32-40 pairs at 13th Division Prairie). Lark numbers increased at monitored sites in 2020 compared to 2019, substantially at some sites (i.e., McChord, Range 76). Twelve adults were killed by aircraft strikes. Of the estimated 123-131 nest-monitored pairs, we located and documented the nest fate of 139 nests. Of the 211 nests, we determined that 137 nests successfully fledged at least one nestling. Though banding effort was reduced this year due to COVID-19 and staffing limitations, we also color-banded 103 young and one lark fledgling.

Columbia River Surveys and Monitoring - CNLM, USACE

Abundance surveys in 2020 were conducted between mid-May and mid-June on 14 dredge placement islands. The total maximum number of streaked horned lark males across all islands was 99, up from 82 in 2019. The highest abundance was at Rice Island with 31, followed by Brown Island with 19 and Miller Sands Island with 10 males. If we assume that the total number of pairs can be found by doubling the maximum number of males, we estimate the total number of individuals in the Columbia River network

to be 198, up from 164 in 2019. This year, a nesting pair of larks was detected on James River for the first time during a survey following occupancy protocol.

JBLM Airfield Grass Conversion – CNLM

In 2017, CNLM, with funding from USFWS, initiated a grass conversion demonstration project on Joint Base Lewis-McChord airfields. The goal is to replace the tall, exotic pasture grasses with native bunchgrasses at Gray Army and McChord Airfield on two 5-acre experimental plots. The project will evaluate the feasibility of converting vegetation and investigate whether grass conversion might lead to reduced BASH risk and less frequent mowing. The project was initiated in November 2017 with herbicide applications and seeding, and pre- and post-implementation bird and vegetation surveys.
In 2020, the third and final year of monitoring activities, we continued vegetation and bird surveys. Surveys confirmed that the native perennial fescue (*Festuca roemerii*) is well established on McChord Airfield plots but only locally established on Gray Army Airfield plots. Though no larks have been detected in the treatment plots during surveys, a nest was found inside the treatment plot at Gray Army in June 2020. A final report summarizing the last three years of restoration and bird results is expected at the beginning of 2021.

Leadbetter Point: 2020 Preliminary Streaked Horned Lark Breeding Survey, Predator Management, and Habitat Restoration Summary - USFWS

Abundance Surveys

Streaked horned lark adult breeding surveys were conducted once monthly (n=4) from May to August. The maximum total count of males equaled six and the mean birds per survey was five, both values were lower than last year. Three nests were discovered within 10-suspected breeding territories. Two nests hatched at least six young and the third nest had indications that the eggs hatched. Juvenile birds were discovered during subsequent surveys. Staffing and coronavirus limitations reduced survey effort by half of previous year's efforts. The total length of the survey transects was 6,715 meters. At least three additional occupied territories were located beyond the survey area.
A new MS Access database was created to archive lark survey, nest monitoring, and bird track data and refuge inventory and monitoring survey instructions were revised.

Predator Management

The current predator management strategy at Leadbetter Point began in 2013. Two species identified as potential predators were encountered in and adjacent to lark nesting areas. There were fewer corvids, especially crows, encountered again in 2020 and birds were quicker to disperse. This may have been a result of fewer people on the beaches during the early breeding season due to pandemic restrictions.

	Dispersed	Lethally Removed
American Crow	69	1
Common Raven	20	4

Habitat Restoration

Pre-breeding: Twenty acres of beach on the Willapa National Wildlife Refuge at the north end of Leadbetter Point were cleared of *Ammophila* beachgrass using a bulldozer and disk. An additional 90 acres of previously cleared beach was disked on the refuge and at Leadbetter Point State Park to reduce resprouting beachgrass.

Post-breeding: A small area of native plants were hand weeded.

Herbert Farm Natural Area Project Update – Institute for Applied Ecology

Conspecific attraction study at Herbert Farm

We placed decoys and playback devices at Herbert Farm, centered on the 23 acres of agricultural field that went into chemical fallow in fall 2017, as part of a Corvallis Airport project to mitigate for a runway improvement project. We have placed decoys and playback devices at the site throughout the breeding season in 2018-2020. We recorded larks at the site in 2018, but no nesting was documented. In 2019, we recorded 2 nesting pairs. One nest was located and 3 fledglings were banded. The 2nd nest was not located, but we did observed at least 1 unbanded fledgling at the site. In 2020, there were 3 confirmed nesting pairs (although the female of 1 pair was likely killed by a raptor in mid-May). Three lark nests were located and monitored. One was successful, fledging two young. The other 2 nests were lost due to predation, with predation of nestlings in one and eggs in the other. An additional nest start was located, but no eggs were ever recorded. We have funding to continue the project in 2021.

