



STATE OF MONTANA REQUEST FOR PROPOSAL (RFP)

RFP Number: 105090 CSW	RFP Title: Light Detection and Ranging (LiDAR) – Flathead Basin Project		
RFP Response Due Date and Time: 8/14/09 <u>2:00 PM</u> Local Time		Number of Pages: <u>1-39</u>	

ISSUING AGENCY INFORMATION

Procurement Officer: <u>Jeff Williams</u>		Issue Date: 7/14/09	
Department of Natural Resources & Conservation PO Box 201601 Helena MT 59620-1601		Phone: <u>406-444-6724</u> Fax: 406-444-2684 TTY Users, Dial 711 Website: http://vendor.mt.gov/	

INSTRUCTIONS TO OFFERORS

Return Sealed Proposal to: Department of Natural Resources & Conservation PO Box 201601 Helena MT 59620-1601	Mark Face of Envelope/Package: RFP Number: 105090 CSW RFP Response Due Date: 8/14/09 Special Instructions:
--	---

IMPORTANT: SEE STANDARD TERMS AND CONDITIONS

OFFERORS MUST COMPLETE THE FOLLOWING

Offeror Name/Address:	Authorized Offeror Signatory: (Please print name and sign in ink)
Offeror Phone Number:	Offeror FAX Number:

Offeror E-mail Address:

OFFERORS MUST RETURN THIS COVER SHEET WITH RFP RESPONSE

TABLE OF CONTENTS

	<u>PAGE</u>
Instructions to Offerors	3
Schedule of Events	4
Section 1: Project Overview and Instructions	5
1.0 Project Overview	5
1.1 Contract Term	5
1.2 Single Point of Contact.....	5
1.3 Required Review	5
1.4 General Requirements	6
1.5 Submitting a Proposal	7
1.6 Cost of Preparing a Proposal	7
Section 2: RFP Standard Information	8
2.0 Authority	8
2.1 Offeror Competition	8
2.2 Receipt of Proposals and Public Inspection	8
2.3 Classification and Evaluation of Proposals	8
2.4 State's Rights Reserved.....	10
Section 3: Scope of Project	11
3.0 Project Description	11
3.1 Project Area	12
3.2 Project Background.....	12
3.3 Reference Materials	13
3.4 Project Timeline	14
3.5 Deliverables	14
3.6 Survey Ground Control Specifications	15
3.7 Aerial Data Collection Specifications	15
3.8 LiDAR Specifications.....	18
3.9 LiDAR DTM Data Collection Specifications	19
3.10 Digital Imagery Specifications	21
3.11 Digital Orthophotography Specifications	23
Section 4: Offeror Qualifications/Informational Requirements	26
4.0 State's Right to Investigate and Reject	26
4.1 Offeror Qualifications/Informational Requirements	26
Section 5: Cost Proposal	29
Section 6: Evaluation Process	30
6.0 Basis of Evaluation.....	30
6.1 Evaluation Criteria.....	30
Appendix A - Standard Terms and Conditions	32
Appendix B – Sample Contract	35

ATTACHMENTS

- FIGURE 1 – Flathead Basin – LiDAR & Imagery Acquisition Areas**
- FIGURE 2 – FBC Task Area 1, Coverage Area**
- FIGURE-3 – Lake County, Task Area 2, Coverage Area**
- FIGURE-4 – City of Whitefish, Task Area 3, Coverage Area**
- FIGURE-5 – FBC, Task Area 1, Vegetation**
- FIGURE-6 – Lake County Task Area 2, Vegetation**
- FIGURE-7 - City of Whitefish, Task Area 3, Vegetation**

INSTRUCTIONS TO OFFERORS

It is the responsibility of each offeror to:

Follow the format required in the RFP when preparing your response. Provide point-by-point responses to all sections in a clear and concise manner.

Provide complete answers/descriptions. Read and answer **all** questions and requirements. Don't assume the State or evaluator/evaluation committee will know what your company capabilities are or what items/services you can provide, even if you have previously contracted with the State. The proposals are evaluated based solely on the information and materials provided in your response.

Use the forms provided, i.e., cover page, sample budget form, certification forms, etc.

Submit your response on time. Note all the dates and times listed in the Schedule of Events and within the document, and be sure to submit all required items on time. Late proposal responses are **never** accepted.

The following items MUST be included in the response to be considered responsive. Failure to include any of these items may result in a nonresponsive determination.

Signed Cover Sheet

Signed Addenda (if appropriate)

Point-by-Point response to all sections and subsections (per Section 1.5.1)

Response to Appendices A and B (per Section 1.5.1)

Complete answers to all requirements of Sections 3, 4, and 5

Correctly executed State of Montana "Affidavit for Trade Secret Confidentiality" form if claiming information to be confidential or proprietary (per Section 2.2.1)

SCHEDULE OF EVENTS

<u>EVENT</u>	<u>DATE</u>
RFP Issue Date	7/14/09
Deadline for Receipt of Written Questions	7/24/09
Deadline for Posting Written Responses to the State's Website.....	7/31/09
RFP Response Due Date	8/14/09
Intended Date for Contract Award	9/2/09

SECTION 1: PROJECT OVERVIEW AND INSTRUCTIONS

1.0 PROJECT OVERVIEW

The STATE OF MONTANA, Department of Natural Resources & Conservation (hereinafter referred to as “the State”) is seeking a contractor to provide obtain high resolution digital topographic data, derived from Light Detection and Ranging (LiDAR) technology, and natural color digital Orthoimagery for an area covering approximately 480 square-miles in northwest Montana’s Flathead basin region.

. A more complete description of the supplies and/or services sought for this project is provided in Section 3, Scope of Project. Proposals submitted in response to this solicitation must comply with the instructions and procedures contained herein.

1.1 CONTRACT TERM

The contract term is for a period of beginning 9/15/09 and ending 4/30/2010.

