

DRAFT ENVIRONMENTAL ASSESSMENT

2025 Draft Aquatic Invasive Species Management Plan

FWP-SEA-FSH-R8-TBD

February 1, 2025



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Environmental Assessment

The Montana Department of Fish, Wildlife & Parks (FWP) has prepared this draft environmental assessment (EA) in accordance with the requirements of the Montana Environmental Policy Act (MEPA). The purpose of an EA is to identify, analyze, and disclose the impacts of a proposed state action. This document may disclose impacts that have no required mitigation measures, or over which FWP, more broadly, has no regulatory authority.

Local governments and other state agencies may have authority over different resources and activities under separate regulations. FWP actions will only be approved if the proposed action complies with applicable regulations. FWP has a separate obligation to comply with any federal, state, or local laws and to obtain any other permits, licenses, or approvals required for any part of the proposed action.

This EA was prepared for the following action:

PROJECT NAME: 2025 Aquatic Invasive Species Management Plan	
LOCATION: State of Montana	COUNTY: All 56 Counties of Montana
PROPERTY OWNERSHIP: <input checked="" type="checkbox"/> FEDERAL <input checked="" type="checkbox"/> STATE <input checked="" type="checkbox"/> COUNTY <input checked="" type="checkbox"/> PRIVATE	
EA PREPARER: Conservation Collaborations	DATE ISSUED:

I. Compliance with the Montana Environmental Policy Act

Before a proposed project may be approved, an environmental review must be conducted to identify and consider potential impacts of the proposed project on the human environment affected by the project. The MEPA and its implementing rules and regulations require different levels of environmental review, depending on the proposed project, significance of potential impacts, and the review timeline. § 75-1-201, Montana Code Annotated (MCA), and the Administrative Rules of Montana (ARM) 12.2.430, General Requirements of the Environmental Review Process.

FWP must prepare an EA when:

- It is considering a “state-proposed project,” which is defined in § 75-1-220(8)(a) as:
 - (i) a project, program, or activity initiated and directly undertaken by a state agency;
 - (ii) a project or activity supported through a contract, grant, subsidy, loan, or other form of funding assistance from a state agency, either singly or in combination with one or more other state agencies; or
 - (iii) a project or activity authorized by a state agency acting in a land management capacity for a lease, easement, license, or other authorization to act.
- It is not clear without preparation of an EA whether the proposed project is a major one significantly affecting the quality of the human environment. ARM 12.2.430(3)(a));

- FWP has not otherwise implemented the interdisciplinary analysis and public review purposes listed in ARM 12.2.430(2) (a) and (d) through a similar planning and decision-making process (ARM 12.2.430(3)(b));
- Statutory requirements do not allow sufficient time for the FWP to prepare an EIS (ARM 12.2.430(3)(c));
- The project is not specifically excluded from MEPA review according to § 75-1-220(8)(b) or ARM 12.2.430(5); or
- As an alternative to preparing an EIS, prepare an EA whenever the project is one that might normally require an EIS, but effects which might otherwise be deemed significant appear to be mitigable below the level of significance through design, or enforceable controls or stipulations or both imposed by the agency or other government agencies. For an EA to suffice in this instance, the agency must determine that all the impacts of the proposed project have been accurately identified, that they will be mitigated below the level of significance, and that no significant impact is likely to occur. The agency may not consider compensation for purposes of determining that impacts have been mitigated below the level of significance (ARM 12.2.430(4)).

MEPA is procedural; its intent is to ensure that impacts to the environment associated with a proposed project are fully considered and the public is informed of potential impacts resulting from the project.

II. Background and Description of Proposed Project

This section includes project background and a description of the proposed project including the responsible party, the type of proposed action and the anticipated schedule of the proposed project.

Name of Project: 2025 Aquatic Invasive Species Management Plan

The Aquatic Invasive Species Management Plan was first implemented in 2002. While the general principles (Prevention, Monitoring, Rapid Response, Control) of the first plan remain relevant in the management of aquatic invasive species today, new information and an evolving landscape of invasive species threats has prompted the development of a new and updated plan that can guide AIS management into the coming decade. The 2025 Aquatic Invasive Species Management Plan (2025 Plan) is intended to describe the aquatic invasive species (AIS) program that manages aquatic habitats and describes management priorities related to AIS across the state. The Aquatic Invasive Species Program (AIS Program) is one of 20 programs that falls under the 2023 Statewide Fisheries Management Plan which collectively support FWP's mission to "steward the fish, wildlife, parks and recreational resources for the public, now and into the future".

Specific 2025 Plan objectives include the following:

- Coordination and implementation of an AIS Management Plan with affected partners
- Prevent the introduction of AIS into and within Montana

- Early detection and monitoring of AIS in Montana
- Rapid response preparedness
- Control and eradication of AIS when and where feasible
- Provide outreach and education to expand public understanding and involvement with AIS prevention and early detection
- Educate stakeholders and the public to change the behavior of water users to minimize the spread of AIS
- Periodic evaluation of AIS laws and rules

Equipment and strategies used to prevent and/or control AIS are identified in Table 1 and Table 2, respectively.

FWP is the primary state agency that manages and implements the AIS program and associated activities within Montana. However, many partner agencies (federal, state, and local), Tribes, and other AIS stakeholders, including the affected public, play an active and important role in AIS management across Montana. The 2025 Plan is intended to guide FWP's AIS activities annually and will be reviewed, as necessary, and updated every four years to assess accomplishments, needed areas of improvement, outline ongoing efforts, and outline priorities for the next four-year AIS management planning cycle. This four-year cycle is determined by the Department.

AIS are non-native aquatic species including mussels, clams, snails, crayfish, pathogens, fish, and plants that cause harm to the environment and economy including, but not limited to, degrading fisheries, damaging infrastructure, and adversely impacting habitat. Globally, AIS cause billions of dollars of damage every year to fisheries, aquatic habitats, irrigation, hydroelectric power generation, municipal water systems, and water-based recreation. AIS are transported in a variety of ways, often unintentionally, through the movement of watercraft and equipment. AIS transport also occurs through fish stocking activities, the aquarium trade, and the movement of surface waters. AIS can be difficult to detect, especially shortly after introductions when their abundance and distribution are low. Many AIS are small (microscopic) which allows them to be easily transported without detection. Importantly, many of the AIS that cause problems in other parts of the United States have not yet been found in Montana, presenting an opportunity to prevent their introduction. Therefore, FWP manages a proactive program focused on addressing AIS through prevention, early detection, and rapid response.

The Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPCA) of 1990 and the National Invasive Species Act (NISA) (1996) called for the development of state and regional management plans to control aquatic invasive and nuisance species. In 2002, the first Montana AIS management plan was approved by then Governor Martz and the federal Aquatic Nuisance Species Task Force (ANSTF). The ANSTF, co-chaired by the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA), provides a national forum to coordinate efforts among federal and state agencies as well as efforts of the private sector and other interest groups. Made up of 13 Federal agency representatives and 15 ex-officio members, the ANSTF oversees the formation and activities of regional AIS panels and committees, and other responsibilities as outlined in NANPCA. A statewide AIS management plan that has been successful approved by the ANSTF creates funding eligibility for states from the USFWS to implement a plan.

The first AIS Act (§§80-7-1001-1030, MCA) was passed by the Montana legislature in 2009 and amended during the 2011, 2013, and 2015 legislative sessions. In late 2016, the first detection of dreissenid mussel veligers (larvae, juvenile stage) in Montana was reported in Tiber Reservoir on the Marias River, and a suspect detection was reported for Canyon Ferry Reservoir on the Missouri River. Both detections caused significant concern related to potential impacts and the potential further spread of dreissenid mussels, leading to a rapid expansion of the AIS program by the 2017 legislature.

Changes included the following:

- Legislative establishment of new statute and agency promulgation of a new administrative rule (§80-7-1015, MCA; ARM 12.5.706)
- Additional funding of \$6 million
- Increased watercraft inspection resources
- Expanded early detection program
- Increased staffing to accommodate these additional responsibilities

Mandatory inspection requirements were also put in place for all watercraft exiting Tiber and Canyon Ferry reservoirs to prevent the movement of invasive mussels into other waterbodies. Mandatory inspection requirements were also established for all watercraft entering the state and crossing west over the Continental Divide (ARM 12.5.706). Inspection stations were established and remain in effect on major highways to ensure watercraft entering the state and/or crossing the Continental Divide are free of AIS.

The detection of mussels in Montana is similar to other mussel detections observed in various western states. Initial detections often result in no establishment of invasive mussel populations, which led to western states to develop the [Building Consensus in the West Workgroup](#) and standard protocols for listing and delisting waterbodies as “mussel positive waters” or “mussel suspect waters.” Montana follows those regional standards and coordinates closely with other states to ensure consistency and continuity. The standard protocols for listing and delisting waterbodies outline specific sampling criteria, timelines and provide associated terminology to be consistent among jurisdictions.

Extensive early detection surveys were conducted on Canyon Ferry and Tiber reservoirs following the initial dreissenid mussel veliger detections. Intensive annual sampling included veliger microscopy analysis, environmental DNA (eDNA) sampling, SCUBA and snorkeling surveys, Ponar dredge sampling, substrate sampling, shoreline surveys, and mussel detection canines. In accordance with the regional standards, Canyon Ferry Reservoir was delisted as a dreissenid mussel suspect waterbody in 2020 after three years of no detections. Tiber Reservoir was delisted as a dreissenid mussel positive water in 2022 after five years of no detection. Based on these no-detection results, exit inspections were discontinued at Canyon Ferry and Tiber reservoirs in 2020 and 2022 respectively, so AIS resources could be shifted to inspections of watercraft in other high-risk areas.

FWP leads the AIS program for Montana and coordinates with a variety of agencies and partners to ensure consistent and effective program implementation. The Montana Aquatic Invasive Species Act ([§§80-7-1001, et seq.](#) MCA) establishes AIS responsibilities by state agency authority as follows:

- Montana Department of Agriculture (MDA). MDA manages the state's Noxious Weed List, some of which are AIS, and is responsible for pesticide registration.
- Montana Department of Transportation (MDT). MDT provides locations for inspection stations and assists with signage and roadside safety.
- Montana Department of Natural Resources and Conservation (DNRC). DNRC administers the AIS Grant Program and provides administrative support for the Western Montana Conservation Commission (WMCC) and the Montana Invasive Species Council (MISC).
- Montana Department of Commerce (DOC). DOC provides outreach and education for boaters and anglers coming to the state.
- Montana Department of Environmental Quality (DEQ). DEQ supports treatment, permitting, and AIS early detection.
- Montana law enforcement (state and local). Law enforcement agencies across the state support compliance at watercraft inspection stations.
- FWP. FWP is overall lead coordination for the AIS Program and is responsible for the prevention program including watercraft inspection implementation, early detection, rapid response.

Native American Tribes also play a critical role in addressing AIS and informing the AIS Program. For example, the Confederated Salish and Kootenai Tribes (CSKT) and the Blackfeet Nation have promulgated tribal ordinances that address AIS in tribal waters including closing some waters to boating and requiring fishing equipment inspections. CSKT and the Blackfeet Nation also manage watercraft inspections and coordinate with the state on rapid response planning.

The USFWS is the lead federal agency on AIS issues. Authority for AIS through the USFWS includes the Nonindigenous Aquatic Nuisance Species Prevention and Control Act (1990) and the National Invasive Species Act (1996). USFWS provides national coordination for AIS and provides funding to states through State Aquatic Nuisance Species Management Plans. Other federal agencies support AIS activities as part of their land management role and provide funding to FWP to support AIS program implementation. Those agencies include: the U.S. Army Corps of Engineers (USACE), U.S. Bureau of Reclamation (BOR), U.S. Forest Service (USFS), and the U.S. Bureau of Land Management (BLM).

FWP represents Montana in several regional and national groups that are engaged in western AIS coordination. For example, FWP staff assisted South Dakota Game and Fish to address invasive zebra mussels on watercraft exiting Pactola Reservoir in September of 2022. FWP staff helped train local watercraft inspectors to ensure boats transporting mussels were decontaminated before leaving Pactola Reservoir. The Western Regional Panel for Aquatic Nuisance Species is a panel of state, federal, tribal, research, and non-governmental organizations that advise the ANSTF to guide national AIS efforts and initiatives. The ANSTF is a committee, created by Congress, to help coordinate AIS activities at the national level. Watershed basin-specific coordination groups include the Columbia Basin, and the Missouri Basin teams that encourage consistency among AIS programs. Other regional groups that support AIS coordination and initiatives include the Pacific Northwest Economic Region (PNWER) and Western Governors Association (WGA).

Partners, such as those identified above and below, play an integral role in the implementation of Montana's AIS Program. FWP contracts with Tribes, counties, and conservation districts for operating watercraft inspection stations. This allows for local management and expands local involvement in issues related to AIS. Inspection station partners are responsible for staffing and

day-to-day operations, but FWP's AIS staff provide equipment, training, management support, and quality control to help ensure inspection stations are effective, consistent and coordinated. Partners are also involved with AIS early detection and actively sample for AIS statewide. Tribes, conservation districts, counties, universities, non-governmental organizations, federal partners, and the public support early detection efforts through sampling for AIS in their local areas. AIS staff provide equipment, training and data application that ensures consistent and timely data collection and reporting.

AIS outreach and education is an important part of Montana's AIS Program and involves extensive coordination between FWP, other affected government agencies and other partners. FWP conducts a state-wide marketing campaign and public messaging that reinforces the "[Clean Drain Dry](#)" and "[Don't Let it Loose](#)" strategies. These campaigns and their associated messaging are intended to raise awareness and increase compliance with Montana's AIS statutes, rules and regulations and encourage boaters, anglers, others who recreate on the water and pet owners to help prevent the introduction and spread of AIS. FWP coordinates with partners such as WMCC, local conservation districts, Walleyes Unlimited, Trout Unlimited, Flathead Lakers, and Invasive Species Action Network to adapt the statewide messaging and provide needed information to their respective stakeholders.

AmeriCorps and Big Sky Watershed Corps volunteers also play important roles in AIS outreach and education. Volunteers meet with marinas, boat shops, fly shops, and outdoor retailers about AIS issues and enlist their help in educating customers about AIS and their role in prevention and response strategies. Volunteers also contribute to and attend workshops, county fairs, and schools to expand public awareness of AIS.

Preventing AIS introductions and spread is critical for the preservation of Montana's wild fisheries and natural habitats. Treatment of AIS following introduction is difficult and eradication is often impossible. This makes prevention the highest priority and most effective tool to protect fisheries resources, habitat, and infrastructure. Prevention is addressed through regular inspections and certification of fish hatcheries, ongoing AIS early detection in waterbodies across the State, and watercraft inspections and decontaminations.

Watercraft are the primary source of AIS transport among waterbodies and across state lines. Watercraft inspections ensure that boats are clean, drained of all standing water, and dry prior to launching in another waterbody, and is the primary tool to address this pathway. Every inspection is an opportunity to educate boaters on how they can help prevent the movement of AIS. Montana follows the [Uniform Minimum Protocols and Standards](#) that have been developed in coordination with other western states to ensure consistent and effective inspection and decontamination. Stopping at watercraft inspection stations is mandatory and enforced by FWP wardens, the Montana Highway Patrol, local police, and local county sheriff's departments. Stations are established on major routes of travel and operated primarily during daylight hours throughout the boating season. Inspection station locations, and periods and hours of operation are determined by the level of AIS transport risk in the affected area. Major highways entering the state from the south and east, and locations crossing west over the Continental Divide are priority areas due to boat traffic coming from dreissenid mussel-positive areas. Boats entering from the west are a high-risk for transporting other AIS including corbicula clams, Eurasian watermilfoil, and flowering rush. Regardless of where watercraft are coming from, all watercraft entering from out of state (including Canada), must be inspected when crossing the border into Montana.

Over 110,000 boats are inspected each year in Montana, with more than half inspected by contracted partners. Boats with ballast systems entering from out-of-state or crossing west over the Continental Divide must be decontaminated prior to launch ([§80-7-1030, MCA](#)). In 2023, 53 mussel fouled vessels were intercepted along with over 600 transporting aquatic plants. Wakeboard boats and boats with ballast systems cannot be fully drained of water, making them high risk for AIS transport. When boats are identified with AIS, they are decontaminated using hot water washers on-site, to ensure AIS are killed and removed. Decontamination of a boat ballast system involves using hot water (120 °F) and can take from 15 minutes to several hours to complete. For mussel fouled (adult mussels are visibly attached) boats, an additional dry time is often required to ensure the vessel is free of any live AIS.

If prevention methods fail, early detection of established AIS populations is critical to prevent further spread and facilitate an appropriate response for control or eradication. AIS can spread rapidly among waterbodies through the movement of fish, water, and equipment, or watercraft that have not been decontaminated. Early detection efforts facilitate successful implementation of measures to prevent further spread of AIS, such as quarantine or mandatory inspection, and improves the probability of effective control or eradication.

All waterbodies (lakes, reservoirs, rivers, streams, and ponds) in the state are assessed annually to determine the risk of AIS introduction (Table 1). The assessment evaluates boater and angler use, proximity to known AIS populations, and water chemistry. Then, each waterbody is ranked based on risk of AIS introduction. The waterbodies at the highest risk, such as Flathead Lake and Fort Peck Reservoir, are sampled frequently, often with monthly samples collected from multiple locations. The waterbodies at a lower risk are sampled less frequently, with some sampled every two to three years. Additionally, any waters used as donor streams or ponds for fish transfers are evaluated for both AIS and fish pathogens prior to the transfer.

Table 1. Waterbodies across Montana are surveyed for the presence or absence of potential AIS. Waterbodies have been evaluated for risk of introduction of AIS, suitable AIS habitat, access, recreation and other factors to determine survey frequency. A full list of waterbodies and survey information is available at www.fwp.mt.gov. A selection of example waterbodies is provided here.

Waterbody Name	AIS Risk Level	Survey Frequency
Flathead Lake	High	Annually
Wapiti Reservoir	Medium-Low	Every Two Years
Weasel Lake	Low	Every Three Years

Montana uses a variety of methods for AIS early detection (Table 2). Sampling techniques vary to target a variety of AIS and increase the likelihood of early detection. Sampling methods include the following: plankton nets, kick nets, Ponar dredges, benthic sleds, vegetation rakes, shoreline visual surveys, visual surveys, artificial substrate samplers, rock picking, mussel detection canines, eDNA, snorkeling, and SCUBA diving. All of Montana’s early detection methods are described in the [AIS Field Sampling and Laboratory Standard Operating Procedures](#). These methods have been peer-reviewed and are coordinated with partners and neighboring states.

The FWP AIS Early Detection Laboratory in Helena processes field samples using the techniques outlined in the [AIS Laboratory Standard Operating Procedures](#). The lab is not only essential to the

work completed in Montana, but also supports many surrounding states through a contract with the USFWS. The lab typically processes more than 3,000 samples a year and has helped to identify new mussel populations in nearby states.

Table 2 Various methods for use in AIS management, including monitoring, early detection, and prevention activities.