Habitat Restoration

A 25-acre field which had been in chemical fallow since 2014, was seeded in fall 2018 and 2019 to create a mosaic of bare ground and sparse, low-stature, vegetation. This field also has two berms which were created by the USFWS Partners for Fish and Wildlife Program to flood swales and create more lark-friendly habitat. A further 84 acres of farmland was put into chemical fallow in 2017-2018, creating a lot of bare ground in 2019 and 2020 which attracted small numbers of larks, some of which bred. About half this area was seeded in fall 2020. The other half will be in chemical fallow during 2021. Two new berms will be created at swale outlets to provide more bare ground and sparse vegetation as waters recede in the spring. This is hoped to provide ongoing lark habitat. Due to concerns from the City of Corvallis (landowner) and Oregon Department of Fish and Wildlife (conservation easement holder) over the long-term cost of maintaining bare ground and sparse vegetation, most of the newly created habitat will be more standard prairie which is less likely to be favorable for larks.

PDX Streaked Horned Lark Survey Results & Observation Summary – Port of Portland

Southwest Quadrant (SW Quad)

The first 2020 survey was on March 5th to determine occupancy/abundance during the winter season. A total of 3 breeding season surveys were conducted on May 5th, 26th, and June 18th. During these surveys there were no detections of Streaked-horned larks or Horned larks.

SW Quad Activity Comparison from 2011 - 2020

The data collected during the SW Quad surveys from 2011 thru 2020 shows a decline in confirmed breeding pairs, males, females, and YOY. This year was the first season with no SHLA detections.

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Breeding Pairs	1	2	3	2-3	1	1	1	1	0	0
Identified males	N/A	17	26	25	17	14	6	1	1	0
Identified females	N/A	4	10	2	2	0	0	0	0	0
# of YOY	3	2	0	8	1	2	0	0	0	0

Note: The occupancy and abundance draft protocol developed by the Washington Department of Fish and Wildlife (Pearson, et al. 2016) was followed for all surveys.

PDX Airfield Activity

During the 2020 breeding season, there were a total of 56 SHLA individuals observed on the airfield, not including 1 non-damaging aircraft/bird strike. Most of the observations were located near the intersection of Taxiway M and Runway 3/21. One nest was discovered in this location on May 15th with two hatchlings. They were later banded by Atwell on May 21st, and one YOY was observed as a fledgling on May 26th.

Less frequent observations were located near Taxiway Juliet, composed of 2-3 males and 1-2 females. There were also two occasions early in the nesting season of a male and female pair near Taxiway A3. These areas were monitored throughout the season and no other activity was observed.

	2016	2017	2018	2019	2020
Breeding Pairs	2	3-4	3	2-3	3
# of males	15	7	4	9-10	6-7
# females	6	4	3	7	4
# of YOY	4	4	3	1	2

Banded SHLA Observations at PDX

The observations below were documented on the airfield during the breeding season. The number of observations indicate separate dates that the individual bird was encountered.

Tarsus Bands	# of Observations	Age	Sex	Notes
G/Y:R/S	2	Adult	F	
W/B:S/O	2	YOY	N/A	Banded-Atwell (5/21)
W/G:S/O	2	YOY	N/A	Banded-Atwell (5/21)
G/G:S/G	1	Adult	M	
G/G:G/S	1	Adult	F	
G/R:S/LB	2	Adult	M	"LB" = light blue.

Sauvie Island Community Science Grassland Bird Monitoring - Audubon Society of Portland/ODFW

Portland Audubon recruited and conducted virtual trainings for 32 volunteers (most of whom were returning volunteers from previous years) to monitor for Streaked Horned Larks and other grassland birds at 2 sites on Sauvie Island that contain habitat potentially suitable for nesting larks (Gillihan Road road transect and ODFW farmland transect). Surveys were conducted between 1 April and 31 July 2020. Volunteers attempted to conduct surveys at each site weekly but not all weeks were covered. The total effort was 72 hours of survey time at ODFW Farmland and 49.8 hours at Gillihan Road. Unfortunately, there were no Streaked Horned Lark detections this season.

