MSL Progress Report for Statement of Work

Report for 3rd Quarter FY14

The tables below come from Appendix 1 & 2, Scope of Work, The University of Montana.   The left column lists the tasks and the right column describes the status and progress during the reporting period.   The status is generally summarized as in progress, completed, or not active, but also may include annotations (e.g., õnot active; funding approved for 3rd quarterö).

The tables below list **Administrative, Information Services, Botany, Zoology, and Ecology** services from *Appendix 1* and **Wetlands and Land Cover MSDI Framework Services** from *Appendix 2*.

The tables may list three categories of tasks:

1) **Core Services**: Tasks and services that will be delivered principally with the Core funding in this contract.

2) **Supplemental Core Services:** Tasks and services for which there is not sufficient Core funding but which will be delivered dependent on acquiring discretionary funding support from partner agencies.

3) **Project Supported Services:** Additional tasks and services that augment the essential core services that may be provided pending the availability of project funding. This category does not list all of the anticipated projects.

Core Administrative Services		
	Cumulative FY 14 (July 1, 2013 ó December 31, 2013)	**3rd Quarter FY 14** (January. 1, 2014 ó March 31, 2014)
1. Coordinate all program activities with Partners and program areas	In Progress - Partners Committee meeting held Nov., 2013 in Helena - Lead Program Manager (LPM) held numerous one-on-one partner meetings including with BLM, USFS, DEQ, NRCS, Pyramid Lumber, UM, TNC, MT Audubon, and other public and private sector partners - Held regular internal MTNHP program managers meetings	In Progress - Held regular internal MTNHP program managers meetings - Lead Program Manager (LPM) met with Director of the Montana Land Trust Association - LPM made presentation about MTNHP services to the MT Noxious Weed Trust Fund Board - Began recruitment for the vacant Botany Program Manager position. Applicant review will occur in Q4 with interviews planned for Q1 FY15
2. Administer contracts and grants	In Progress - MTNHP managed approximately 60 agreements during the reporting period	In Progress - MTNHP managed approximately 50 agreements during the reporting period
3. Promote use of Heritage data resources through	In Progress	In Progress

		Cumulative	3rd Quarter
	outreach and training sessions	- MTNHP data and services workshop presented by LPM in Lame Deer for Northern Cheyenne Tribe, Nov. 18, 2013 - Presentation to MT Wood Products Association Dec. 11, 2013 in Missoula - LPM participated in MSL Fall Workshop reception & training Sept. 19, 2013	- LPM participated in web video presentation for Spring Library Federation Meetings 3/4/14
4.	Collaborate with Library staff to effectively represent the mandate, activities, and products of NHP through publications, reports, brochures, posters, maps, fact sheets, etc.	In Progress - LPM participated in regular coordination meetings with State Librarian & Digital Information Manager / CIO - LPM participated in regular MSdL Managers meetings - Provided content for MSL annual report - Provided regular updates for MSL Commission reports - Held MSL new staff orientation sessions as necessary	In Progress - LPM participated in regular coordination meetings with State Librarian & Digital Information Manager / CIO - LPM participated in regular MSdL Managers meetings - Provided regular updates for MSL Commission reports - Held MSL new staff orientation sessions as necessary - Met with State Librarian, CIO, and Governor's Natural Resource Policy Adviser in January
5.	Participate in regional and national network coordination meetings and conference calls to help ensure continued compatibility and to take advantage of opportunities and advocate for initiatives that would benefit Montana.	In Progress - LPM participated in NatureServe coordinators calls	In Progress - LPM participated in NatureServe coordinators calls - LPM participated in Western States Coordinators calls
6.	Develop an updated revision of the FY10-14 NHP 5-year Strategic Plan for the period FY15-20	To be started. - The current version of the plan was distributed to partners in November preparation of the revision process	To be started.

Core Information Services Program Services			
		Cumulative FY 14 (July 1, 2013 – December 31, 2013)	**3rd Quarter FY 14** (January. 1, 2014 – March 31, 2014)
1.	Respond to requests for MTNHP information used in Environmental Assessments	In Progress - Responded to 304 requests for SOC reviews during the period	In Progress Responded to 177 requests for SOC reviews during the period
2.	Finish the migration from the Biotics4 database to a SQL database environment for the following components: species and community occurrences, references, and managed areas.	In Progress - References are complete - Managed areas are complete - Species occurrences are complete for Botany, in progress for Zoology	In Progress
3.	Implement BIOTCIS 5 for the management of state and global element information. In addition, we will: a. Work with NatureServe to develop procedures and methods to upload	In Progress - Biotics 5 is currently being rolled out by NatureServe and we are awaiting word on their schedule for implementing it for MTNHP. - Oracle Data Access Components have been	In Progress - Final conversion date is now set for July 2014 - Sections a & b on hold