1.2 SINGLE POINT OF CONTACT

From the date this Request for Proposal (RFP) is issued until an offeror is selected and the selection is announced by the procurement officer, **offerors are not allowed to communicate with any state staff or officials regarding this procurement, except at the direction of Jeff Williams**, the procurement officer in charge of the solicitation. Any unauthorized contact may disqualify the offeror from further consideration. Contact information for the single point of contact is as follows:

Procurement Officer: Jeff Williams

Address: PO Box 201601, Helena MT 59620-1601

Telephone Number: 406-444-6724

Fax Number: 406-444-2684

E-mail Address: jewilliams@mt.gov

1.3 REQUIRED REVIEW

1.3.1 Review RFP. Offerors should carefully review the instructions, mandatory requirements, specifications, standard terms and conditions, and contract set out in this RFP and promptly notify the procurement officer identified above in writing or via e-mail of any ambiguity, inconsistency, unduly restrictive specifications, or error which they discover upon examination of this RFP. This should include any terms or requirements within the RFP that either preclude the offeror from responding to the RFP or add unnecessary cost. This notification must be accompanied by an explanation and suggested modification and be received by the deadline for receipt of written or e-mailed inquiries set forth below. The State will make any final determination of changes to the RFP.

1.3.2 Form of Questions. Offerors with questions or requiring clarification or interpretation of any section within this RFP must address these questions in writing or via e-mail to the procurement officer referenced above on or before **7/24/09**. Each question must provide clear reference to the section, page, and item in question. Questions received after the deadline may not be considered.

1.3.3 State's Response. The State will provide an official written response by **7/31/09** to all questions received by **7/24/09**. The State's response will be by formal written addendum. Any other form of interpretation, correction, or change to this RFP will not be binding upon the State. Any formal written addendum will be posted on the State's website alongside the posting of the RFP at <http://gsd.mt.gov/osbs> under issuing agency

Department of Natural Resources & Conservation by the close of business on the date listed. **Offerors must sign and return with their RFP response an Acknowledgment of Addendum for any addendum issued.**

1.4 GENERAL REQUIREMENTS

1.4.1 Acceptance of Standard Terms and Conditions/Contract. *By submitting a response to this RFP, offeror agrees to acceptance of the standard terms and conditions and contract as set out in Appendices A and B of this RFP.* Much of the language included in the standard terms and conditions and contract reflects requirements of Montana law. Requests for additions or exceptions to the standard terms and conditions, contract terms, including any necessary licenses, or any added provisions must be submitted to the procurement officer referenced above by the date for receipt of written/e-mailed questions. Any request must be accompanied by an explanation of why the exception is being sought and what specific effect it will have on the offeror's ability to respond to the RFP or perform the contract. The State reserves the right to address nonmaterial requests for exceptions with the highest scoring offeror during contract negotiation. Any material exceptions requested and granted to the standard terms and conditions and contract language will be addressed in any formal written addendum issued for this RFP and will apply to all offerors submitting a response to this RFP. The State will make any final determination of changes to the standard terms and conditions and/or contract.

1.4.2 Resulting Contract. This RFP and any addenda, the offeror's RFP response, including any amendments, a best and final offer, and any clarification question responses shall be included in any resulting contract. The State's contract, attached as Appendix B, contains the contract terms and conditions which will form the basis of any contract between the State and the highest scoring offeror. In the event of a dispute as to the duties and responsibilities of the parties under this contract, the contract, along with any attachments prepared by the State, will govern in the same order of precedence as listed in the contract.

1.4.3 Understanding of Specifications and Requirements. By submitting a response to this RFP, offeror agrees to an understanding of and compliance with the specifications and requirements described in this RFP.

1.4.4 Prime Contractor/Subcontractors. The highest scoring offeror will be the prime contractor if a contract is awarded and shall be responsible, in total, for all work of any subcontractors. All subcontractors, if any, must be listed in the proposal. The State reserves the right to approve all subcontractors. The Contractor shall be responsible to the State for the acts and omissions of all subcontractors or agents and of persons directly or indirectly employed by such subcontractors, and for the acts and omissions of persons employed directly by the Contractor. Further, nothing contained within this document or any contract documents created as a result of any contract awards derived from this RFP shall create any contractual relationships between any subcontractor and the State.

1.4.5 Offeror's Signature. The proposals must be signed in ink by an individual authorized to legally bind the business submitting the proposal. The offeror's signature on a proposal in response to this RFP guarantees that the offer has been established without collusion and without effort to preclude the State of Montana from obtaining the best possible supply or service. Proof of authority of the person signing the RFP response must be furnished upon request.

1.4.6 Offer in Effect for 120 Days. A proposal may not be modified, withdrawn, or canceled by the offeror for a 120-day period following the deadline for proposal submission as defined in the Schedule of Events, or receipt of best and final offer, if required, and offeror so agrees in submitting the proposal.

1.5 SUBMITTING A PROPOSAL

1.5.1 Organization of Proposal. Offerors must organize their proposal into sections that follow the format of this RFP, with tabs separating each section. ***A point-by-point response to all numbered sections, subsections, and appendices is required.*** If no explanation or clarification is required in the offeror's response to a specific subsection, the offeror shall indicate so in the point-by-point response, or utilize a blanket response for the entire section, with the following statement:

"(Offeror's Name)" understands and will comply.

An offeror making the statement "Refer to our literature..." or "Please see www.....com" may be deemed nonresponsive or receive point deductions. If making reference to materials located in another section of the RFP response, specific page numbers and sections must be noted. **The Evaluator/Evaluation Committee is not required to search through literature or another section of the proposal to find a response.**

1.5.2 Failure to Comply with Instructions. Offerors failing to comply with these instructions may be subject to point deductions. The State may also choose to not evaluate, may deem nonresponsive, and/or may disqualify from further consideration any proposals that do not follow this RFP format, are difficult to understand, are difficult to read, or are missing any requested information.

1.5.3 Multiple Proposals. Offerors may, at their option, submit multiple proposals, in which case each proposal shall be evaluated as a separate document.

1.5.4 Copies Required and Deadline for Receipt of Proposals. Offerors must submit **one original proposal and seven (7) copies** to the **Department of Natural Resources & Conservation**. The State reserves the right to request an electronic copy of the RFP response. **PROPOSALS MUST BE SEALED AND LABELED ON THE OUTSIDE OF THE PACKAGE** to clearly indicate that they are in response to RFP **105090 CSW**. ***Proposals must be received at the receptionist's desk of the Department of Natural Resources & Conservation prior to 2:00 pm, local time, 8/14/09. Facsimile responses to requests for proposals are ONLY accepted on an exception basis with prior approval of the procurement officer.***

1.5.5 Late Proposals. ***Regardless of cause, late proposals will not be accepted and will automatically be disqualified from further consideration.*** It shall be the offeror's sole risk to assure delivery at the receptionist's desk at the designated office by the designated time. Late proposals will not be opened and may be returned to the offeror at the expense of the offeror or destroyed if requested.