This infographic report created last year covers the 2018 and 2019 monitoring seasons:
https://audubonportland.org/wp-content/uploads/2020/01/Streak-Horned-Lark-Patrol-201819.pdf

Willamette Valley NWR Complex- Brian Root

Summary (from 2020 Annual Report):

The Willamette Valley NWR Complex comprises 3 refuges in the central Willamette Valley of western Oregon: Ankeny NWR, Baskett Slough NWR, and William L. Finley NWR. The Complex provided >2,350 acres of potentially suitable habitat for breeding streaked horned larks (SHLA) during 2020. Management included both active (specifically for SHLAs) and passive (as part of goose forage production) actions. Monitoring results suggested that a seasonal maximum of 46 SHLA breeding pairs used the Complex's agricultural fields during the 2020 breeding season. We confirmed approx. 40 independent SHLA fledglings, but large & highly mobile multi-family groups at Baskett Slough were difficult to count and almost certainly included many additional fledglings. Most fledglings were observed later in the nesting season (mid-August), suggesting a late nesting season and/or poor early season nest success. Substantial habitat acreages were available throughout the breeding season at Baskett Slough NWR and to a lesser extent at Ankeny NWR. However, vernal swale habitats at Finley NWR were heavily vegetated, caused by a lack of winter/spring flooding during early CY2020 and persistent rains throughout the spring that enhanced vegetation cover. Cooperative farming and Refuge management (incl. disking and chemical weed control) prolonged habitat availability into summer. We again implemented SHLA reproductive monitoring during 2020. A seasonal intern and the Refuge Biologist monitored 19 nests at Baskett Slough NWR during early June through mid-August. Nest outcomes included 12 successful nests, 6 failed nests, and 1 with unknown fate. Raw nest success (≥ 1 fledgling) was 67% (12/18), with a Mayfield estimate of 52% (95% CI = 30-87%). These estimates were substantially greater than similar nesting locations during the 2019 monitoring efforts. The Complex will continue managing for SHLA breeding habitats during 2021, and will pursue modifications to actively managed fields that could prolong habitat availability into late summer, when reproductive success seems to be greatest. We plan to continue our monthly breeding pair surveys, and hope to continue intensive reproductive monitoring (nest and fledgling success) at least at a subset of SHLA nesting locations.

WRP's Update- Cameron King

North Valley private lands- There were 7 confirmed breeding pairs across north valley private lands sites (WRP's). This likely represents the lower range of what was actually realized. Five of those pairs were at one site, which is in the early stages of an establishing prairie, and will likely see a decline over time through prairie succession. It does appear that the site will have habitat features to allow for 1-2 pairs of SHLA moving forward.

The other two pairs were at a large prairie complex in Marion County. This site should retain some suitable habitat into the future, but breeding numbers fluctuate and will likely remain low. Otherwise, no major projects on the horizon at this point that will have significant impacts on SHLA suitable habitat in Polk, Marion, or Yamhill counties.

South Valley Private Lands- There were 3 confirmed breeding pairs of SHLA's across south valley private land sites (WRP's). This represents observations across two sites, one in Linn County and one in Lane County. Linn County (MDAC) had one pair nesting on the road and the Lane County site had two pairs nest in an emergent marsh edge. With the majority of our prairie restoration sites over the last few years our habitat suitability for larks has declined due to prairie establishment.

Coyote Creek South – ODFW/LTWC

The 309-acre Coyote Creek South property, owned by the Oregon Department of Fish and Wildlife (ODFW), is undergoing habitat restoration in cooperation with the Long Tom Watershed Council (LTWC). The habitat restoration includes conversion of former grass seed fields to wet prairie and vernal pool habitat. Phase 1 is 112 acres of wet prairie and 12 acres of vernal pools on the northern part of the

property along Cantrell Road. Phase 2 is 53 acres of wet prairie on the southern part of the property at the end of Halderson Road. Phase 3 is 29 acres of wet prairie adjacent to and south of Phase 2. All three areas have provided suitable habitat for the Federally Threatened Streaked Horned Lark (hereafter lark) since the initiation of restoration activities. The full summary report can be found here: https://cascadiaprairieoak.org/documents/coyote-creek-south-breeding-birds-and-streaked-horned-larks-2020

Corvallis Update- Randy Moore, OSU
Over the last 5 years, lark numbers in and around the Corvallis airport have fluctuated dramatically in response to rotating crops. In 2014 the population dropped to the lowest it had been in previous years, only 40 breeding pairs. Then by 2017 and 2018 the population rebounded back up to normal (about 60 pairs) due to fallowing in surrounding ag fields which increased available lark habitat. In 2019 there were 83 pairs, though Randy suspects this is a low estimate. In 2020, remaining ag fields were fallowed. Randy predicts that 2021 will be the breeding season that sees a return to larks being distributed only along airport rights-of-way with a few scattered territories in agricultural odd areas and vernal wetlands. Population will almost certainly shrink accordingly in comparison with the previous 3 years. There will be a full survey in 2021.