element occurrence data into the BIOTICS 5 database b. Work with NatureServe to develop procedures and methods to upload state element data to and download global element data from the BIOTICS 5 database via web services.	successfully tested for loading data to and downloading data from the BIOTICS 5 test database.	
4. Administer data server internal to the firewall for editing and storage of MTNHP data including: a. Coordinate overall MTNHP server architecture and development with MSL b. Design and maintain appropriate relational databases for botany, zoology, and ecology data. c. Administer MTNHP databases on internal server including database security and routine backup to prevent catastrophic loss d. Develop procedures and methods to disseminate information to web-facing servers external to the firewall	In Progress - We continue to coordinate server architecture with MSL - Databases for botany, zoology, and ecology, and other Heritage data have been designed and implemented on SQLINT. Procedures for final migration of data from Blade08 to SQLINT have been developed and tested. Final migration will take place when new web applications not using data from Blade08 are ready. - SQLINT is being administered - Development of procedures for disseminating information to web-facing servers from SQLINT is in progress.	In Progress - On the verge of server migration ó much prep work done this quarter and final migration should be complete early in 4th Q
5. Continue to work with Digital Library staff to enhance discovery of biological information in the GIS Portal and the MSL geographic information web site.	In Progress - We continue to maintain current metadata on the GIS Portal for Species Occurrences and Observations, Land Cover, Wetlands, and Land Management data. - Participated in ArcGIS Online coordination meetings with MSL Geographic Information staff to investigate potential MTNHP use of this resource.	In Progress - Updated MSDI Land Cover and MSDI Wetland GIS data made available via MSL Geographic Information web site
6. Finish the migration of agency-level features of Natural Heritage Tracker into the Natural Heritage MapViewer	In Progress - A Beta version of the MapViewer with all agency level TRACKER functions with the exception of the add observation function was released for limited testing in December 2013. A full release is expected in 3rd quarter FY14. View the beta at: http://mtnhp.org/mapviewerbeta	In Progress - With support from the BLM, a test version of the MapViewer with TRACKER functionality and multistate data viewing capability was developed. - All Tracker functionality replicated in MapViewer - New add obs functionality developed - A link to the Beta version of MapViewer was added to the MTNHP home page in March & is currently being tested - A full release is expected in 4th quarter FY14. View the beta at: http://mtnhp.org/mapviewerbeta
7. Provide regular updates on the website, social media, and through emails as new resources	In Progress - LPM helped organize a MSL wide social media	In Progress - Regular posts to Facebook and Twitter accounts

	become available (including reports, web tools, Montana Field Guide enhancements, etc.).	workshop with MT Dept. of Commerce -	- Regular updates and announcements on MTNHP web site
8.	Maintain and improve the functionality and ease of use general Natural Heritage Program web pages	In Progress	
9.	Revise the MTNHP web site to conform to the Montana web standard including mobile device compatibility	Not started	Not Started
10.	Continue to develop, maintain and improve easy-to-use methods for data contributors to submit animal, plant, and habitat information, including observations, plot data, and photographs	In Progress - A new add observation function for the agency level MapViewer is planned for release in 3rd quarter FY14. This new version will replace the existing add observation entry functions in the other MTNHP apps throughout its website	Almost Complete : - New add obs tool added to Beta MapViewer for agency & public users. Will become live in 4th Q
11.	Maintain and improve the functionality and ease of use of the Montana Field Guide and Species of Concern web report applications	In Progress - Beginning in December 2013, Montana Field Guide Species accounts are being updated for all Animal Species of Concern so that literature citations used in the species accounts are contained in the *Literature Cited Above* portion of the References section of the account. This update provides agency personnel and members of the public direct access to literature or holdings for literature on Montana Animal Species of Concern.	In Progress
12.	Work with the MSL Digital Library Division staff to effectively cross reference and integrate MTNHP information and data with the MSL catalogue, search methods, and reference services.	In Progress - MTNHP information staff worked with the Statewide Projects Librarian to format Montana Field Guide content to be made available on the EBSCO Discovery Service. This resource should be made available in 3rd quarter FY14. - MTNHP collaborated with MT Fish, Wildlife, and Parks and members of the MT Chapter of the Wildlife Society to create a new web page for online bibliographies on Fish and Wildlife Recommendations for Subdivision Development in Montana and the Effects of Recreation on Rocky Mountain Wildlife, both of which are tied to reports on these topics. These online bibliographies are now on the MTNHP website: http://mtnhp.org/WildlifeBib.asp	In Progress as needed and opportunities present - Waiting on EBSCO for DiscoverIT! Connection to Field Guide species information – anticipate available this summer - Trained an Information Specialist in properly filling out forms for new Heritage publications for submission to MSL cataloguer - 2 new publications submitted for cataloguing and archiving on the Internet Archive.
13.	Maintain the Natural Heritage Program's reference system for literature on the plants, animals, and habitats of Montana	In Progress - In conjunction with the Wildlife Bibliographies project noted above, the MTNHP reference system was updated to allow tagging of references to "Special Projects" to supplement the ability to tag	Ongoing - System is used daily use by web apps and staff

		to Species, Ecological Systems, and MTNHP Report categories.	
14.	Participate in a work group with MSL GeoInfo to develop a new workflow for land information data creation, maintenance, and dissemination that includes the land management, conservation easements, public lands and private conservation lands data which are co-maintained by MSL GeoInfo and MTNHP.	Not started	Started - Biological Systems Data Coordinator (BDSC) participated in a 2-day Parcel Fabric training. MSL GeoInfo hopes to use Parcel Fabric software to maintain cadastral and other land-related information in the future. - LPM and BDSC met with MSL GeoInfo staff to discuss the potential for including land information in the Parcel Fabric.

