



Montana Invasive Species Council

Tuesday, August 21, 2018

9:00 a.m. to 3:00 p.m.

Location: Little Big Horn College
8645 S. Weaver Drive
Crow Agency, MT

9:00 – 9:10 a.m. Welcome and introductions

9:10 - 9:40 a.m. –Administrative Business

- Roll call and confirm quorum
- Action Item: May 23 meeting minutes
- Action item: MISC revised budget
- MISC Updates

9:40 – 10:00 a.m. – Montana Weed Control Association presentation

10:00 – 12:00 a.m. – MISC Project Updates

- Law review, listening session, summit
- Western Governors' Association Biosecurity and Invasive Species Initiative and Workshop
- Missouri River Invasive Mussel Pilot Project
 - Action: Adoption of Central Eastern Montana Invasive Mussel Partnership Agreement
- Science Advisory Panel
- Interagency All-hazards ICS Team
- All-taxa plan

Break for lunch

1:00 – 2:00 p.m. – Species and Vector Updates

- American Bullfrog
- White-nose Syndrome
- Donated hay
- Feral Horses
- Pine shoot beetle and EAB deregulation
- Ventenata and medusahead



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9:00 a.m. to 3:00 p.m.

2:00 – 2:30 p.m. – Education & Outreach

- E&O Committee Report
- Windfall presentation

2:30 - 3:00 p.m. - Wrap-up and Adjourn

- AIS Update and EQC AIS funding proposal
- National Plant Board Meeting
- Other agency/org. updates
- New business
- Public comment

Agenda is subject to change and item times are approximate. Actual times may vary by up to one hour. Visit <http://dnrc.mt.gov/public-interest/meetings-and-events> for the most updated meeting information. The Montana Department of Natural Resources and Conservation will make reasonable accommodations for persons with disabilities who wish to participate in this public meeting. For questions about accessibility or to request accommodations, please contact Stephanie Hester at 406-444-0547 or shester@mt.gov as soon as possible before the meeting date.

MEETING MINUTES

Meeting/ Project Name:	Montana Invasive Species Council		
Date of Meeting:	May 23, 2018	Time:	10-4
Minutes Prepared By:	Kate Wilson	Location:	Montana State Capitol, Helena

1. Welcome and Introductions:

Bryce Christiaens opened the meeting at 10:05 a.m.

- Round robin introductions

2. Attendees

MISC Voting Members: Dennis Clairmont (CSKT), Dave Burch (MT Dept of Ag), Mike Miller (MT Dept of Transportation), Jan Stoddard (MT Dept of Commerce), Steve Wanderaas (McCone Conservation District), Andy Welch (Northwestern Energy), Tom Woolf (MT Fish Wildlife and Parks), Leigh Greenwood (TNC), Alyssa Piccolomini (MDA - for Kim Mangold), Dennis Longknife (Fort Belknap), Mike Miller (MDT), Steve Tyrrel (Ag representative)

MISC Federal Partners: Carmela Romerio (BLM), Gary Adams (USDA APHIS), Bill Sparklin (USFWS), Monica Pokorny (NRCS)

MISC Members Phone: Alec Underwood (National Wildlife Federation), Laurie Shafer (Fort Peck Tribe), Jane Mangold (MSU Extension)

Other Attendees: Stephanie Hester (DNRC), Kate Wilson (DNRC), Bryce Maxwell (Montana Natural Heritage Program), Hope Stockwell (Legislative Services), Hallee Kansman (University of Montana Law School), Rachel Frost (Missouri River Conservation Councils/CEMMRT), Mark Bostrom (DNRC), Bill Whitacre (Western Governors' Association – phone)

3. Agenda and Notes, Decisions, Issues

Topic	Discussion
Environmental Quality Council/AIS state funding mechanisms update Hope Stockwell, Legislative Services	<ul style="list-style-type: none"> • EQC next Tuesday and Wednesday (May 29/30) • AIS Program funding mechanisms <ul style="list-style-type: none"> ○ Watercraft fees, angler prevention pass, hydro fees, gas tax revenue generated by motorboats ○ Gas tax allowed because for 'off road' purpose • Handouts on what types of boats are out there, which ones register in the state • How much gas do boats use in Montana? • State parks currently get some of the motorboat gas tax <ul style="list-style-type: none"> ○ 1977: 28,000 motorboats using 150 gallons/year ○ 2018: Over 100,000 registered boats (69,000 have purchased the 3 year decal – best number we have right) ○ Based on calculation of 169 gallons per year/18.3 gallons per hour • FOAM, Walleyes Unlimited, MOGA estimate they use ~500 gallons a year (could generate up to \$9.3M annually) • Current fees generating \$6.9M annually • Discussion about not continuing to include hydro fees in state funding mechanism • Scenarios: runs through different options – out of state angler prevention pass (reduce). Idaho model (sticker fee for motorized, non-motorized). • Come in person to provide public comment or submit comments to hstockwell@mt.gov prior to the meeting. • Current: ~\$14M for 2 years (\$6.2M annually allocated to FWP/DNRC [\$355k/\$500k grants]) • Current requirements for Montana registration of boats: pay a one-time only registration fee to the state. Every 3 years must get a 'validation decal' from FWP (free). Helps keep track of boats. Nothing now for a decal related to AIS. Could do separate from registration or find a way to incorporate in current registration process.
Welcome John Tubbs	<ul style="list-style-type: none"> • Welcome back to Helena • Visited with Director of MDA – honey bees infected with mites in quarantine (small hive beetle – a regulated pest, but first detection in MT) <ul style="list-style-type: none"> ○ MDA dealing with a real issue today – MT number 2 in honey production. Serious threat to agriculture – not just honey industry but role as pollinators. ○ Brings to attention the value of MISC and the all-taxa approach • Emerald ash borer detection in South Dakota a big concern

	<ul style="list-style-type: none"> • Executive budget proposals happening now – agencies meeting to discuss. Would like to discuss hydro fees, as important part of funding scheme now. • Key that legislature did not have continued funding – one time only, renewal required in next session. Nobody backing away from seriousness of issue – so solution needs to be found. • Upper Columbia Conservation Commission (UC³) position now based in Missoula (Kate Wilson) • Reclamation program has been hosting \$500k AIS grants. Have often been the 'start up entity,' but now in existence multiple years, so looking to shift funds to new source (not reclamation). Needs Governor's approval.
<p>Administrative Business: Minutes discussion and approval</p> <p>Bryce Christiaens, Stephanie Hester -</p>	<p>February 20 Minutes</p> <ul style="list-style-type: none"> • Quorum confirmed • A reminder that if members send a proxy, they need to inform Chair Christiaens before the meeting. • February 20, 2018 meeting minutes <ul style="list-style-type: none"> ○ <i>Motion:</i> Steve Wanderaas motioned to approve minutes, Andy Welch seconded ○ <i>Discussion</i> – some of action items from February meeting didn't make it to agenda for this meeting. Stephanie Hester to make sure that they are captured and moving forward. ○ <i>Vote:</i> unanimous approval. Motion passes. <p>Budget for MISC</p> <ul style="list-style-type: none"> • Did not get either grant (Noxious Weed Trust Fund, Integrated Pest Management) so adjusted budget (\$7500 and \$8500 removed) • Some padding but recommend waiting on voting on a budget now as need actuals from Science Advisory Panel and summit planning (vote on next meeting) • Move to action item for next meeting <p>Invasive Tree Committee</p> <ul style="list-style-type: none"> • Jasmine Reimer has volunteered to be chair – has been active on Russian Olive and salt cedar issues. Stephanie Hester and Gary Adams support Jasmine as chair. <ul style="list-style-type: none"> ○ <i>Motion:</i> Leigh Greenwood motioned to elect Jasmine as chair of the invasive tree committee, Laurie Shafer seconded ○ <i>Discussion</i> – none ○ <i>Vote:</i> unanimous approval. Motion passes. <p>MISC Member Vacancies</p> <ul style="list-style-type: none"> • Steve Wanderaas has found someone interested in private landowner position. Needs to connect with Stephanie on process to get considered/appointed by the Governor. • 2 additional vacancies (Northern Cheyenne, Little Shell Tribe of Chippewa) – Gary Adams offered to work with contact at Northern Cheyenne <ul style="list-style-type: none"> ○ Dennis Longknife working with Stephanie Hester on MISC hosted Tribal Invasive Species Forum. Good way to engage tribes not represented on MISC. ○ Northern pike in trout streams and interest on the reservation in restoring the native trout population. Need support in community and could use advice from MISC on best approach to address issue. Put on agenda for next meeting. ○ Jan Stoddard: New Tribal Officer at Commerce, so could work with them to try to engage tribes as well. <p>Other MISC Updates</p> <ul style="list-style-type: none"> • Ag radio show (Northern Ag Network) would like to interview someone from MISC on August 28 – if anyone from MISC willing to be point person, looking for volunteers to assist with drafting questions and being interviewed. Outreach in eastern Montana <ul style="list-style-type: none"> ○ Steve Tyrell offered. Steve Wanderaas can 'pitch in' as well. • USDA Veterinary Services/Dept of Livestock: Stephanie Hester and Kate Wilson participated in 3-day functional exercise for Foot and Mouth Disease. Recognition from state that we aren't well positioned for invasive species emergency response. Discussing with Disaster and Emergency Services (DES) to develop and train an interagency response team – DES willing to work with MISC to provide certification and training to ensure team has prerequisites. <ul style="list-style-type: none"> ○ Non-fire/flood emergencies do not have teams in place ready to be deployed ○ Bryce C to Gary A: Other state teams in North America to use as model? Not really. Fed team only organized ICS approach that exists. California or Florida (big ag states) might be exception. Not usually a well-organized state equivalent. Trying to integrate fed system into state very challenging (no infrastructure in place). Gary would support concept, but not aware of any great models out there. Long term discussion, but should pursue.