New/continuing 2020 projects:
Randy continues to work with various partners in monitoring the population at CVO as several big construction projects affect it: runway resurfacing projects (both main runways, one completed in 2019, the other to take place in 2021) and a perimeter fencing project that promises to provide extensive hunting perches for lark predators.

Small Working Group Meeting | January 28, 2021 | Teams Meeting

In Attendance: Bob Altman, *AviFauna Northwest;* Elspeth Kim, Gary Slater, Jerrmaine Treadwell, *Ecostudies Institute;* Benjamin Mello, Ilon Logan, *Federal Aviation Administration (FAA);* Katy Weil, Elaine Stewart, *Oregon Metro;* Nick Atwell, *Port of Portland;* Jess Jones, *US Army Corps of Engineers (USACE);* Kristine Sclafani, Kim Flotlin, Martha Jensen, Bill Ritchie, Elise Brown, *US Fish and Wildlife Service (USFWS);* Scott Pearson, Chris Sato, *Washington Department of Fish and Wildlife (WDFW).*

Note: Due to COVID-19, a virtual meeting was held among a smaller group of individuals implementing conservation efforts, rather than the usual larger in person meeting. The shorter meeting focused around a handful of discussions that are summarized below. Any project updates provided at the meeting were incorporated into the written project updates submitted by working group members in an accompanying document.

Discussion #1: About Task 3.5. Develop a mitigation strategy for offsetting the effect of non-federal development in occupied lark habitats. Led by Kris Sclafani, USFWS.

We need to identify how to support mitigation off airports and determine details such as: how to allocate funding, what to do when different federal and non-federal agencies can contribute, and how to use funding the best way possible for lark recovery – including determining the equation of birds/habitat and how that translates to money. Do we need to take a different mitigation strategy approach for lands with and without a federal nexus? FAA is working to determine how they can direct funds to an entity who would then hold the funds. Simultaneously, FWS needs to identify what mechanism can be used consistently across the range to assess relative level of effect from project actions and how that translates into dollars. Once these are determined, it will need to be decided where the funding lives/who holds the money. FAA has restrictions on who and what they can fund, as they cannot fund on-site mitigation at an airport. Nick suggests a land trust type situation might be needed, where a larger bucket of money that can be contributed to by multiple entities could hold funds and distribute them for mitigation, compatible land use, and more. Feels that the 'bird years' approach is not our best option.

After determining the money aspect, the second step will be the mitigation strategy itself. What does this look like? Need to determine so that the FAA MOU can be updated and begin generating funds for recovery. Will need to coordinate with partners in the Willamette Valley including state, county, municipal, and so on. How can we move in a positive direction? Should we be reaching out to Fern Ridge more for opportunities to do lark conservation?

Bob suggests recovery plan is coarse but is a good starting point for actions, then we can step down to action plan. Those two documents broadly prioritize what and where. Bill suggests we focus in on Action 2.3.1.1.1.1 (Rank #3) "Identify and Acquire Suitable Sites" and develop a list of regional suitable sites that could be acquired when funds become available.

Discussion #2: About Funding Requests. Led by Elspeth Kim, Ecostudies Institute

What proposals are being submitted to USFWS and is there any coordination that needs to happen for USFWS or other funding requests? The group had a short discussion about proposals currently under review and a reminder that the Oregon USFWS office has an open call for proposals. Gary discussed a proposal Ecostudies has submitted to develop a standardized monitoring protocol for ag lands in the Willamette Valley and related activities, as well as how to encourage use of the site-based protocol developed by WDFW. It is a priority action in our Action Plan and among the recovery team. Bob highlights that we need a lark population estimate in Oregon. Bill notes that WA State Parks submitted a funding request for habitat restoration at Leadbetter and will know in June if the project, which was ranked high, receives funding. Continued discussion of proposals and increased coordination among the group is welcome in the future.

Gary adds that USFWS is funding an Ecostudies Institute proposal to develop reintroduction methods for larks through the State of the Birds funding program. There will be a series of workshops to discuss how this will work and an implementation plan will be created.

Topic Area: Surveys and Population Management
The group did a quick review of the lark survey table provided in the materials. Elspeth reiterates that the survey results table is meant to be a big picture view of lark numbers, different protocols are used across its range, and numbers should be used only for discussion. If folks want to include specific lark population estimates for a particular region in a report or other document, they should contact the appropriate entity.

Scott says that work on the N-mixture analysis for sites in WA is in progress. There are some new challenges that require conversations with biologists but once these are addressed, the data can be run. He also notes that there has never been a clear timeline or due date for getting raw data to WDFW for analysis, or expectation of when results will be available and shared with the group. Open to discussion on this if it would be useful to clarify.