Method	Common Use	Project Area Emphasis
Vegetation rake	Vegetation sampling	Monitoring, Early Detection
Plankton net	Water collection sampling; microscopic organism collection	Monitoring, Early Detection
Ponar grab sampler	Sediment sampling	Monitoring, Early Detection
Benthic sled	Benthic invertebrate sampling	Monitoring, Early Detection
Artificial substrate samplers	Invertebrate sampling	Monitoring, Early Detection
Snorkel/SCUBA	Visual substrate survey	Monitoring, Early Detection
Detection canines	Olfactory substrate & equipment survey	Monitoring, Prevention
Environmental DNA	Water collection sampling	Early Detection
Hot water mobile decontamination unit	Vessel or equipment cleaning to remove possible AIS	Prevention

Being prepared to respond to a new AIS detection is critical for preventing further spread and possibly facilitating eradication. FWP works closely with partners to help ensure all management agencies and other interested parties are prepared when AIS are detected. Rapid response exercises are held periodically to ensure all involved parties understand roles, responsibilities, and expected courses of action. These exercises help ensure all parties involved respond quickly to contain and treat AIS, as deemed necessary or appropriate.

Having the ability to treat and possibly eradicate new AIS infestations is an important part of responding to a new detection. Eradication efforts are often only possible when AIS are found soon after detection, while control projects help contain AIS when eradication is no longer feasible (Table 3). Some examples of control projects include a 2019 lake drawdown for invasive corbicula clams found in Lake Elmo in Billings, and herbicide and diver hand removal control of Eurasian watermilfoil in Nilan Reservoir near Augusta in 2021. While necessary at times, the cost of response is much greater than the cost of prevention.

Table 3. Various activities that may be undertaken to address AIS in waterbodies. The typical use describes how methods can address AIS. Examples of control and eradication activities that may be applied to AIS management needs.

Method	Typical Use	General Assessment	Example
Dewatering/drawdown	Decrease suitable available habitat for target AIS, exposes AIS to unfavorable conditions	Most applicable where input and output can be controlled in waterbodies and during specific seasons	Dewatering Lake Elmo in winter months to expose invasive clams to lethal physical conditions, such as desiccation and freezing temperatures
Barrier/ Mats	Blocks growth or attachment of AIS	Use can impact some non-target species as non-selective	Targeted barrier mats on the southern portion of Flathead Lake to control flowering rush growth
Chemical application	Early population establishment scenarios Localized populations where other options are unsuccessful	Depending on chemical type applied may impact non-target species	Targeted herbicide on Eurasian watermilfoil on Nilan Reservoir to eradicate pioneer population
Mechanical removal	Localized application of use to decrease population size	Selective technique	Targeted removal of snapping turtle to control populations
Diver hand removal	Targeted physical removal by hand	Selective technique	Targeted removal of Eurasian watermilfoil to control on Jefferson River
Diver assisted suction	Targeted physical removal with suction machinery	Selective technique	Targeted removal of flowering rush (Not yet used in Montana).

Method	Typical Use	General Assessment	Example
Temporary waterbody access restriction	Limits activities on waterbody	Broad temporary technique	Temporary Fishing Access Site closure or multiple waterbody access closure is used to limit access to watercraft of all types, or foot traffic access to the water to limit the potential spread of AIS beyond the restricted waterbody while management assessments are occurring, or treatments are actively occurring. Restricted access has occurred multiple times and in association with methods mentioned previously.

AIS in Montana

Multiple AIS are present in Montana waters. The State Library's Montana Natural Heritage Program (MNHP) serves as the data repository for species occurrence and species of concern for the state. This repository indicates 114 AIS species with 85 of those as established (Appendix A) in Montana and 29 AIS species of interest and not yet established in Montana. The current MNHP record of species indicates roughly two-thirds of Montana's known AIS are non-native fish species. Most of the non-native fish present in Montana waterbodies are associated with historic fisheries management (i.e., intentional stocking by FWP and other agencies). However, there are multiple circumstances where known illegal fish plantings or aquarium release have resulted in established non-native fish species within the affected waterbody. The remaining AIS are 18 aquatic plants, 10 molluscs, 2 crustaceans and 2 amphibians.

The 20th century in Montana was a time for many first records of introduced invasive species. For example, in 1962 one of the earliest AIS recorded was flowering rush (*Butomus umbellatus*) in Montana's Flathead Lake which at the time was available as an ornamental garden plant. Flowering rush has spread and moved downstream into the Columbia River Basin. Similarly Eurasian watermilfoil (*Myriophyllum spicatum*) and curly leaf pondweed (*Potamogeton crispus*), both detected in 1973, were likely introduced by aquarium release, or as fragments on trailered watercraft. The management of watermilfoil in the Jefferson and Clark Fork Rivers has required multiple year efforts to minimize population growth.

Other notable invasive species detections that prompted significant management response to limit their spread include *Myxobolus cerebralis* (the parasite that causes whirling disease) in 1994 and New Zealand mudsnails (*Potamopyrus antipodarum*) in 1995. Record salmonid fishery declines due to *M. cerebralis* in multiple Montana rivers were linked to hatchery fish introductions, which ceased in the 1990s. Mudsnails, whose introduction was linked to recreation activities including angling, initially triggered multiple river access closures. In 2020, detections of mudsnails west of the Continental Divide have been linked to hatchery facilities. American bullfrog (*Lithobates catesbeianus*) was also detected in the mid-1990s in multiple Montana rivers. While this amphibian is native in the eastern US, it has been suggested their introduction in the western US, including Montana, is due to recreational hunting (as a food item) and aquarium release. Another example is the snapping turtle (*Chelydra serpentina*) which is native to eastern Montana but recently documented in western Montana. Predatory behavior of the snapping turtle has resulted in adverse impacts to native species. This hop over the Continental Divide is thought to be the result of human introduction for personal use.

III. General Setting of the Affected Environment

Affected Area / Location of Proposed Project

The proposed project would adopt the 2025 Plan which would encompass and guide the AIS program implementation across the entire state of Montana. Therefore, the analysis area (affected environment) for direct, secondary and cumulative impacts on the physical environment and human population resources analyzed by this Draft EA includes the entirety of the state of Montana, all 56 counties, 147, 040 mi² (380, 832 km²) (Figure 1).

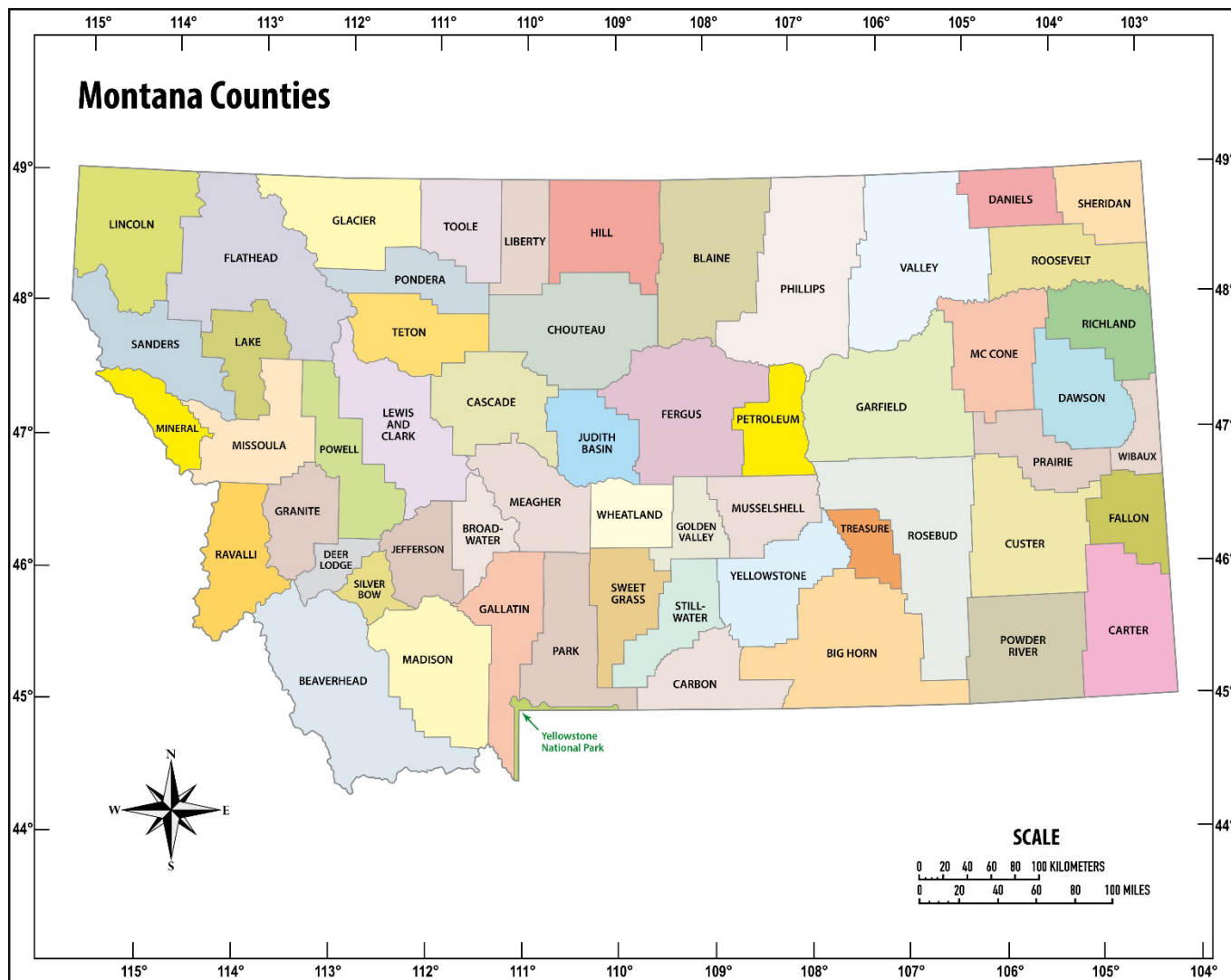


Figure 1. All 56 counties of Montana will be encompassed within the 2025 Plan.

Introduction:

The waters of Montana cover 177,000 stream miles and over 10,000 lakes, ponds, and reservoirs. These waters provide extensive recreational opportunities and are the basis of a critically important tourist economy that draws visitors from around the world. Recreational tourism is often the primary and sometimes the only business in many parts of Montana. However, agriculture and resource-extraction industries throughout the state represent significant economic drivers. Critical infrastructure including multiple hydroelectric dam facilities, large irrigation networks, municipal drinking water plants, industrial processing facilities, and fish hatcheries rely on the clean water of Montana to function. Protecting their operation is central to Montana's economy.

The Continental Divide cuts through the state creating a hydrological division and variables that help characterize Montana for its wide-open rolling prairies and snow-covered mountains. The Continental Divide drives two major water systems that feed into the Pacific Northwest and the

Central US. To the West of the Divide, water feeds the Clark Fork, Snake and Columbia River systems ending in the Pacific Ocean. To the East of the Divide, the Madison, Missouri and Yellowstone River systems feed the Mississippi ending in the Gulf of Mexico. To the North, the St. Mary River flows into Canada and ultimately into Hudson Bay. As a northern state of the Mountain West, the upper reaches of these major rivers flow through Montana and therefore any AIS that is introduced into a Montana river has the potential to spread downstream to other states.

Physical Environment:

Most Montana counties located west of the Continental Divide are characterized by one or more river valleys divided by rugged mountain ranges. Elevations range from 1,820 ft. (555 m) where the Kootenai River enters Idaho near Troy, Montana, to 12,799 ft (3,904 m) on top of Granite Peak in the Beartooth Mountain Range. Major river drainages in Montana west of the Continental Divide include the Kootenai (which flows into the Columbia River in British Columbia), Bitterroot, Blackfoot, and Flathead (all of which flow into the Clark Fork, which itself flows into Lake Pend Oreille in Idaho, and from there into the Columbia River near the Washington- British Columbia boundary). East of the Continental Divide, major drainages in Montana include the Bighorn, Clarks Fork, and Tongue rivers (all of which flow into the Yellowstone River), the Beaverhead and Big Hole (which form the Jefferson), Gallatin, Judith, Madison, Marias, Musselshell, Sun, and Teton rivers (all of which flow into the Missouri River). Additionally, the Belly, St. Mary, and Waterton rivers, which originate in Glacier National Park, are tributaries of the Saskatchewan River system, ultimately flowing into Hudson Bay, Canada.

Lower elevation habitats (below 6,000 ft., 1,829 m) vary greatly and include large areas of shortgrass-sagebrush prairie, mountain foothills, intensively cultivated areas (grain and hay field agriculture), natural wetlands-lakes, riparian plant communities ranging from narrow stream bank zones to extensive cottonwood river bottoms, man-made reservoirs, small communities, and sizeable cities and towns. The mountainous portions of Montana (above 6,000 ft., 1,829 m) contain all, or portions of, 44 mountain ranges including the Absaroka, Anaconda- Pintler, Beartooth, Beaverhead, Big Belt, Bitterroot, Blacktail, Boulder, Bridger, Cabinet, Castle, Centennial, Coeur d'Alene, Crazy, East Pioneer, Elkhorn, Flathead, Flint Creek, Gallatin, Garnet, Gravelly, Henry's Lake, Highland, John Long, Lewis, Lewis and Clark, Little Belt, Livingston, Madison, Mission, Nevada, Ninemile-Reservation Divide, Purcell, Rattlesnake, Ruby, Sapphire, Salish, Sawtooth, Snowcrest, Spanish Peaks, Swan, Tendoy, Tobacco Root, and West Pioneer ranges. Mountainous habitats are dominated by coniferous forest (Douglas fir, lodgepole pine, Engelman spruce, western cedar, hemlock, whitebark pine, limber pine, ponderosa pine, juniper), and rocky sub-alpine-alpine communities found above timberline. About one third of the land mass of Montana is public land (Figure 2, Table 4).

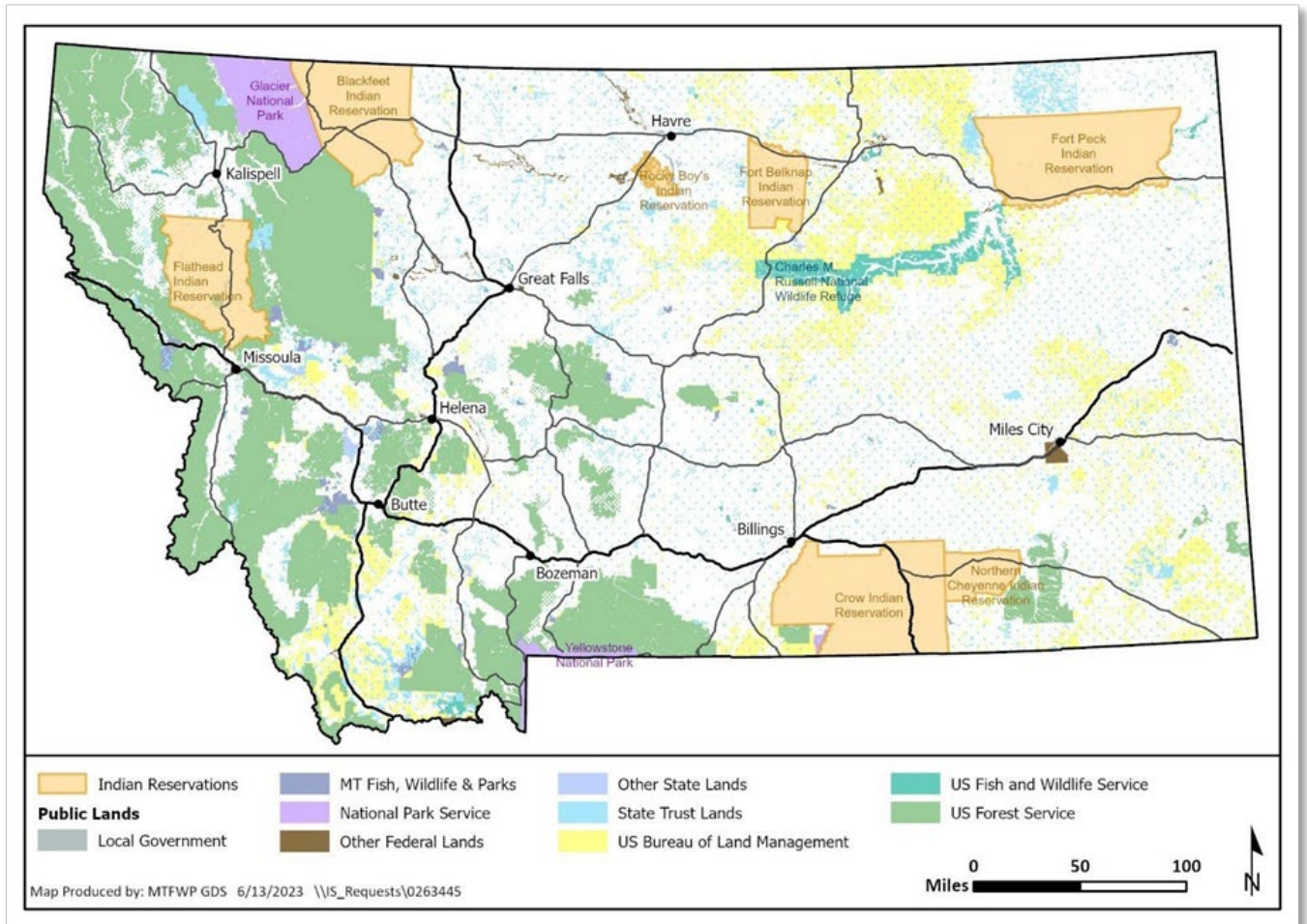


Figure 2. Identification of federal, state, tribal and other land jurisdiction in Montana.

Table 4. Acres of land by federal, state, county, municipal government within the state of Montana.

Owner	Acres
City Government	47,950
County Government	79,944
Local Government	33,873
Montana Department of Corrections	35,213
Montana Department of Natural Resources and Conservation	14,320
Montana Department of Transportation	8,382
Montana Fish, Wildlife & Parks	451,709
Montana State Trust Lands	5,197,389
Montana University System	25,221
National Park Service	1,188,144
State of Montana	48,237
U.S. Army Corps of Engineers	6,497
Bureau of Land Management	8,041,210
Bureau of Reclamation	156,208
U.S. Department of Agriculture	71,361
U.S. Department of Defense	9,313
U.S. Fish & Wildlife Service	941,148
U.S. Forest Service	17,177,072
U.S. Government	1,730

Human Population:

As of 2022, an estimated 1,122,867 people lived in Montana. The 2022 estimate also reflected an almost 12% increase in population in the past decade (2012-2022). Several counties have experienced significant population growth when compared to the overall state population growth (Figure 3). Trends since 2000 indicate populations in Montana counties of Gallatin, Flathead and Yellowstone have surpassed the state population growth rate (Figure 4).