	<ul style="list-style-type: none"> ○ Stephanie H: County Assist Teams as model in the state (flood/fire) ○ Steve T: Fully support working towards that capability. Identify roles and team members based on regularly authorities would be beneficial – all state agencies, pre-identified individuals with ICS training would be valuable to state. ○ Mike M: MDA has Emergency Services person that should be consulted. MDA staff has been exposed to some ICS training, but not sure how other agencies ○ Tom W: FWP has a rapid response exercise (flood type scenario), included training. FWP trying to build capacity for rapid response where they have authority (chronic wasting disease example). Build infrastructure so that there are trained staff available ○ Bryce C: This has come up in every one of the response exercises (tree pest, mussels), would be great to integrate DES in the next ones. And would support approach ● Mark Bostrom: Funding for MISC was set up for one time only (and UC3). Have gone ahead and made the request to push those positions (Stephanie Hester and Kate Wilson) to permanent. A letter from MISC would be desirable if supported. <ul style="list-style-type: none"> ○ Leigh G: What entities can advocate for state funding? Concern with proper adherence to rules on that. Clarification needed before brought before MISC for sign on letter. ○ Action item for next meeting: draft letter of support
<p>Governor's Summit on Invasive Species</p> <p>Bryce Christiaens</p>	<p>Law Review</p> <ul style="list-style-type: none"> ● Most of interviews wrapped up now (state, federal, local government). Still need to do quite a bit of work with Tribal governments. Meeting in June will be a good opportunity to work through what Tribes have on books for invasive species authority. ● Several rules that have been used for invasive species that weren't intended (e.g. FWP seizure of evidence vs. AIS Act on quarantining a boat because of precedent). ● Introduce law student (Hallee Kansman – UM) ● Any comments or initial thoughts on Table of Contents? Full compendium will have all language associated with statutes, but too many pages (135) to print out drafts <ul style="list-style-type: none"> ○ Leigh G: Header of 'insect pests,' suggest 'insects and disease' to be more inclusive ○ Leigh: Federal authorities moving out of Canada – Plant Protection and Quarantine (add). Quarantine 37 – might apply to onions, potatoes, etc. (things that get planted in the earth). ● Gaps identified but in general not a lack of authority uncovered in interviews/literature review <ul style="list-style-type: none"> ○ Regulatory & enforcement issues: Bonding issue (Supreme Court Judge Committee) <ul style="list-style-type: none"> ▪ Counties authority to enforce noxious weeds growing on private property (how to force private property owners to act) ○ Comprehensive invasive species list: non-noxious weeds mixed bag. How to we incorporate regulatory for all taxa list? How do we get species listed? Where is list housed? Some good models out there to look at – needs to be a larger conversation about how to implement. ○ Lack of ownership on aquatic invasive plants – MDA feels that authority has been given to FWP by Bullock administration (2011 transfer of Aquatic Plant Specialist from MDA to FWP). FWP views plants as agricultural issues (not fish and wildlife issue). <ul style="list-style-type: none"> ▪ Moving forward on species like flowering rush, has been an issue. No state leadership on the issue currently. ▪ Same model for federal funding for inspection stations (match) now extended for flowering rush and clear that this is a gap for the state ▪ What is solution? Legislative decision probably. Also have aquatic plants panel at the 2018 Summit. Have recommendation come out of summit. ▪ What about EWM? Has MDA taken that on? FWP Aquatic Plant Specialist works on Jefferson Slough ▪ Tom: Noxious weed law houses aquatic plants (orphan species – need another look and attention). FWP surveys for them annually. ▪ Stephanie: DNRC AIS grant program has funded multiple aquatic invasive plant control projects over the years. ○ Listing of AIS – species like northern pike (clear economic benefit, but also clear ecological impact), how to address? Need larger discussion on how state addresses, especially given downstream states and Tribes actively working to eliminate species they consider invasive but we do not. ○ Management of invasive species vs. vectors (firewood, hay and watercraft examples). Organize regulations/statutes around vector protects better for all species. A number of examples that we have uncovered in the law review process. ○ Funding for invasive species – different jurisdictions do differently, lack of funding, complications on sharing responsibilities across federal, state and Tribal lands ○ Data sharing and management across entities: privacy laws/issues (Customs and Border Protection example of lack of authority under Lacey Act).

	<ul style="list-style-type: none"> ▪ Dennis Longknife: Minnow survey conducted by Fort Belknap. Not sure about whether they will be willing to share or not. <p>Listening Sessions</p> <ul style="list-style-type: none"> • Once we have compendium and identified issues list in more of a finalized form, will be moving forward with listening sessions across the state (similar to how MISC developed the framework). Get public comment on invasive species issues and potential solutions – things that have worked at local level that could be applied at larger level (and vice versa). • Make sure we have good coverage across the state – ask MISC partners to help organize and get the word out about listening sessions. • Need to have everything vetted and proposed (recommendations prior to summit) before November 15-16 Summit • Last year: Miles City (little participation), Fort Peck (0 attendees) • Volunteers: Steve Wanderaas. Leigh G (plant pest theme). • Leigh G: Organize by geography or topic? Bryce C: Probably geography but could depend on if there are specific issues in specific places (could be mix of theme and coverage). • Stephanie H: Need to ensure coverage in eastern Montana - Miles City/Wolf Point, Fort Peck suggested • Jan S: Who do you want to attend? What is ideal demographics? Bryce C: Practitioners, managers, interest groups, etc. <p>Western Governors' Association Workshop – November 14, 2018 (Helena)</p> <ul style="list-style-type: none"> • Bill Whitacre: WGA incoming chair gets choice of topic to focus on for year intensively. Incoming Governor of Hawaii electing to focus on biosecurity and invasive species. • Series of workshops format – 4 for this initiative, spaced 4-6 weeks apart. Intent of those is to get a wide variety of stakeholders in the room (state, federal, Tribal, interest groups, NGOs, etc.). Record and livestream all workshops (publish and incorporate in year 1 report that informs policies and recommendations). • Governor Bullock interested in holding workshop – makes sense to hold in conjunction with the MISC Summit. Just starting work on agenda. Bill working with Stephanie and Kate on organization, panel themes/topics and speakers. • WGA: 4 workshops with specific themes. 1. Lake Tahoe (Sept) – cross border management of established species. 2. Cheyenne, WY (Oct) – restoration after infestation. 3. Helena, Montana (Nov) – EDRR. 4. Hawaii (Dec) – biosecurity and transportation. • Will be some overlap between the WGA Workshop and MISC Summit, though will likely have more regional/national presence at the WGA workshop. MT summit going to focus on state-specific issues, whereas WGA workshop will focus on regional level issues and solutions. • Mike M: Hot topic that you might want to consider – Disaster and Emergency Services, idea for model of interagency response team. Bill: Think that would be fascinating panel – and makes sense for using Montana as model for ICS and emphasizing the need for EDRR. • Stephanie H: Will work with planning team to come up with topics/themes and speakers (for both MISC Summit and WGA workshop). Will present to Patrick Holmes at the Governor's Office for consideration and feedback.
<p>Project and Agency/Organization updates</p> <p>Stephanie Hester, Kate Wilson, Tom Woolf, Bryce Christiaens,</p>	<p>Economic impact study (mussels only) – Kate Wilson</p> <ul style="list-style-type: none"> • Working with UM – Flathead Lake Biological Station socio-economist Nanette Nelson • Steering Committee: Kate Wilson, Tom Woolf, Steve Tyrell, Stas Burgiel (NISC), Pat Riley, Rachel Frost, Tenlee Atchison, Lori Curtis, • Steve T: Pat Riley (retired from DNRC water resources) contacted GIS specialist to pull data on water users/surface water rights that has been transferred to economist for review • Tom W: Add Tribal/cultural values to chart <p>Missouri River Pilot Project – Stephanie Hester</p> <ul style="list-style-type: none"> • National Invasive Species Council (NISC) funding received in 2017 – project has been going on for a year, but completed by September 30th (no option to extend) • State, federal, Tribal, non-governmental coordination – issues specific to central and eastern Montana (different than west of the divide) • January workshop: Integrate information into EDRR supplemental plan that is specific to eastern Montana • Geographic response plan concept, importance of EDRR: Canyon Ferry, Tiber, Fort Peck • Document that all partners sign on to – understand roles and responsibilities (e.g. state takes the lead on response, but partners can assist locally in education and outreach, etc.) • White paper on how state of Montana share's invasive mussel response (lessons learned) for regional application. Contractor working on currently – conducting interviews (4 question interviews with relevant parties).

- State-wide approach but focus on Missouri River for this pilot. UC³ doing similar activities west of the divide in the Upper Columbia basin.
- Share whitepaper with regional groups – consider topic for summit or WGA workshop
- Held regroup meeting on Monday – biggest role for Central & Eastern Montana Mussel Response Team (CEMMRT) is education and outreach. Big focus on irrigators.
- Fort Peck mussel tabletop exercise to be held August 28 (final meeting for Missouri River pilot)
- Conservation Districts running watercraft inspections – kudos to Steve Wanderaas for reaching out to CDs on issue. Contract with FWP and Garfield CD (flowing wells station).