1.6 COST OF PREPARING A PROPOSAL

1.6.1 State Not Responsible for Preparation Costs. The costs for developing and delivering responses to this RFP and any subsequent presentations of the proposal as requested by the State are entirely the responsibility of the offeror. The State is not liable for any expense incurred by the offeror in the preparation and presentation of their proposal or any other costs incurred by the offeror prior to execution of a contract.

1.6.2 All Timely Submitted Materials Become State Property. All materials submitted in response to this RFP become the property of the State and are to be appended to any formal documentation, which would further define or expand any contractual relationship between the State and offeror resulting from this RFP process.

SECTION 2: RFP STANDARD INFORMATION

2.0 AUTHORITY

This RFP is issued under the authority of section 18-4-304, MCA (Montana Code Annotated) and ARM 2.5.602 (Administrative Rules of Montana). The RFP process is a procurement option allowing the award to be based on stated evaluation criteria. The RFP states the relative importance of all evaluation criteria. Only the evaluation criteria outlined in this RFP will be used.

2.1 OFFEROR COMPETITION

The State encourages free and open competition among offerors. Whenever possible, the State will design specifications, proposal requests, and conditions to accomplish this objective, consistent with the necessity to satisfy the State's need to procure technically sound, cost-effective services and supplies.

2.2 RECEIPT OF PROPOSALS AND PUBLIC INSPECTION

2.2.1 Public Information. All information received in response to this RFP, including copyrighted material, is deemed public information and will be made available for public viewing and copying shortly after the time for receipt of proposals has passed with the following three exceptions: (1) bona fide trade secrets meeting the requirements of the Uniform Trade Secrets Act, Title 30, chapter 14, part 4, MCA, that have been properly marked, separated, and documented; (2) matters involving individual safety as determined by the State; and (3) other constitutional protections. See section 18-4-304, MCA. The State will make a copier available for interested parties to use at \$0.10 per page. The interested party is responsible for the cost of copies and to provide personnel to do the copying.

2.2.2 Procurement Officer Review of Proposals. Upon opening the proposals received in response to this RFP, the procurement officer in charge of the solicitation will review the proposals and separate out any information that meets the referenced exceptions in Section 2.2.1 above, providing the following conditions have been met:

- Confidential information is clearly marked and separated from the rest of the proposal.
- The proposal does not contain confidential material in the cost or price section.
- An affidavit from an offeror's legal counsel attesting to and explaining the validity of the trade secret claim as set out in Title 30, chapter 14, part 4, MCA, is attached to each proposal containing trade secrets. Counsel must use the State of Montana "Affidavit for Trade Secret Confidentiality" form in requesting the trade secret claim. This affidavit form is available on the General Services Division's website at: <http://gsd.mt.gov/procurement/forms.asp> or by calling (406) 444-2575.

Information separated out under this process will be available for review only by the procurement officer, the evaluator/evaluation committee members, and limited other designees. Offerors must be prepared to pay all legal costs and fees associated with defending a claim for confidentiality in the event of a "right to know" (open records) request from another party.

2.3 CLASSIFICATION AND EVALUATION OF PROPOSALS

2.3.1 Initial Classification of Proposals as Responsive or Nonresponsive. All proposals will initially be classified as either "responsive" or "nonresponsive," in accordance with ARM 2.5.602. Proposals may be found nonresponsive at any time during the procurement process if any of the required information is not provided; the submitted price is found to be excessive or inadequate as measured by criteria stated in the

RFP; or the proposal is not within the plans and specifications described and required in the RFP. If a proposal is found to be nonresponsive, it will not be considered further.

2.3.2 Determination of Responsibility. The procurement officer will determine whether an offeror has met the standards of responsibility in accordance with ARM 2.5.407. Such a determination may be made at any time during the procurement process if information surfaces that would result in a determination of nonresponsibility. If an offeror is found nonresponsive, the determination must be in writing, made a part of the procurement file, and mailed to the affected offeror.

2.3.3 Evaluation of Proposals. An evaluator/evaluation committee will evaluate the remaining proposals and recommend whether to award the contract to the highest scoring offeror or, if necessary, to seek discussion/negotiation or a best and final offer in order to determine the highest scoring offeror. All responsive proposals will be evaluated based on stated evaluation criteria. In scoring against stated criteria, the State may consider such factors as accepted industry standards and a comparative evaluation of all other qualified RFP responses in terms of differing price, quality, and contractual factors. These scores will be used to determine the most advantageous offering to the State. If an evaluation committee meets to deliberate and evaluate the proposals, the public may attend and observe the evaluation committee deliberations.

2.3.4 Completeness of Proposals. Selection and award will be based on the offeror's proposal and other items outlined in this RFP. Submitted responses may not include references to information located elsewhere, such as Internet websites or libraries, unless specifically requested. Information or materials presented by offerors outside the formal response or subsequent discussion/negotiation or best and final offer, if requested, will not be considered, will have no bearing on any award, and may result in the offeror being disqualified from further consideration.

2.3.5 Opportunity for Discussion/Negotiation and/or Oral Presentation/Product Demonstration. After receipt of all proposals and prior to the determination of the award, the State may initiate discussions with one or more offerors should clarification or negotiation be necessary. Offerors may also be required to make an oral presentation and/or product demonstration to clarify their RFP response or to further define their offer. In either case, offerors should be prepared to send qualified personnel to **Helena**, Montana, to discuss technical and contractual aspects of the proposal. Oral presentations and product demonstrations, if requested, shall be at the offeror's expense.

2.3.6 Best and Final Offer. The Best and Final Offer is an option available to the State under the RFP process, which permits the State to request a best and final offer from one or more offerors if additional information is required to make a final decision. Offerors may be contacted asking that they submit their best and final offer, which must include any and all discussed and/or negotiated changes. The State reserves the right to request a best and final offer for this RFP, if any, based on price/cost alone.

2.3.7 Evaluator/Evaluation Committee Recommendation for Contract Award. The evaluator/evaluation committee will provide a written recommendation for contract award to the procurement officer that contains the scores, justification, and rationale for the decision. The procurement officer will review the recommendation to ensure its compliance with the RFP process and criteria before concurring in the evaluator's/evaluation committee's recommendation of the responsive and responsible offeror that achieves the highest score and is, therefore, the most advantageous to the State.