Supplemental Core Information Services Program Services

1.	Create and maintain map services for MTNHP data that Partners can consume in their GIS or web applications, including land management, species occurrences, and animal and plant point observation data	In Progress - SOC feature map service for MDT & BLM continues - New MSDI Land Cover map service released in 1st quarter FY14 - MSDI wetlands map service continues	Ongoing - MSDI wetlands map service continues - MSDI land cover map service continues
2.	Provide support to train and inform agency Partners in effectively using technical resources, services, and applications, through webinars, PowerPoint presentations at professional meetings, or agency groups	In Progress - MTNHP participated in MLA Fall Workshop reception September 2013 & presented the MT Field Guide - Overview of services presented to Montana Wood Products Association, December 2013 - Half day data and services workshop presented to Northern Cheyenne Tribe in Lame Deer, November 2013	None in 3rd quarter
3.	Gather information from users about their information needs, format/access preferences, and the effectiveness of our delivery systems and tools	In Progress - An ongoing on-line survey for MTNHP continues to collect feedback on service delivery. More than 166 users have provided valuable feedback	In Progress - An ongoing on-line survey for MTNHP continues to collect feedback on service delivery. More than 182 users have provided valuable feedback - Feedback survey for MapViewer Beta test in progress
4.	Examine the feasibility of developing techniques and tools for mobile data collection for staff and citizen scientistsø	Not started	

Project Supported Information Services Program Services

1.	With funding support from partner agencies, develop capability within the MapViewer to display and query species observation data from the surrounding states that lie within the administrative boundary of the BLM Montana-Dakota Office and Region 1 of the US Forest	In Progress - With support from the BLM, a test version of the MapViewer with TRACKER functionality and multistate data viewing capability was developed. The final release version should be available for use by late February 2014. The multistate version capability will be restricted to BLM and USFS	In Progress -- now available on-line as MapViewer Beta - With support from the BLM, a test version of the MapViewer with TRACKER functionality and multistate data viewing capability was developed. - All Tracker functionality replicated in MapViewer - New add obs functionality developed - A link to the Beta version of MapViewer was

		users with a need to view the data.	- added to the MTNHP home page in March & is currently being tested - A full release is expected in 4th quarter FY14. View the beta at: http://mtnhp.org/mapviewerbeta
2.	Design, develop, and deploy a õMid-levelö functional access to MTNHP Species of Concern (SOC), habitat, and species list information in the Natural Heritage MapViewer to support planning and resource management activities of local government, private consultants, and conservation organizations	Not started	Not started

Core Botany Program Services		
	Cumulative FY 14 (July 1, 2013 ó December 31, 2013)	**3rd Quarter FY 14** (January. 1, 2014 ó March 31, 2014)
1. Maintain a comprehensive database and taxonomic list of vascular plants occurring in Montana.	In Progress: - QA/QC queries were performed and are awaiting the input of a Botanist for resolution.	On hold pending hiring of Botanist
2. Collect and manage observation data for vascular plants.	In Progress: - 104 new observations added to the database - Data cleanup measures implemented to parse data into more appropriate fields - Discussions with USFS initiated to implement a data exchange between the MTNHP Botany database and the USFS TES Plant Database - Ongoing for some species with contract support from A. Pipp	In progress: - Completed QA/QC review of 540 wetland plant specimens, and entered them into project databases. Observations will be entered into program databases in Q4 as funding and staff allow - Continuation of efforts to clean up the observation database by parsing data into more appropriate fields and providing more consistent documentation of data sources. - Conducted analysis to determine numbers of botany observations and species occurrences for each National Forest in Montana in preparation for a USFS TES Plant data exchange.
3. Create speciesø occurrences for vascular plant, bryophyte and lichen Species of Concern.	In Progress: - 2 new species occurrences were created	On hold pending hiring of Botanist
4. Review the status of vascular plants, assign state ranks and, where appropriate, assign global ranks, and document these status ranks	In Progress: - Former MTNHP Botanist Scott Mincemoyer was recruited as a volunteer to undertake this task following the Montana Native Plant Society meeting.	In Progress - Former MTNHP Botanist Scott Mincemoyer attended the Montana Native Plant Society meeting as a volunteer and led a status review workshop. Updates to status ranks will be done during Q4
5. Respond to requests for information on the identification, biology, ecology, conservation status, management, and appropriate survey methods for vascular plants, bryophytes and lichens.	In Progress: - Information staff continues to respond to requests for botanical information that come in, in the absence of a Botanist. Technical botanical questions are referred to the Ecology staff.	In Progress as possible - Information staff continues to respond to requests for botanical information that come in, in the absence of a Botanist. Technical botanical questions are referred to the Ecology staff.
6. Work with other Heritage staff to regularly	On hold pending hiring of Botanist	On hold pending hiring of Botanist