Science Advisory eDNA panel – Tom Woolf

- Panelists: Caren Goldberg (WSU, biggest body of eDNA published work), Jim Darling (EPA – Asian Carp eDNA), Jim Snider (California Fish & Wildlife), Karen Vargas (previous Nevada AIS Coordinator, chair of WRP monitoring committee) and John Amberg (USGS Research Fish Biologist), Robert Bajno (chemist for Fisheries and Oceans Canada)
- Technology being used throughout the west, but not by state agencies. Concern with state of science and how to use eDNA for state management, resources and political implications of a detection. Currently not recognized as
- Keyed into gaps associated with eDNA for mussels – ‘trust issues’ with agencies. No body in samples (just water that detects DNA), so difficult to rectify management implication (e.g. closing waterbodies or access points, quarantine, rule-making, etc.)
- Panel laid out steps forward to break down barriers, lead to acceptance of technology. But no one entity to go to for guidance/leadership.
- Recommendations:
 - Develop, refine and agree upon method/standards with adaptive capacity
 - Develop consistent language
 - Develop communication plan between managers and labs
 - Coordinate across western partners and cross-border partners via WRP/WGA
 - WGA workshop could host panel session on topic as well (Nov 14 workshop)
 - Identify risk tolerance and map mang. actions for detection scenarios and trends
 - Test assays with round robin study
 - Gene sequence any positive result to confirm
 - Optional conditions for eDNA detection during mussel spawning
 - Use eDNA to contribute to the weight of evidence
- Action item: discussion/approval of recommendations
 - Recommendations final now – panel has provided feedback already
 - Could either pass recommendations as they are or draft letter and move recommendations forward to the Governor’s Office, EQC, Western Regional Panel, Western Governors’ Association
 - *Motion:* Steve W. motioned to approve panel recommendations as MISC recommendations, Steve Tyrell seconded
 - *Discussion* – clarification on action. Who is meant to accomplish recommendations? Pending approval take recommendations to WRP and WGA for consideration (taking on at regional level). MISC duty ends with approving recommendations and handing them off. Will keep on issue even when we push to regional partners.
 - *Public comment:* Mark Bostrom – a lot of great questions that came from the audience at the panel. This technology does need work to be used as a management tool – this is really a first step. Support advancing to Governor’s office and handing off to regional organization.
 - *Vote:* unanimous approval. Motion passes.
- We budgeted for 2 panels – what are other potential topics for Science Advisory Panel? Discuss at future meetings.

Upper Columbia Conservation Commission – Kate Wilson

- June 13 meeting at the Flathead Lake Biological Station
 - State funding mechanism discussion/recommendation
 - Northwest Power Planning & Conservation Council
 - Vector management: seaplanes, fire equipment, 310 permits
- E&O Strategy for Upper Columbia: capture all existing efforts, address gaps
- Monitoring Plan for Upper Columbia: capture all existing efforts, incorporate eDNA protocols in addition to traditional plankton tows/microscopy
- Bureau of Reclamation and DNRC funding to cover development of materials, education & outreach, expansion of monitoring network (beyond Flathead basin), pilot project for marinas and boat shops

Emerging Issues (American bullfrog)

- Bryce Maxwell (Montana Natural Heritage Program) caught expansion of American bullfrog
- Bitterroot bullfrogs infestation widespread, but not moving up the Flathead River, about to enter the valley (Polson/Ninepipes area big concern – impacts on waterfowl)
- Introduced in the 1940s – possibility of controlling along the Yellowstone, but probably not in the Bitterroot (widespread). They will eat everything (including each other, rattlesnakes, ducklings, smallmouth bass, etc.).
- Steve T: Who has authority over? Management? FWP has regulatory authority over management. Effort along the Yellowstone (MNHP, USGS) to survey extent of spread. USGS doesn't do management and FWP overloaded other matters so no active management going on currently.
- Dennis L: Northern leopard frog project with CSKT (research). After 2 years of data collection, release sites expanding into new areas, deemed a success. Bullfrogs on radar for impacts.
- American bullfrog agency meeting on what is feasible, then report back to full council at next MISC meeting

Agency & Organization Updates

- CSKT (Dennis Clairmont)
 - Concern with invasive grass (ventenata) on bison range, over 100k acres
 - Medusa head started at Valley Creek now covering 60k acres
 - White top exploding on the reservation
 - Virgil Dupuis – flowering rush USACE funding
- DNRC/APHIS/TNC
 - Gary A: Status of emerald ash borer – deregulation federally? Very difficult to regulate a species that moves widely on its own and by humans. USDA would like to see move from enforcement to management (biocontrol). Will have opportunity to provide feedback on proposed rule – MISC will have opportunity to provide input.
 - Leigh G: Propose rule to remove regulation. Proposed rule to public comment timeframe unknown – 'cry wolf' a lot because timeline hard to predict. Will need to provide comment within 60 days when the time comes. Huge implications for west vs. east states. Even if it makes it out rulemaking to comment – actual rulemaking could take years. Frustrating when trying to provide input. South Dakota (Sioux Falls) only 10-hour drive – firewood vector.
- Tourism (Jan Stoddard)
 - Another record year for tourism (Glacier and Yellowstone)
 - Record number of RVs sold, more Americans predicted to travel
 - For next 4 weeks, work with 150 visitor info centers in Montana – if there are specific information you want to incorporate, provide information to Jan (bulleted talking points)
 - Firewood, Clean Drain Dry (mandatory inspections), weed free hay, cleaning off-road equipment, Play Clean Go as topics to send forward – E&O Committee
 - Include information that we would want visitor services staff and volunteers to say to visitors
 - Infographic as option – Jan had asked to put up in visitor area bathrooms
- MDA (Matt Miller)
 - Statewide Vegetation Management Plan now up for review
 - Looking for suggestions for vendors if you know anyone who does that kind of work
 - Busy time of year – have been asked a few questions. What is MISC doing for the terrestrial community? Education & outreach, data management. What else?
 - Steve W: Have to remember not to overreach and step on toes, so I find that question hard to answer too
 - Matt M: Ensure that we are addressing issues for terrestrial community as well as other priority issues (e.g. mussels, emerging species)
 - Steve T: Terrestrial weed guy by occupation. Challenge when you have well established group like Noxious Weed Association and MDA rules. MISC can fill gaps but can also have mutually beneficial initiatives (medusahead and ventenata)
 - Stephanie H: Public meeting – anyone can attend MISC meetings. MDA serves on Council to represent terrestrial weed community and ensure terrestrial weed perspective. Noxious Weed Education Campaign coordinator on MISC education & outreach committee and MDA Tree Pest Committee chair.
 - Jane M: Agree with Steve T's comment – terrestrial noxious weed world has been well organized for many years now. Maybe a way for MISC to best interact with them is to

	<p>look at their lessons learned and try to apply them/call on terrestrial folks to help guide us as we move forward addressing other issues/species</p> <ul style="list-style-type: none"> ○ Bryce C: Look at the way terrestrial species get listed, one example of a way we can learn from their organizational structure ○ Gary A: on board of advisors for a couple of terrestrial groups. Often have agenda by which organizations pitch what they are doing and discuss. Maybe MISC should get 10 min on agenda for update and advice on how to engage <ul style="list-style-type: none"> ● TNC (Leigh Greenwood) <ul style="list-style-type: none"> ○ Forest pests that adhere to anything – gypsy moth, spotted lanternfly movement (pallets, RVs, boats, etc.). Not always firewood – long distance highway dispersal a big issue. Working on awareness issue. ● NRCS (Monica Pokorny) <ul style="list-style-type: none"> ○ Appreciate MISC and education efforts. Glad to see new FWP materials that better address irrigation and eastern Montana demographics (beyond boats) ● APHIS (Gary Adams) <ul style="list-style-type: none"> ○ Trainer who did tree pest willing to come back for non-tree pest exercise if desired. Gary would request if there is interest. Need to know what kind of incident to exercise and timeline ○ Steve T: Could be good for legislators to attend ○ APHIS provided traps to detect emerald ash borer to cities and DNRC ● EXTENSION (Jane Mangold) <ul style="list-style-type: none"> ○ New update on weed identification guide. Now have link for each species (extension or NRCS) that speaks to management of invasive weeds. ○ Fact sheets for newer/high priority invasive terrestrial plants ○ Ventenata tour on Tuesday, June 26 with BBQ – substantial infestation around Bozeman. Invite to MISC. Include in MISC update/ListServe ● DNRC (Mark Bostrom) <ul style="list-style-type: none"> ○ This body could be advisory body to DNRC if AIS grant funds move from reclamation ● FWP (Tom Woolf) <ul style="list-style-type: none"> ○ Over 6k boats inspected this season, 3 mussel-fouled. Stations are open. Data app working. Idaho has 18 mussel boats intercepted. (Mostly get notifications beforehand from AZ and NV. Great year for mussel growth in the Lower Colorado. Years working in the west to enhance notification and communication going to fruition now.) ○ Contracted with CSKT, Blackfeet, Missoula County, Garfield CD ○ Whitefish Lake, Glacier, Bighorn mostly using education materials and protocols ○ Passport for low risk boaters going well – good feedback so far ○ Monitoring efforts have been initiated. Tiber and Canyon Ferry sampling will continue to be intensive <ul style="list-style-type: none"> ▪ DNA plan on Tiber this year (sampling/analysis) ○ Education and outreach: Work closely with DNRC (Kate) on targeted education and outreach. PR firm targeting out of state boaters. ○ Broadus site: roving crew to pop up periodically to see traffic. Has game camera on order, will be deployed to get baseline data on boat traffic. ○ Steve T: Game cam that collects nighttime data? Concerned about Midwest traffic. Tom W: Trigger distance shorter, hard to get close enough to the road. ○ CSKT first station to conduct night inspections (24/7) ○ Steve T: Interest of marina operators to become part of program -inspections at marina. Tom W: Option to certify private vendors as inspection stations (esp. afterhours).
Committee Reports	<p>Education & Outreach – Kate Wilson</p> <ul style="list-style-type: none"> ● RFP review for websites/materials – Windfall firm out of Missoula, MT selected by review committee at public meeting this morning. Contract to be awarded very soon. ● MISC Annual Report: feedback in next couple of weeks. Send to E&O Committee for discussion. Discuss best printing option. ● ISAN training: Fort Peck June 12, Missoula June 19, Great Falls June 28 – send poster to Dennis for distribution to Tribes ● Rotunda event March 1st (during session) – National Invasive Species Week. Opportunity to engage legislators. Interested entities contact Stephanie or Kate. ● AIS inventory (UC3) available if interested ● Draft messaging for visitor information centers – send around for feedback ● Steve T: Pipes for mussel displays. FWP will make available. <p>Data management – Bryce Christiaens (Missoula County), Bryce Maxwell (Montana Natural Heritage Program)</p> <ul style="list-style-type: none"> ● Incorporate invasive species data into Montana Natural Heritage Program