Map

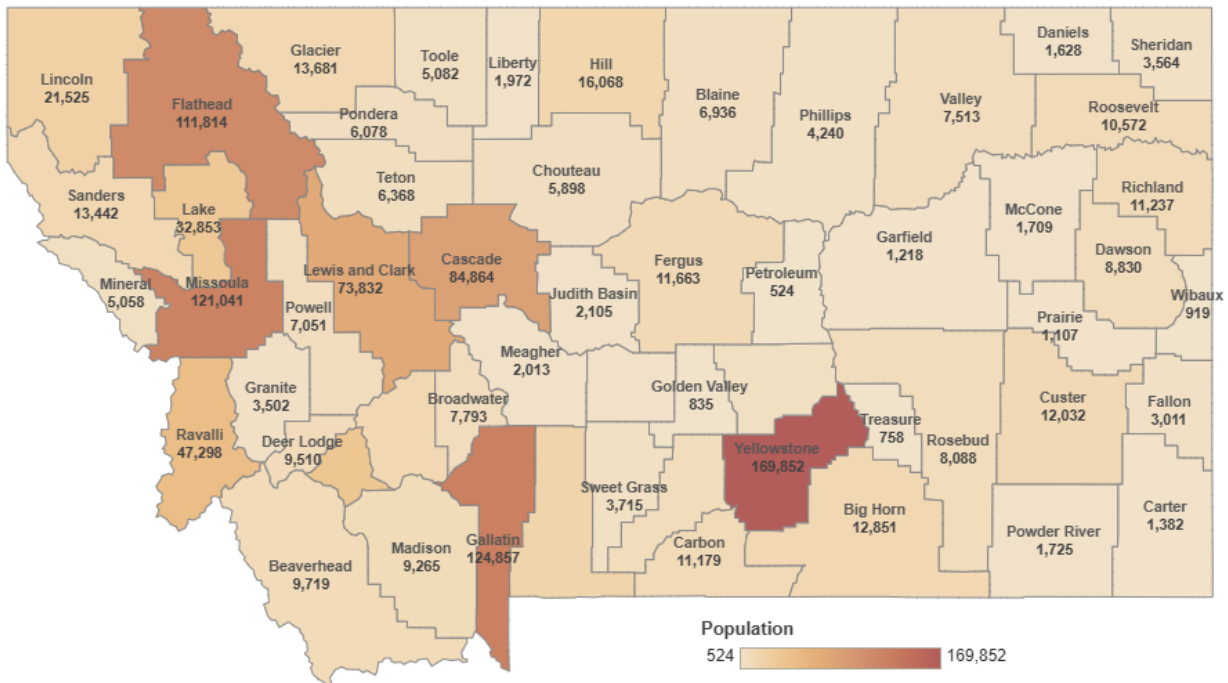
Table

Age Pyramid

Select Year Select Gender Select Age Groups

Select Race Select Hispanic Origin

Montana
1,122,867



Data Source: Annual County Resident Population Estimates by Age, Sex, Race, and Hispanic Origin, Population and Housing Units Estimates Program, U.S. Census Bureau.



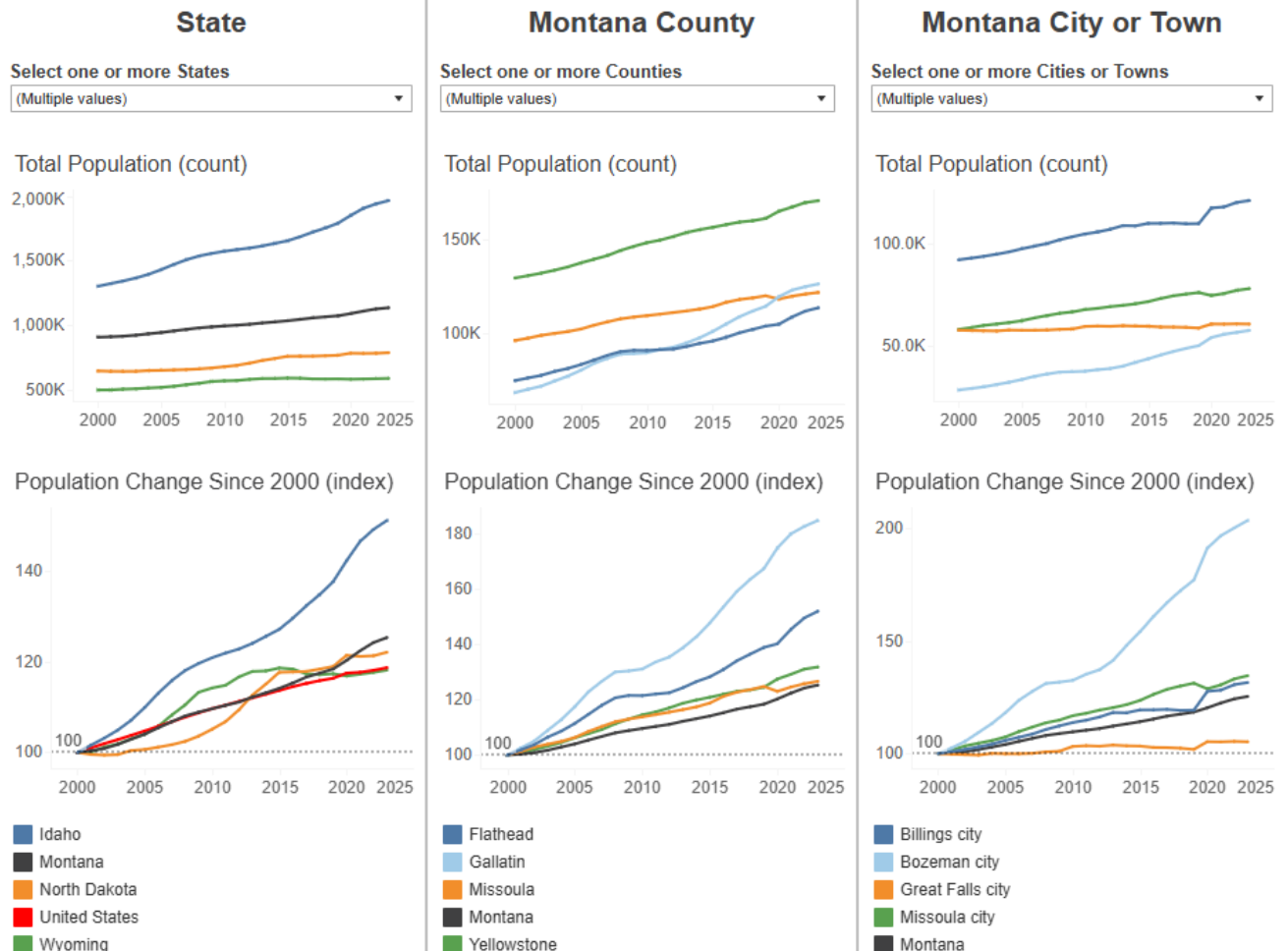
Figure 3. Montana population as indicated by county (US. Census).

Home

Trend

Rank

Table



Data Source: Population total and intercensal tables, Population and Housing Unit Estimates Program, U.S. Census Bureau. Year over year (yoy) represents numeric and percent difference between current year and prior year population.



Figure 4. Population estimates and trends for select Montana counties compared to overall state population changes over time.

Economics:

In 2022, the median household income in the United States was \$74,755, and in Montana \$67,915. All but 5 counties in Montana are below the U.S. median household income (Table 5). Those counties include Gallatin, Jefferson, Stillwater, Yellowstone and Valley.

Table 5. Montana county median household income and poverty rate, alphabetized.

County	Median Household Income (\$)	Poverty Rate (%)	County	Median Household Income (\$)	Poverty Rate (%)
Beaverhead	57,497	11.7%	McCone	59,086	14.0%
Big Horn	49,113	22.8%	Meagher	53,724	15.0%
Blaine	53,577	17.3%	Mineral	55,979	12.5%
Broadwater	67,927	8.6%	Missoula	68,210	9.2%
Carbon	67,062	9.2%	Musselshell	55,291	16.0%
Carter	50,597	13.2%	Park	68,594	10.3%
Cascade	59,184	13.8%	Petroleum	48,991	12.8%
Chouteau	51,137	15.9%	Phillips	56,043	15.1%
Custer	64,743	10.8%	Pondera	51,057	20.2%
Daniels	57,141	9.9%	Powder River	54,102	11.7%
Dawson	60,763	11.9%	Powell	60,350	15.7%
Deer Lodge	52,848	14.0%	Prairie	49,838	13.4%
Fallon	65,637	10.0%	Ravalli	65,789	11.3%
Fergus	60,466	12.3%	Richland	72,974	9.9%
Flathead	66,395	10.8%	Roosevelt	48,712	23.6%
Gallatin	83,520	9.5%	Rosebud	64,003	17.8%
Garfield	50,762	14.7%	Sanders	47,976	17.3%
Glacier	46,270	25.8%	Sheridan	62,982	12.7%
Golden Valley	45,622	19.6%	Silver Bow	58,898	16.0%
Granite	58,186	11.0%	Stillwater	81,147	9.6%
Hill	50,518	18.4%	Sweet Grass	68,006	10.2%
Jefferson	83,697	8.0%	Teton	57,054	13.2%
Judith Basin	60,677	11.9%	Toole	49,850	17.5%
Lake	57,225	18.2%	Treasure	60,454	12.4%
Lewis and Clark	72,491	9.2%	Valley	79,703	11.7%
Liberty	53,601	18.0%	Wheatland	44,002	19.6%
Lincoln	48,432	17.3%	Wibaux	56,317	14.1%
Madison	72,487	9.6%	Yellowstone	78,216	9.3%

Agriculture:

Montana supports a large agricultural economy. In 2017, there were an estimated 27,048 farms and ranches. By far the most common activities of these farms and ranches were raising beef cattle, growing forage (hay) for cattle, and growing grain crops (wheat, oats, barley). Sheep, hogs, and dairy cattle were also raised in smaller numbers.

Sheep and beef cattle were grazed on privately owned grassland and on publicly owned (USFS, BLM, DNRC) grazing allotments. In 2021, an estimated 2,451,500 cattle (including calves) grazed in Montana, as well as some 287,300 sheep (including lambs). The largest populations of cattle were in Beaverhead (~ 125,000), Fergus (~ 115,000), and Yellowstone (~ 110,000) counties, and the largest number of sheep were in Carter (~ 19,000), Golden Valley (~ 15,300), Stillwater (~ 12,300), and Beaverhead (~ 12,200) counties. Cattle density was highest in Yellowstone, Carbon, and Judith Basin counties; cattle outnumbered people by the greatest proportion in Carter, Garfield, and Powder River counties.

Timber/Wood Products:

The majority of Montana's forested lands (23 million acres) are located within the western part of the state. Nearly 4 million acres of these forest lands are permanently reserved as either wilderness areas or national parks. Eleven million acres of the remaining forested land is administered by the USFS, with 5.2 million acres of this public estate designated by current forest plans as suitable for timber production. Private forest lands occupy approximately 6 million acres, with 2 million owned and managed by large timber companies. Another 4 million acres of private forest lands are owned by some 11,000-plus private individuals. Timber production has declined since the late 1980s. In 1988, an estimated 1,163 million board feet (MMBF) were produced; this declined to approximately 352 MMBF in 2009, before recovering slightly to 367 MMBF in 2018.

Sources for wood products, categorized broadly into public (US Forest Service, Bureau of Land Management, state, and other public) and private (corporate industrial timber lands, private, non-industrial, and tribal) forestlands, have varied over time. During the 1980s, most production came from USFS lands, being almost matched by private industrial forests, with very little coming from other state lands. As production on USFS lands declined in the 1990s, the proportion coming from non-industrial and tribal lands increased (briefly becoming dominant in 1994). The relative contribution from private industrial lands peaked in 1998 as USFS lands continued to decline, but other public lands made up some of that. However, the proportion contributed by private industrial lands has declined markedly in the past 20 years, with the other sources increasing in importance.

In 2018, the University of Montana Bureau of Business and Economic Research estimated that Montana's forest industry accounted for just under 8,000 jobs in direct employment, and an additional 13,300 jobs indirectly associated with wood products. This was up somewhat from employment circa 2010, but lower than the late 1990s.

Mining:

Large mineral deposits, ranging from talc to gold, are located throughout Montana. Of these, metallic minerals provide the largest share of Montana's non-fuel mining income, with copper, palladium, and platinum leading the list of important metals (these latter two being mined nowhere else in the United States). In 2012, there were a total of 53 mines in production, development, standby permitting, or reclamation status, all but seven of which were in the western part of the state.

Recreation:

Outdoor recreation and tourism are major components of Montana's economy, particularly in the mountainous western part of the state. Western Montana is nationally renowned for its high-quality fishing, hunting, camping, hiking, river floating, skiing, snowmobiling, wildlife viewing, and sightseeing opportunities. Glacier and Yellowstone National Parks, Flathead Lake, and other public lands attract large numbers of people to Montana every year. Many of these outdoor activities are made possible by public ownership of large tracts of mountainous habitat and additional access provided by private landowners. Also, according to Montana's stream access laws, the public may use rivers and streams bordered by private land for recreational purposes up to ordinary high-water mark (§§ 23-2-301, et. seq, MCA). Therefore, recreationists have largely unhindered access to millions of acres of undeveloped land and water resources across Montana.

Water-based recreation is a key activity associated with Montana. Access to many lakes, reservoirs and rivers offers recreationists significant opportunities and use of various watercraft or vessels for access. Motorized and non-motorized water-based activities are popular across the state. High elevation or remote waterbodies are no hinderance to recreation popularity.

IV. Purpose and Benefits of Proposed Project

The EA must include a description of the purpose and the need or benefits of the proposed project. ARM 12.2.432(3)(b). Benefits of the proposed project refer to the benefits to the resource, public, department, state, and/or other.

FWP's purpose is to provide management direction for AIS within the state of Montana under the direction of a new, programmatic plan (2025 Plan). Under the proposed action, FWP would adopt and implement the 2025 Plan to:

- Adaptively guide FWP planning and policy decisions regarding AIS management in Montana.
- Guide FWP in meeting their statutory requirement to manage AIS.
- Define FWP's public commitment to responsibly manage AIS statewide.
- Provide the public, affected Tribes, state, local and federal agencies, and affected NGOs with transparency related to FWP's AIS management strategies.

The 2025 Plan identifies 16 strategies and 81 actions to describe how FWP will implement the AIS management program. The Plan will be reviewed annually and updated, as needed, to reflect evolving AIS management needs.

If FWP prepared a cost-benefit analysis before completion of the EA, the EA must contain the cost-benefit analysis or a reference to it. ARM 12.2.432(3)(b).

A complete cost-benefit analysis of the 2025 Plan was not completed.

	YES*	NO
Was cost/benefit analysis prepared for the proposed project *If YES, a copy of the cost/benefit analysis prepared for the proposed project is included in Attachment A to this draft EA	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. Other Agency Regulatory Responsibilities

FWP must list any federal, state, and/or local agencies that have overlapping or additional jurisdiction, or environmental review responsibility for the proposed project, as well as permits, licenses, and other required authorizations. ARM 12.2.432(3)(c).

Other required local, state, and federal agencies provide approvals, such as permits, certificates, and/or licenses from affected agencies. Although this is a summary of state, federal and local requirements (Table 6), it does not necessarily represent a complete and comprehensive list of all permits, certificates, or approvals needed. This lists the primary federal, state, and/or local agencies with regulatory responsibilities, the applicable regulation(s) and the purpose of the regulation(s). Agency decision-making is governed by state and federal laws, including statutes, rules, and regulations, that form the legal basis for conditions or limits the proposed project must meet to obtain necessary permits, certificates, licenses, or other approvals. Further, these laws, rules and regulations set forth the conditions under which each agency could deny the necessary approvals.

Table 6. Agencies that may have authorization associated with AIS management within Montana.

Agency	Type of Authorization {permit, license, stipulation, other}	Purpose
FWP, Montana Fish and Wildlife Commission	§§ 87-5-701, et. seq. ARM 12.6.2201, et. seq.	Regulate and designate exotic, prohibited or controlled fish and wildlife species
Montana Department of Agriculture (MDA)	ARM 4.5.201	Regulate and designate noxious weeds, including aquatic non-native plants

Agency	Type of Authorization {permit, license, stipulation, other}	Purpose
Montana Department of Natural Resources and Conservation (DNRC), local conservation districts	310 Permit (§ 75-5-310, MCA)	Any private, nongovernmental individual or entities that proposes to work in or near a stream on public or private land. Any activity that physically alters or modifies the bed or banks of a perennially flowing stream, including a provision for clean equipment
FWP	Stream Protection Act 124 Permit (§87-5-501, MCA, et. seq)	Any agency or subdivision of state, county, or city government proposing a project that may affect the natural existing shape and form of any stream or its banks or tributaries. Many federal agencies also comply either via a memorandum of understanding or general agreement. Permitting of stream work proposed by public entity, including a provision for clean equipment
FWP	Scientific Collectors Permit (§87-1-201, MCA; 12.7.1301 ARM)	Permit for other state or federal agencies, universities, private individuals to collect aquatic organisms for AIS monitoring purposes
County Government	Lakeshore Protection Act (§75-7-207, MCA)	Applies to all private individuals and government entities proposing to do work in or near a body of water within a county's jurisdictional area.
Montana Department of Environmental Quality (DEQ)	Montana Water Quality Act (§75-5-301, MCA et. seq)	Prohibits the pollution of state waters and the placement of wastes in a location where they are likely to cause pollution of any state water.
DEQ	Montana Pollution Discharge Elimination System (MPDES) (§75-5-303, MCA)	MPDES permits regulate possible chemical use for AIS control/eradication effort
DEQ	308 Authorization, Water Quality Exemption (§75-5-308, MCA)	Temporary exemption to exceed state water quality standards
DEQ	318 Authorization (§75-5-318, MCA)	Any activity in any state water that will cause unavoidable short-term violations of water quality standards.

Agency	Type of Authorization {permit, license, stipulation, other}	Purpose
Tribal Nations - Assiniboine, Blackfeet, Chippewa, Cree, Crow, Gros Ventre, Kootenai, Little Shell Chippewa, Northern Cheyenne, Pend d'Oreille, Salish and Sioux	MOU or co-management agreements	Coordinate AIS management efforts, as applicable
US Fish and Wildlife Service (USFWS)	Endangered Species Act (ESA) Section 6, Cooperation with States (16 U.S.C. 35 §§ 1535)	The ESA provides a framework to conserve and protect endangered and threatened species and their habitats both domestically and abroad. FWP's Section 6 Agreement with the USFWS provides a mechanism for the federal-state agency cooperation in conservation of threatened, endangered, and candidate species that may be affected by AIS eradication effort program activities. There are multiple potentially affected ESA-listed species in Montana (see https://ipac.ecosphere.fws.gov/).
USFWS	ESA, Section 7, Interagency Cooperation (16 U.S.C. 35 §§ 1536)	Federal agencies must consult with the USFWS when any project or action they authorize, fund, or carry out may affect a listed species or designated critical habitat. The consultation process can vary depending on the complexity of the project or action. As applicable, Section 7 consultation provides a mechanism for federal-federal agency cooperation in conservation of threatened, endangered, and candidate species that may be affected by AIS program activities. FWP serves to collaboratively prepare biological assessments in cooperation with the affected federal action agency and the USFWS.