2.3.8 Request for Documents Notice. Upon concurrence with the evaluator's/ evaluation committee's recommendation, the procurement officer will issue a "Request for Documents Notice" to the highest scoring offeror to obtain the required documents/information, such as insurance documents, contract performance security, an electronic copy of any requested material, i.e., RFP response, response to clarification questions, and/or best and final offer, and any other necessary documents. Receipt of the "Request for Documents Notice" does not constitute a contract and **no work may begin until a contract signed by all parties is in place.** The procurement officer will notify all other offerors of the State's selection.

2.3.9 Contract Execution. Upon receipt of all required materials requested in the "Request for Documents Notice," a formal contract utilizing the contract attached as Appendix B and incorporating the Standard Terms and Conditions attached as Appendix A, as well as the highest scoring offeror's response to the RFP, will be provided to the highest scoring offeror for signature. The highest scoring offeror will be expected to accept and agree to all material requirements contained in the contract and set out in Appendices A and B of this RFP. If the highest scoring offeror does not accept all material requirements, the State may move to the next highest scoring offeror, or cancel the RFP. Work under the contract may begin when the contract is fully executed, i.e., when the contract is signed by all parties.

2.4 STATE'S RIGHTS RESERVED

While the State has every intention to award a contract as a result of this RFP, issuance of the RFP in no way constitutes a commitment by the State of Montana to award and execute a contract. Upon a determination such actions would be in its best interest, the State, in its sole discretion, reserves the right to:

- Cancel or terminate this RFP (section 18-4-307, MCA);
- Reject any or all proposals received in response to this RFP (ARM 2.5.602);
- Waive any undesirable, inconsequential, or inconsistent provisions of this RFP which would not have significant impact on any proposal (ARM 2.5.505);
- Not award if it is in the best interest of the State not to proceed with contract execution (ARM 2.5.602); or
- If awarded, terminate any contract if the State determines adequate state funds are not available (section 18-4-313, MCA).

SECTION 3: SCOPE OF PROJECT

3.0 PROJECT DESCRIPTION

3.0.1 Overview. The Montana Department of Natural Resources and Conservation (DNRC) is seeking proposals from qualified offerors to obtain high resolution digital topographic data, derived from Light Detection and Ranging (LiDAR) technology, and natural color digital Orthoimagery for an area covering approximately 473.5 square-miles in northwest Montana's Flathead basin region.

3.0.2 Purpose. The purpose of this Request for Proposal (RFP) is to select a qualified aerial and mapping firm to obtain digital imagery and LiDAR elevation data and to develop selected derivative products for the DNRC and cooperative project partners. The project purpose is to provide baseline scientific mapping data for enhanced knowledge of the region's topography, hydrology, vegetative cover and infrastructure. The information shall be utilized to assess cumulative impacts and flood hazards, and to support local resource and development planning.

3.0.3 Project Objectives. The goal of the project is to collect highly accurate digital elevation data and natural color digital orthophoto imagery of the coverage area which may be utilized to produce Digital Terrain Models (DTM) and two (2) foot contours of suitable precision for floodplain mapping, hydrologic and hydraulic studies. The data may serve a variety of other derivative applications including: land coverage and forest canopy characterization in support of fuel hazard mapping; habitat and species mapping; geologic and geomorphic feature mapping; wetland and riparian zones; environmental and development planning; soil classification surveys; and various water resources investigations. Upon project completion, data shall be distributed to the project partners and hosted for public availability utilizing the Montana State Library's Natural Resources Information System (NRIS) website.

The project includes the following key components, for which cost proposals are requested:

Data Acquisition

1.4m LiDAR high resolution digital elevation data at 15 cm RMSE(z)
Natural Color 3 band (4 band collection preferred) Digital Imagery at 1" = 200' scale
Ground Control/Calibration
QA/QC & FEMA Checkpoint Survey

Required Data Process Products (see Section 3.5 for a list of project deliverables)

FGDC & FEMA Compliant Metadata
Hydrographic feature Breaklines
Bare-Earth Digital Elevation Model (DEM) Data
Natural Color Orthoimagery at 1.0 foot pixel resolution

Optional Data Process Products

Bare-earth Digital Terrain Model (DTM)/Breakline enhanced
2' Contours
Color Infrared (CIR) Orthorectified Imagery

3.0.4 Performance Standards. The performance standards for this project are the Federal Emergency Management Agency's (FEMA) "*Guidelines and Specifications for Flood Hazard Mapping Partners, Appendix A: Guidance for Aerial Mapping and Surveying*". At a minimum, all digital

elevation data delivered shall meet a 0.5 foot (15 centimeter) root mean square error (RMSE) vertical accuracy and 2.2 feet (67 centimeter) RMSE(r) horizontal accuracy (per Table 3.2). A State of Montana registered Professional Land Surveyor (PLS) is required to oversee, and certify the accuracy of all mapping products.

3.1 PROJECT AREA

The project area is located within the Flathead basin region of northwest Montana, including roughly 378.5 square-miles (mi²) of Flathead County and approximately 95 mi² of Lake County. The southern boundary is located near the City of Polson (at the southern end of Flathead Lake) and the northern boundary is near the inlet to Whitefish Lake (See Figures 1-4). The size of the area to be mapped is dependent upon acquisition costs but is approximately 473.5 square miles. Mapping areas for the funding partners of the City of Whitefish, Flathead Basin Commission, and Lake County are approximately 18.5 mi², 360 mi², and 95 mi², respectively.

Land cover in the mapping area varies from urban to densely forested, while the terrain varies from flat lying to rugged and steeply sloped. However, the majority of the collection area consists of the relatively flat agricultural valley region bounded by the steeper foothills and mountains (See Figures 5-7). Several large lakes are located within the coverage area including Flathead Lake, Swan Lake, Whitefish Lake, Echo Lake, and Lake Blaine.

The Flathead County coverage area includes: the Flathead Lake shoreline and buffer area; all of the mainstem Flathead River from the lake to its confluence with the South Fork Flathead; the entire Whitefish River to Whitefish Lake; the Whitefish Lake shoreline and buffer area; the Stillwater River to Table Creek; portions of the Swan River and Ashley Creek, most of the City of Columbia Falls; the City of Whitefish and extra territorial planning jurisdiction; most of the City of Bigfork; most of the City of Lakeside; and the greater Kalispell area.

The Lake County coverage area includes: the Flathead Lake shoreline and a buffer area that varies from 500 feet to over three (3) miles (to include the City of Polson and town sites of Big Arm, Elmo, Dayton, Proctor, Rollins, and Woods Bay); Dayton Creek tributary; portions of the Flathead River downstream of Flathead Lake; the Swan Lake shoreline and buffer area that varies from 500 feet to two (2) miles, including portions of the Swan River upstream and downstream of Swan Lake; and the Johnson Creek tributary of the Swan River.