	exchange information with NatureServe.		
7.	Work with other Heritage staff to maintain and improve content and delivery of botanical information on NHP websites, including Field Guide, SOC Report and MapViewer.	On hold pending hiring of Botanist	On hold pending hiring of Botanist
8.	Present information on NHP botanical services and data products, and Montana's plant resources at professional and public meetings.	In Progress - Wetland Plant ID workshops in August 2013	In Progress óEcology staff will offer Wetland Plaint ID workshops (4) planned for June and July 2014
9.	Create and maintain information on vascular plants related to their taxonomy, biology, ecology, status, identification and management.	On hold pending hiring of Botanist	On hold pending hiring of Botanist
10.	Compile photographic images of vascular plants, bryophytes and lichens.	On hold pending hiring of Botanist	On hold pending hiring of Botanist
11.	Compile literature on vascular plants, bryophytes and lichens.	On hold pending hiring of Botanist	On hold pending hiring of Botanist
Supplemental Core Botany Program Services			
1.	Create associations between vascular plant Species of Concern and Ecological Systems/habitats in which they occur.	On hold pending hiring of Botanist	On hold pending hiring of Botanist
2.	Compile and maintain a database of bryophyte and lichen taxa occurring in Montana.	On hold pending hiring of Botanist	On hold pending hiring of Botanist
3.	Review the status of bryophytes and lichens, assign state ranks and, where appropriate, assign global ranks, and document these status ranks	On hold pending hiring of Botanist	On hold pending hiring of Botanist
4.	Collect and manage observation data for bryophytes and lichens.	In Progress: - 3 new observations added to the database	On hold pending hiring of Botanist
5.	Create and maintain information on bryophytes and lichens related to their taxonomy, biology, ecology, status, identification and management.	On hold pending hiring of Botanist	On hold pending hiring of Botanist
6.	Maintain a list of related web resources relevant to vascular plants, bryophytes and lichens.	On hold pending hiring of Botanist	On hold pending hiring of Botanist
7.	Develop and maintain a geodatabase of unique habitats such as fens that are of special importance for Montana's botanical resources.	Fen surveys database in progress by Ecology Program	On hold pending hiring of Botanist
Project Supported Botany Program Services			
1.	Conduct training sessions on the identification and ecology of Montana's vascular plants.	Wetland Plant ID workshops for agency and private sectors in August	In Progress óEcology staff will offer Wetland Plaint ID workshops (4) planned for June and July 2014
2.	Monitor populations of ESA-listed and globally rare vascular plants.	Section 6 cooperating agreement renewed; request for funding in prep	On hold pending hiring of Botanist
3.	Conduct field surveys for vascular plants, bryophytes and lichens, focusing on Species of Concern and under-surveyed geographic areas.	Continuing during ecology field surveys	Continuing during ecology field surveys
4.	Develop reports and peer-reviewed publications	On hold pending hiring of Botanist	On hold pending hiring of Botanist

	on the distribution, taxonomy, biology, ecology, status, identification and management of Montana's vascular plants, bryophytes and lichens.		
5.	Create predicted distribution maps for vascular plant, bryophyte and lichen Species of Concern.	On hold pending hiring of Botanist	On hold pending hiring of Botanist
6.	Compile and maintain data on other taxonomic groups: Fungi, Algae, Diatoms.	In Progress: - New database tables were designed and implemented to house data on aquatic invasive plant species and other aquatic plants, and data entry has begun. Data were collected by a variety of state and federal agencies and other organizations. This work is being undertaken in cooperation with the MTDNRC.	In progress by Information Services Staff - Completed first round of data entry to the aquatic invasive plant species database. Further work on this project on hold pending hiring of Botanist.