Agency	Type of Authorization {permit, license, stipulation, other}	Purpose
USFWS	ESA, Section 9, Prohibited Acts (16 U.S.C. 35 §§ 1538)	Section 9 identifies prohibited acts as it relates to ESA-listed species. There are multiple potentially affected ESA-listed species in Montana (see https://ipac.ecosphere.fws.gov/).
USFWS	ESA, Section 10, Exceptions (16 U.S.C. 35 §§ 1539)	Section 10 of the ESA provides a regulatory mechanism to allow for the incidental “take” of federally endangered and threatened species by private interests and non-federal government agencies during otherwise lawful activities. FWP typically manages such scenarios pursuant to the Section 6 Agreement with the USFWS. There are multiple potentially affected ESA-listed species in Montana (see https://ipac.ecosphere.fws.gov/).
USFWS	ESA, Section 12, Endangered Plants (16 U.S.C. 35 §§ 1541)	Section 12 directed the Smithsonian Institution "to review (1) species of plants which are now or may become endangered or threatened and (2) methods of adequately conserving such species. There are multiple potentially affected ESA-listed species in Montana (see https://ipac.ecosphere.fws.gov/).
US Army Corps of Engineers (USACE)	Memorandum of Understanding (MOU) or Agreements for work on US Army Corps of Engineers lands/waters	Individual agreements for actions that occur on USACE lands/associated with USACE projects
USACE	Federal Clean Water Act, 404 Permit (33 USC §1344)	Any person, agency, or entity, either public or private, proposing activities that will result in the discharge or placement of dredged or fill material into waters of the United States.

Agency	Type of Authorization {permit, license, stipulation, other}	Purpose
USACE	Federal Rivers and Harbors Act, Section 10 Permit (33 USC 403)	The temporary or permanent construction of any structure in or over any federally listed navigable waters of the United States, the excavation from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters.
US Forest Service	MOU or Agreements for work on US Forest Service lands/waters	Individual agreements for actions that occur on USFS lands
US Bureau of Reclamation	MOU or Agreements for work on US Bureau of Reclamation lands/waters	Individual agreements for actions that occur associated with Reclamation projects

VI. List of Mitigations, Stipulations

Mitigations, stipulations, and other enforceable controls required by FWP, or another agency, may be relied upon to limit potential impacts associated with a proposed Project. Table 7 below lists and evaluates enforceable conditions FWP may rely on to limit potential impacts associated with the proposed project. ARM 12.2.432(3)(g).

Are enforceable controls limiting potential impacts of the proposed action? If not, no further evaluation is needed.	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
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Table 7. Listing and Evaluation of Enforceable Mitigation Limiting Adverse Impacts

If yes, are these controls being relied upon to limit impacts below the level of significance? If yes, list the enforceable control(s) below			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Enforceable Control	Responsible Agency	Authority (Rule, Permit, Stipulation, Other)	Effect of Enforceable Control on Proposed Project	
Watercraft inspection and decontamination	FWP	ARM12.5.706	Authority to stop vessels and equipment for AIS inspection, including those crossing the Continental Divide; decontaminate vessels found with AIS.	
Waterbody quarantine	FWP	ARM12.5.707	Authority to prevent further spread of AIS from waterbody with AIS.	
Check stations	FWP, MDA	§80-7-1011, MCA	Authority to establish check stations.	
AIS sampling and monitoring	FWP	§80-7-1006, MCA	Authority for prevention and detection of invasive species.	
Scientific collections	FWP	§87-2-806, MCA; ARM 12.7.1301	Authorize the collection of aquatic samples for scientific investigation by universities or consultants.	
Angling restrictions and fishing closures	Montana Fish and Wildlife Commission, FWP	§87-1-304, MCA; ARM 12.5.501 – 509	Implementation and lifting of drought related angling restrictions and closures.	
AIS control	FWP, MDA	§80-7-1006, MCA	Authority for management, control and restoration of infested areas.	

If yes, are these controls being relied upon to limit impacts below the level of significance? If yes, list the enforceable control(s) below			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Enforceable Control	Responsible Agency	Authority (Rule, Permit, Stipulation, Other)	Effect of Enforceable Control on Proposed Project	
Invasive species management area	FWP, MDA	§80-7-1008, MCA §80-7-1015, MCA	Designation for a specific area or body of water for a specific or indeterminate amount of time that regulates invasive species	

VII. Alternatives Considered

In addition to the proposed project (See *Section II, Background and Description of Proposed Project*), and as required by MEPA, FWP analyzes the "No-Action" alternative in this Draft EA. Under the "No Action" alternative, the proposed project would not occur. Therefore, no additional impacts to the physical environment or human population in the analysis area would occur. The "No Action" alternative forms the baseline from which the potential impacts of the proposed Project can be measured.

If the "No Action" alternative is selected and the proposed 2025 Plan is not adopted and implemented, FWP and its partners would continue to adaptively manage AIS using contemporaneous strategies; however, the public, affected Tribes, state, local and federal agencies, affected non-governmental organizations, and other stakeholders would not be provided with transparency related to such evolving and adaptive AIS management strategies. Further, the "No Action" alternative may not comply with the Montana Aquatic Invasive Species Act (2017, Montana Legislature). Under the Montana Aquatic Invasive Species Act, FWP must prepare a list of invasive species over which it has jurisdiction, work collaboratively with multiple departments, develop and adopt a strategic plan for AIS that includes education, prevention, detection, management, control and restoration, and emergency response; enforce quarantine measures, operation of check stations.

Were any additional alternatives considered and dismissed?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
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VIII. Terms to Describe Potential Impacts on Physical Environment and Human Population

The impacts analysis identifies and evaluates **direct**, **secondary**, and **cumulative impacts**.

- **Direct impacts** are those that occur at the same time and place as the action that triggers the effect.
- **Secondary impacts** “are further impacts to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action.” ARM 12.2.429(18).
- **Cumulative impacts** “means the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures.” ARM 12.2.429(7).

Where impacts are expected to occur, the impact analysis estimates the **extent**, **duration**, **frequency**, and **severity** of the impact. The duration of an impact is quantified as follows:

- **Short-Term:** impacts that would not last longer than the proposed project.
- **Long-Term:** impacts that would remain or occur following the proposed project.

The severity of an impact is measured using the following:

- **No Impact:** there would be no change from current conditions.
- **Negligible:** an adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor:** the effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- **Moderate:** the effect would be easily identifiable and would change the function or integrity of the resource.
- **Major:** the effect would irretrievably alter the resource.

Some impacts may require mitigation. As defined in ARM 12.2.429, mitigation means:

- Avoiding an impact by not taking a certain action or parts of a project;
- Minimizing impacts by limiting the degree or magnitude of a project and its implementation;
- Rectifying an impact by repairing, rehabilitating, or restoring the affected environment; or
- Reducing or eliminating an impact over time by preservation and maintenance operations during the life of a project or the time period thereafter that an impact continues.

FWP may, as an alternative to preparing an EIS, prepare an EA whenever the action is one that might normally require an EIS, but effects which might otherwise be deemed significant appear to be mitigable below the level of significance through design, or enforceable controls or stipulations, or both, imposed by the agency or other government agencies. For an EA to suffice in this instance, the agency must determine that all the impacts of the proposed action have been accurately

identified, that they will be mitigated below the level of significance, and that no significant impact is likely to occur. The agency may not consider compensation for the purpose of determining that impacts have been mitigated below the level of significance. ARM 12.2.430(4).

A list of any mitigation strategies including, but not limited to, design, enforceable controls or stipulations, or both, as applicable to the proposed project is included in **Section VI** above. FWP must analyze impacts to the physical and human environment for each alternative considered. The proposed project considered the following alternatives:

- **Alternative 1: No Action**

Under the “No Action” alternative, the proposed project would not occur. Therefore, no additional impacts to the physical environment or human population (human environment) in the analysis area would occur. The “No Action” alternative forms the baseline from which the potential impacts of the proposed project can be measured.

FWP would continue to implement AIS strategies that have evolved and changed since the publishing of the 2002 Plan but would not provide the public with clarity and transparency in those new/updated practices. Impacts from projects or management actions would vary in severity from no impact to moderate impact. Projects or action with potential impact would vary in short-term or long-term effects. Each proposed action would require public process pursuant to MEPA prior to project approval and implementation.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

- **Alternative 2: Proposed Project**

See *Section X, A and B, Impacts on the Physical Environment and Human Population*

The following analyses identify and disclose potential impacts from approval and implementation of the 2025 Plan. Any direct, secondary, and/or cumulative impacts to the resources analyzed by this Draft EA (see Section X. and X. A and B) resulting from *specific* AIS projects conducted under the various programs analyzed below, and detailed in the 2025 Plan, would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation.

IX. Alternative 1: No Action

Under the “No Action” alternative, the proposed project would not occur. Therefore, no additional impacts to the human environment in the analysis area would occur. The “No Action” alternative forms the baseline from which the potential impacts of the proposed project can be measured.

FWP would continue to implement AIS strategies that have evolved, and changed since the publishing of the 2002 Plan, but would not provide the public with clarity and transparency in those

new/updated practices. Impacts from projects or management actions would vary in severity from no impact to moderate impact with potential short-term or long-term impacts. Each proposed action would require public process pursuant to MEPA prior to project approval and implementation.

See Section III, *General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

X. Alternative 2: Proposed Project

A. Evaluation and Summary of Potential Impacts on the Physical Environment

1. Terrestrial, Avian, and Aquatic Life and Habitats

Existing Environment/Baseline Conditions (No Action Alternative):

The state of Montana has 114 mammal species, 458 bird species, 15 amphibian species, 20 reptile species, and 91 fish species. The state encompasses many types of ecological systems including 16 varieties of forest-woodland systems; 5 varieties of alpine systems; 10 varieties of shrubland, steppe and savannah systems; 5 varieties of grassland systems; 6 varieties of sparse-barren systems; and 18 varieties of wetland-riparian systems, open water systems, human land use systems, and recently disturbed or modified systems¹. A comprehensive guide and discussion of Montana's fish and wildlife, and associated habitats is available online through the Montana State Library Field Guide.

See Section III, *General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

Direct Impacts:

No significant adverse direct impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. Prior to implementation, some projects conducted under the proposed 2025 Plan would require permitting pursuant to the Clean Water Act (33 U.S.C. 1251, et. seq) and the Montana Water Quality Act (§§ 75-5-101, et. seq, MCA). These acts regulate the discharge of pollutants into state waters to ensure compliance with state and national standards intended to mitigate adverse impacts, including direct impacts to aquatic species and habitats during and following project implementation (see secondary and cumulative impacts). In general, AIS program actions are intended to improve aquatic life and habitats (see secondary and cumulative impacts); however, AIS program implementation may cause adverse direct impacts to terrestrial, avian, and aquatic life and habitats.

AIS program actions to address AIS introductions vary. Further, AIS presence within a given waterbody will also vary over time; depending on the introduced AIS, actions may include dewatering or diverting water from a waterbody, mechanical removal (e.g., pulling plants or removing aquatic species with nets), use of chemicals (e.g., herbicides or piscicides), or other

¹ https://fieldguide.mt.gov/displayES_LCLU.aspx

measures to contain or eradicate the AIS. All these actions have the potential to impact AIS and other non-AIS aquatic resources directly and adversely. For example, dewatering a waterbody may eliminate other (non- target) water-obligate species present. Further, the use of chemicals (i.e., piscicide) to eliminate an invasive fish species may adversely impact other fishes and other gill-breathing organisms present, such as tadpoles and certain water-borne insects at various stages of their life cycle. AIS program implementation would include mitigation strategies to limit adverse direct impacts to non-target affected non-AIS species such as collection and re-establishment, propagation and stocking, or the wild transfer of affected non-AIS species from other waterbodies to re-establish affected populations of non-AIS species following project implementation. Therefore, any adverse direct impacts to aquatic life and habitats would be short-term, mitigated by restorative actions and negligible to moderate.

Eliminating or reducing the AIS of concern would improve the overall ecological condition of the affected water body and thereby support all other aspects of the affected ecosystem, including terrestrial and avian life and habitats in the affected area. However, for example, the use of piscicide to eliminate an invasive fish species, such as rainbow trout in a stream inhabited by native cutthroat trout, would result in a fish kill where dead and dying fish species collecting on the shore of the affected waterbody may attract and increase the risk of conflicts with terrestrial and avian species such as bears, raptors, and other scavenging wildlife. In this case, AIS program implementation would include mitigation strategies to limit adverse direct impacts to non-target species such as removal or sinking of dead and dying fish to eliminate the unwanted attraction of scavenging wildlife and raptors following program implementation. Therefore, any adverse direct impacts to terrestrial and avian life and habitats within any affected ecosystem would be short-term, mitigated by best practices, and negligible to moderate.

Additional example activities conducted are identified and detailed in *Section II, Background and Description of Proposed Project*.

Secondary Impacts:

No significant adverse secondary impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. AIS management actions that directly impact terrestrial, avian, and aquatic life and habitats may also result in secondary impacts to such resources. Overall, AIS program activities are intended to mitigate adverse impacts associated with the AIS of concern in the affected waterbody. Eliminating or reducing the AIS of concern would be expected to improve the overall ecological condition of the affected waterbody and thereby support all other aspects of affected ecosystem health.

Prior to implementation, many projects conducted under the 2025 Plan would require permitting pursuant to the United States Clean Water Act (33 U.S.C. 1251, et. seq) and the Montana Water Quality Act (Title 75, Chapter 5, MCA). These acts regulate the discharge of pollutants into state waters to ensure compliance with state and national standards intended to protect against adverse impacts, including secondary impacts, to aquatic resources following implementation of the affected actions and to mitigate adverse secondary impacts to aquatic habitats to the extent practicable.

Stream health is important to natural ecosystem function and overall health; therefore, when completed, proposed projects implemented to improve streams and other waterbodies and bring them back to a more natural state would be expected to enhance habitat diversity and quality for many game and nongame species (aquatic, terrestrial, and avian) and their associated habitats. For example, following the establishment of invasive dreissenid mussels to waterbodies populations of native mussel communities declined dramatically, in some cases resulting in 95% decline (e.g., Strayer and Malcom 2018). The reduction or elimination of dreissenid mussels from an affected waterbody would limit or eliminate competition with native mussels inhabiting the affected ecosystem and thereby support restoration of affected ecosystem health. Further, actions to reduce Eurasian watermilfoil with the use of herbicide may support the persistence and function of native aquatic vegetation. However, herbicides target all plants which may result in a reduction in all plant life, not only the invasive plant species. Therefore, any adverse secondary impacts to terrestrial, avian, and aquatic life and habitats in the area affected by a proposed project would be short- and long-term and negligible to moderate. Any beneficial secondary impacts would be long-term and negligible to major, as intended.

Additional example activities that may be conducted are identified and detailed in *Section II, Background and Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. Overall, AIS program activities are intended to mitigate adverse impacts associated with the AIS of concern in the affected waterbody. Eliminating or reducing the AIS of concern would be expected to improve the overall ecological condition of the affected waterbody and thereby support ecosystem health, including terrestrial, avian, and aquatic life and habitats.

Certain past “actions” of state government, including actions planned and implemented by FWP, have resulted in the introduction of AIS. For example, historically, the intentional introduction of non-native rainbow trout to a waterbody with wild, native westslope or Yellowstone cutthroat trout present for the purpose of improving recreational fishing opportunities has, in many cases, adversely impacted these affected wild and native trout populations through competition for resources and hybridization, effectively reducing or eliminating native species from the aquatic ecosystem where they evolved. Therefore, any cumulative impacts associated with the prevention, reduction, or elimination of AIS or non-native invasive fish species pursuant to the AIS Program would be long-term, moderate to major, and beneficial. Any adverse cumulative impacts, such as decreased recreational fishing opportunity, would be short- and long-term, mitigated by the intended re-establishment of native fish species, and negligible to minor.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

2. Water Quality, Quantity and Distribution

Existing Environment/Baseline (No Action Alternative):

The larger riverine systems that run through the project area include the Missouri River, Milk River, Yellowstone River, Kootenai River, Clark Fork River, Powder River, Musselshell River, Tongue River, and Marias River. The largest lakes and reservoirs in the project area include Fort Peck, Flathead and Tiber. Additionally, there are numerous ephemeral or permanent wetlands located throughout the project area.

With the No Action alternative, FWP would continue to implement the strategies that have evolved, changed since publishing the 2002 Plan, but would not provide the public with clarity and transparency in those new/updated practices. Impacts (adverse or beneficial) from projects or management actions would vary in severity from no impact to moderate impact with potential short-term or long-term impacts. Each action would continue to follow required public process and/or MEPA process prior to implementation.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

Direct Impacts

No significant adverse direct impacts to water quality, quantity, and distribution would be expected because of the proposed action. In general, AIS program actions are intended to improve water quality, quantity, and distribution (see secondary and cumulative impacts below); however, AIS program implementation may cause adverse direct impacts.

There are limited mitigation strategies available to address adverse impacts to an affected waterbody once AIS are introduced. Therefore, the primary strategy is to prevent the introduction and establishment of AIS. Where prevention fails, activities to minimize impacts from AIS, illegal or misinformed fish introduction would be addressed on a case-by-case basis. Depending on the introduced AIS, actions may include dewatering or diverting water from a waterbody, mechanical removal (e.g., pulling plants or removing aquatic species with nets), use of chemicals (e.g., herbicides or piscicides), or other measures to contain, minimize, eradicate, or otherwise mitigate adverse impacts related to AIS, which have the potential to impact water quality, quantity, and distribution adversely and directly.

For example, to protect native aquatic species and their habitats, FWP may intentionally introduce herbicides to surface water to target invasive aquatic plants, such as Eurasian water milfoil, for eradication. Once applied to water, herbicides will break down the invasive aquatic plant stems, and depending on the herbicide used some will also damage native aquatic plants. In this case, the intentional manipulation of water quality to address invasive aquatic plant species would result in a discrete area of an aquatic environment that may be unsuitable for human or livestock consumption immediately following treatment for a short period of time. Alternatively, mechanical

removal of invasive aquatic plants from the aquatic environment would likely result in increased water turbidity. However, prior to implementation, such projects may require permitting pursuant to the Clean Water Act (33 U.S.C. 1251, et. seq) and the Montana Water Quality Act (Title 75, Chapter 5, MCA). These acts regulate the discharge of pollutants into state waters to ensure compliance with state and national standards intended to mitigate adverse impacts, including direct impacts to aquatic species and habitats associated with increased water turbidity.

As noted above, many AIS actions have the potential for adverse direct impacts to water quality while others, such as diverting or dewatering a waterbody, have the potential to impact water quantity and distribution adversely and directly. Because the removal of AIS, once established, can be challenging or impossible to accomplish, the primary objective of the AIS program is AIS prevention. When actions must be taken in response to the introduction and establishment of AIS (i.e., pesticide, mechanical removal) mitigating the potential for adverse direct impacts is prioritized in step with the objective to limit or remove AIS from the affected waterbody. Therefore, any adverse direct impacts to water quality, quantity and distribution from the implementation of AIS actions would be short-term, mitigated by best practices and/or enforceable limits and conditions, and minor to moderate.