3.2 PROJECT BACKGROUND

The Montana DNRC Water Resources Division (WRD) is facilitating a region-wide approach to obtaining new digital topographic and aerial imagery covering a large portion of the Flathead Basin. To maximize the coverage area, a consortium has been formed with three funding partners: the Flathead Basin Commission; Lake County; and the City of Whitefish. The WRD shall serve as manager and administer for the project through cooperative agreements with each participating organization.

The total project budget has been established and is limited to the funds procured by each of the project partners, summarized in the table below:

Table 3.1 Project Budget Summary

PARTNER / Task Designation	Approx. Coverage Area (square miles)	Funding Source	Amount (\$)
Flathead Basin Commission (FBC)/Task Area 1	360	State Reclamation & Development Grant (RDGP)	\$294,977
Lake County/ Task Area 2	95	State Renewable Resource Grant (RRGL)	\$100,000
City of Whitefish/Task Area 3	18.5	City Projects Budget	\$30,000
Total	473.5		\$424,977

Each task area will be tracked and itemized separately under a single project contract agreement between the DNRC and the selected offeror. Funds may not be shared between separate task areas. Proposals shall detail the approach proposed to accommodate the task areas, describing how data collection and processing will be tracked, administered, and invoiced. The budget amounts in Table 3.1 shall cover the total project costs which shall include a 5% contingency amount and another 2% (estimated) to cover the costs of hosting the data on the NRIS website for public availability. The DNRC shall administer data hosting with NRIS, and therefore the activity is not part of the scope of services for this contract.

As mentioned earlier, the size of the final area to be mapped is dependent upon the negotiated acquisition costs and product deliverables. DNRC's GIS Department is considering performing the DTM and 2-foot contour generation tasks in-house utilizing the processed bare-earth DEM data sets and hydrographic breaklines provided by selected contractor. Proposals shall discuss the offeror's experience and recommendations with this approach, along with other means of achieving project cost savings while still achieving or exceeding the project objectives and technical specifications.

As part of FEMA's new RiskMAP program, the DNRC is initiating a countywide Digital Flood Insurance Map (DFIRM) update for Lake County this year. The project includes conversions of existing map data into digital format, incorporation of existing data studies that have been performed after the current maps took effect, and performing new floodplain studies in order to update portions of the maps with more current flood hazard information. The LiDAR data collected shall be utilized to complete new detailed riverine studies for portions of Johnson Creek and Dayton Creek, and new shoreline studies for Swan Lake and Flathead Lake. The Lake County DFIRM project schedule has been established and requires LiDAR flight acquisition to be completed during the Fall of 2009 (leaf-off conditions) in order to meet the Topographic Data Development Submittal Date of January 25, 2010.

3.3 REFERENCE MATERIALS

Geodatabase Feature Classes outlining the proposed project coverage areas for LiDAR and digital image acquisition.

Figures 1-4: Flathead Basin Proposed Acquisition Areas

Figures 5-7: Task Area Vegetation Maps

Federal Emergency Management Agency's (FEMA) "Guidelines and Specifications for Flood Hazard Mapping Partners, Appendix A: Guidance for Aerial Mapping and Surveying" (FEMA G&S, Appendix A).

Federal Emergency Management Agency's (FEMA) "Guidelines and Specifications for Flood Hazard Mapping Partners, Appendix N: Data Capture Standards" (FEMA G&S, Appendix N).

3.4 PROJECT TIMELINE/SCHEDULE

LiDAR and digital imagery acquisition is expected to be collected during the fall of 2009 during leaf-off conditions. The pre-flight plan shall be submitted a minimum of one week prior to initiating acquisition. Submittal of all required deliverables shall meet the schedule presented below:

	Lake County (Task Area 2)	FBC & City of Whitefish (Task Areas 1 & 3)
Required Deliverables	Dec. 10, 2009	Feb. 26, 2010
Optional Deliverables	Jan. 10, 2010	Mar. 31, 2010

3.5 DELIVERABLES

The following is a list of the deliverables and a general outline of the services required under the proposed scope of services. The cost of all products and associated work shall be included in the offeror's price proposal. Products listed shall be consistent with the specifications presented herein. The proposed services and options listed may be amended in the final contract considering the project priorities and budget constraints. Proposals shall include description of the production process and the quality control measures to be included.

Pre-Flight Plans for LiDAR (meeting FEMA G&S Appendix A Section 8.7.1 requirements) and Orthoimagery acquisition including the following components:

- (1) A map showing the study area boundaries and the planned flight paths. Map shall identify which GPS ground control points are used as base stations on particular flight paths and areas.
- (2) Data sheets documenting vertical & horizontal accuracy of selected GPS base points.
- (3) Documentation specifying pre-flight calibration, altitude, airspeed, scan angle, scan rate, LiDAR pulse rates, receiver return mode, and other pertinent information.
- (4) A plot of PDOP as a function of time during the data collection period indicating time when data will not be acquired due to high PDOP.
- (5) Contingency plans for inclement weather and re-flights.

Post-Project Reporting meeting all the requirements listed in FEMA G&S Appendix A Section 8.7.2. In general the documentation shall include: LiDAR system report; flight report, ground control report, ellipsoid model used; data processing procedures; system calibration report and accuracy analysis using check point survey. In addition, offeror shall provide ground survey points prepared in a pointZ Geodatabase feature class format.

Metadata. The offeror shall provide metadata, unique to each product, compiled to the current standard endorsed by the Federal Geographic Data Committee (FGDC) and FEMA specifications and standards for metadata associated with terrain and/or survey data (meeting FEMA G&S Appendix N Section N.2.3.1 and Section N.3.3.1 requirements) for each of the

data deliverables. The end product shall be provided to DNRC using the file directory structure and folder naming conventions specified in FEMA G&S Appendix N Section N.2.3.3 for terrain data and N.3.3.3 for survey data. The current FGDC standard is the Content Standard for Digital Geospatial Metadata Version 2 (FGDC-STD-001-1998).

LiDAR & Digital Imagery Tile Index. Offeror shall utilize a tile index & naming convention that is compliant with FEMA standards and specifications (meeting FEMA G&S Appendix N Section N.2 requirements) that best fits the proposed project boundaries. The end product shall be provided to DNRC using the file directory structure and folder naming conventions specified in FEMA G&S Appendix N Section N.2.3.3.