- Bryce M: beta sites. Montana Field Guide Invasive and Pest Species (AIS, noxious weeds, forest pests, agricultural pests). Forest and ag pests need a lot more information added, AIS and noxious weeds comprehensive already.
- Turn on live? It is ready if MISC is ready. Download guides by clicking on PDF
- Non-native species section: Used to be grab bag of all non-listed species (over 400!), now categorized by family. Ag crops – have them in field guide but not listed under category?
 - Forbs (269) and grasses (80) – classes still very big How valuable?
 - Steve T: What is goal of project? Non-native species include crops that aren't invasive – why list here? Confusing
 - Bryce C: Committee discussed dropping from key area on website
 - Bryce W: Value is 'watch species' – not accounted for elsewhere
 - Monica P: What about making 'noxious weeds and non-native plants' one category
- Discussion on ag crops: different than invasive species. Don't think they belong. Could cause some issues with perception. One option - test out how users actually use information.
 - *Motion*: Steve T. motioned to make site live with exception of ag crop listing, Steve W. seconded.
 - *Discussion* – none
 - *Vote*: unanimous approval. Motion passes.
- WAFWA list on sage grouse habitat – weakness was invasive species data management. Keep in mind and also tie to WGA workshop.
- Predictive models: data management committee to continue to discuss value based on species
- FWP data app now available for partners to report monitoring and survey efforts
- Missing data is likely due to the fact that we haven't added all data sets yet or information has not been shared with MNHP
- Geographic Response Plan update (not part of data management committee, separate project of interest): ARCGIS online project. Agencies can view data layers at different zooms. Can feature story maps on websites as well. Priority areas include Flathead Lake, Tiber Reservoir, Canyon Ferry Reservoir and Fort Peck Reservoir.
 - One gap: Irrigation district boundaries, canals and diversions
 - Docks and piers can digitize from aerial maps and add manually

Tree Pest – Stephanie Hester (for Katie McKeever)

- Katie McKeever took new position with USFS. Needs approval from USFS (new agency) to continue to serve as chair
- Over 30 attended tree pest exercise (hosted by APHIS) – scenario of emerald ash borer in Missoula
- Included city foresters for the first time – very valuable
- Dennis L: fire team doing some monitoring for beetles at Fort Belknap
- Action item (that came from tree pest exercise): All taxa rapid response plan discussion/approval. In framework that we need to develop (after invasive mussel EDRR guidelines). Part of contract that we already have in place, and have budget as well. Framework document.
- Steve W: Reviewed statewide EDRR for mussels at Lewistown meeting – good plan
- Bryce C: Makes sense to have this type of framework in place for concept of interagency response team for invasive species detections
 - *Motion*: Steve W. motioned to create general all-taxa EDRR plan, Leigh G. seconded
 - *Discussion* – none
 - *Vote*: unanimous approval. Motion passes.

Firewood – Leigh Greenwood (for Amy Gannon)

- Recommendations for MISC to discuss/support:
 - Support education & outreach efforts targeting entities most likely to transport firewood into Montana
 - Support and develop cross agency education & outreach
 - Explore measures to prohibit firewood transport through MCA or rules
 - *Motion*: Steve T motioned to accept recommendations, Steve W. seconded
 - *Discussion* – how do 3 recommendations align with national recommendation from the National Plant Board? All different states are to pursue firewood regulations on their own, though template could be

	<p>created (intent of National Plant Board). MT unique in that it is not currently pursuing regulations BECAUSE of an emerald ash borer detection (doing proactively).</p> <ul style="list-style-type: none"> ▪ <i>Vote:</i> unanimous approval. Motion passed. <p>Invasive Trees – Stephanie Hester</p> <ul style="list-style-type: none"> • No report – Jasmine R. to take over as chair • Salt Cedar Team – Steve Wanderaas: No treatment planned as no funding available. USACE planning to continue mapping
Public Comment	<ul style="list-style-type: none"> • None
Wrap Up	<p>Next meeting: August 21, 2018 at capital</p> <p>Other</p> <ul style="list-style-type: none"> • Northern Pike regional forum at PNWER July 24 • MSU Extension store: best way to order new ID guides (\$4.95 per book) – NRCS might be able to supply some of the hard copy booklets. Encourage people to use the e-version of the guide. Bookmarks coming (to hand out instead of books). • MDA might have materials too (Layla Dunlap – follow up) • Steve T: engage noxious weed folks whenever possible. Demonstrate leadership on aquatic invasive plants by addressing head on (pose risk to the state) – should be priority issue. <p>Adjournment</p> <ul style="list-style-type: none"> • <i>Motion:</i> Steve W. motioned to adjourn, Jane M. seconded • <i>Discussion</i> – none • <i>Vote:</i> unanimous approval. Motion passed. <p>Adjourned at 3:55 pm.</p>

Updated 8/8/18

4. Action Items				
Action (From previous meetings)		Assigned	Due Date	Status
1	Request information from members on updates, media, and events for Invasive Species listserve/Bulletin	ALL – send to Kate Wilson	Ongoing	Ongoing
2	Explore becoming partner in 'Squeal on Pigs' campaign, app and hotline (WA, OR, ID)	Kate Wilson/E&O Committee	August 30	Received info on process. Need to see if able to add MT

3	Look at Montana Conservation Menu website as model for invasivespecies.mt.gov website	Kate Wilson/E&O Committee	July 1	Provided info. to contractor
4	Marias River float scheduled for July 12 – Follow up on event to see if there is ability to partner at event	Kate Wilson/Stephanie Hester	June 1	Stephanie presented on MISC
5	Consider sending MISC representative(s) to ISAC functions in DC and providing sponsorship next year – vote on at next meeting	Bryce C./Stephanie Hester	Dec 15	Approved by Exec. Committee
Action (From May meeting)		Assigned	Due Date	Status
6	Discuss/approve adjusted budget at next MISC meeting	Stephanie Hester	July 15	On Aug. 21 agenda
7	MISC to host Tribal Invasive Species Forum	Stephanie Hester and Dennis Longknife	June 14	Complete. Next tribal forum scheduled for Aug 20.
8	Discuss Northern pike issue in trout streams on Fort Belknap at next meeting	Dennis Longknife	Aug. 21	Discussed at invasive species tribal forum
9	New Tribal Officer at Commerce, so could work with them to try to engage tribes as well	Jan Stoddard and Stephanie Hester	June 1	Complete. Working with Carla Lott.
10	We budgeted for 2 panels – what are other potential topics for Science Advisory Panel? Discuss at future meetings (add to agenda for next meeting)	Stephanie Hester and Bryce Christiaens	Aug. 21	On Aug. 21 agenda
11	American bullfrog agency meeting on what is feasible, then report back to full council at next MISC meeting	FWP-Laurie Hanauska-Brown	Aug. 21	Meeting in Polson July 18
12	Draft talking points to incorporate in information to visitor centers statewide, provide information to Jan (bulleted talking points) Firewood, Clean Drain Dry (mandatory inspections), weed free hay, cleaning off-road equipment, Play Clean Go as topics to send forward – E&O Committee	Kate Wilson, E&O Committee, Jan Stoddard	ASAP	Complete and distributed to visitor centers statewide
13	Check with Carol Bearden at MDA to see if MISC can get time on advisory committee agenda	Stephanie Hester	Aug. 21	Stephanie presented to the Noxious Weed Advisory Council July 11
14	Trainer who did tree pest willing to come back for non-tree pest exercise if desired. Gary would request if there is interest. ID what kind of incident to exercise and timeline	Bryce Christiaens and Gary Adams	July 1	In process. Planning for early 2019