Example activities conducted are identified and detailed in *Section II, Background and Description of Proposed Project*.

Secondary Impacts

No significant adverse secondary impacts to water quality, quantity and distribution would be expected because of the proposed project. Overall, AIS program activities are intended to mitigate adverse impacts associated with the AIS of concern in the affected waterbody. Eliminating or reducing the AIS of concern would be expected to improve the overall ecological condition of the affected waterbody and thereby support all other aspects of affected ecosystem health, including water quality, quantity and distribution associated with the affected aquatic environment.

Depending on the AIS present, water quality may improve or degrade, either of which may adversely impact extant species. For example, invasive dreissenid mussels decrease natural water turbidity through filtration of natural particles including algae, which constitutes an important food source for higher trophic level organisms. Limiting or eradicating dreissenid mussels (if possible) would support natural algal presence in the affected waterbody thereby altering overall ecological conditions.

Water quantity and distribution may also be adversely impacted by invasive plants, such as Eurasian watermilfoil, or curly leaf pondweed, which can alter the balance of water use within an aquatic ecosystem, decrease water flow and cause clogging of equipment thereby adversely impacting irrigation, drinking water supply systems, and hydroelectric generation systems. Further, invasive dreissenid mussels can completely clog water distribution infrastructure making water delivery impossible. Currently there are limited mitigation strategies available to address such impacts once these AIS are introduced. Therefore, as with other AIS, prevention through education and outreach is the top priority of the AIS program. Successful AIS Program prevention strategies

work to maintain productivity in waterbodies across Montana. Therefore, any secondary impacts to water quality, quantity and distribution would be long-term, negligible to major, and beneficial.

Additional examples of activities conducted under this program are identified and detailed in *Section II, Background and Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to water quality, quantity and distribution would be expected because of the proposed project. Overall, AIS program activities are intended to mitigate adverse impacts associated with the AIS of concern in the affected waterbody. Eliminating or reducing the AIS of concern would be expected to improve the overall ecological condition of the affected waterbody and thereby support ecosystem health, including water quality, quantity and distribution.

Certain past “actions” of state government, including actions planned and implemented by FWP, have resulted in the introduction of AIS. For example, historically, mysis shrimp were introduced to waters of northwest Montana in the 1960s as a food supply for kokanee salmon. Mysis did not provide good forage for kokanee and ultimately contributed to the collapse of kokanee fisheries in Flathead Lake. Any adverse cumulative impacts, such as decreased recreational fishing opportunity, would be short- and long-term, mitigated by the intended re-establishment of native species, and negligible to minor.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

3. Geology

Existing Environment/Baseline Conditions (No Action Alternative):

Montana's geology is characterized by extensive sequences of Paleozoic, Mesozoic, and Cenozoic sedimentary strata, which rest upon an ancient crystalline basement composed of Archean and Proterozoic rocks. Some of the oldest rocks in North America are part of Montana's geology with formations beyond 2.5 billion years old.

With the No Action alternative, FWP would continue to implement AIS strategies that have evolved, changed since the publication of the 2002 Plan, but would not provide the public with clarity and transparency in those updated practices. Each proposed action requires public process pursuant to MEPA prior to project approval and implementation.

Under the No Action Alternative, the proposed project would not occur, and no disturbances associated with the proposed actions would therefore impact Geology. AIS would continue to be managed under the existing plan and no additional impact would occur. The No Action Alternative would not change the status of the existing area. Impacts to Geology due to current and future activities in the existing area would continue. See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

Direct Impacts: No significant adverse direct impacts to geology would be expected because of the proposed project. Some ground disturbing activities may occur from personnel and equipment when accessing affected waterbodies for AIS treatments (see Soil Quality, Stability and Moisture). However, none of these activities would be expected to directly impact area geology. No additional ground disturbing activities would occur because of the proposed project. Therefore, no adverse or beneficial direct impacts to geological resources would be expected because of the proposed project.

Example activities conducted are identified and detailed in *Section II, Background and Description of Proposed Project*.

Secondary Impacts

No significant adverse secondary impacts to geology would be expected because of the proposed project. Following project implementation (see Direct Impacts above), no ground disturbing activities would occur. Therefore, no adverse or beneficial secondary impacts to geological resources would be expected because of the proposed project.

Example activities conducted are identified and detailed in *Section II, Background and Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to geology would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact geology in areas affected by AIS actions. Further, no direct or secondary impacts to geology would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to geology would be expected because of the proposed project.

4. Soil Quality, Stability and Moisture

Existing Environment/Baseline Conditions (No Action Alternative):

Montana's soil quality exhibits considerable heterogeneity, reflecting the state's diverse geological and climatic conditions. Soils vary from deep loams with high organic matter to those with high salinity or low water-holding capacity.

With the No Action alternative, FWP would continue to use the Montana AIS Management Plan, 2002 to guide AIS management actions. Impacts from projects or management actions would vary in severity from no impact to moderate impact with potential short-term or long-term impacts. Each action would continue to follow required public process and/or MEPA process prior to implementation.

Direct Impacts: No significant adverse direct impacts to soil quality, stability and moisture would be expected because of the proposed project. Some ground disturbing activities may occur from personnel and equipment when accessing affected waterbodies for AIS treatments (see Geology). However, none of these activities would be expected to directly impact area soil quality, stability or

moisture. No additional ground disturbing activities would occur because of the proposed project. Therefore, no adverse or beneficial direct impacts to soil resources would be expected because of the proposed project.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

Secondary Impacts

No significant adverse secondary impacts to soil quality, stability and moisture would be expected because of the proposed project. Following project implementation (see Direct Impacts above), no ground disturbing activities would occur. Therefore, no adverse or beneficial secondary impacts to soil resources would be expected because of the proposed project.

Example activities conducted are identified and detailed in *Section II, Background and Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to soil quality, stability or moisture would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact soil in areas affected by AIS actions. Further, no direct or secondary impacts to soil would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to soil would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

5. Vegetation Cover, Quantity and Quality

Existing Environment/Baseline Conditions (No Action Alternative):

Common habitat types within the project area include Great Plains mixed-grass prairie (67,251 km²), sagebrush steppe (45,747 km²), Rocky Mountain lower montane, foothill, and valley grassland (20,096 km²), montane sagebrush steppe (16,425 km²), Rocky Mountain subalpine dry- mesic spruce fir forest and woodland (12,579 km²), Rocky Mountain lodgepole pine (12,036 km²), Rocky Mountain dry mesic montane mixed conifer forest (10,888 km²), and Great Plains sand prairie (10,516 km²). Ecological systems that support aquatic vegetation include wetlands, fens, prairie potholes, vernal pools, floodplain, riparian, swamps, marshes, meadows and open water. A diversity of aquatic plant species are associated with different ecological systems, including but not limited to pondweed, arrowhead, cattail, sedge, rush, and others.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected- existing environment.

With the No Action alternative, FWP would continue to implement AIS strategies that have evolved, changed since the publishing of the 2002 Plan, but would not provide the public with clarity and transparency in those new/updated practices. Impacts from projects or management actions

would vary in severity from no impact to moderate impact with potential short-term or long-term impacts. Each action would continue to follow required public process and/or MEPA process prior to implementation.

Direct Impacts: No significant long-term adverse direct impacts to vegetation cover, quantity, and quality are expected. AIS can impact entire ecosystems, including vegetation. The AIS program focuses on prevention and education to disrupt the potential for introduction or spread of AIS. Actions taken to minimize vegetation impacts from AIS could include physical measures, such as water level manipulation or pulling and uprooting plants, or physically removing invasive plants. Other measures could include use of chemicals, herbicides or pesticides, to kill invasive plants or animals. As an example, aquatic vegetation and vegetation located near, around a waterbody may be adversely and directly impacted by project personnel trampling existing vegetation when conducting and implementing the work necessary for a given proposed project. FWP would limit or mitigate such impacts by limiting the number of personnel conducting such activities and employing other reasonable and practical measures, such as the use of existing trails and roads to reduce potential adverse impacts to area vegetation. Also, FWP would expect any adverse direct impacts to plants to be unnoticeable within one growing season. Measures to mitigate ecosystem impacts, including vegetation cover, quantity, and quality resulting from AIS introductions will be considered on a case-by-case basis pursuant to MEPA prior to implementation.

Further, for example, the use of herbicide to eliminate, reduce or otherwise control the propagation of AIS within or near an affected waterbody may adversely impact non-target vegetation. Most herbicides used for such purposes would not be species-specific in their efficacy. Therefore, non-target vegetation would likely be directly and adversely impacted. To mitigate such adverse direct impacts, applicators who intend to treat waters with state restricted-use aquatic herbicides must attend a special aquatic training session and pass an Aquatic Pest Control Exam for initial certification as a commercial applicator. Training and testing are offered once a year and certification is required. Therefore, any adverse direct impacts to vegetation cover, quantity, and quality, would be short-term, mitigated by best practices, and negligible to moderate.

Additional examples of activities conducted under this program are identified and detailed in *Section II, Background and Description of Proposed Project*.

Secondary Impacts

No significant adverse secondary impacts to vegetation cover, quantity and quality would be expected because of the proposed project. Overall, AIS program activities are intended to mitigate adverse impacts associated with the AIS of concern in the affected waterbody. Eliminating or reducing the AIS of concern would be expected to improve the overall ecological condition of the affected waterbody and thereby support all other aspects of affected ecosystem health, including natural vegetation cover, quantity and quality associated with the affected environment. Therefore, any expected secondary impacts would be long-term, minor to major, and beneficial.

Additional examples of activities conducted under this program are identified and detailed in *Section II, Background and Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to vegetation cover, quantity and quality would be expected because of the proposed project. Overall, AIS program activities are intended to mitigate adverse impacts associated with the AIS of concern in the affected waterbody. Eliminating or reducing the AIS of concern would be expected to improve the overall ecological condition of the affected waterbody and thereby support ecosystem health, including water quality, quantity and distribution.

Certain past “actions” of state government, including actions planned and implemented by FWP, have resulted in changing vegetative cover including hand removal of Eurasian Watermilfoil (EWM). This activity targets specific plants, but small amounts of native aquatic vegetation are often removed along with the invasive EWM. Any adverse cumulative impacts, such as decreased recreational fishing opportunity, would be short- and long-term, mitigated by the intended re-establishment of native aquatic species, and negligible to minor.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

6. Aesthetics

Existing Environment/Baseline Conditions (No Action Alternative):

The proposed project area has many unique features across the natural landscape that include native habitats, minerals, flora, fauna, areas of historic significance, and riverine and wetland ecosystems. The proposed project area also has diverse communities, including urban communities, and rural communities that are dominated by agricultural use and outdoor recreational opportunities.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected- existing environment.

With the No Action alternative, FWP would continue to implement AIS strategies that have evolved, changed since the publishing of the 2002 Plan, but would not provide the public with clarity and transparency in those new/updated practices. Impacts from projects or management actions would vary in severity from no impact to moderate impact with potential short-term or long-term impacts. Each action would continue to follow required public process and/or MEPA process prior to implementation.

Direct Impacts: No significant adverse direct impacts on aesthetics would be expected because of the proposed action. The AIS program focuses on prevention and education to disrupt the potential for introduction or spread of AIS. Actions taken to minimize vegetation impacts from AIS could include physical measures, such as water level manipulation or pulling and uprooting plants, or physically removing invasive plants. Other measures could include use of chemicals, herbicides, or pesticides to kill invasive plants or animals. As an example, aquatic vegetation and vegetation located near, around a waterbody may be adversely and directly impacted by project personnel trampling existing vegetation when conducting, implementing the work necessary for a given proposed project. FWP would limit or mitigate such impacts by limiting the number of personnel

conducting such activities and employ other reasonable and practical measures, such as the use of existing trails and roads to reduce potential adverse impacts to area vegetation. Also, FWP would expect any adverse direct impacts to plants to be unnoticeable within one growing season. Measures to mitigate ecosystem impacts, including vegetation cover, quantity, and quality resulting from AIS introductions will be considered on a case-by-case basis pursuant to MEPA prior to implementation.

Additional examples of activities conducted under this program are identified and detailed in *Section II, Background and Description of Proposed Project*.

Secondary Impacts

No significant adverse secondary impacts on aesthetics would be expected because of the proposed project. Following AIS project implementation (i.e., construction activities, see Direct Impacts above), the aesthetic nature of some affected environments may change. For example, depending on the AIS present, a given waterbody may have increased clarity or more turbid, either of which may adversely impact aesthetics. For example, invasive dreissenid mussels decrease natural water turbidity through filtration of natural particles including algae, which can affect water clarity.

Additional examples of activities conducted under this program are identified and detailed in *Section II, Background and Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to aesthetics would be expected because of the proposed project. Overall, AIS program activities are intended to mitigate adverse impacts associated with the AIS of concern in the affected waterbody. Eliminating or reducing the AIS of concern would be expected to improve the overall ecological condition of the affected waterbody and thereby support ecosystem health, including water quality, quantity and distribution.

Certain past “actions” of state government, including actions planned and implemented by FWP, have resulted in short-term impacts. For example, historically, hand removal of EWM creates small amounts of turbidity. Turbidity cause by EWM removal is localized and dissipates quickly. Any adverse cumulative impacts, such as decreased or increased water turbidity, would be short- and long-term, mitigated by the intended re-establishment of natural conditions, and negligible to minor.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

7. Air Quality

Existing Environment/Baseline Conditions (No Action Alternative):

Air quality in most areas of Montana is currently unclassifiable or in compliance with-attainment for the applicable National Ambient Air Quality Standards (NAAQS). Existing sources of air pollution in Montana are varied and generally include industrial point sources (i.e., Colstrip coal-fired power

plant), fugitive dust associated with high wind events and exposed ground, vehicle travel on unpaved roads (fugitive dust), vehicle exhaust emissions, and various agricultural practices (e.g., vehicle exhaust emissions and fugitive dust).

Historically, ambient air quality monitoring in some areas of the state has demonstrated non-compliance or nonattainment for the particulate matter (PM₁₀), carbon monoxide (CO), and sulfur dioxide (SO₂) NAAQS. Since that time, the affected areas have generally demonstrated compliance with the affected NAAQS. Montana's affected air quality nonattainment and/or maintenance areas (areas that once violated but have since attained the NAAQS) include the following: Libby (PM_{2.5} Maintenance Area, PM₁₀ Maintenance Area); Whitefish (PM₁₀ Maintenance Area); Columbia Falls (PM₁₀ Maintenance Area); Kalispell (PM₁₀ Maintenance Area); Thompson Falls (PM₁₀ Maintenance Area); Missoula (PM₁₀ Maintenance Area, CO Maintenance Area); Great Falls (CO Maintenance Area); East Helena (Pb Maintenance Area); Butte (PM₁₀ Maintenance Area); Laurel (SO₂ Nonattainment Area); Billings (CO Maintenance Area, SO₂ Maintenance Area); Polson, Tribal (PM₁₀ Nonattainment Area); Ronan, Tribal (PM₁₀ Nonattainment Area); and Lame Deer, Tribal (PM₁₀ Nonattainment Area).

See Section III, *General Setting of the Affected Environment*, for additional detailed information related to the affected- existing environment.

With the No Action alternative, FWP would continue to implement AIS strategies that have evolved, changed since the publishing of the 2002 Plan, but would not provide the public with clarity and transparency in those new/updated practices. Impacts from projects or management actions would vary in severity from no impact to moderate impact with potential short-term or long-term impacts. Each action would continue to follow required public process and/or MEPA process prior to implementation.

Direct Impacts: No significant adverse direct impacts to air quality would be expected because of the proposed project. However, certain actions may adversely impact air quality. For example, efforts to eliminate AIS from an affected waterbody may include the dewatering or water-drawdown of the affected waterbody which would expose sediments that can be mobilized by wind resulting in fugitive dust emissions. Also, AIS projects that involve the use of heavy mechanized equipment, such as barrier construction to contain or prevent AIS may adversely impact air quality through combustion of fossil fuels and result in vehicle exhaust emissions, primarily nitrogen dioxide, hydrocarbons, benzene and formaldehyde, which can lead to the formation of smog. Further the movement of heavy equipment and over unpaved, gravel roads for the purposes of AIS actions may also create fugitive dust emissions. Any adverse impacts to air quality would be short-term, negligible to minor, limited to the period of construction activities, and mitigated by dust control practices as necessary.

Additional examples of activities conducted under this program are identified and detailed in *Section II, Background and Description of Proposed Project*.

Secondary Impacts

No significant adverse secondary impacts to air quality would be expected because of the proposed project. Following AIS project implementation (i.e., construction activities, see Direct

Impacts above), no impacts to air quality would be expected because of the proposed project. Therefore, the proposed project would not be expected to cause or contribute to a violation of the applicable NAAQS regardless of project location.

The proposed action would not result in significant adverse direct, secondary, or cumulative climate change impacts. Any impacts of the proposed action would be consistent with current impacts (i.e., the no action alternative).

Additional examples of activities conducted under this program are identified and detailed in *Section II, Background Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to air quality would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact air quality in areas affected by AIS actions. Further, no direct or secondary impacts to air quality would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts on air quality would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

8. Unique, Endangered, Fragile or Limited Environmental Resources

Existing Environment/Baseline Conditions (No Action Alternative):

The proposed project area has freshwater emergent wetlands, freshwater ponds, riparian forest, riparian scrub-shrub, native Great Plains mixed-grass prairie, big sagebrush steppe, and other fragile ecosystem resources. According to the Montana Natural Heritage Program, Montana has 227 Animal Species of Concern, 93 Potential Species of Concern, and 59 Special Status Species. Species status is based on a standardized ranking system to denote global (range-wide) and state status.

Within the project area, there are also eight federally threatened species: Canada lynx (*Lynx canadensis*), grizzly bear (*Ursus arctos*), yellow billed cuckoo (*Coccyzus americanus*), bull trout (*Salvelinus confluentus*), meltwater lednian stonefly (*Lednia tumana*), western glacier stonefly (*Zapada glacier*), red knot (*Calidris canutus*), and piping plover (*Charadrius melodus*). Additionally, there are four species listed as endangered under the Endangered Species Act: northern myotis (*Myotis septentrionalis*), least tern (*Sternula antillarum*), pallid sturgeon (*Scaphirhynchus albus*), and black-footed ferret (*Mustela nigripes*). Also, the federally endangered whooping crane (*Grus americana*) may be found migrating through the project area. Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) use habitats throughout the proposed project area. The proposed project area may also have important animal habitat such as bat roosting areas (i.e., maternity roosts, hibernacula, or bachelor roosts), bird rookeries, and important stopover sights for migrating birds that provide critical resources for their annual migrations.

Within the project area, there are specific fish species of note, 23 Species of Concern and 5 Potential Species of Concern. Species federally listed under the Endangered Species Act include Kootenai River white sturgeon and pallid sturgeon (Endangered), bull trout (Threatened), sturgeon chub, and sicklefin chub are under review. Shovelnose sturgeon are also listed as threatened due to similar attributes to the endangered pallid sturgeon.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected-existing environment.