LiDAR Data Products: LiDAR deliverables shall be submitted to DNRC using the file directory structure and folder naming conventions specified in FEMA G&S Appendix N, Section N.2.3.3 for terrain data and Section N.3.3.3 for survey data.

- (1) Raw Mass Point Data (post calibrated, pre-filtered): Irregularly spaced LiDAR elevation points in LAS (LiDAR Archive Standard v1.1) format.
- (2) Area of Interest (AOI) bounding/masking area polygon and individual processing AOI tiles, Geodatabase feature class.
- (3) Bare-Earth DEM Data in LAS v1.1 format.
- (4) Breaklines: Hydrographic features, ESRI Geodatabase feature class polyline Z format.
- (5) FEMA QA/QC & Checkpoint Survey: Accuracy validation and report including RMSE analysis in accordance with FEMA G&S Appendix A Sections 6.4 & 8.6.

OPTIONAL Products

- (6) Bare Earth DTM: Subset of filtered bare-earth DEM data enhanced with hydrographic breaklines to characterize the terrain, 2.0 m resolution, ESRI Grid
- (7) 2-foot Contours, ESRI Geodatabase polylineZ

Orthophoto Products:

- (1) Raw Images, GeoTIFF format
- (2) Orthorectified images, 24-bit RGB, GeoTIFF format
- (3) Imagery Mosaic, Mr. SID format (individual tiles in GeoTIFF format)

OPTIONAL Products

- (4) Color Infrared Orthorectified Imagery, Same as natural color images, GeoTIFF and Mr.SID mosaics

3.5.1 Acceptance. The project deliverables may be reviewed by DNRC, the project partners, and FEMA, or a selected third party. Any erroneous data or data products not meeting compliance with the project specifications, shall be returned. It shall be the responsibility of the offeror to correct any such deficiencies, and demonstrate and ensure compliance with these specifications, at no additional cost to the DNRC. The acceptance of any products by the DNRC shall not preclude subsequent rejection and correction of deficiencies if such products are found to be defective.

3.6 SURVEY GROUND CONTROL SPECIFICATIONS

3.6.1 Horizontal Datum. The horizontal datum used for the project shall be referenced to the Montana State Plane Coordinate System FIPS 2500, North American Datum of 1983 (NAD83). Coordinate positions shall be specified in units of US Survey Feet. All survey control, digital terrain model files, digital elevation model files, derived products, and orthophotography shall be consistent with this datum.

3.6.2 Vertical Datum. All survey ground control points shall use North American Vertical Datum of 1988 (NAVD88) datum for initial elevation control. Digital terrain models shall be delivered in NAVD88 datum. Vertical data ellipsoid to orthometric height conversions shall be performed using the standard National Geodetic Survey (NGS) GEOID03 model.

3.6.3 Vertical and Horizontal Accuracy. Vertical and horizontal control for survey ground control points shall have a minimum horizontal RMSE of 5 cm. All control must be 3 times more accurate than the expected LiDAR surface.

3.6.4 Establishment of Horizontal and Vertical Control. Horizontal and vertical control shall be supervised and certified by a registered land surveyor (PLS) licensed in the State of Montana in accordance with these specifications. All ground and validation survey shall follow the FEMA G&S Appendix A for survey and check control. The offeror shall be responsible for any and all control survey necessary to produce an accurate and acceptable product that meets the standards and specifications set forth in this document.

3.6.5 Survey Control Point Database. An EXCEL spreadsheet containing survey control point information shall be submitted on CD/DVD. The data to be contained in the file shall contain X, Y, Z coordinate positions and other positional values as established by surveyor. In addition a digital file shall be submitted displaying the positions of each ground control station.

3.6.6 Imagery Control Target Placement. The offeror shall recommend and coordinate with the DNRC for the placement of control target locations or photo identifiable points of a sufficient quantity and size to satisfy the imagery accuracy requirements. A control diagram shall be submitted with the offeror's Proposal.

3.6.7 Permission. The offeror shall be responsible for obtaining all permits, permission, or traffic control that may be required to enter upon any lands or use of any Public Right-of Way where access to accomplish the ground control survey is necessary.

3.7 AERIAL DATA COLLECTION SPECIFICATIONS

3.7.1 Data Acquisition Plan. Independent aerial acquisition of high resolution LiDAR and Orthoimagery data is the preferred method for the project. A large format 12-bit 4-band digital camera system is also preferred as described in Section 3.10.1. Proposals shall detail the proposed capture method for LiDAR and image acquisition (i.e. simultaneous or independent) and a discussion of the pros and cons relating to data quality, data processing, costs, flight constraints, etc. Preparing a data collection plan that considers all aspects of high resolution elevation data collection is critical to the success of this project. The offeror shall present a detailed acquisition plan including a discussion of topography, weather/climate, ground cover, vegetation, and other factors which may impact data quality, project schedule and cost, along with contingency plans. Aerial surveys shall be performed under the direct supervision of a State of Montana registered Professional Land Surveyor.

3.7.2 Sensor and Equipment. LiDAR systems capable of receiving 4 returns (minimum) per laser pulse are required for the project. On-board GPS and Inertial Measurement Unit (IMU) systems shall be described in the proposal, along with proposed average point spacing collected by the sensor. Digital camera system sensor and equipment requirements are discussed in Section 3.10.1.

3.7.3 Flight Planning. The offeror shall prepare a pre-flight plan on a base map and submit to the DNRC for review and approval prior to the flight. A copy of the control layout and system calibration report shall also be submitted. The flight plan must also include information about scan angle, pulse repetition frequency (PRF), flight altitude, and speed. In addition, all tolerances including tilt, crab, and overlaps shall be defined.

A preliminary flight plan, along with planned scan angle, overlaps, flight altitude, speed, etc., shall be submitted with the offeror's Proposal.

3.7.4 Aircraft Requirements. Only aircraft maintained and operated in accordance with regulations of the Federal Aviation Administration and the Civil Aeronautics Board shall be utilized on this project. Should any part of the required photographic coverage fall within controlled air space, all aircraft anticipated for assignment to conduct aerial photography within such areas shall contain appropriate equipment necessary to operate in positive control areas with the purview of appropriate regulations. Proposed aircraft, along with capabilities and equipment, shall be described in the Proposal.

3.7.5 Environmental Conditions. Digital elevation data shall be collected using LiDAR sensor(s) for the project area under the following conditions:

- Favorable weather conditions free of rain, snow, fog, mist, smoke, high winds and low clouds.
- Sufficiently dry and clear ground surface conditions free from snow, ice, and flood conditions.
- Leaf-Off conditions

Conditions for Orthoimagery collection are detailed in Section 3.10.4.