Core Ecology Program Services			
		Cumulative FY 14 (July 1, 2013 – December 31, 2013)	**3rd Quarter FY 14** (January. 1, 2014 – March 31, 2014)
1.	Respond to user requests for information on the distribution, composition, successional dynamics, conservation status, management, and appropriate survey methods for terrestrial and wetland communities	In Progress - Respond to approximately 10 requests per month for land cover information, esp. whitebark pine, silver sage, and Russian olive	In Progress - Respond to approximately 10 requests per month for land cover information, esp. whitebark pine, silver sage, and Russian olive - Updated MSDI Land Cover and MSDI Wetland GIS data made available via MSL Geographic Information web site
2.	Respond to user requests for assistance using or interpreting wetland and land cover map products	In Progress - Average 5 requests per month - Responded to approximately 10 requests for assistance with using/interpreting wetland mapping products.	In Progress - Average 10 requests per month - Responded to approximately 15 requests for assistance with using/interpreting wetland mapping products, or for wetland maps covering specific project areas
3.	Compile photographic images of wetland and terrestrial habitats representative of those found in Montana	In Progress - Whitebark, sage steppe and fen photos have been selected to be added to Thumbsplus and georeferenced for Mapviewer. - Entered 1,100 wetlands photos into Thumbsplus. All are georeferenced and selected photos are available through the MapViewer. This work was completed with project funds. (EPA, NRCS)	In Progress - Over 1,000 georeferenced fen, whitebark, and sage steppe photos into Thumbsplus. These will be made available through Mapviewer in Q4 if staff time and resources allow.. This work was completed with supplemental core funding
4.	Create and maintain accounts for terrestrial and wetland land cover classes and/or ecological systems in the Montana Field Guide that describe the composition, distribution, status, successional dynamics, and	Ongoing	Ongoing - Reviewing National Vegetation Classification Standard (NVC) macrogroup descriptions for Natureserve (Core and supplemental core)

	management/restoration needs of each.		
5.	Work with Information Services staff to maintain and improve content of ecological information on Heritage websites, including wetland mapping and assessments, land cover mapping, and ecological community accounts.	Ongoing. Land Cover and Wetland MSDI pages have also been updated and all data in GIS portal is current	Ongoing - Historic Land Cover data archived with MSL. - MSDI pages for Land Cover and Wetlands updated - Land Cover metadata updated for geodatabase - Worked with Information Services staff to update the MSDI Wetlands Framework data in the MapViewer.
6.	Collaborate with other Heritage Program and NatureServe ecologists from the Rocky Mountain Region to ensure compatibility of ecological mapping and classification systems	In Progress - Working with Natureserve ecologists to prepare proposal for ecological site inventory and to update National Vegetation Classification macrogroups in Montana	Ongoing - Reviewing National Vegetation Classification Standard (NVC) macrogroup descriptions for Natureserve (Core and supplemental core) - Waiting for decision on ecological site inventory - Working with WYNDD to ensure consistent methods in description and mapping of fens and other groundwater-dependent sites.
7.	Update the 2002 list of ecological communities in Montana	In Progress for wetlands, shrub communities and subalpine forests	In Progress for wetlands, shrub communities and subalpine forests
8.	Maintain a list of related web resources relevant to terrestrial and wetland communities	No Progress	In progress for Groundwater-dependent ecosystems
Supplemental Core Ecology Program Services			
1.	Assess the status of terrestrial and wetland communities and ecosystems, assign state ranks, and document the justification behind status ranks	Seeking additional funding from EPA for wetlands	Funding requested from EPA and GNLCC. Awaiting decision on funding
2.	Identify ecological sites of particular conservation concern that should be included in MTNHP information provided for environmental assessments	Ongoing during survey work	Ongoing during survey work
3.	Compile literature on terrestrial, and wetland communities with emphasis on those of conservation concern	In Progress for fens	Completed for fens
4.	Maintain crosswalks between different vegetation classification schemes to facilitate use of MTNHP products and products created by others	In Progress - Working with National Vegetation Classification Standard. Collaboration with NRCS to updated ESDs	In Progress - Working with Natureserve to update macrogroup components in National Vegetation Classification Standard. - Collaborating with NRCS to updated Ecological Site Descriptions (ESD) and crosswalk with the NVCS.
5.	Collaborate with partner agencies to develop ecological site descriptions	In Progress - Collected field data representing 10 Ecological Sites with project funding. (NRCS)	In Progress - Preparing for field work to collect field data at 10 Ecological Sites with project funding (NRCS).
6.	Develop and refine GIS-based approaches to landscape-level condition assessment	In Progress with project funding (EPA, USGS, DEQ)	In Progress with project funding (NRCS). - Developed a Potential Wetland Soils Geodatabase