With the No Action alternative, FWP would continue to implement AIS strategies that have evolved, changed since the publishing of the 2002 Plan, but would not provide the public with clarity and transparency in those new/updated practices. Impacts from projects or management actions would vary in severity from no impact to moderate impact with potential short-term or long-term impacts. Each action would continue to follow the required public process and/or MEPA process prior to implementation.

Direct Impacts: No significant adverse direct impacts to any unique, endangered, fragile, or limited environmental resources are expected. Any direct impacts to unique, endangered, fragile, or limited environmental resources from AIS program actions are short-term minor to moderate, depending on the invasive species. Introduction of AIS can substantially impact unique and fragile aquatic resources by out-competing extant aquatic plant and animal species in a waterbody and can change the aquatic species composition within a waterbody. Management actions to address AIS can have short-term and minor to moderate impacts. For example, drawdown or dewatering a waterbody may be needed to remove an AIS (through physical or chemical removal), which may adversely impact any water-dependent unique, endangered, fragile, or limited environmental resources inhabiting the affected waterbody. In such cases, FWP would mitigate impacts to such resources.

The best strategy to minimize adverse impacts of an AIS treatment is to prevent the introduction of AIS. Where prevention fails, management actions will be assessed on a case-by-case basis through MEPA or other appropriate public processes. Any adverse direct impacts to unique, endangered, fragile, or limited environmental resources would be short-term, negligible to moderate. There are limited mitigation strategies available to address adverse impacts to an affected waterbody once AIS are introduced. Therefore, the primary strategy is to prevent the introduction and establishment of AIS. Where prevention fails, activities to minimize impacts from AIS, illegal or misinformed fish introduction would be addressed on a case-by-case basis. Depending on the introduced AIS, actions may include dewatering or diverting water from a waterbody, mechanical removal (e.g., pulling plants or removing aquatic species with nets), use of chemicals (e.g., herbicides or piscicides), or other measures to contain, minimize, eradicate, or otherwise mitigate adverse impacts related to AIS, which have the potential to impact unique, endangered, fragile, or limited environmental resources adversely and directly.

For example, to protect native aquatic species and their habitats, FWP may intentionally introduce herbicides to surface water to target invasive aquatic plants, such as Eurasian water milfoil, for eradication. Once applied to water, herbicides will break down the invasive aquatic plant stems, and depending on the herbicide used some will also damage native aquatic plants. In this case, the

intentional manipulation of water quality to address invasive aquatic plant species would result in a discrete area of an aquatic environment that may be unsuitable for human or livestock consumption immediately following treatment for a short period of time. Alternatively, mechanical removal of invasive aquatic plants from the aquatic environment would likely result in increased water turbidity. However, prior to implementation, such projects may require permitting pursuant to the Clean Water Act (33 U.S.C. 1251, et. seq) and the Montana Water Quality Act (Title 75, Chapter 5, MCA). These acts regulate the discharge of pollutants into state waters to ensure compliance with state and national standards intended to mitigate adverse impacts, including direct impacts to aquatic species and habitats associated with increased water turbidity.

As noted above, many AIS actions have the potential for adverse direct impacts to unique, endangered, fragile or limited environmental resources while others, such as diverting or dewatering a waterbody, have the potential to impact unique, endangered, fragile or limited environmental resources adversely and directly. Because the removal of AIS, once established, can be challenging or impossible to accomplish, the primary objective of the AIS program is AIS prevention. When actions must be taken in response to the introduction and establishment of AIS (i.e., piscicide, mechanical removal) mitigating the potential for adverse direct impacts is prioritized in step with the objective to limit or remove AIS from the affected waterbody. Therefore, any adverse direct impacts to from the implementation of AIS actions would be short-term, mitigated by best practices and/or enforceable limits and conditions, and minor to moderate.

Example activities conducted are identified and detailed in *Section II, Background and Description of Proposed Project*.

Secondary Impacts

No significant adverse secondary impacts to unique, endangered, fragile, or limited environmental resources would be expected because of the proposed project. Overall, AIS program activities are intended to mitigate adverse impacts associated with the AIS of concern in the affected waterbody. Eliminating or reducing the AIS of concern would be expected to improve the overall ecological condition of the affected waterbody and thereby support all other aspects of affected ecosystem health, including unique, endangered, fragile or limited environmental resources associated with the affected aquatic environment.

Depending on the AIS present, water quality may improve or degrade, either of which may adversely impact extant species. For example, invasive dreissenid mussels decrease natural water turbidity through filtration of natural particles including algae, which constitutes an important food source for higher trophic level organisms. Limiting or eradicating dreissenid mussels (if possible) would support natural algal presence in the affected waterbody thereby altering overall ecological conditions.

Unique, endangered, fragile or limited environmental resources may also be adversely impacted by invasive plants, such as Eurasian watermilfoil, or curly leaf pondweed, which can alter the balance of water use within an aquatic ecosystem, decrease water flow and cause clogging of equipment thereby adversely impacting irrigation, drinking water supply systems, and hydroelectric generation systems. Further, invasive dreissenid mussels can completely clog water distribution infrastructure

making water delivery impossible. Currently there are limited mitigation strategies available to address such impacts once these AIS are introduced. Therefore, as with other AIS, prevention through education and outreach is the top priority of the AIS program. Successful AIS Program prevention strategies work to maintain productivity in waterbodies across Montana. Therefore, any secondary impacts to unique, endangered, fragile or limited environmental resources would be long-term, negligible to major, and beneficial.

Additional examples of activities conducted under this program are identified and detailed in *Section II, Background and Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to unique, endangered, fragile or limited environmental resources would be expected because of the proposed project. Overall, AIS program activities are intended to mitigate adverse impacts associated with the AIS of concern in the affected waterbody. Eliminating or reducing the AIS of concern would be expected to improve the overall ecological condition of the affected waterbody and thereby support ecosystem health, including unique, endangered, fragile or limited environmental resources.

Certain past “actions” of state government, including actions planned and implemented by FWP, have resulted in the introduction of problematic species. For example, historically, FWP introduced mysis shrimp in the 1960’s and 1970’s to improve forage for trout and salmon. The shrimp established, but did not provide an effective forage base for those species, but instead had negative impacts on the food chain.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

9. Historical and Archaeological Sites

Existing Environment/Baseline Conditions (No Action Alternative):

The proposed project area is the traditional homeland and hunting grounds for the Kootenai, Pend d’Oreille, Salish, Blackfeet, Gros Ventre, Crow, Assiniboine, Hidatsa, Mandan, Arikara and Sioux tribes. Additionally, there were homesteaders, trappers, pioneers, and other travelers through the project area. All these groups utilized the proposed project area and there are known and unknown historical, archaeological, and other sites of importance across the proposed project area.

There are multiple significant archaeological sites and resources located in the proposed project area. Some examples of archaeological sites in Montana that capture past activities and tools include Petroglyph Canyon, Pictograph Cave, Deer Medicine Rocks and the Anzick Clovis Burial Site.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected- existing environment.

With the No Action alternative, FWP would continue to implement AIS strategies that have evolved, changed since the publishing of the 2002 Plan, but would not provide the public with clarity and transparency in those new/updated practices. Impacts from projects or management actions

would vary in severity from no impact to moderate impact with potential short-term or long-term impacts. Each action would continue to follow the required public process and/or MEPA process prior to implementation.

Direct Impacts:

No significant adverse direct impacts to historical and archaeological sites are expected because of the proposed project. No ground disturbing activities would occur because of the proposed project. Therefore, no direct impacts to historical and archaeological sites would be expected because of the proposed project. Also, in keeping with the Montana Antiquities Act and related regulations (ARM 12.8.501-12.8.510), all undertakings on state lands are assessed by a qualified archaeologist or historian for their potential to affect cultural resources. The process for this assessment may include a cultural resource inventory and evaluation of cultural resources within or near the project area, in consultation with the State Historic Preservation Office. FWP also consults with all Tribal Historic Preservation Offices affiliated with each property in accordance with FWP's Tribal Consultation Guidelines. Regardless of the nature of a proposed project, if cultural resources within or near the project area are recorded and are eligible for the National Register of Historic Places, they will be protected from adverse impacts through adjustments to the project design or cancellation of the project if no design alternatives are available. If cultural resources are unexpectedly discovered during project implementation, FWP would cease implementation and contact FWP's Heritage Program for further evaluation. Therefore, no impacts to any historical and archaeological sites found on state-owned property would be expected because of the proposed project. Impacts to historical and archaeological sites will be assessed on a case-by-case basis through MEPA or other public processes prior to beginning any ground disturbing activities.

Direct impacts to historical and archeological sites from the AIS Program are not expected. Actions related to discovery of AIS could include construction or ground disturbing activities, such as the staging of operations to implement control measures or building of access sites for watercraft inspection stations. Cultural resource inventory and consultation with the State Historic Preservation Office occurs prior to project implementation or prior to any ground-breaking activities. If cultural resources are discovered, project designs will be modified, or the project will be cancelled if other alternatives are not available.

Secondary Impacts

No significant adverse secondary impacts to historical and archaeological sites would be expected because of the proposed project. Following project implementation (see Direct Impacts above), no ground disturbing activities would occur. Therefore, no adverse or beneficial secondary impacts to historical and archaeological sites would be expected because of the proposed project.

Example activities conducted are identified and detailed in *Section II, Background and Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to historical and archaeological sites would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact historical and archaeological sites in areas affected by AIS actions. Further, no direct or secondary impacts to historical and archaeological sites would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to historical and archaeological sites would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

10. Demands on Environmental Resources of Land, Water, Air and Energy

Existing Environment/Baseline Conditions (No Action Alternative):

Much of the proposed project area is considered rural and relies on the resources of the land and water for agricultural operations. Both land and water are used for recreational opportunities throughout the project area. Further, various types of energy development and production occur throughout the project area.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected- existing environment.

With the No Action alternative, FWP would continue to implement AIS strategies that have evolved, changed since the publishing of the 2002 Plan, but would not provide the public with clarity and transparency in those new/updated practices. Impacts from projects or management actions would vary in severity from no impact to moderate impact with potential short-term or long-term impacts. Each action would continue to follow the required public process and/or MEPA process prior to implementation.

Direct Impacts:

No significant adverse direct impacts to demands on environmental resources of land, water, air, and energy are expected. Direct impacts to demands on environmental resources of land, water, air, and energy from the AIS Program range from short and long-term, negligible to major. Depending on the AIS introduced, management actions could include dewatering or diverting water from a waterbody, reducing or closing land and water access, modifying or closing water diversion on agricultural and hydropower facilities, physical or mechanical removal of AIS or unwanted species, or use of chemicals to remove unwanted species. Prevention and early detection are the best tools to slow the spread of AIS and minimize impacts to aquatic and other natural resources.

Secondary Impacts

No significant adverse secondary impacts to demands on environmental resources of land, water, air, and energy would be expected because of the proposed project. Following project implementation (see Direct Impacts above), no activities that would place undue demands on environmental resources of land, water, air, and energy would occur. Therefore, no adverse or beneficial secondary impacts to demands on environmental resources of land, water, air, and energy would be expected because of the proposed project.

Example activities conducted are identified and detailed in *Section II, Background and Description of Proposed Project*.

Cumulative Impacts

No significant adverse cumulative impacts to demands on environmental resources of land, water, air, and energy would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact demands on environmental resources of land, water, air, and energy in areas affected by AIS actions. Further, no direct or secondary impacts to demands on environmental resources of land, water, air, and energy would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to demands on environmental resources of land, water, air, and energy would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

B. Evaluation and Summary of Potential Impacts of the Proposed Project on the Human Environment

1. Social Structures and Mores

Existing Environment/Baseline Conditions (No Action Alternative):

The project area has a population of 1,122,867 (2022 US Census) which is spread across rural areas, small towns and only a handful of urban areas. Many communities are supported by agriculture and recreational opportunities, which translate into agriculture-based activities, such as rodeos and fairs, and recreation activities such as boating, fishing, hunting and hiking. Further, Montana encompasses twelve Native American Tribes and associated reservations. Diverse tribal cultures are evident in Montana life. There is a deep sense among Montanans for being Montanan which often can mean having a high regard for community, self-sufficiency and independence, hard work, connection to the natural environment, and overall friendly social attitude.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected- existing environment.

Direct Impacts:

No significant adverse direct impacts to social structures and mores would be expected because of the proposed project. Program actions used to address AIS introductions may adversely impact social structures and mores by dewatering or diverting water from a waterbody relied upon by the public for recreation or other water resource uses, such as limiting or closing public access, limiting or closing fishing and other recreational activities, limiting or preventing diversion or use of water, and limiting or shutting down water delivery infrastructure, among other impacts. The overall objective to reduce or eliminate the AIS of concern would be expected to result in long-term, moderate to major, and beneficial impacts. Prevention is the best mitigation for AIS and FWP

dedicates substantial resources toward education and outreach to prevent the introduction and spread of AIS. Using this strategy. Prevention strategies may adversely impact social structures and mores by requiring the affected public to undertake preventative actions prior to recreating, such as Clean, Drain, and Dry. However, FWP considers taking personal responsibility to be a minor infringement on how the affected population interacts and lives together and a limited distraction from recreational customs and conventions of any affected community. Therefore, any adverse direct impacts would be short-term, negligible to moderate, and mitigated by BMPs.

Example activities conducted under this program are identified and detailed in *Section II, Background and Description*.

Secondary Impacts: No significant adverse secondary impacts would be expected because of the proposed project. AIS management actions/programs are generally intended to benefit the overall health and function of the aquatic environment and because the aquatic environment plays a critical role in the natural function of the overall ecosystem, most secondary impacts would be expected to benefit the resource. However, some secondary impacts from some of the AIS program actions may impact social structures. Potential impacts (adverse and beneficial) may include, the introduction of AIS can adversely impact social structure and mores in the area affected by the project through clogged water pipes and water delivery infrastructure, waterways choked with weeds, native and sport fisheries displaced by invasive fish species, restricted or closed access to waterbodies, draining or dewatering of waterbodies, among other adverse impacts. Any direct adverse impacts from management actions in response to AIS would be short-term and minor to moderate. Prevention is the best measure to stop the spread or introduction of AIS; therefore, FWP dedicates substantial resources toward public education and information regarding the introduction and spread of AIS. Monitoring and early detection are also key to addressing AIS prior to spread within or to other waterbodies.

Example activities conducted under this program are identified and detailed in *Section II, Background and Description of the Project*.

Cumulative Impacts

No significant adverse cumulative impacts to social structures and mores would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact social structures and mores in areas affected by AIS actions. Further, no direct or secondary impacts to social structures and mores would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to social structures and mores would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

2. Cultural Uniqueness and Diversity

Existing Environment/Baseline Conditions (No Action Alternative):

The project area has a population of 1,122,867 (2022 US Census). The five largest ethnic groups in the project area are white (non-Hispanic) 85.5%, American Indian and Alaska Native (non-Hispanic) 6.6%, Hispanic or Latino 4.3%, two or more races 3.0%, and Asian 1.0%. In 2022, an estimated 4.0% of Montana households reported speaking a language other than English in the home. The proposed project location is the traditional homeland and hunting grounds for the Kootenai, Pend d'Oreille, Salish, Blackfeet, Gros Ventre, Crow, Assiniboine, Hidatsa, Mandan, Arikara and Sioux tribes. Additionally, there were homesteaders, trappers, pioneers, and other travelers through the area. All these groups utilized the proposed project area.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected- existing environment.

Direct Impacts:

No significant adverse direct impacts to cultural uniqueness and diversity would be expected because of the proposed project. The proposed project would guide future AIS management in Montana by defining objectives and goals at local and statewide scales. It is not expected that the proposed action of adopting and implementing the 2025 Plan would directly result in the relocation of people into or out of any part of Montana. Therefore, no direct impacts to pre-project cultural uniqueness and diversity would be expected because of the proposed project.

Secondary Impacts:

No significant adverse secondary impacts to cultural uniqueness and diversity would be expected because of the proposed action. The 2025 Plan would guide future AIS management in Montana by defining objectives and goals at local and statewide scales. Following adoption of the 2025 Plan, and associated project implementation, it is not expected the proposed action would result in the relocation of people into or out of any part of Montana. Therefore, no secondary impacts to pre-project cultural uniqueness and diversity would be expected because of the proposed project.

Cumulative Impacts

No significant adverse cumulative impacts to cultural uniqueness and diversity would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact cultural uniqueness and diversity in areas affected by AIS actions. Further, no direct or secondary impacts to cultural uniqueness and diversity would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to cultural uniqueness and diversity would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

3. Access to and Quality of Recreational and Wilderness Activities

Existing Environment/Baseline Conditions (No Action Alternative):

Opportunities to use and enjoy the lakes, rivers, streams and reservoirs are abundantly available for recreational users across Montana. The waters of Montana cover 177,000 stream miles and over

10,000 lakes, ponds, and reservoirs. Montana has 55 State Parks that provide access to fish, boats, camp and hike. FWP also maintains over 330 fishing access sites (FAS) across the state for anglers, boaters and general waterbody access. Additionally, the nearly 28 million acres of federally managed land also provides access to Wilderness Areas, National Forest, Wilderness Management Areas, and other recreational access.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

Direct Impacts:

No significant adverse direct impacts to access to and quality of recreational and wilderness activities would be expected because of the proposed project. Public access to affected waterbodies that are located on public lands, or private lands that accept public access may be disrupted during AIS treatments or to temporarily limit the spread of AIS during assessment periods. For example, public access to an affected drainage would be restricted during, and for a period of 2-4 days, following treatment intended to remove an invasive plant species in order to prevent human exposure to chemicals and to further limit plant spread. This would include actions such as closing roads, boat ramps, and other waterbody access points until the affected area is deemed safe for human use. Using this example, access restrictions would adversely impact those wishing to recreate in the area during and immediately following the relatively short treatment period. To the extent practical, such impacts would be mitigated by timing the project such that affected roads are not closed during popular recreation time such as holidays and weekends and maintaining access to adjacent drainages that provide similar recreational opportunities during the treatment period.

For example, mechanical removal of Eurasian watermilfoil from an affected waterbody often results in a short-term increase in water turbidity exceeding applicable water quality standards for turbidity and requiring FWP to obtain a short-term authorization (318 Permit) to exceed the standard. Beyond impacts to water quality, such AIS activities may also adversely impact access through closure or restriction of access during the treatment or treatment evaluation.

Several congressional designated Wilderness Areas currently exist in the affected area; therefore, some adverse impacts to the quality of and/or access to Wilderness Areas may occur because of the proposed action. For example, while unlikely, AIS management action within a Wilderness Area could include encroachment by mechanized means to remove non-native species and reintroduce native species better suited to available habitats. Such AIS actions may conflict with the Wilderness Act and would adversely impact access to or the quality of the wilderness experience during the activity. These impacts would be appropriately mitigated through coordination and permitting by appropriate authorities (i.e., USFS, NPS, USFWS) on a case-by-case basis. Any adverse direct impacts to access to and quality of recreational and Wilderness activities and experiences would be short-term, negligible to minor, and mitigated by best practices intended to limit such potential issues.