3.7.6 Reflights. Unacceptable LIDAR & aerial photography, as determined by the DNRC's sole discretion, and within the provisions herein shall be reflown by the contractor at no additional cost to the DNRC. All reflights must meet with the accepted specifications and flight plans. The same sensor shall be used for the reflights under the same environmental conditions as discussed in Sections 3.7.5 and 3.10.4.

3.7.7 GPS Base Stations. The offeror shall select the GPS base station(s) to ensure reliable differential processing of airborne GPS data. Where possible, GPS base stations shall have ellipsoid height to an accuracy of 2 centimeters relative to the Continuously Operating Reference Stations (CORS) or the High Accuracy Reference Network (HARN). The offeror shall use a high-quality, dual-frequency GPS receiver and associated antenna at the GPS base station(s).

Maximum baseline lengths between base station control points and the aircraft GPS shall not exceed 13 nautical miles unless offeror can demonstrate that equivalent accuracies are

achievable through alternative methods; which should be presented in the Proposal. A Montana PLS shall perform the selection and certification of vertical control monuments used for the project.

3.7.8 Position Dilution of Precision (PDOP). The offeror shall check the Position Dilution of Precision (PDOP) in the project area. The PDOP is an indicator of the positional accuracy that can be derived from the current GPS satellite geometry, which varies continuously; the smaller the PDOP number, the higher the data quality. During any phase of the flight acquisition, the PDOP value shall not exceed 3.5, and must be based upon a satellite constellation of 6 or more.

3.7.9 Calibration Checks. A high-density network of accurate GPS, photo-identifiable points shall be established. Cross or opposing flights shall be performed to ensure that there are no errors as a result of GPS/IMU boresighting errors. Values are also checked for horizontal and vertical accuracy. The imagery and ground control will facilitate for checks in the system to ensure that issues such as latency and windup errors are correctly modeled.

A map shall be provided which will include all flight line planning, photo centers, and GPS airborne control network coordinates. Data sheets documenting accuracy and/or survey results for all control shall be provided in conjunction with the map and must be appropriately cross-referenced.

PDOP quality planning for the proposed flight schedule shall be provided using GPS Almanac planning software and the latest available almanac downloaded prior to flight. A GPS navigation system shall be used during flight to ensure flight line accuracy for the mission.

In addition the imagery shall be collected in stereo to allow for independent conventional Aero-Triangulation validation on the calibration site if required.

3.8 LIDAR SPECIFICATIONS

3.8.1 Performance Standards. All products associated with contract deliverables shall meet or exceed relevant National Standard for Spatial Data Accuracy (NSSDA) standards per FEMA Guidelines (FEMA G&S Appendix A). The performance standards for this project are the Federal Emergency Management Agency’s (FEMA) “*Guidelines and Specifications for Flood Hazard Mapping Partners, Appendix A: Guidance for Aerial Mapping and Surveying*”. At a minimum, all digital elevation data delivered shall meet a 0.5 foot (15 centimeter) root mean square error (RMSE) vertical accuracy and 2.2 feet (67 centimeter) RMSE(r) horizontal accuracy (per Table 3.2). A State of Montana registered Professional Land Surveyor (PLS) is required to oversee, and certify the accuracy of all mapping products.

3.8.2 Quality Assurance/Quality Control (QA/QC). QA/QC of the LiDAR-derived data, demonstrating that the technical specifications have been met, is the responsibility of the offeror. The DNRC and FEMA may perform additional QA/QC and the offeror shall rectify any errors identified at no additional cost to DNRC. The offeror shall follow the QA/QC procedures and requirements presented in FEMA G&S Appendix A Section 8.6. A detailed description of all methods proposed to be used by the offeror to ensure the required data quality must be outlined in the Proposal.

Table 3.2 LiDAR MINIMUM SPECIFICATIONS SUMMARY

Description	Specification
Average Raw Point Spacing/LiDAR irregularly spaced mass points	1.4 meters

DEM Post Spacing	2.0 meters
Vertical Accuracy: *Flat Terrain (2-foot contour interval) Rolly to Hilly Terrain (4-foot contour interval) (as applicable Task Areas 1 & 2 only)	0.5 ft (15 cm) RMSE(z) or 1.0 ft accuracy @ 95% confidence level 1.2 ft (37 cm) RMSE(z) or 2.4 ft accuracy @ 95% confidence level
Horizontal Accuracy	2.2 ft (67 cm) RMSE(r) or 3.8 ft @ 95% confidence level
LiDAR System: Pulse Return Capabilities	Up to 4
GPS PDOP During Acquisition	≤3.5
GPS Satellite Constellation	≥6
Maximum GPS Baseline	13 nautical miles

***Notes:**

1. Vertical Accuracy requirement exceeds FEMA minimum specification of 18.5 cm RMSE(z).
2. **For Task Area 3, City of Whitefish:** 2-foot contours are required for the entire task area which includes steep terrain around Whitefish Lake. Offeror shall plan LiDAR acquisition and estimate costs accordingly for Task Area 3; to meet 2-foot contour specifications for all terrain (flat and steep) per FEMA G&S, Appendix A.

3.9 LIDAR DTM DATA COLLECTION SPECIFICATIONS

3.9.1 Overview. This section identifies guidelines and specifications for the provision of Digital Terrain Modeling (DTM) definition data to produce 2-foot contours. For the purposes of this section, a DTM is a datafile (or datafiles) of X,Y,Z data points, structured in such a way as to permit digital modeling of the surface terrain within the defined boundaries of a given mapping project. Offeror-supplied DTM's for this project shall be converted by user personnel to appropriate surface models for subsequent analysis by various hydrologic, hydraulic, engineering, and other applications.

Areas not within two times the DEM posting of data points are data voids. Except with bodies of water and areas recently (within 24 hours) covered with asphalt, raw data voids shall not exceed 5 percent of the collected area.

The offeror shall provide high-resolution, high-accuracy, bare-earth ground elevation data. To restrict data to ground elevations only, elevation points on bridges, buildings and other structures, and on vegetation shall be removed from the LIDAR derived data. After removal of data associated with structures and vegetation, a bare earth DEM shall be produced with the minimum regular ground sample point spacing allowed by the data in easting and northing. DTM datafiles contain three types of features defined by X,Y,Z data points and breaklines.

