

Feral Swine Transboundary Workgroup Findings and Recommendations

December 1, 2020

Natural resource managers throughout North America have identified feral swine as a significant challenge. This invasive species has emerged as a major environmental and economic concern as populations have exploded. They exist across North America with population estimates over six million. Populations are expanding in the western provinces of Canada and are on the rise in the United States. Existing data from the U.S. and Canada on the distribution of feral swine have confirmed that animals have been detected near the international border and the potential for transboundary movement is very possible.

Western states without established populations have worked vigilantly to prevent introductions or to eradicate feral swine that appear on the landscape. Western states have an opportunity to enhance prevention efforts by partnering with Canadian provinces and each other to discuss challenges and opportunities to preventing and stopping feral swine along interstate and international borders.

In January 2020, staff from the Montana and Washington invasive species councils reached out to U.S. federal, state and Canadian governmental feral swine experts to convene a workgroup aimed at discussing the challenges and opportunities to preventing and stopping feral swine along interstate and international borders (see Appendix A for workgroup members).

On February 21, 2020, the first ever Feral Swine Transboundary Workgroup meeting occurred. During the meeting, members provided an overview of feral swine issues in their respective areas, discussed best practices for management, and began forming preliminary recommendations for enhancing transboundary feral swine management.

The workgroup met again on May 20, 2020, to hear overviews of the [Canadian Invasive Wild Pig Initiative](#) and the [United States Department of Agriculture National Feral Swine Damage Management Program](#), as well as to review and refine recommendations for enhanced transboundary management.

This report contains a summary of the transboundary group's review of five key strategic areas, and contains findings, recommendations and best management practices that federal, state, provincial and local natural resource managers might incorporate into their programs to improve transboundary feral hog management in the western region.

1. Coordination

- a. Identify stakeholders and compile lists of land management agencies, national groups, academics, industry groups, and other stakeholders that are involved in feral swine research, management or response to share best practices and coordinate research and management efforts.
 - i. Beyond the transboundary group that convened initially, other examples include the invasive species working group of the Pacific NorthWest Economic Region (PNWER). PNWER coordinates provincial and state issues through working groups and hosts an annual summit that is a prime venue for including feral swine into its programming. Also, Canada has a national Invasive Wild Pig Initiative, charged with developing a national strategy.
- b. Standardize messaging and communication to the public and develop customized key messages for various distinct audiences. Messaging to recreational hunters will be different than messaging to farmers and ranchers, for example.
 - i. A number of states and provinces have adopted the shared educational campaign, [Squeal on Pigs!](#) to create consistency in messaging across the West.

2. Monitoring

- a. Identify and incorporate feral swine survey and monitoring into ongoing efforts for other species.
 - i. For example, the USDA-APHIS-Wildlife Services surveys coyotes to assess livestock predation. Potentially, feral swine surveys could be added to these efforts.
- b. Expand capacity to monitor populations using measures such as distribution, density, disease testing, and rate of population expansion.
- c. Prioritize, develop, and enhance population distribution maps to identify high-risk areas to focus efforts of prevention and detection.
 - i. Some resources exist to identify high-risk areas and to identify gaps in distribution mapping. Examples include:
 1. [USDA-APHIS History of Feral Swine in the Americas](#)
 2. [Understanding habitat co-occurrence and the potential for competition between native mammals and invasive wild pigs \(*Sus scrofa*\) at the northern edge of their range](#)
 3. Connectivity and corridors: implications for wild pig (*Sus scrofa*) range expansion across the North American prairies (currently under peer review)
- d. Expand monitoring networks by partnering with non-traditional organizations to begin or increase active surveillance, e.g. hunting groups, wildlife organizations, etc.

- e. Augment passive reporting (reports of sightings of feral swine evidence) with active monitoring, particularly in high-risk areas, using tools such as trail cameras, GPS collaring, flying surveys, and direct contact with landowners.
- f. To the extent possible and as resources allow, collecting data on domestic pig operations can benefit surveillance efforts, as escapees can become feral quickly.