			to enhance the MSDI Wetlands Framework. This geodatabase incorporates the Soils MSDI layer and several database tables from the SSURGO database.
7.	Work with Information Services to make structured surveys of aquatic communities available through Map Viewer	On Hold	On Hold
8.	Work with Information Services to make wetland assessments available through Map Viewer	No progress	In progress - All field data from 2012 and 2013 fen surveys entered into Access databases for eventual transfer to program databases
9.	Work with Information Services to make a statewide aquatic classification map available through Map Viewer and Ecological Systems Field Guide	On Hold	On Hold
10.	Compile vegetation data collected by others to support current and future vegetation classification and mapping efforts	In Progress - Completed for forests	Ongoing
11.	Present results of surveys or status assessments of terrestrial and wetland communities at professional and public meetings	Presentations on whitebark pine for Whitebark Pine Ecosystem Foundation; on wetlands to Region 8 Wetland Capacity Meeting in Salt Lake City; on Russian Olive to Russian Olive Symposium	Presentations to Northwest Science Association on groundwater-dependent ecosystems and on mapping forest mortality; presentations on forest mapping to Intermountain GIS
Project Supported Ecology Program Services			
1.	Conduct field surveys for underrepresented or uncommon ecological communities in under-surveyed geographic areas	Over 90 wetlands surveys completed summer of 2013; over 200 whitebark pine surveys (NASA, USFS)	On hold until field season
2.	Develop reports and peer-reviewed publications on the composition, distribution, and status of Montana's wetland and terrestrial communities.	In Progress - Report on fens for EPA - Report on sage steppe for USGS - Report on the assessment of wetlands in southeastern Montana. (EPA)	- Completed for whitebark pine mapping (NASA) - In progress for sage steppe mapping (USGS) - In progress on fens (EPA)
3.	Evaluate the status of wetland and terrestrial communities with field surveys	In Progress - Over 200 sagebrush surveys in 2013 (USGS) - Completed 83 wetland assessments in the Swan River watershed and Blackfoot River watershed. Surveyed several terrestrial vegetation communities in conjunction with data collected for the NRCS. (EPA, NRCS)	In Progress - Preparing for summer field work to complete wetland assessments in the Blackfoot Watershed (EPA). - Preparing for summer field work to survey terrestrial vegetation communities in conjunction with the NRCS. (NRCS)
4.	Maintain information on aquatic communities and their status through field surveys, publications and mapping products.	Otter Creek report completed; CBNG surveys for BLM	In progress: Report on CBNG surveys

Core Zoology Program Services

	Cumulative FY 14 (July 1, 2013 ó December 31, 2013)	3rd Quarter FY 14 (January. 1, 2014 ó March 31, 2014)
1. Respond to requests for information on the identification, biology, ecology, conservation status, management, and appropriate survey methods for vertebrate and invertebrate species	In Progress - Responded to several hundred requests from federal, state, and tribal personnel as well as consultants and members of the public. Implemented new request tracking system to better track request statistics.	In progress: - Responded to 171 requests from federal, state, and tribal personnel as well as consultants and members of the public. - A backlog of requests has still to be dealt with due to lack of time/funding to address them while working on projects.
2. Continue to manage an animal point observation database (POD) for all animal species.	In Progress - 68,548 observations were added to the animal point observation databases (including 20,000+ records from the USFS NRIS Wildlife database). 46,130 records were reviewed for final acceptance into the point observation databases with a focus on Montana Species of Concern. General QA/QC measures were run on all records, regardless of pending status, to ensure that records fell within speciesø known ranges and that duplicate records were removed (2,406+ duplicate records were removed). - 4,919 structured survey locations were added to the structured survey database. - An additional 180,401 observation records (12% of all records in the database) still need to be reviewed for final acceptance into the database.	In Progress - The backlog of data submissions by email has been completely eliminated for the first time in the past 9 years. - Finalized data exchange with the USFS. - Initiated work with BLM to integrate data at individual field offices into POD. - Populated thousands of missing values in the POD and BirdPOD tables so that there are no longer missing location or background documentation values. - 5,661 observations were added to the animal point observation databases - 296 structured survey locations were added to the structured survey database.
3. Work with Information Services staff to maintain and improve content of zoological information on Heritage websites	In Progress - Updated Montana Field Guide Species accounts for all Animal Species of Concern so that literature citations used in the species accounts are contained in the *Literature Cited Above* portion of the References section of the account. This update provides agency personnel and members of the public direct access to literature or holdings for literature on Montana Animal Species of Concern. - Worked with information services staff to revise the Tracker website and create the Map Viewer website.	In Progress - Worked with information services staff to revise the Tracker website and create a beta version of the MapViewer website.
4. Collect and manage observational data on animal SOC that has been gathered by others	In Progress - 12,402 observations were added to the animal point observation databases for Montana Animal Species of Concern (also see task 2 above).	In Progress - 1,712 observations were added to the animal point observation databases for Montana Animal Species of Concern.
5. Maintain animal species occurrences for existing SOC species from high value	Not active due to lack of funding.	In Progress - Populated thousands of missing values in the POD