15	Ventenata tour on Tuesday, June 26 with BBQ – substantial infestation around Bozeman. Invite to MISC. Include in MISC update/ListServe	Jane Mangold to share. Stephanie Hester to send on to MISC members	June 15	Stephanie attended tour. Ventenata is being discovered in several counties
16	MISC Annual Report: feedback in next couple of weeks. Send to E&O Committee for discussion. Discuss best printing option.	Kate Wilson	June 5	Final draft in process.
17	ISAN training: Fort Peck June 12, Missoula June 19, Great Falls June 28 – send poster to Dennis for distribution to Tribes	Kate Wilson	June 1	Complete
18	Rotunda event March 1 st (during session) – National Invasive Species Week. Opportunity to engage legislators. Interested entities contact Stephanie or Kate.	All – Stephanie Hester and Kate Wilson to organize	March 1	Rotunda reserved.
19	Follow up with MDA Layla Dunlap for ag materials (MISC booths at events)	Stephanie Hester	June 1	Complete

Appropriation/Award	MISC (approved)	MISC (revised)	NWTF	Western IPM	NISC	TOTALS	Difference
	\$95,000		\$8,500	\$15,000	\$60,000		
Council member travel	\$20,000	\$20,000	-	-	-	\$20,000	
Law Review, Summit, Listening Sessions	\$16,000	\$32,000				\$32,000	-16,000
Science Advisory Panel (2 panels)	\$20,000	\$20,000	\$8,500	\$7,500		\$20,000	
Missouri River Pilot*	\$0	\$0	-	-	\$60,000	\$60,000	
E&O	\$20,000	\$18,000	-	-		\$27,500	-7,500
Regional tabletop exercise	\$10,000	\$5,000	-	\$7,500		\$10,000	
Unallocated	\$9,000	\$0					
Expended	\$95,000	\$95,000.00				\$169,500	
Balance	\$15,804						
	\$79,196.03*						

NISC Missouri River Deliverables and Budget

DELIVERABLES	NISC	UC3
Strategic Plan for Coordination	\$ 3,000	\$0
Coordination workshop	\$ 3,000	\$0
Coordinated EDRR Plan for the Missouri River Basin	\$30,000	\$0
White paper—pilot lessons learned	\$ 8,000	\$0
Economic Impact	\$16,000	\$5,000
Expended	\$60,000.00	
Balance	(26,551.50)	
	\$33,448.50*	

**Montana Invasive Species Council
Invasive Species Law Review Compendium**

August 2018 Draft



Montana Invasive Species Council, in partnership with the Montana Department of
Natural Resources and Conservation
2018

Table of Contents

Introduction	4
STATE AUTHORITIES	5
A. General:.....	5
1. Title 7, Chapter 1, Part 2 – Creation of New Boards.....	5
2. Title 7, Chapter 11, Part 10 – Creation and Governance of Special Districts.....	5
3. Title 80, Chapter 7, Part 12 – Invasive Species Council.....	18
B. Aquatic Invasive Species:.....	19
1. Title 4, Chapter 12, Part 13 – Quarantines and Pest Management.....	19
2. Title 4, Chapter 12, Part 39 – Eurasian Watermilfoil Management Area.....	24
3. Title 12, Chapter 5, Part 7 – Resource Protection.....	25
4. Title 23, Chapter 2, Part 3 – Pubic Trust Doctrine.....	28
5. Title 75, Chapter 6, Part 3 – Regional Water and Wastewater Authority Act.....	33
6. Title 75, Chapter 7, Part 1 – Natural Streambed and Land Preservation Act.....	44
7. Title 80, Chapter 7, Part 10 – Montana Aquatic Invasive Species Act.....	51
C. Insect Pests:.....	60
1. Title 7, Chapter 22, Part 23 – County Control of Insect Pests.....	60
2. Title 76, Chapter 13, Part 3 – Control of Forest Diseases and Pest Control.....	61
D. Terrestrial Plant/Noxious Weeds:.....	62
1. Title 4, Chapter 5, Part 1 – Noxious Weed Trust Fund.....	62
2. Title 4, Chapter 5, Part 2 – Designation of Noxious Weeds.....	66
3. Title 4, Chapter 5, Part 5 – Noxious Weed Training.....	67
4. Title 7, Chapter 22, Part 21 – County Weed Act.....	67
5. Title 7, Chapter 22, Part 41 – Control of Nuisance Weeds within Municipality....	79
6. Title 36, Chapter 11, Part 4 – Weed Management.....	80
7. Title 80, Chapter 7, Part 7 – Regulation of Importation or Sale of Noxious Weeds	80
8. Title 80, Chapter 7, Part 8 – Noxious Weed Management Trust Fund.....	83
9. Title 80, Chapter 7, Part 9 – Noxious Weed Seed Free Forage Act.....	86
10. Title 4, Chapter 5, Part 3 – Noxious Weed Seed Free Forage.....	91
E. Vertebrate Pests:.....	102
1. Title 4, Chapter 12, Part 2 – Feed Regulations.....	102
2. Title 7, Chapter 22, Part 25 – County Vertebrate Pest Management.....	104
3. Title 12, Chapter 6, Part 15 – Classification of Prohibited and Restricted Species	105
4. Title 12, Chapter 6, Part 22 – Enforcement of Exotic Wildlife.....	106
5. Title 60, Chapter 7, Part 1 – Livestock on Highway.....	113
6. Title 60, Chapter 7, Part 2 – Grazing Livestock.....	114
7. Title 76, Chapter 12, Part 1 – Natural Areas.....	115
8. Title 76, Chapter 15, Part 2 – Conservation Districts.....	119
9. Title 76, Chapter 15, Part 9 – Coal Bed Methane Protection Act.....	124
10. Title 76, Chapter 16, Part 1 – Grazing Conservation Act.....	126
11. Title 81, Chapter 4, Part 3 – Herd Districts.....	130
12. Title 87, Chapter 5, Part 7 – Exotic Wildlife and Wildlife Protection.....	140

FEDERAL AUTHORITIES.....148

- 1. Title 39, Part 4, Chapter 30 – Alien Species Prevention and Enforcement Act....148
- 2. Title 7, Chapter 109A – Animal Damage Control Act148
- 3. Title 7, Chapter 109 – Animal Health Protection Act 149
- 4. Title 16, Chapter 41 – Cooperative Forestry Assistance Act 151
- 5. Title 16, Chapter 35 – Endangered Species Act:..... 164
- 6. Executive Order 13112 – Invasive species:175
- 7. Title 43, Chapter 35 – Federal Land Policy and Management Act:179
- 8. Title 7, Chapter 61 – Federal Noxious Weed Act:.....182
- 9. Title 7, Chapter 37 – Federal Seed Act:.....185
- 10. Title 16, Chapter 36 – Forest and Rangeland Renewable Resources Planning Act: 193
- 11. Title 16, Chapter 65 – International Forestry Cooperation Act:..... 194
- 12. Title 18, Chapter 3; Title 16, Chapter 53 – Lacey Act:.....195
- 13. Title 16, Chapter 67 – National Invasive Species Act:.....206
- 14. Title 42, Chapter 55 – National Environmental Policy Act:210
- 15. Title 16, Chapter 67 – Nonindigenous Aquatic Nuisance Prevention and Control Act: 211
- 16. Title 7, Chapter 104 – Noxious Weed Control and Eradication Act:..... 215
- 17. Title 16, Chapter 3 – Organic Administration Act:..... 219
- 18. Title 7, Chapter 104 – Plant Protection Act: 219
- 19. Title 16, Chapter 3B – Soil Conservation and Domestic Allotment Act:..... 238
- 20. Title 21, Chapter 5 – Virus-Serum-Toxin Act:241
- 21. Title 16, Chapter 69 – Wild Bird Conservation Act:..... 241

TRIBAL AUTHORITIES242

- 1. Blackfeet Tribe 242
- 2. Chippewa Cree Tribe243
- 3. Confederated Salish and Kootenai Tribes (CSKT)..... 243
- 4. Crow Tribe..... 245
- 5. Assiniboine and Gros Ventre Tribe (Fort Belknap)..... 246
- 6. Assiniboine and Sioux (Fort Peck) 249
- 7. Little Shell Tribe..... 252
- 8. Northern Cheyenne..... 252
- 9. Memoranda of Understanding with the Tribes..... 252

LOCAL AUTHORITIES.....258

- A. Montana Counties:..... 258**
 - 1. Broadwater County:..... 258
 - 2. Jefferson County: 259
 - 3. Lake County: 259
 - 4. Madison County:..... 259
 - 5. Powell County: 259
- B. Montana Cities and Towns: 259**
 - 1. City – Boulder, Montana:..... 259
 - 2. City – Choteau, Montana:.....260
 - 3. City – Great Falls, Montana:260

4. City – Helena, Montana:	260
5. Town – Judith Gap, Montana:	260
6. City – Livingston, Montana:.....	260
7. City – Missoula, Montana:.....	260
8. City – Whitefish, Montana:	260
APPENDIX.....	260
STATE AGENCIES:.....	261
1. Montana Department of Agriculture (MDA):	261
2. Montana Department of Environmental Quality (DEQ):	261
3. Montana Department of Livestock (MDL):.....	262
4. Montana Fish, Wildlife, and Parks (FWP):.....	262
5. Montana League of Cities and Towns (MLCT):	262
6. Montana Department of Natural Resources and Conservation (DNRC):	262
7. Montana Department of Transportation (MDT):.....	263
FEDERAL AGENCIES:	263
1. Aquatic Nuisance Species Task Force (ANSTF):	263
2. Invasive Terrestrial Animals and Pathogens (ITAP):	263
3. National Invasive Species Council (NISC):.....	264
4. U. S. Department of Agriculture	265
5. U.S. Department of Commerce	268
6. U.S. Department of Defense	269
7. U.S. Department of Homeland Security	269
8. U.S. Department of Interior	270
9. U.S. Environmental Protection Agency (EPA)	274

Introduction

This compendium is a collection of current and relevant authorities relating to the control, reduction, and management of invasive species and pests in the state of Montana. Included are Federal, State, Local, and Tribal sources of law, including – statutes, regulations, ordinances, policies, and treaties.