3. Reporting and notification

- a. Develop and document reporting and notification protocols. Standardized protocols would ensure that communication and response is streamlined and efficient.
- b. Develop and adopt standard notification information requirements, such as date and time of sighting, number of pigs alive and or dead, spatial location, etc.
- c. State and provincial authorities along the international border should discuss and agree on notification protocols for reports that will be shared cross-border.
 - i. For example, Washington and British Columbia have discussed scenarios that would trigger a report to the respective jurisdiction. In this instance, a report made in a U.S. county that abuts the international border will trigger notification, whereas a notification will be provided to the U.S. if the detection is made within 100 km of the international border.
- d. Following action, including instances where a report resulted in no-action, communicate the resolution and summary of investigation or response actions to notification lists and other applicable parties, e.g. individual who reported the sighting.
- e. As resources allow, exercise notification protocols for the purpose of testing response systems. Use exercise after-action feedback to improve readiness, procedures, and notification information.

4. Response

- a. Rapidly respond to confirmed reports no later than 48 hours with a goal of eliminating the entire sounder.
- b. Develop agreements with private landowners, tribal and first nations, and federal and state/provincial land management agencies allowing for monitoring and response actions prior to detection of feral swine.
- c. Promote and develop agreements and mechanisms for resource sharing such as use of helicopters, traps, and qualified individuals that may provide technical support.
- d. Pig sightings are often escapees from domestic pig operations of all varieties from commercial operations to backyard pens. These escapees can become feral very quickly if not promptly captured and returned. In cases where escapees become feral it is important to have the authority to eradicate and test the animals for diseases before they are allowed to breed.

5. Control and Management

- a. Promote and share response and management plans to promote consistency, to identify standard resources, and to facilitate communication between jurisdictions.
- b. As resources and level of effort allow, expand capacity for sample testing for disease and population metrics including opportunities to obtain data such as body weights, standard body measurements, sex, age, location, blood samples.
- c. Standardize data collection, storage, and data sharing between authoritative data sources.
- d. Clearly and consistently message the problems associated with allowing recreational hunters to control populations. In most instances, recreational hunting is not an effective approach to eliminate wild pig populations and there is evidence that it can make the problem worse.
- e. Identify and prioritize research needs to enhance management activities such as mapping of priority survey areas, and low-density eDNA testing.

Appendix A: Feral Swine Transboundary Workgroup Members

First Name	Last Name	Title	Organization	Email
Katrina	Ackerman*	Senior International Relations Officer	Government of Saskatchewan, Ministry of Trade and Export Development	katrina.ackerman2@gov.sk.ca
Perry	Abramenko	Inspector/Pest Program Specialist	Government of Alberta, Ministry of Agriculture and Forestry	perry.abramenko@gov.ab.ca
Jared	Beaver	Assistant Professor and Extension Wildlife Specialist	Montana State University	jared.beaver@montana.edu
Martina	Beck	Unit Head, Invasive Fauna	Government of British Columbia, Ministry of Environment and Climate Change Strategy	Martina.Beck@gov.bc.ca
Travis	Black	Deputy Regional Manager, SE Region	Colorado Parks & Wildlife	travis.black@state.co.us
Rick	Boatner	Invasive Species Coordinator	Oregon Department of Fish and Wildlife	Rick.j.boatner@state.or.us
Jacob	Bradford	Bureau of Reclamation	US Bureau of Reclamation, Missouri Basin/Arkansas-Rio Grande-Texas Gulf	jbradford@usbr.gov
Ryan	Brook	Associate Professor	University of Saskatchewan, College of Agriculture and Bioresources	ryan.brook@usask.ca
Justin	Bush	Executive Coordinator	Washington Recreation and Conservation Office, WA Invasive Species Council	justin.bush@rco.wa.gov
Michelle	Cox	Region 1 Invasive Species Program Coordinator	US Forest Service	Michelle.Cox2@usda.gov
Stephanie	Criswell	Invasive Species Program Manager	Montana Department of Natural Resources and Conservation, MT Invasive Species Council	scriswell@mt.gov
Wayne	East	Animal Health Division	Colorado Department of Agriculture	wayne.east@state.co.us