Discussion #3: About Task 1.2.1.a Ensure all appropriate partners adopt site-based protocol with properly trained staff. Led by Kris Sclafani, USFWS and Gary Slater, Ecostudies Institute.

Do folks have any issues with onboarding and training staff to conduct monitoring and utilizing the site-based protocol? Gary points out that while there is a need for some training, most individuals hired for lark monitoring positions have a significant experience in bird id by sight and sound. It may not require a standardized training approach. In the 2020 proposal to OR-FWS, one objective was to help partners adopt the site-based protocol (This objective was dropped in the 2021 proposal). Katy agrees there is a definite need for training and more data to inform management decisions and glad it's included in the proposal. Bob suggests that we could train 4-5 individuals to survey all sites that can be accessed as a monitoring team. In this way we could at least get a standardized baseline using consistent monitors, maybe only visit sites that aren't already covered. He does also add that funding may not be there for each year. Gary noted one disadvantage of this approach is that it would be hard to standardize and thus would be hard to replicate in the future and it would not incorporate detectability. Scott asks if a hearing exam should be conducted for as part of training personnel for conducting surveys, noting that importance over visual cues when doing lark monitoring. Nick adds that it is hard on airfields to hear and that they rely more on visual detection at Portland International Airport. They survey for larks as early as possible but there are banks of take-offs at 5AM and 6AM, right when you want to detect birds that makes hearing them hard. Scott is putting in covariates such as wind to the N-mixture analysis, and could include noise, Nick says yes, they monitor decibel levels at PDX but that varies based on area. Further discussion needed.

Discussion #4: About Task 3.1.2.1 Evaluate effect of chemical applications. Led by Gary Slater, Ecostudies Institute.

This task has been a prioritized action for some time so a check in on what are folks seeing in the field regarding effects of chemical application was in need. Has the level of concern around this increased or decreased and what steps do we need to take to address this? Bob notes that five years ago zinc phosphide was a concern at Corvallis Airport when Randy was finding dead birds. There is a need for someone to research this still and find out what is going on. Elaine

suggests a student in Portland State's environmental master's program could produce a white paper or thesis, move from there to work with other partners ties into insecticides. The group discusses options for gathering more data such as recording and submitting habitat management actions to look for trends, or creating BMPs for what to do if dead larks are found. Many entities have their own protocols, most of which include a lab in Madison, WI. Most airfields that participate in the Bird Air Strike Hazard (BASH) program send remains to the Smithsonian National Museum of Natural History. While this discussion is fruitful, Scott reminds folks that toxic load analyses and related efforts are complex and should be done at a high level and take a lot of resources. Suggests having a follow up conversation about this to consider best approach.

Discussion #5: Maintaining momentum in the Willamette Valley. Led by Kris Sclafani, USFWS and Bob Altman, Avifauna Northwest.

Discussion began with summarizing the results from the pilot run of the partner biologist position. Bob explained that the position accomplished a lot working with ag landowners, but the project was not as successful in terms of implementations; there was sufficient money for the project but could not gain footing with land managers and owners. Bob suggests shifting the focus away from private land owners (matrix sites) and more on partners to secure core sites that are directed for lark conservation or lands where larks may not be focal species, but they can be in mix. Matrix lands had been the focus because they are the largest pieces of habitat for the lark, but these should be a lesser priority as there has not been much traction getting landowners on board.

Elaine asks if we are prepared for when Willamette ag lands become available for core sites. Bob says yes, land trusts have geographic area where they want to focus attention, but then it's a money thing. It's a tougher sell to preserve core sites for just larks, may have to include other species. More outreach may be needed to land trusts and other orgs that hold conservation lands to interest people and communicate with them why they should protect land for larks. It's suggested that this could be packaged as a larger grassland bird effort, which would have more traction, but the specific habitat requirements for larks make this difficult – depends on the property and landowner as to how we make the best pitch. Certainly management for multiple species is more successful at getting traction, and rather than other birds we could and should focus on things like bumblebees and rare plants that could benefit, suggests Elaine.

There is one property that has been protected and opened up for larks. Elise Brown has been working on a Safe Harbor agreement there, which should be finished soon. She has been working with Scott and finding it difficult to come up with baseline for larks. Kris suggests we consider if USACE can do more with larks surrounding their wetland conservation work.

Topic Area: Action Planning

The group briefly discussed the action plan and ranked items. Results of this conversation are reflected in the updated Action Plan and rankings.