Montana Invasive Species Summit 2018

Agenda

Hosted by the Montana Invasive Species Council

Radisson Colonial Hotel

2301 Colonial Drive, Helena, Montana

November 15-16, 2018

Objective: Share results of the invasive species law review and associated listening sessions; solicit feedback on solutions moving forward

THURSDAY - NOVEMBER 15, 2018

- | | |
|---------------------|--|
| 8:00 am – 9:00 am | Registration & Continental Breakfast |
| 9:00 am – 9:45 am | Welcome & Opening Remarks
<i>Welcome guests and participants; provide an overview of Governor's Office & agency roles</i> |
| 9:45 am – 10:15 am | Overview of Invasive Species Law Review; Results of Listening Sessions
<i>Overview of law review project; describe each panel - goals and outcomes</i> |
| 10:15 am – 10:30 am | Mid-Morning Break
<i>Coffee & snacks provided</i> |
| 10:30 am – 11:30 am | Panel One: All Taxa Invasive Species List
<i>Explore value and benefits for an all-taxa invasive species list. Look at different models that could be applied to increase efficacy and use</i> |
| 11:30 am – 12:30 pm | Panel Two: Managing pathways instead of species

Goal: Understand strategies and options for regulating pathways.
Ways to adjust regulations/laws to better manage vectors |
| 12:30 pm – 1:30 pm | Lunch (provided) |

1:30 pm – 2:45 pm	Lightening Round: Species with Potential Economic Benefits, Known Environmental Impacts <i>Explore issues and concerns with managing non-native species that have an economic benefit. Venue for discussion</i>
2:45 pm – 3:15 pm 3:15 pm – 4:15 pm	Mid-Afternoon Break Panel Three: Montana's Hot Potato: Aquatic Invasive Plants <i>Discuss current status and find a functional home for the management of aquatic invasive plants</i>
4:15 pm – 4:30 pm	Closing Remarks/Summary of Day and Adjournment
5:00 pm – 8:00 pm	Social Event: TBD

FRIDAY - NOVEMBER 16, 2018

8:00 am – 9:00 am	Continental Breakfast
9:00 am – 9:15 am	Welcome & Opening Remarks <i>Overview of agenda and panels and outcomes for the day</i>
9:15 am – 10:15 am	Panel Four: Regulatory & Enforcement <i>Identify and discuss key issues that could benefit from increasing enforcement and penalties</i>
10:15 am – 10:30 am	Mid-Morning Break <i>Coffee & snacks provided</i>
10:00 am – 11:15 am	Panel Five: Political Champions <i>Discuss priority issues such as invasive species funding and potential legislation</i>
11:15 am -12:00 pm	Wrap Up/Next Steps/Adjournment <i>Summarize outcomes of each panel session; discuss need for study bill to explore need and feasibility of comprehensive Invasive Species Act in Montana. Wrap up.</i>
1:00 pm – 5:00 pm	Self-Organized Meeting Opportunities <i>Provide Summit participants with space to meet on other topics while in town</i>

**Please contact Stephanie Hester if you wish to reserve a room for a self-organized stakeholder work session at DNRC office*

Workshop Agenda

WGA Biosecurity and Invasive Species Initiative Workshop: Early Detection and Rapid Response

Radisson Colonial Hotel
Helena, Montana
November 14, 2018

Wednesday, November 14	
7:45 am 35 MIN	Breakfast Served
8:20 am 10 MIN	Welcome – Jim Ogsbury
8:30 am 60 MIN	Panel: Rapid Response for New Species Detections – Funding, Authorities, and Collaboration. <i>Rapid response and coordination is needed to effectively address new occurrences of invasive species. Panelists will highlight how effective partnerships, policies, and data sharing help managers respond efficiently.</i>
9:30 am 60 MIN	Case Study: Where and When to Intervene on Invasive Species? The Costs of Control at Early, Middle, and Late Stages of Infestation. <i>Panelists will highlight case studies of early, mid, and late-stage invasive species control and how to most effectively have a demonstrable impact with limited funds.</i>
10:30 am 15 MIN	Break
10:45 am 60 MIN	Case Study: Terrestrial invasive species focus. <i>Exact topic to be determined.</i>
11:45 am 60 MIN	Lunch – Governor Bullock Keynote <i>Lunch served at 11:15. Keynote starts at 12:00, runs approx. 20 minutes</i>
12:45 pm 60 MIN	Panel: Regional Invasive Mussels Partnerships and Action Plans. <i>Researchers and land managers will examine effective regional partnerships to control the spread of invasive mussels. They will also discuss the opportunities and challenges when coordinating management actions between agencies.</i>
1:45 pm 60 MIN	Case Study: Terrestrial invasive species focus. <i>Exact topic to be determined, possible invasive mussel eDNA detection in Tiber Reservoir</i>
2:15 pm 15 MIN	Break

2:30 pm 60 MIN	Panel: Tracking Aquatic Invasive Species Infestations and Vectors. <i>Tracking the spread of aquatic invasive species is a major component of effective invasive species control programs. This panel will examine how agencies are effectively accomplishing this challenging task.</i>
3:30 pm 60 MIN	Panel: The Economics of Invasive Species – Forest Products. <i>Invasive pests can have massive impacts on forests and forest dependent economies. This panel will quantify some of these impacts and discuss strategies for developing resilient forest ecosystems and economies.</i>
4:30 pm 15 MIN	Next Steps and Final Thoughts
4:45pm 60 MIN	Adjourn



**Central and Eastern Montana
Invasive Mussel Early Detection
and Rapid Response**

Partnership Agreement



Where we work

Central and Eastern Montana is home to wide-open spaces and few people. Agriculture is the largest industry. Areas surrounding Fort Peck Lake and Big Horn Lake also have a large amount of recreation. These two industries would be significantly impacted by an invasive mussel infestation.

Project Partners for the Missouri River Basin

Interagency partners in both early detection and rapid response (EDRR) in Montana include federal, state, tribal, and local partners. These EDRR Partners will participate jointly and integrate their authorities and resources using Incident Command System (ICS) during dreissenid mussel detections in waterbodies with overlapping management jurisdictions. This approach of treating new detections as emergencies (with specific authorities and direction provided by agency directors and the Governor's Office) is anticipated to bring local, state, and regional partners together with little to no advance planning.

When possible, including federal, state, regional, and local partners in advance by assisting in the development of a database of resources, infrastructure and assets; establishing and exercising lines of communication; building partnerships across shared resources and interests; and developing training opportunities to build shared rapid response skills will reduce friction in establishing future rapid response actions.

To prepare for the use of ICS in a response, the following actions will be taken to improve readiness:

- Establish lines of communication with statewide agency representatives of partners listed in the "Strategic Plan for Early Detection Rapid Response (EDRR) Project Partners for the Missouri River Basin."
- Invite and include partners in invasive species stakeholder events and meetings.
- Include communication with regional partners and stakeholders in the communications duties of the Montana Invasive Species Counsel (MISC) Outreach position and include updates from regional partners in MISC communications.
- Create regional, multi-agency training opportunities to practice ICS skills and reach out to local partners.
- Participate in table-top and field exercises based on existing invasive species response plans and relevant local management plans that include all likely response partners including local and non-governmental participants.

- Assist with the development of a map-based geographic response plan to augment the statewide Mussel Rapid Response guidelines. Local partners can assist with gathering information such as property ownership, access points, infrastructure, diversions and water users. Together we can ensure the most up to date information is included in response planning.

In the spirit of cooperation, the entities listed below agree to collaboratively partner in these and other efforts to prevent the introduction and spread of invasive mussels in the waters east of the continental divide in Montana.

We agree to inform, consult, coordinate and contribute to the best of our ability with each other on all related programs and activities regarding education, outreach, monitoring, and policy related to aquatic invasive species.