Megan	Evans	Executive Director	Alberta Invasive Species Council	info@abinvasives.ca
Slade	Franklin	Weed and Pest Coordinator	Wyoming Department of Agriculture	slade.franklin@wyo.gov
Leanne	Heisler	Wildlife Biologist	Government of Saskatchewan, Fish, Wildlife & Lands Branch, Ministry of Environment	leanne.heisler@gov.sk.ca
Ron	Howell	Assistant Chief of Law Enforcement	Montana Fish, Wildlife & Parks	RHowell@mt.gov
Anna	Izzard*	Appeal Coordinator	Government of Saskatchewan, Provincial Appeal Panel	anna.izzard@scic.ca
Dr. Susan	Keller	State Veterinarian	North Dakota Department of Agriculture	skeller@nd.gov
Jason	Kloft	District Supervisor	USDA APHIS Wildlife Services, Kansas Wildlife Services	Jason.M.Kloft@aphis.usda.gov
Quentin	Kujala	Chief of Staff, Director's Office	Montana Fish, Wildlife & Parks	qkujala@mt.gov
Thomas	Lines	Operations Officer	U.S. Custom and Border Protection, Havre Sector HQ	thomas.d.lines@cbp.dhs.gov
Emily	Lomas	Terrestrial Invasive Fauna Specialist	Government of British Columbia, BC Ministry of Environment and Climate Change Strategy	Emily.Lomas@gov.bc.ca
Heidi	McMaster	Environmental Protection Specialist-Regional IPM Coordinator	US Bureau of Reclamation-Columbia Pacific Northwest Region	HMcMaster@usbr.gov
Dr. Brandon	Munk	DVM, Wildlife Branch	California Department of Fish & Wildlife	Brandon.Munk@wildlife.ca.gov
Steve	Myers	Senior Program Manager	Pacific Northwest Economic Region	steve@pnwer.org
Dale	Nolte	Feral Swine Program Manager	USDA APHIS Wildlife Services, National Wildlife Research Center	dale.l.nolte@usda.gov
Maggie	Nutter	President	Marias River Livestock Association	nutter@northerntel.net

Ryan	Powers	District Supervisor	USDA APHIS Wildlife Services, North Dakota Wildlife Services	ryan.a.powers@usda.gov
Cara	Riwai-Couch	Natural Research Specialist	US Bureau of Reclamation	criwaicouch@usbr.gov
Kevin	Shaffer	Fisheries Branch Chief	California Department of Fish & Wildlife	kevin.shafer@wildlife.ca.gov
Terry	Smith	Assistant State Director	USDA-APHIS-Wildlife Services, Washington Wildlife Services	Terry.L.Smith@usda.gov
Bill	Sparklin	Invasive Species Biologist	US Fish & Wildlife Service	william_sparklin@fws.gov
John	Steuber	State Director	USDA APHIS Wildlife Services, Montana Wildlife Services	john.e.steuber@usda.gov
Dr. Tahnee	Szymanski	Asst. State Veterinarian	Montana Department of Livestock	tszymanski@mt.gov
James	Tansey, PhD*	Provincial Specialist, Insect/Vertebrate Pest Management	Government of Saskatchewan, Ministry of Agriculture	james.tansey@gov.sk.ca
Matt	Tyree*	Manager, Fisheries Unit	Government of Saskatchewan, Ministry of Environment	matt.tyree@gov.sk.ca
Wendy	Velman	State Botanist	US Bureau of Land Management, Montana Dakota Office	wvelman@blm.gov
Darby	Warner*	Executive Director of Insurance	Government of Saskatchewan, Saskatchewan Crop Insurance Corporation	darby.earner@scic.ca
Karen	Wickerson	Rat and Pest Program Specialist	Government of Alberta, Agriculture and Forestry	karen.wickerson@gov.ab.ca
Kate	Wilson	Commission Administrator	Upper Columbia Conservation Commission	kate.wilson@mt.gov
Marnie	Zimmer	Canadian Cooperative Health Cooperative	University of Saskatchewan, National Office	mzimmer@cwbc-rscf.ca
Nic	Zurfluh	Invasive Species Section Manager	Idaho Department of Agriculture	nicholas.zurfluh@isda.idaho.gov

*Participated on workgroup, unable to comment on recommendations.