	observations of animal SOC that can be used in Environmental Reviews		and BirdPOD tables so that there are no longer missing location or background documentation values in preparation for creating updated species occurrences that are used in environmental reviews. - Put funding in place in partnership with FWP to work on updating species occurrences for all animal SOC during the 4th quarter. - Request for updated fish data to create SOøs submitted to FWP.
6.	Maintain a complete taxonomic list of vertebrate animal species for Montana	In Progress - Updated the American Ornithological Union Four-Code field for all birds to the latest status. Completed blank fields and performed QA/QC measures to discrepancies between data fields in the master species tracking table.	In Progress - Updated taxonomy for birds to correspond with the changes made in the American Ornithologistsø Union 54th supplement to the Check-list of North American Birds.
7.	Maintain a list of related web resources relevant to vertebrates and invertebrates	In Progress - Approximately 5 new web resources were added to the existing list of web resources and existing links were checked to fix broken links.	In Progress - Approximately 5 new web resources were added to the existing list of web resources and existing links were checked to fix broken links.
8.	Work with other Heritage staff to regularly exchange information with NatureServe	Not scheduled during this reporting period.	In Progress - See task 5 under supplemental core zoology program services below.
<td colspan="4" align="center">**Supplemental Core Zoology Program Services**</td>			
1.	Review the status of vertebrate and invertebrate animal taxa, assign state ranks, assist NatureServe with assigning global ranks when appropriate, and document these status ranks	In Progress - Added the Saint Anthony Dune Tiger Beetle (*Cicindela arenicola*) to the Montana Species of Concern list.	In Progress - Updated state rankings for Little Brown Myotis (*Myotis lucifugus*) and Northern Myotis (*Myotis septentrionalis*) and added Little Brown Myotis to the Montana Species of Concern list.
2.	Create animal species occurrences for newly designated SOC species from high value observations of animal SOC that can be used in Environmental Reviews	Not active due to lack of funding.	Not active due to lack of funding.
3.	Maintain species accounts, including state and Western Hemisphere range maps and observational maps, in the Montana Field Guide for all animal SOC	In Progress - See core task 3 above - - Systematically reviewed Montana range maps for all vertebrate species. - Revised Montana range maps for the majority of Montana fish species as well as for a number of other vertebrates where it was supported by recent observation data.	Not active due to lack of funding.
4.	Create predicted distribution maps for animal SOC	Not active due to lack of funding.	In Progress - Updated predictive distribution model for Golden Eagle for state, federal, and private partners on the

			Montana Golden Eagle Working Group.
5.	Work toward a complete taxonomic list of invertebrate animal species for Montana	Not active due to lack of funding.	In Progress - Began adding species to the statewide master species list for the following invertebrate groups who have been addressed systematically in recent publications: butterflies, spiders, tiger beetles, boring beetles, bumblebees, grasshoppers, katydids, and crickets. We are working with NatureServe to get element codes for these species before they can be displayed on MTNHP websites.
6.	Create and maintain species accounts, including state and Western Hemisphere range maps and observational maps, in the Montana Field Guide for animal species that are not SOC	In Progress - Systematically reviewed Montana range maps for all vertebrate species. - Revised Montana range maps for the majority of Montana fish species as well as for a number of other vertebrates where it was supported by recent observation data.	Not active due to lack of funding.
7.	Create predicted distribution maps for animal species that are not SOC	Not active due to lack of funding.	Not active due to lack of funding.
8.	Create associations between animal SOC and the Ecological Systems in which they are known to occur	Not active due to lack of funding.	Not active due to lack of funding.
9.	Create associations between animal species that are not Species of Concern and the Ecological Systems in which they are known to occur	Not active due to lack of funding.	Not active due to lack of funding.
10.	Compile literature on vertebrate and invertebrate animal species with an emphasis on SOC	Minor progress due to lack of funding.	Minor progress due to lack of funding. Some literature was compiled for bats where project funding is available.
11.	Compile photographic images of vertebrate and invertebrate animal species and locations where animal surveys have been conducted for Montana SOC as they become available	In Progress - Added approximately 200 photos to the Montana Field Guide for Montana vertebrate Species of Concern and non-Species of Concern; most were donated by the public.	In Progress - Added approximately 20 photos to the Montana Field Guide for Montana vertebrate Species of Concern and non-Species of Concern; most were donated by the public.
12.	Compile photographic images of vertebrate and invertebrate animal species and locations where animal surveys have been conducted for Montana non-SOC	In Progress -- see task 11 above.	In Progress -- see task 11 above.
Project Supported Zoology Program Services			
1.	Conduct field surveys for vertebrate and invertebrate species with a focus on SOC and under-surveyed geographic areas and habitats	In Progress - Conducted acoustic and roost surveys for bats in conjunction with USFS, BLM, FWP, and Northern Rocky Mountain Grotto partners across Montana. - Conducted surveys for amphibians and aquatic reptiles in the Pryor Mountains. - Conducted Northern Goshawk surveys on the	In Progress - Conducted acoustic and winter roost surveys for bats in conjunction with USFS, BLM, FWP, and Northern Rocky Mountain Grotto partners across Montana. - Conducting statewide owl call playback surveys in conjunction with FWP.