Federal Partners:

Bureau of Land Management (Date)

US National Park Service (Date)

US Bureau of Reclamation (Date)

Natural Resources Conservation Service (Date)

US Fish and Wildlife Service (Date)

US Army Corps of Engineers (Date)

Montana Tribal Government:

Blackfeet Tribe (Date)

Chippewa Cree Tribe of the Rocky Boy's Reservation (Date)

Crowe Tribe of Indians (Date)

Fort Belknap Tribes (Date)

Fort Peck Tribes

State Agency Partners:

Montana Fish, Wildlife & Parks

Montana Department of Natural
Resources Conservation

Montana Invasive Species Council

Upper Columbia Conservation
Commission

EDRR Project Partners:

Montana Association of Conservation
Districts

Montana Watershed Coordination
Council

Central & Eastern MT Mussel
Response Team

North Central Missouri River
Working Group

Missouri Headwaters Partnership

Tongue and Powder Rivers

Partner Conservation Districts:

Missouri River Conservation Districts
Council

Yellowstone River Conservation
Districts Council

Garfield Conservation District

Cascade Conservation District



DATE: June 21, 2018

TO: John Tubbs - Montana Department of Natural Resources & Conservation Director
Martha Williams - Montana Fish, Wildlife & Parks Director

FROM: Bryce Christiaens, Montana Invasive Species Council Chair

CC: Patrick Holmes—Office of the Governor, Natural Resource Advisory

SUBJECT: Science Advisory Panel on eDNA for the Early Detection of Invasive Mussels

Dear Director Tubbs:

The Montana Invasive Species Council (MISC) was created to identify priority invasive species issues and make recommendations to improve prevention and management. The 2017 Legislature tasked MISC with creating and coordinating a science advisory panel to evaluate and provide recommendations on key invasive species issues and topics (MCA 2-15-3309). Montana Fish Wildlife and Parks (FWP) identified the need for more information regarding the use of environmental DNA (eDNA) for *dreissenid* mussel early detection and MISC supported this topic for the first Science Advisory Panel to investigate.

A steering committee was assembled by MISC to develop questions and to guide the development of a Science Advisory Panel. At this time, the use of eDNA as a tool to detect the presence of *dreissenid* mussel DNA in the environment holds both promise and uncertainty. eDNA technology is evolving rapidly and many questions exist regarding the use of this method for *dreissenid* early detection. As a result, natural resource managers across western states have struggled with how best to utilize information provided from eDNA results. This was illustrated last season for Montana when positive eDNA detections for invasive mussels were reported by the United States Geological Survey.

MISC, in coordination with FWP, the Confederated Salish and Kootenai Tribes, and the Flathead Lake Biological Station hosted a workshop April 17-18 at the Flathead Lake Biological Station to bring together invasive mussel managers and stakeholders to pose questions and discuss the issue with six panel experts.

From the workshop, the Panel developed the following recommendations as the best path forward to better understand and utilize eDNA for the early detection of *dreissenid* mussels.

- 1) Develop, refine, and agree upon method/standards with adaptive capacity among scientists, labs, and managers
- 2) Develop consistent language (for both within lab and out)
- 3) Develop a communication plan between managers and labs
- 4) Coordinate across western partners and cross-border partners via the suggested avenues
- 5) Identify risk tolerance and map management actions for detection scenarios and trends
- 6) Test assays with round robin process to assist with lab/manager confidence, identify areas for improvement in consistency, and relationship building
- 7) Gene sequence any positive result to confirm
- 8) Optimal conditions for eDNA detection is during *dreissenid* mussel spawning
- 9) Use eDNA to contribute to the weight of evidence to determine presence of *dreissenids*

The Council would like to move forward with promoting these recommendations by setting up a regional workgroup to implement the above recommendations in coordination with the Western Regional Panel, the Western Governors' Association, and the Pacific Northwest Economic Region. Please let us know if these recommendations are supported by the Department and executive branch.

Sincerely,



Bryce Christiaens

Chair, Montana Invasive Species Council

Keeping Invaders at Bay

Montana Invasive Species Council (MISC): A statewide partnership working to protect Montana's economy, natural resources, and public health through a coordinated approach to combat invasive species



A strategy for meeting our invasive species challenges

Two years in the making, MISC's Montana Invasive Species Strategic Framework offers more than 90 coordinated actions to better protect Montana lands, waters, and public health from invasive species:

- ▶ **COORDINATION:** Respond to invasive species as a shared responsibility by integrating management efforts
- ▶ **DETECTION:** Identify and share the locations of high-priority invasive species across jurisdictions
- ▶ **PREVENTION:** Engage resources and stakeholders to reduce the transport of invasive species into Montana
- ▶ **RAPID RESPONSE:** Build a rapid response plan to eliminate or mitigate emerging invasive species
- ▶ **CONTROL:** Grow capacity and expertise in managing invasive species to improve program effectiveness





Here in Montana, and across the northwest and Canada, the mussel detection brought the power and resources of many together as one—to give this issue the attention and priority it deserved. It gave us a second chance to keep the impacts from mussels at bay and protect the pristine Headwaters of the Missouri, Hudson and Columbia watersheds. When we all take responsibility for this problem and work together, we are seeing what we can accomplish together, and it is something remarkable.”

—Matt Wolcott, Incident Commander for Mussel Response, Montana DNRC



MISC Accomplishments

December 2014 Governor signs executive order establishing the Montana Invasive Species Advisory Council (MISAC)

January-June 2015 21 council members appointed representing key invasive species stakeholders and experts

June-February 2016 Assessment and gap analysis of Montana's invasive species programs

April 2016 Governors Summit on Invasive Species

September - October 2016 MISAC hosts Listening Sessions across the state

December 2016 Montana Invasive Species Strategic Framework completed

December 2016 Governor signs executive order renewing MISAC (now MISC)

November 2016- April 2017 MISAC serves on Mussel Response Team leading long-term planning efforts and response preparedness for future detections

March 2017 Awarded a National Invasive Species Council grant to initiate an early detection rapid response project in the Missouri River Basin

April 2017 The Montana Invasive Species Council (MISC) is written into Montana Statute (2-15-3309)

April 2017 MISC hosts an Invasive Species Education Day at the Capitol Rotunda

April 2017 MISC hosts the state's first invasive mussel rapid response exercise

April-June 2017 MISC participates with federal agencies to develop 'Safeguarding the West from Invasive Species' Initiative

June 2017 Montana's Invasive Mussel Early Detection/Rapid Response Guidelines drafted

June 2017 MISC partners with the Montana Natural Heritage Program to incorporate invasive species data in Montana's Natural Resource Information Database

July 2017 MISC, DNRC and FWP awarded 'hot potato award' by the Pacific Northwest Economic Region for their diligence in the 2016 invasive mussel response

Other Accomplishments

- ▶ More than 20 presentations to stakeholders and regional partners on Montana's Mussel Response
- ▶ Invasive species education and outreach at events across the state
- ▶ National Invasive Species Awareness Week participation and outreach



Looking Forward

2018 projects (2019 Biennium)

- ▶ Hosted Missouri River Basin Invasive Mussel Coordination Workshop, January 2018
- ▶ Hosted Plant Pest Rapid Response Exercise, March 2018
- ▶ Hosted Invasive Mussel eDNA Science Advisory Panel, April 2018
- ▶ Invasive Species Law Review—state, federal, tribal and local governments
- ▶ White paper on Lessons Learned from Mussel Response
- ▶ Invasive Mussel response exercises at Flathead and Fort Peck
- ▶ Statewide invasive mussel economic impact analysis
- ▶ Development of invasivespecies.mt.gov website and landing page (to include pages for both MISC and the Upper Columbia Conservation Commission)
- ▶ MISC will co-host an invasive species workshop with the Western Governors' Association (WGA) in conjunction with the 2018 Summit. The workshop is part of WGA's Biosecurity and Invasive Species Initiative and will focus on early detection and rapid response at the Montana workshop.
- ▶ MISC will host the Montana Invasive Species Summit. The theme of the 2018 Summit will be the invasive species law review that is currently underway. Join us at the Radisson Colonial in Helena **November 15-16, 2018!**



Montana Fish, Wildlife & Parks watercraft inspection stations look for aquatic invasive species like mussels and Eurasian watermilfoil. Photos courtesy of Montana FWP.



Why Montana cares about invasive species, and why Montana faces an urgent threat:

Invasive species include plants, animals, and pathogens that are non-native to our ecosystems and cause harm to natural and cultural resources, the economy, and/or human health. We are fortunate that Montana remains relatively free of invasive species that have wreaked havoc in other states.

It is imperative that we better protect Montana from the impacts of invasive species.

Invasive species can damage property and natural resources. They can:

- ▶ Cost Americans up to \$137 million annually in impacts to agriculture, forestry, tourism, fisheries, utilities, buildings and natural areas
- ▶ Outcompete native species decreasing biodiversity
- ▶ Degrade and change sport fisheries
- ▶ Threaten key industries including agriculture, timber, hydro-electricity, and recreation
- ▶ Impede recreation such as boating, fishing, hunting, gardening, and hiking
- ▶ Spread easily by wind, water, animals, people, equipment, and imported goods
- ▶ Increase frequency and intensity of wildfires
- ▶ Alter ecosystem processes

MISC Committees

Data Management: Committee to facilitate the development, implementation and enhancement of a coordinated information data management system for invasive species in Montana.

Education and Outreach: Committee to coordinate and promote invasive species information sharing between natural resource managers, scientists, educators, policy makers, stakeholders and the public.

Invasive Woody Trees: Committee to facilitate a more coordinated statewide network for management of invasive tree species across the state of Montana.

Firewood: Pathway-based Committee that focuses on preventing the spread of invasive species through the movement of firewood.

Tree Pest: Serves primarily as an information sharing body between multiple parties that have a role in tree pest issues throughout Montana.

“It is imperative that we do everything we can to protect Montana from the threat of invasive species that disrupt our land, water, and native species.”