Most FWP Fisheries programs are intended to improve aquatic life and habitats; and many Montanans hold high regard for outdoor recreation, including fishing. Introduction of AIS into designated Wilderness Areas or other recreational fisheries would have adverse, minor to major, impacts to access and quality of recreational and wilderness activities in the affected area. Direct impacts of management actions to mitigate AIS introduction depend on the species introduced and characteristics of the affected waterbody. Any direct impacts from management actions in response to AIS would be short-term and minor to moderate. Prevention and early detection are key to preventing the spread of AIS, and FWP dedicates substantial resources to educating the public about preventing the spread of AIS and through an extensive AIS monitoring program.

Example activities conducted under this program are identified and detailed in *Section II, Background and Description of Proposed Project*.

Secondary Impacts:

No significant adverse secondary impacts would be expected because of the proposed project. AIS actions/programs are generally intended to benefit the overall health and function of the aquatic environment and, because the aquatic environment plays a critical role in the natural function of the overall ecosystem, most secondary impacts would be expected to benefit the resource. However, some adverse secondary impacts to access to and the quality of recreational and Wilderness activities may occur because of the proposed project. For example, people who enjoy fishing waterbodies being treated to eliminate or reduce existing populations of non-native, invasive fish species such as brook trout, lake trout, brown trout or rainbow trout for the purpose of promoting conservation of native, wild species such as westslope or Yellowstone cutthroat trout may view the loss of the existing non-native fishery as an adverse impact, especially considering such species may have been present in the affected waterbody for more than a century in some cases. The long-term goal for native, wild fish species conservation in Montana is to restore secure conservation populations and to further promote fisheries based on native species that have evolved in Montana's environment and projects that restore native fish species are necessary to ensure the continued survival of the species, conserve remaining genetic diversity and meet statutory obligations to prevent listing under the ESA. Further, many opportunities to fish for non-native, invasive fish species would remain available throughout the state and would continue to be supported by FWP fisheries management for the purposes of recreational fishing. Therefore, any expected adverse secondary impacts associated with AIS actions would be long-term, negligible to moderate and mitigated by best practices.

Example activities conducted under this program are identified and detailed in *Section II, Description of Proposed Project*.

Cumulative Impacts:

No significant adverse cumulative impacts to access to and quality of recreational and wilderness activities would be expected because of the proposed project. Past AIS activities that have affected

access to quality recreation activities were implemented with the goal of preventing the further spread of AIS from a waterbody. Specifically, when New Zealand mud snails were found in the Madison River at Cobblestone FAS this resulted in temporary long-term restriction of access to foot traffic and angling. Restrictions were lifted following post-management analysis of the AIS. Further, access to Lake Elmo was restricted during dewatering phase of management actions to attempt to eradicate corbicula clams from the waterbody. Once AIS management actions were completed, access was restored. Therefore, any expected adverse cumulative impacts associated with AIS actions would be long-term, negligible to moderate and mitigated by best practices.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

4. Local and State Tax Base and Tax Revenue

Existing Environment/Baseline Conditions (No Action Alternative):

The local governments rely on property taxes for revenue. Property taxes represent a significant portion of local and state tax revenue. Montana tax revenue is generated primarily by individual income tax, but additional tax revenue is created by corporate income tax, natural resource taxes linked to activities such as energy production, property taxes, and other taxes and fees. Montana does not have a state sales tax; however, several individual communities do levy an optional sale tax to generate revenue.

Under the No Action Alternative, the proposed alternative would not occur, and no actions would therefore impact local and state tax base and tax revenue in the analysis area. FWP would continue to implement AIS strategies that have evolved, changed since the publishing of the 2002 Plan, but would not provide the public with clarity and transparency in those new/updated practices. Impacts on local and state tax base and tax revenue due to current and future activities in the existing area would continue.

See *Section III, General Setting of the Affected Environment* for more detailed information related to the affected existing environment.

Direct Impacts:

No significant adverse direct impacts to local and state tax bases and tax revenue would be expected because of the proposed project. The proposed project would guide future AIS management in Montana by defining objectives and goals at local and statewide scales. It is not expected that the proposed action of adopting and implementing the 2025 Plan would directly result in changes to local and state tax bases and tax revenue. Therefore, no direct impacts to local and state tax bases and tax revenue would be expected because of the proposed project.

Secondary Impacts:

No significant adverse secondary impacts to local and state tax bases and tax revenue would be expected because of the proposed action. The 2025 Plan would guide future AIS management in Montana by defining objectives and goals at local and statewide scales. Following adoption of the

2025 Plan, and associated project implementation, it is not expected the proposed action would result in changes to local and state tax bases and tax revenue. Therefore, no secondary impacts to local and state tax bases and tax revenue would be expected because of the proposed project.

Cumulative Impacts:

No significant adverse cumulative impacts to local and state tax bases and tax revenue would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact local and state tax bases and tax revenue in areas affected by AIS actions. Further, no direct or secondary impacts to local and state tax bases and tax revenue would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to local and state tax bases and tax revenue would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

5. Industrial, Commercial and Agricultural Activities and Production

Existing Environment/Baseline Conditions (No Action Alternative):

Montana has various industrial, commercial and agricultural activities and production across the state. Some of the key industries in Montana include mining for coal, copper, and palladium, manufacturing of wood products, food processing and more recently technology. Commercial activities in the state are driven by real estate, retail services and tourism. Agricultural activities are a strong component of Montana's economy with the production of various grain crops, livestock and specialty agricultural crops, such as cherries and lentils. Under the No Action Alternative, the proposed alternative would not occur, and no further disturbance associated with the proposed actions would impact industrial, commercial, and agricultural activities and production. AIS management would continue to be addressed under the Statewide AIS Management Plan, 2002, and impacts on industrial, commercial, agricultural activities and production due to current and future activities in the existing area would continue.

See *Section III, General Setting of the Affected Environment* for more detailed information related to the affected existing environment.

Direct Impacts: No significant adverse direct impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed project. AIS management programs are intended to improve aquatic life and habitats; and many Montanans hold high regard for outdoor recreation, including fishing. Therefore, the severity of adverse direct impacts, where applicable, is typically short-term and negligible to moderate. Any direct impacts from implementation of the AIS program would be short- and long-term, minor to major, and beneficial. The introduction of AIS would have minor to major adverse impacts to industrial, commercial, and

agricultural activities and production through clogged water pipes and water delivery infrastructure, waterways choked with invasive plants, draining or dewatering of waterbodies, and limited or restricted access to waterbodies, among other adverse impacts. Prevention is the best measure to stop the spread or introduction of AIS, therefore FWP dedicates substantial resources to public education and information regarding the introduction and spread of AIS. Monitoring and early detection are also key to addressing AIS prior to spreading within or to other waterbodies.

Example activities conducted under this program are identified and detailed in *Section II, Description of Proposed Project*.

Secondary Impacts: No significant adverse secondary impacts would be expected because of the proposed project.

AIS management actions that directly impact industrial, commercial, and agricultural activities and production (see Direct Impacts analysis above) may also result in secondary impacts to such resources. These actions/programs are generally intended to benefit the overall health and function of the aquatic environment and, because the aquatic environment plays a critical role in the natural function of the overall ecosystem, most secondary impacts would be expected to benefit the resource. However, some secondary impacts from some of the programs that may impact, as industrial, commercial, and agricultural activities and production indicated below, may be both beneficial and adverse. Secondary impacts from implementation of the following programs would be long-term, negligible to moderate, beneficial and/or adverse.

Any secondary impacts from the AIS program to industrial, commercial, and agricultural activities and production would be long-term, minor to moderate, adverse, and beneficial. Introduction of AIS would have adverse impacts to industrial, commercial, and agricultural activities and production through clogged water pipes and water delivery infrastructure, waterways choked with invasive plants, draining or dewatering of waterbodies, limited or restricted access to waterbodies, among other adverse impacts. Prevention is the best measure to stop the spread or introduction of AIS; therefore, FWP dedicates substantial resources to education and information regarding the introduction and spread of AIS. Monitoring and early detection are also key to addressing AIS prior to spread within or to other waterbodies.

Example activities conducted under this program are identified and detailed in *Section II, Description of Proposed Project*.

Any direct, secondary, and/or cumulative impacts to industrial, commercial, and agricultural activities and production resulting from specific projects conducted under the various programs discussed above, and detailed in the 2025 Plan, would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation.

Cumulative Impacts:

No significant adverse cumulative impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact industrial, commercial, and agricultural

activities and production in areas affected by AIS actions. Further, no direct or secondary impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to industrial, commercial, and agricultural activities and production would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

6. Human Health and Safety

Existing Environment/Baseline Conditions (No Action Alternative):

According to the 2022 US Census, 19.6% of Montana residents are at least 65 years old. The leading cause of death in Montana is heart disease followed by cancer. However, Montana has one of the highest suicide rates in the United States and is a significant public health concern. Health efforts and programs are focused on preventative and family health services. There are multiple safety programs in place, such as public emergency preparedness and human violence prevention.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

Direct Impacts: No significant adverse direct impacts on human health and safety would be expected because of the proposed project. The proposed project would guide future AIS management in Montana by defining objectives and goals at local and statewide scales. Therefore, no direct impacts to pre-project human health and safety would be expected because of the proposed project.

Secondary Impacts: No significant adverse secondary impacts to human health and safety would be expected because of the proposed project. The proposed project would guide future AIS management in Montana by defining objectives and goals at local and statewide scales. Therefore, no secondary impacts to human health and safety would be expected because of the proposed project.

Any direct, secondary, and/or cumulative impacts to human health and safety resulting from specific projects conducted under the various programs discussed above, and detailed in the 2025 Plan, would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation.

Cumulative Impacts:

No significant adverse cumulative impacts to human health and safety would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact human health and safety in areas affected by AIS actions. Further, no direct or secondary impacts to human health and safety would be expected because of the proposed

project. Therefore, no adverse or beneficial cumulative impacts on human health and safety would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

7. Quantity and Distribution of Employment

Existing Environment/Baseline Conditions (No Action Alternative):

The economy in Montana employs approximately 535,200 people. Employment is spread across various sectors such as transportation and utilities, education and health services, hospitality, government, business services, construction and manufacturing. The key urban areas of Billings, Missoula, Great Falls and Bozeman are focal areas for employment. The current unemployment rate is 3.1%.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

Direct Impacts:

No significant adverse direct impacts to quantity and distribution of employment would be expected because of the proposed project. Most FWP Fisheries programs are intended to improve aquatic life and habitats; and many Montanans hold high regard for outdoor recreation, including fishing. Therefore, the severity of adverse direct impacts, where applicable, is typically short-term and negligible to moderate. Beneficial impacts are typically long-term and minor to moderate.

Any direct impacts from AIS to the quantity and distribution of employment in the area affected by the project would be short- and long-term, adverse, and moderate. The introduction of AIS may adversely impact employment quantity and distribution in the affected area through clogged water pipes and water delivery infrastructure, waterways choked with weeds, native and sport fisheries displaced by invasive fish species, restricted or closed access to waterbodies, and draining or dewatering of waterbodies, among other adverse impacts. Prevention is the best measure to stop the spread or introduction of AIS; therefore, FWP dedicates substantial resources toward public education and information regarding the introduction and spread of AIS. Monitoring and early detection are also key to addressing AIS prior to spread within or to other waterbodies.

Example activities conducted under this program are identified and detailed in *Section II, Description of Proposed Project*.

Secondary Impacts:

No significant adverse impacts would be expected because of the proposed project. AIS program management actions that directly impact quantity and distribution of employment (see direct impacts analysis above) may also result in secondary impacts to such resources. These actions/programs are generally intended to benefit the overall health and function of the aquatic

environment and, because the aquatic environment plays a critical role in the natural function of the overall ecosystem, most secondary impacts would be expected to benefit the resource. However, some secondary impacts may impact quantity and distribution of employment. Secondary impacts from implementation of the following programs would be long-term, negligible to moderate, beneficial and/or adverse.

Any impacts from AIS to the quantity and distribution of employment in the affected area would be short- and long-term, adverse, and moderate. Introduction of AIS may adversely impact employment quantity in the affected area through clogged water pipes and water delivery infrastructure, waterways choked with weeds, native and sport fisheries displaced by invasive fish species, restricted or closed access to waterbodies, and draining or dewatering of waterbodies, among other adverse impacts. Prevention is the best measure to stop the spread or introduction of AIS; therefore, FWP dedicates substantial resources toward public education and information regarding the prevention and spread of AIS. Monitoring and early detection are also key to addressing AIS prior to spreading within or to other waterbodies.

Example activities conducted under this program are identified and detailed in *Section II, Description of Proposed Project*.

Cumulative Impacts:

No significant adverse cumulative impacts to quantity and distribution of employment would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact quantity and distribution of employment in areas affected by AIS actions. Further, no direct or secondary impacts to quantity and distribution of employment would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts quantity and distribution of employment would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

8. Density and Distribution of Human Population and Housing

Existing Environment/Baseline Conditions (No Action Alternative):

The project area has a population of 1,122,867 (2022 US Census) with 7.4 persons/square mile (2020 US Census). The median household income in Montana is \$67,915 and the median value of owner-occupied housing is \$305,700 (2022 US Census). The population density is relatively low with 6.86 people per square mile. Most of the population of Montana is concentrated in only a few urban areas, with a trend of rural areas experiencing a gradual decline in population. The majority of Montana's land is rural with a sparse population. The number of housing units in Montana has been increasing at a growth rate of 6.7% over the past decade. However, like many growing western states, housing continues to be in high demand but limited in availability.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

Direct Impacts:

No significant adverse direct impacts to density and distribution of human population and housing would be expected because of the proposed project. The proposed project would guide future AIS management in Montana by defining objectives and goals at local and statewide scales. It is not expected that the proposed action of adopting and implementing the 2025 Plan would directly result in the relocation of people into or out of any part of Montana or to relocate within Montana. Therefore, no direct impacts to pre-project population and housing would be expected because of the proposed project.

Secondary Impacts:

No significant adverse impacts would be expected because of the proposed action. Even though no direct impacts to density and distribution of human population and housing would be expected because of the proposed project (see direct impacts analysis above), some projects may result in secondary impacts to such resources. However, because these actions are intended to benefit the overall health and function of the aquatic environment, and because many Montanans hold high regard for outdoor recreation any secondary impacts would be long- term, negligible to moderate, and beneficial.

Any direct, secondary, and/or cumulative impacts to pre-project density and distribution of human population and housing resulting from specific projects conducted under the various programs discussed above, and detailed in the 2025 Plan, would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation.

Cumulative Impacts:

No significant adverse cumulative impacts to density and distribution of human population and housing would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact density and distribution of human population and housing in areas affected by AIS actions. Further, no direct or secondary impacts to density and distribution of human population and housing would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to density and distribution of human population and housing would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

9. Demands for Government Services

Existing Environment/Baseline Conditions (No Action Alternative):

The demands for government services in Montana are varied but are focused on the following areas: quality healthcare, K-12 and higher education, public safety, infrastructure (i.e.,

transportation, utilities), natural resource management and environmental protection, and economic development.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected existing environment.

Under the No Action Alternative, the proposed alternative would not occur, and no further disturbance associated with the proposed actions would impact demands for government services. AIS management would continue to be managed under the 2002 Plan and impacts on demands for government services due to current and future activities in the existing area would continue.

Direct Impacts:

No significant adverse direct impacts to demands for government services would be expected because of the proposed project. The proposed project would guide AIS management and actions to improve and benefit the aquatic environment in waterbodies at local and statewide scales. The proposed project would not result in any significant changes in the duties and responsibilities of FWP and/or any other government agency staff. Therefore, any direct impacts from the proposed project on demands for government services would be consistent with existing impacts in the affected area.

Any impacts from implementation of the AIS program to demands for government services would be short- and long-term, adverse, and minor to moderate. The introduction of AIS can have minor to major, adverse, long-term impacts to demands for government services through clogged water pipes and water delivery infrastructure, waterways choked with weeds, native and sport fisheries displaced by invasive fish species, restricted or closed access to waterbodies, draining or dewatering of waterbodies, among other adverse impacts. Prevention is the best measure to stop the spread or introduction of AIS; therefore, FWP dedicates substantial resources toward public education and information regarding the spread of AIS. Monitoring and early detection are key to addressing AIS prior to spreading within or to other waterbodies.

Example activities conducted under this program are identified and detailed in *Section II, Background and Description of Proposed Project*.

Secondary Impacts:

No Significant adverse secondary impacts would be expected because of the proposed project. AIS management actions that directly impact demands for government services may also result in secondary impacts to such resources. These actions/programs are generally intended to benefit the overall health and function of the aquatic environment and, because the aquatic environment plays a critical role in the natural function of the overall ecosystem, most secondary impacts would be expected to benefit the resource.

Any secondary impacts to demands for government services in responding to an introduced AIS would be short- and long-term and negligible to moderate. Introduction of AIS can adversely impact government services through clogged water pipes and water delivery infrastructure, waterways

choked with weeds, native and sport fisheries displaced by invasive fish species, restricted or closed access to waterbodies, draining or dewatering of waterbodies, among other adverse impacts. Prevention is the best measure to stop the spread or introduction of AIS; therefore, FWP dedicates substantial resources toward public education and information regarding the introduction and spread of AIS. Monitoring and early detection are also key to addressing AIS prior to spreading within or to other waterbodies.

Example activities conducted under this program are identified and detailed in *Section II, Description of Proposed Project*.

Cumulative Impacts:

No significant adverse cumulative impacts on demands for government services would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact demands for government services in areas affected by AIS actions. Further, no direct or secondary impacts to demands for government services would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to demands for government services would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

10. Locally Adopted Environmental Plans and Goals

Existing Environment/Baseline Conditions (No Action Alternative):

There are multiple local environmental plans and goals that influence Montana communities. For example, conservation districts implement various environmental plans focused on water and soil management; counties and cities implement noxious weed management plans to address long-term management of invasive plants; and several cities have adopted specific goals to address climate and waste management.

See *Section III, General Setting of the Affected Environment*, for more detailed information related to the affected- existing environment.

Under the No Action Alternative, the proposed alternative would not occur, and no further disturbance associated with the proposed actions would impact locally adopted environmental plans and goals. AIS management would continue to be managed under the 2002 Plan and impacts on locally adopted environmental plans and goals due to current and future activities in the existing area would continue.

Direct Impacts:

The proposed plan largely relies on locally adopted environmental plans and goals that were cooperatively developed between FWP, partner agencies, watershed groups, conservation groups, and other fisheries and aquatic interests. No significant adverse direct impacts to pre-project locally adopted environmental plans and goals would be expected because of the proposed

project. Most FWP AIS programs are intended to improve aquatic life and habitats; and many Montanans hold high regard for outdoor recreation. Therefore, the severity of adverse direct impacts, where applicable, is typically short-term and negligible to moderate.

Any impacts to locally adopted environmental plans and goals from the AIS Program would be short- and long-term, minor to moderate, and beneficial. The AIS Program participates in the coordination and development of AIS plans and goals from the national scale down to the local level. Montana's AIS Program is active in several regional and statewide plans and efforts, such as Western Regional Panel on Aquatic Nuisance Species, Montana Invasive Species Council, and other state and federal agency partners. The AIS Program also has cooperative agreements in place with affected tribes and local Conservation Districts to maintain and staff several boat check stations across the state. AIS outreach and education efforts depend on coordination and partnerships with local watershed and conservation groups and other organized AIS interests (e.g., Invasive Species Action Network, Montana Watershed Coordination Council).