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		- Sioux and Beartooth Districts of the Custer National Forest. - Conducted Flammulated Owl surveys for the Gallatin National Forest.	- Working on summarizing data gathered during the 2013 and earlier field seasons for a variety of projects.
2.	Develop reports, posters, books, web pages and peer-reviewed publications on the distribution, status, biology of, and human impacts on Montana's animal species	Developed PowerPoint summaries of some of the bat acoustic and roost surveys.	Developed - a manuscript with University of Montana professors and graduates on how breeding site heterogeneity reduces variability in Columbia Spotted Frog recruitment and population dynamics that was accepted for publication in the journal Biological Conservation. - additional PowerPoint summaries of some of the ongoing bat acoustic and roost surveys. - training materials for identification of bat species through recordings of their ultrasonic echolocation calls.
3.	Present results of surveys or status assessments of animals at professional and public meetings	Gave presentations to - Citizens of the Ruby Valley on the status and conservation challenges of Axolotls and other amphibians in Alder on July 31st - Federal and state representatives across North America on Montana's surveillance efforts on bats and the fungal disease that causes White-Nose Syndrome in Boise on September 3rd-6th - BLM, USFWS, FWP, and Northern Rocky Mountain Grotto members on the status of bat and White-Nose Syndrome surveillance efforts in Montana in Butte, on November 20th, 2013 - Joel Berger's Montana Wildlife class at the University of Montana on the biology and conservation status of Montana's amphibians and reptiles on October 28th, 2013.	Gave presentations to - State, federal, and private biologists on the status of bird observation data management at the Montana Bird Conservation Partnership Meeting in Helena on February 4th and 5th. - State, federal, tribal, and private biologists on the beta version of the MapViewer website and the status of bat and White-Nose Syndrome surveillance efforts in Montana at the Montana Chapter of the Wildlife Society Meetings in Bozeman on March 4th through 7th. - Northern Rocky Mountain Grotto members on the status of bat and White-Nose Syndrome surveillance efforts in Montana at Lewis and Clark Caverns on April 5th.

APPENDIX 2: SCOPE OF WORK
For FY14
Wetlands and Land Cover MSDI Framework Services

Core Wetlands and Land Cover Services		
	Cumulative FY 14 (July 1, 2013 – December 31, 2013)	**3rd Quarter FY 14** (January. 1, 2014 – March 31, 2014)
1. Provide coordination and stewardship of the Wetlands MSDI GIS database using MLIAC funding and other project funding	In Progress - Continuously updating the Wetlands MSDI database.	In Progress - Continuously updating the Wetlands MSDI database.
2. Participate in a work group with NRIS to develop a new workflow for hydrologic data creation, maintenance, and dissemination that includes the wetlands/riparian database	In Progress - Reviewed draft methods to integrate wetland and riparian data into the NHD.	On hold
3. Provide coordination and stewardship of the MSDI Land Cover GIS database using MLIAC funding and other project funding	In Progress - Updated metadata and MSDI web page - Promoted data layer at professional meetings and conferences	In Progress - Updated metadata and MSDI web page - Promoted data layer at professional meetings and conferences - Meeting with Forest Service and USFWS partners to identify needed improvements
4. Working with NRIS, provide data and assist with maintaining map services and metadata for Wetlands and Land Cover data sets as part of the MSDI map services, and GIS Portal downloads	- In Progress - Updated metadata for Wetlands layer. - Updated MSDI Wetlands Framework page.	In Progress - The MSDI Wetlands Framework was updated, including the geodatabase, metadata, and Map Service. - Updated metadata for Land Cover layer - Updated Land Cover Framework Page - Completed archiving of historic Land Cover layers
5. With funding from MLIAC and other sources, maintain and update the 2013 statewide Land Cover data set based on the annual workplan included in the overall Land Information Plan submitted to MLIAC	In Progress - Developed method to map live and dead forests, and applied it to 2011 imagery. Will release updated 2014 land cover in fourth quarter, once methods can be applied to 2013 NAIP.	In Progress - Preparing statewide layer of live and dead forests from 2013 NAIP imagery. To be completed by 4th quarter
6. Develop predicted distribution maps for communities of particular concern that are not easily mappable (e.g., whitebark pine, silver sagebrush)	In Progress - Completed predicted distribution maps for whitebark pine in SW Montana	In Progress - Developing predicted distribution maps for whitebark pine in the Gallatin and Custer NFs and along Rocky Mountain Front
7. Revise, add and delete map classification units as necessary to improve map usability	In Progress - Creating new map classification units for insect-impacted forests.	In Progress - Creating new map classification units for insect-impacted forests; to be completed by 4th quarter
Project Supported Wetlands and Land Cover Services		
1. With outside project funding, develop a statewide data layer of wetland and riparian	In Progress - Wetland and riparian mapping was completed for	In Progress - Wetland and riparian mapping was completed for

	mapping information from NAIP imagery. Interpret and map wetlands and riparian areas for approximately 250 USGS Quads	138 USGS quads.	92 USGS quads.
2.	With outside project funding, conduct field surveys to improve land cover classification accuracy	No Progress	No funding. Requests pending with GNLCC and NASA
3.	With outside project funding, conduct field surveys to improve wetland mapping accuracy	In Progress - Field surveys to improve wetland mapping accuracy were conducted in northwest and central Montana.	Funding requests pending with EPA
4.	With outside project funding, add attributes to wetland mapping to improve usability and transferability	Not active due to lack of funding.	Not active due to lack of funding.