— Governor Steve Bullock

MISC Members and Partners

- Agriculture Industry
- Blackfeet Nation
- Chippewa Cree Tribe
- Central Eastern Montana Mussel Response Team
- Confederated Salish & Kootenai Tribes
- County Weed Districts
- Crow Tribe of Indians
- Fort Belknap Indian Community
- Ft. Peck Assiniboine & Sioux Tribes
- Montana Conservation Districts
- Montana Department of Agriculture
- Montana Department of Commerce
- Montana Department of Transportation
- Montana Fish, Wildlife & Parks
- Montana Natural Resources & Conservation
- Montana State University Extension Services
- Montana Trout Unlimited
- Montana Wildlife Federation
- National Park Service
- Natural Resources Conservation Service
- The Nature Conservancy
- NorthWestern Energy
- Private Landowners
- Upper Columbia Conservation Commission
- U.S. Army Corps of Engineers
- U.S. Bureau of Land Management
- U.S. Bureau of Reclamation
- U.S. Customs and Border Protection
- U.S. Fish & Wildlife Services
- U.S.D.A. Animal, Plant, Health Inspection Services
- U.S. Forest Service



Montana Invasive Species Council
 Stephanie Hester, Council Coordinator
 (406) 444-0547

dnrc.mt.gov/divisions/cardd/montana-invasive-species-program/misc

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MISC Financial Contributors from 2016-2017

Avista.....	\$2,000
Missoula County Extension.....	\$3,000
Missoula County Weed District.....	\$17,000
Montana Fish, Wildlife & Parks.....	\$9,980
Montana Association of Conservation Districts.....	\$500
Montana Department of Agriculture.....	\$10,000
Montana Department of Natural Resources.....	\$25,000
Montana Department of Transportation.....	\$10,000
Montana Weed Control Association.....	\$200
Summit Registrations.....	\$7,150
USDA Forest Service.....	\$10,000
Western Integrated Pest Management Center.....	\$10,000
Total	\$104,830

Expenditures



Member travel.....	\$14,000
2016 Summit.....	\$44,000
Invasive Species Assessment.....	\$25,830
Listening sessions and strategic framework.....	\$20,000
Total	\$103,830

Ventenata (*Ventenata dubia*)



Pamela Scheinost, USDA-NRCS

Identification Ventenata is a winter annual grass native to southern Europe, western Asia and northern Africa. It is also known as wiregrass or North Africa grass. Ventenata is typically 6 to 27 inches tall with leaves that are rolled lengthways or folded. It has open sheaths, and the inflorescence is more or less lax, open, and pyramidal in shape (photo right). The color of ventenata has been described as tawny to light yellow. Grass identification can be difficult for many people, so look for these key characteristics on ventenata: reddish-black nodes in May-June (photo left); unusually long, membranous ligule (1-8mm) (photo left); distinct shiny appearance and open panicle in June-July; and lower awns that are straight and upper awns that are twisted and bent once the plant senesces in July-August (photo bottom right).



Habitat Ventenata has been found along roadsides and in hay, pasture, range and CRP fields in the western U.S. (photo bottom left). It was first reported in the U.S. in Washington and Idaho in the 1950s. Ventenata is most common on south-facing hillsides with shallow, rocky, clay or clay-loam soils. It is increasingly receiving attention due to its rate of spread and difficulty to control. There are anecdotal reports from Washington and Idaho of ventenata displacing other invasive annual grasses like cheatgrass and medusahead.

Spread Spread occurs primarily through contaminated grass seed, hay and annual crops. The long awns likely assist in dispersal by sticking to humans and animals.

Management Priorities Ventenata is not listed as a noxious weed in any state or Canadian province, but it is increasingly problematic in eastern Oregon, Washington, and Idaho. Information on management is limited, especially for range and pasture settings. First and foremost, maintaining healthy grassland plant communities and limiting disturbance can help to prevent ventenata from establishing. Mowing multiple times during the growing season can be effective. However, mowing once during heading does not work as the plant bends over and becomes tangled in the mower, and plants mowed prior to heading may produce another flush of seeds if soil moisture is adequate. Ventenata has flourished following fire in Oregon; in Idaho, fire suppressed ventenata but tended to stimulate annual weedy bromes and left an opening for more ventenata the following year. The plant is



Matt Lavin, Montana State University

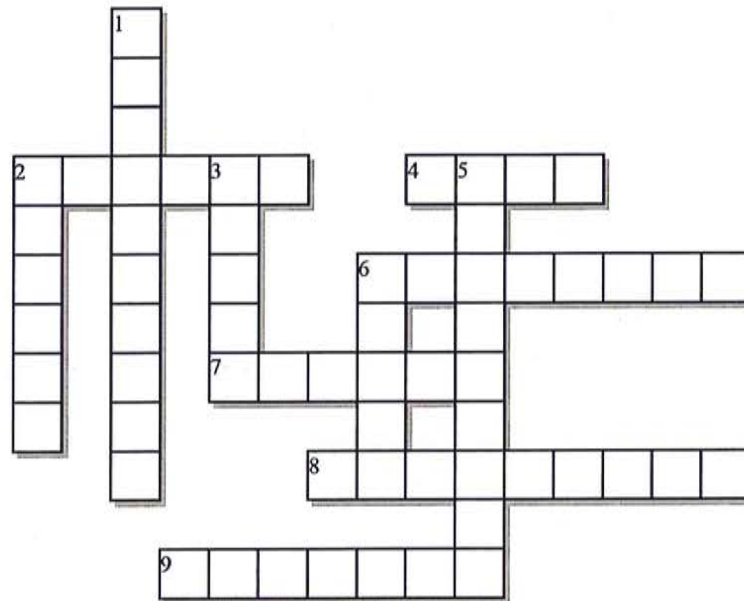


Matt Lavin, Montana State University

unpalatable once panicles appear, so grazing as a management option is limited to early spring. Herbicides labeled for control of ventenata in pasture, range and CRP are limited because ventenata is such a recent issue. Imazapic applied in the fall to semi-dormant perennial grass stands has been effective, particularly when ventenata comprised more than 25% of vegetative cover. Furthermore, imazapic applied in the fall followed by an application of nitrogen fertilizer in the spring and fall of the next year has shown promise as fertilizer can help perennial grasses recover from herbicide damage and be more competitive. A study in Washington found that a spring application of imazapic was more effective than a fall application.

Much of the information presented here can be found in a USDA-NRCS plant guide on ventenata (http://plants.usda.gov/plantguide/pdf/pg_vedu.pdf) and a Washington State University Extension bulletin (<http://county.wsu.edu/whitman/agriculture/plants/weeds/Documents/VentenataEB2040Epdf.pdf>).

Test your knowledge of Ventenata



Across:

- 2 - Ventenata was named after a French professor of this science in the late 1700s*
- 4 - Come on baby, let's bend and twist! These features on the seeds may assist with long-distance dispersal
- 6 - The uppermost awns are bent, while the lowermost are _____
- 7 - A Washington study found imazapic was more effective on ventenata when applied in this season
- 8 - The shape or outline of the inflorescence of ventenata can be described as this
- 9 - Ventenata has an unusually long and membranous one of these

Down:

- 1 - One study found that an application of this after spraying ventenata increased control
- 2 - Seeds of ventenata are produced about one month later than invasive annual grasses in this genus (now don't 'cheat' and look at the answer!)*
- 3 - These are reddish-black and a distinguishing feature of ventenata
- 5 - Another common name for ventenata
- 6 - The surface of ventenata foliage has a distinct _____ appearance

*Refer to USDA-NRCS plant guide or Washington State University Extension bulletin for answer

Solutions are posted to the MSU Extension Invasive Rangeland Weed website:
<http://www.msueextension.org/invasiveplantsMangold/extensionsub.html>



NOXIOUS WEED TOUR
FORT BELKNAP INDIAN RESERVATION
August 22, 2018

- 11:00 a.m. Meet at the Horsecapture Park across from Kwik Stop. Hand out Lunches and Water
- 11:15 a.m. Leave for White Bear Dam along Highway 2.
- 11:30-12:00 noon Tour Spotted Knapweed and Leafy Spurge infestations
Eat lunch on your own.
- 1:00 p.m. Continue tour and visit Highway 2 and BIA Route 8. Leafy Spurge sites along the tribal Right of Way (ROW). Donovan Archambault/INCA for Fort Belknap and Josh Werk Intern, will discuss how Bio-Control is working here.
- 2:00 p.m. Stop on Route 8 by Warren Bells and old Tucker Gravel Pit. Tribal Roads Department will discuss how their eradication efforts are working.
- 2:30-3 p.m. Travel to Beaver Creek and visit Crasco Gravel Pit to hear how the Crasco Ranch's successful eradication efforts are working at this new site.
- 3:30-4:30 p.m. Travel to Hays/Mission Canyon (Star Hill). Spotted Knapweed is out of control everywhere here. Continue tour and turn around at the Pow Wow Grounds. Release Bio-Control at this site
- 5:00-6:00 p.m. In case of scheduling conflicts we will also include a Weed Tour of a Gravel Pit by Andy Coles (3 miles west of Hwy 66 in Little Rocky Mountains). Release Bio-Control at this site.

End of Tour

- * Gail Whiteman and her INCA crew from the Crow Tribe will be joining the Fort Belknap Weed Tour with MISAC. The crew will join Donovan Archambault, an INCA District Coordinator and former tribal councilman in collecting Root Weevils in Missoula as bio-control agents for Spotted Knapweed. The Crow crew will also help Donovan and INCA intern, Josh Werk, release the weevils at Spotted Knapweed sites across the Fort Belknap Indian Reservation.