Example activities conducted under this program are identified and detailed in *Section II, Description of Proposed Project*.

Secondary Impacts:

No significant adverse impacts would be expected because of the proposed project. AIS management actions that directly impact locally adopted environmental plans and goals (see direct impacts analysis above) may also result in secondary impacts to such resources. These actions/programs are generally intended to benefit the overall health and function of the aquatic environment and, because the aquatic environment plays a critical role in the natural function of the overall ecosystem, most secondary impacts would be expected to benefit the resource. However, some secondary impacts from some of the programs that may impact locally adopted environmental plans and goals, as indicated below, may be both beneficial and adverse.

Any direct, secondary, and/or cumulative impacts to locally adopted environmental plans and goals resulting from specific projects conducted and detailed in the 2025 Plan would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation.

Cumulative Impacts:

No significant adverse cumulative impacts to locally adopted environmental plans and goals would be expected because of the proposed project. FWP is unaware of any past, present, or future related state projects that would impact locally adopted environmental plans and goals in areas affected by AIS actions. Further, no direct or secondary impacts to locally adopted environmental plans and goals would be expected because of the proposed project. Therefore, no adverse or beneficial cumulative impacts to locally adopted environmental plans and goals would be expected because of the proposed project.

For a more detailed discussion of potential cumulative impacts associated with the proposed project see *Section XI, Cumulative Impacts Analysis*.

XI. Cumulative Impacts Analysis

For the purposes of MEPA, "cumulative impact" means the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when such actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. ARM 12.2.429(7).

"Action" means a project, program or activity directly undertaken by the agency; a project or activity supported through a contract, grant, subsidy, loan or other form of funding assistance from the agency, either singly or in combination with one or more other state agencies; or a project or activity involving the issuance of a lease, permit, license, certificate, or other entitlement for use or permission to act by the agency, either singly or in combination with other state agencies. ARM 12.2.429(1).

Under the "No Action" alternative, the proposed project would not occur. Therefore, no cumulative impacts to the affected human environment would occur. The "No Action" alternative forms the baseline from which the potential impacts of the proposed project are measured. For the purposes of the proposed project, the cumulative impacts analysis applies to all resources analyzed under Alternative 2, Proposed Project. See section XII.A and XII.B of this Draft EA.

No significant adverse cumulative impacts would be expected because of the proposed project; however, cumulative impacts would occur because of the proposed project.

The information below identifies past, present, and future actions (i.e., activities to be considered by the cumulative impacts analysis) related to the proposed action by location or generic type. Actions considered in these analyses were identified by FWP and other subject matter experts. Past and present actions are accounted for as part of the existing, or "baseline," environmental conditions. MEPA is forward-looking, with analyses focused on the potential impacts of the proposed action with consideration for any past, present, or future related actions.

Related Past, Present, and Future State Actions:

Historic and Present Related MEPA Review

The following list identifies prior environmental review conducted to assess potential impacts to the affected human environment from past and present related projects or actions. Past and present actions are accounted for as part of the existing, or "baseline," environmental conditions of the affected human environment prior to approval and implementation of the proposed project. FWP is unaware of any future related actions that would cumulatively impact the affected human environment with consideration for the proposed project or any of the past and present actions listed below:

- *Corbicula fluminea* (Asian Clam) eradication and lake Elmo Habitat and Access Improvement Project (2020)
- Nilan Reservoir Eurasian Watermilfoil (*Myriophyllum spicatum*) Control Project (2021)

The following activities have impacted or may impact the human environment in the analysis area:

- Human population expansion and development. Human population expansion and development may result in adverse impacts to aquatic resources and aquatic habitats by encroachment of infrastructure into riparian areas (e.g., road and utility stream crossings, housing encroachment into vegetative stream buffers), increased demand for groundwater and surface water resources, decreased water quality (e.g., degradation from septic/sewage effluent, stormwater discharge), and increased exploitation through angling.
- Recreation activities. Recreation on Montana waters is variable in terms of access for individuals and equipment, or vessels used. Historic and ongoing recreation activities can be a source for AIS introduction and spread in Montana waters. The proposed action does not include any additional recreation activities; therefore, the project does not contribute to cumulative impacts associated with recreation activities.
- National Park, National Wildlife Refuges, wilderness, and national forest area designations. Federal land managers have jurisdiction over national parks, National Wildlife Refuges, wilderness areas, and national forests. These areas are protected from certain activities that could impact terrestrial, avian, and aquatic life and habitats in the affected areas.
- Wildland and prescribed fire. Wildland and prescribed fires can directly influence Montana's aquatic resources in various ways. Managing wildfires requires specific equipment and water use. Specific actions on wildfire operations could contribute to the introduction and spread of AIS. The proposed action does not propose any addition or decrease of wildland or prescribed fire; therefore, the project does not contribute to cumulative impacts associated with wildland or prescribed fire.

Under the 2025 Plan, FWP would continue to recommend similar management strategies to limit adverse impacts from AIS. FWP would work with federal land or wildlife management entities via MEPA and the National Environmental Policy Act (NEPA) planning processes, (e.g., USFWS consultation) when recommending AIS management action.

The proposed action, with consideration for impacts associated with the management strategies listed above, would result in further protection of aquatic resources in Montana. Therefore, any cumulative impacts of the proposed action would be consistent with current impacts, short- or long-term, negligible to major, and beneficial in the areas where aquatic species are present.

Any direct, secondary, and/or cumulative impacts to aquatic resources resulting from specific projects discussed above, and detailed in the 2025 Plan, would be assessed on a case-by-case basis pursuant to MEPA and other affected public processes and regulatory mechanisms, as applicable, prior to project approval and implementation.

As noted, none of the project-specific environmental review documents cited above identified the potential for significant adverse impacts, including cumulative impacts, to the affected human environment. Therefore, preparation of an Environmental Impact Statement or EIS-level MEPA

review was not required, and each project was approved through EA-level MEPA review. With consideration for potential impacts from the proposed project, FWP determined that no significant adverse cumulative impacts would be expected because of the proposed project. For additional information see the resource-specific impacts analyses contained in *Section X.A and X.B* of this Draft EA.

Permits, Leases, Licenses, and other Authorizations

The following list identifies various authorizations for AIS management activities.

- Montana Department of Transportation issued encroachment permits for watercraft inspection station operations.

Memorandums of Understanding and other Formal Agreements

The following list identifies various agreements for AIS management activities.

- Agreement between FWP and the Flathead Lake Biological Station- University of Montana to define AIS collection data sharing.
- IN PROGRESS –Memorandum of Understanding among and between multiple state agencies to work collaboratively on AIS management in Montana (in review 2025).
- IN PROGRESS –Memorandum of Understanding between FWP and US Forest Service to work collaboratively on AIS management in Montana and define data sharing (in review 2025).

Guiding Documents

Further, several guiding documents inform, have informed, and will continue to inform actions such as the proposed action. These guiding documents outline strategies and considerations for taking management action and addressing any potential impacts from such management actions. These guiding documents, and affected regulatory entities, include the following:

- Enumeration of Potential Economic Costs of Dreissenid Mussel Infestation in Montana (2019) provides Montana with information on the relative risk of AIS and their impacts on economic services.
- Dreissenid eDNA Science Advisory Panel Report (2018) provides Montana with guidance on eDNA as a tool in AIS management scenarios.
- Montana Dreissenid Mussel Rapid Response Plan (2018) provides Montana with guidelines for addressing and responding to the detection of invasive dreissenid mussels, including possible response actions.
- Governor’s Summit on Invasive Species, Summary Report (2016)
- Montana Management Assessment of Invasive Species (2016)
- Montana Invasive Species Framework (2016) provides perspective on AIS management priorities facing Montanans.
- The Quagga Zebra Mussel Action Plan for Western Waters 2.0 (2020) is the current western vision for management of invasive dreissenid mussels. The plan was developed by the Western Regional Panel on Aquatic Invasive Species and approved by the national AIS Task Force.
- Columbia River Basin Dreissenid Mussel Rapid Response Plan (2007) was created by the 100th Meridian Initiative to assist in timely response to detected dreissenid mussels in the

Columbia Basin. Multiple iterations through regional exercise and response have improved and informed the process for rapid response to address invasive species.

- Columbia Basin Cooperative Weed Management Area Flowering Rush Management Plan (2018) was created by the Columbia Basin Cooperative Weed Management Area to address flowering rush from a regional perspective.
- Building Consensus in the West Workgroup: Final Activity Report 2011-2019 (2019) was developed by the Western Regional Panel on ANS. Multiple censuses driven AIS management strategies found within help guide complex situations.

The guiding documents identified above outline strategies and considerations for taking management action to address potential adverse impacts from such management actions and thereby ensure the proposed project is conducted in a manner consistent with limiting the potential for adverse cumulative impacts. Therefore, no significant adverse cumulative impacts would be expected because of the proposed project.

XII. Private Property Impact Analysis (Takings)

The Private Property Assessment Act applies to proposed agency projects pertaining to land or water management or to some other environmental matter that, if adopted and enforced without due process of law and just compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.

The Montana State Attorney General's Office has developed guidelines for use by state agencies to assess the impact of a proposed agency project on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency project has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act.

Further, regarding implementation of a specific AIS project, which are not being proposed within this EA, and in its simplest terms, takings and/or damages cannot occur if the project is 1) conducted under a contract, lease, or other agreement and 2) adequate compensation is provided to the affected property owner. Projects conducted by FWP occur under contract, lease, or some other form of agreement (MOU, MOA, etc.) between the affected property owner and the agency. Further, specific AIS projects will be subject to MEPA review and, at that time, FWP will consider the potential for takings and damages if the project occurs on or impacts private property.

PRIVATE PROPERTY ASSESSMENT CHECKLIST			
Does the Proposed Action Have Takings Implications under the PPAA?	Question #	Yes	No
Does the project pertain to land or water management or environmental regulations affecting private property or water rights?	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action result in either a permanent or an indefinite physical occupation of private property?	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Does the action deprive the owner of all economically viable uses of the property?	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 4a and 4b and continue with question 6.)	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there a reasonable, specific connection between the government requirement and legitimate state interest?	4a	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the government requirement roughly proportional to the impact of the proposed use of the property?	4b	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action deny a fundamental attribute of ownership?	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action have a severe impact of the value of the property?	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public general? (If the answer is NO, skip questions 7a-7c.)	7	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the impact of government action direct, peculiar, and significant?	7a	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?	7b	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?	7c	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
Does the proposed action result in taking or damaging implications?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Taking or damaging implications exist if YES is checked in response to Question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to question 4a or 4b.			
If taking or damaging implications exist, the agency must comply with MCA § 2-10-105 of the PPAA, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.			
Alternatives: The analysis under the Private Property Assessment Act, §§ 2-10-101-112, MCA, indicates no impact. FWP does not plan to impose conditions that would restrict the regulated person's use of private property to constitute a taking.			

XIII. Public Participation

Scoping provides an opportunity for public and agency involvement during the early planning stages of the analysis. The intent of the scoping process is to gather comments, concerns, and ideas from those who have an interest in or who may be affected by the *Proposed Action*. Several strategies were used to inform the public about and solicit comments on the *Proposed Action*. These strategies included:

- Press release
- Legal notice

A detailed account of the scoping processes can be found in the *Public Scoping Report*, which is on file with FWP and available by request. A copy of the *Public Scoping Report* may be obtained by request from the FWP Contact identified below in this section.

Scoping also includes efforts to engage internal and affected external agencies. For the proposed project, these scoping efforts included queries to the following websites/databases/personnel:

- Montana Department of Natural Resource and Conservation (DNRC)
- Montana Department of Transportation (DOT)
- Montana Department of Agriculture (MDA)

XIV. Recommendation for Further Environmental Analysis

NO further analysis is needed for the proposed action	<input checked="" type="checkbox"/>
FWP must conduct EIS level review for the proposed action	<input type="checkbox"/>

XV. EA Preparation and Review

	Name	Title
EA prepared by:		
EA reviewed by:		

XVI. Bibliography

Strayer, D.L. and H.M. Malcom. 2018. Long-term response of native bivalves (Unionidae and Sphaeriidae) to a *Dreissena* invasion. *Freshwater Science* 37:4.

Appendix A.

The Montana Natural Heritage Program has recorded the presence of aquatic non-native species present in Montana waters. Some of these recorded presences are historic records that may have represented a singular individual or a failed introduction. Most of the non-native fish species listed here are also subject to the Montana Statewide Fisheries Management Plan but some may not necessarily be managed as AIS. For a distribution of species listed here, refer to the Montana Field Guide: <https://mtnhp.org/>

Scientific Name	Common Name	Species Type
<i>Taricha granulosa</i>	Rough-skinned Newt	Amphibian
<i>Lithobates catesbeianus</i>	American Bullfrog	Amphibian
<i>Coregonus artedii</i>	Cisco	Fish
<i>Coregonus clupeaformis</i>	Lake Whitefish	Fish
<i>Oncorhynchus nerka</i>	Kokanee Salmon	Fish
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon	Fish
<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone Cutthroat Trout	Fish
<i>Oncorhynchus clarkii lewisi</i>	Westslope Cutthroat Trout	Fish
<i>Oncorhynchus mykiss</i>	Rainbow Trout	Fish
<i>Oncorhynchus mykiss aguabonita</i>	California Golden Trout	Fish
<i>Salmo trutta</i>	Brown Trout	Fish
<i>Salvelinus fontinalis</i>	Brook Trout	Fish
<i>Salvelinus namaycush</i>	Lake Trout	Fish
<i>Thymallus arcticus</i>	Arctic Grayling	Fish
<i>Osmerus mordax</i>	Rainbow Smelt	Fish
<i>Umbra limi</i>	Central Mudminnow	Fish
<i>Esox lucius</i>	Northern Pike	Fish
<i>Esox masquinongy x lucius</i>	Tiger Muskellunge	Fish
<i>Carassius auratus</i>	Goldfish	Fish
<i>Couesius plumbeus</i>	Lake Chub	Fish
<i>Cyprinus carpio</i>	Common Carp	Fish
<i>Gila atraria</i>	Utah Chub	Fish
<i>Notemigonus crysoleucas</i>	Golden Shiner	Fish
<i>Notropis atherinoides</i>	Emerald Shiner	Fish
<i>Notropis hudsonius</i>	Spottail Shiner	Fish
<i>Pimephales promelas</i>	Fathead Minnow	Fish
<i>Semotilus atromaculatus</i>	Creek Chub	Fish
<i>Catostomus commersonii</i>	White Sucker	Fish
<i>Ictiobus bubalus</i>	Smallmouth Buffalo	Fish
<i>Ictiobus cyprinellus</i>	Bigmouth Buffalo	Fish
<i>Ameiurus melas</i>	Black Bullhead	Fish
<i>Ameiurus natalis</i>	Yellow Bullhead	Fish

<i>Percopsis omiscomaycus</i>	Trout-perch	Fish
<i>Fundulus kansae</i>	Northern Plains Killifish	Fish
<i>Gambusia affinis</i>	Western Mosquitofish	Fish
<i>Poecilia latipinna</i>	Sailfin Molly	Fish
<i>Poecilia mexicana</i>	Shortfin Molly	Fish
<i>Xiphophorus hellerii</i>	Green Swordtail	Fish
<i>Xiphophorus variatus</i>	Variable Platyfish	Fish
<i>Culaea inconstans</i>	Brook Stickleback	Fish
<i>Morone chrysops</i>	White Bass	Fish
<i>Ambloplites rupestris</i>	Rock Bass	Fish
<i>Lepomis cyanellus</i>	Green Sunfish	Fish
<i>Lepomis gibbosus</i>	Pumpkinseed	Fish
<i>Lepomis macrochirus</i>	Bluegill	Fish
<i>Micropterus dolomieu</i>	Smallmouth Bass	Fish
<i>Micropterus salmoides</i>	Largemouth Bass	Fish
<i>Pomoxis annularis</i>	White Crappie	Fish
<i>Pomoxis nigromaculatus</i>	Black Crappie	Fish
<i>Perca flavescens</i>	Yellow Perch	Fish
<i>Sander vitreus</i>	Walleye	Fish
<i>Oreochromis mossambicus</i>	Mozambique Tilapia	Fish
<i>Chelydra serpentina</i>	Snapping Turtle	Reptile
<i>Trachemys scripta</i>	Pond Slider	Reptile
<i>Faxonius virilis</i>	Virile Crayfish	Crustacean
<i>Procambarus simulans</i>	Southern Plains Crayfish	Crustacean
<i>Hyalella azteca</i>	An Amphipod	Crustacean
<i>Lasmigona complanata</i>	White Heelsplitter	Mollusc
<i>Ligumia recta</i>	Black Sandshell	Mollusc
<i>Quadrula quadrula</i>	Mapleleaf	Mollusc
<i>Corbicula fluminea</i>	Asiatic Clam	Mollusc
<i>Cipangopaludina chinensis</i>	Chinese Mysterysnail	Mollusc
<i>Bithynia tentaculata</i>	Mud Bithynia	Mollusc
<i>Melanoides tuberculatus</i>	Red-rim Melania	Mollusc
<i>Pseudosuccinea columella</i>	Mimic Lymnaea	Mollusc
<i>Radix auricularia</i>	Big-eared Radix	Mollusc
<i>Potamopyrgus antipodarum</i>	New Zealand Mudsnail	Mollusc
<i>Myosotis scorpioides</i>	True Forget-me-not	Aquatic Plant
<i>Rorippa nasturtium-aquaticum</i>	Watercress	Aquatic Plant
<i>Rorippa microphylla</i>	Onerow Watercress	Aquatic Plant
<i>Callitriche stagnalis</i>	Pond Water-starwort	Aquatic Plant
<i>Myriophyllum spicatum</i>	Eurasian Water-milfoil	Aquatic Plant
<i>Lythrum salicaria</i>	Purple Loosestrife	Aquatic Plant
<i>Nymphaea odorata</i>	American Water-lily	Aquatic Plant

<i>Polygonum hydropiper</i>	Marshpepper Smartweed	Aquatic Plant
<i>Veronica anagallis-aquatica</i>	Brook-pimpernell	Aquatic Plant
<i>Butomus umbellatus</i>	Flowering-rush	Aquatic Plant
<i>Vallisneria americana</i>	American Eel-grass	Aquatic Plant
<i>Iris pseudacorus</i>	Yellowflag Iris	Aquatic Plant
<i>Juncus effusus</i>	Soft Rush	Aquatic Plant
<i>Juncus effusus ssp. effusus</i>	Soft Rush	Aquatic Plant
<i>Najas marina</i>	Spiny Naiad	Aquatic Plant
<i>Alopecurus geniculatus</i>	Water Foxtail	Aquatic Plant
<i>Phragmites australis ssp. australis</i>	European Common Reed	Aquatic Plant
<i>Potamogeton crispus</i>	Curly-leaf Pondweed	Aquatic Plant