3.9.2 Breaklines. Breaklines are defined by a connected series of two or more x, y, z data points. Breaklines define interruptions in terrain surface smoothness. They are provided to insure that known elevation values along a linear feature are properly maintained in the terrain modeling software. Breaklines are used to add information about the terrain surface to assist with the accurate depiction of contours. They are modeled in TINs as triangle edges, and typically represent the bulk of X,Y,Z data collected in a DTM.

Breaklines shall be delineated to insure the digital terrain model (DTM) is hydrologically correct. Hydrologically Enforced Elevation Data is defined as “Hydroenforced TIN’s, DEM,s or contours ensure that top surfaces of bridges and culverts are cut by stream breaklines so that computer models will accurately represent drainage flow” per FEMA’s Appendix A A.4.10. The achieved density and accuracy of the LiDAR derived mass points may reduce the need for intense breakline addition. The following guidelines will be used when developing breaklines:

- Breaklines will be delivered in ArcGIS geodatabase format . Separate feature classes must be delivered for each breakline feature type defined below.
- Feature classes must be contained within a feature dataset with proper horizontal and vertical spatial references defined. Feature classes must be Z-enabled where defined as three-dimensional breakline features below. Those features captured as two-dimensional breaklines must have a floating point ELEVATION attribute.
- Breaklines will be captured for hydrologically significant features as appropriate to support the development of a terrain surface.

Breakline features shall be classified and attributed as follows:

- **Closed Water Body Features:** Land water boundaries of constant elevation water bodies (lakes, reservoirs, etc.) will be delivered as closed polygons with a constant elevation that reflects the water elevation at the time the data were captured. Water body features will be captured for features one-half acres in size or greater. Water bodies can be captured as two- or three- dimensional breaklines.
- **Linear hydrographic Features:** Linear hydrographic features (streams, shorelines, canals, swales, embankments, etc.) will be delivered as breaklines with varying elevations. All stream/river features that are 0.5 miles or greater in length will be captured. Features that are 8 feet or less in width shall be captured as single breakline features. Features that are greater than 8 feet in width shall be captured as double line features. All features will be captured as three-dimensional breaklines for the top of stream channel.
- **Road Features:** Road features, not including bridges and overpasses, shall be captured as edge of pavement breaklines as required to create a hydrologically correct digital terrain model. These features will be captured as three-dimensional breaklines.
- **Soft Features:** In areas where the LiDAR mass points are not sufficient to create a hydrologically correct DTM, soft features such as ridges, valleys, top of banks, etc. shall be captured as soft breaklines of varying elevations. These features will be captured as three-dimensional breaklines.

3.9.3 General DTM Specifications.

DTM Horizontal and Vertical Datums: DTM data shall be referenced to the same horizontal coordinate system and vertical datum as established in Sections 3.6.1 and 3.6.2.

DTM Collection Techniques: At a minimum, DTM data delivered for this project shall include hydrographic breaklines and bare earth random points.

Data Collection Methodology: It is recommended that all breakline data be collected using the new orthoimagery as a reference source, interpolating the elevations from the LIDAR data. Where the LIDAR data density is such that accurate breaklines cannot be compiled in this fashion, the breaklines shall be generated using stereo compilation methods.

3.9.4 Data Voids. For the purposes of this RFP, areas not within two times the DEM posting of data points are *data voids*. Data voids may occur from several different causes, including the following:

- LIDAR pulses may be naturally absorbed by water bodies or areas recently covered with asphalt. Such voids are normally considered to be unavoidable.
- The LIDAR system may have malfunctioned for some reason.
- Heavy winds, flight navigation system (FMS) error or pilot error may have caused "holidays" between flight lines.
- Data points may be intentionally removed as part of the bare-earth post-processing to delete points that impinged on the tops of manmade structures or failed to penetrate dense vegetation.

Data voids caused by system malfunctions or flight line holidays are unacceptable, requiring new flights. Data voids caused by removal of LIDAR data points on manmade structures are always acceptable. Data voids caused by removal of LIDAR data points on dense vegetation are subject to additional guidelines.

Areas in which data voids exist greater than 1 acre in size may be treated as "obscured areas" only if they have been photogrammetrically reviewed and additional "ground" point or breaklines cannot be added. The offeror shall report all data voids and identify within the deliverables by feature class.

3.9.5 Artifacts. Artifacts are regions of anomalous elevations or oscillations and ripples within the DEM data resulting from systematic errors, environmental conditions, or incomplete post-processing. They may result from malfunctioning sensors, poorly calibrated instrumentation, adverse atmospheric conditions, or processing errors. As with data voids, the severity of such artifacts depends upon their size and location. The data sets shall be cleaned and free from artifacts.

3.10 DIGITAL IMAGERY SPECIFICATIONS

The offeror shall acquire natural color digital orthophotos during the fall of 2009. The imagery shall be used to support topographic mapping, DFIRM updates, and a variety of other purposes.

3.10.1 Sensor and Equipment. To take advantage of modern photogrammetric technology, the DNRC requires the offeror to own and operate a digital camera system.

For digital imagery acquisition, the offeror shall utilize a 8-bit all digital aerial sensor that requires no chemical film processing or scanning. The preferred system would be a large format 12-bit sensor that acquires stereo imagery and is capable of capturing 4 bands of multispectral data: red, green, blue, and near infrared. The sensor shall be equipped with GPS and inertial measurement unit (IMU) systems.

3.10.2 Flight Altitude. The flying height shall be an appropriate altitude to produce:

Digital Orthoimagery at 1"=200' scale at 1-foot pixel resolution for the entire area. The offeror may resample from a smaller pixel resolution to achieve the 1-foot pixel resolution, but in no case shall the offeror resample from a larger pixel resolution to achieve the 1-foot pixel resolution.

Deviation from planned flight altitudes shall not exceed 2% low or 3% high of the flight height above mean ground elevation, unless approved in writing by the DNRC.

3.10.3 Flight Plan. The offeror shall prepare a flight plan on a base map and submit to the DNRC for review and approval prior to the flight. Flight lines shall be laid out to obtain full coverage of the imaged project, with the principal points of the first two and the last two exposures of each flight strip falling outside of the photographed project area. The flight plan shall be detailed to show the number of flight lines and the spacing between successive exposures. Flight lines and individual exposures shall be identified according to agreed-upon conventions prior to photography.

For each exposure that is utilized to produce orthoimagery for project products, the offeror shall document the horizontal and vertical geodetic position of the aircraft at the time of exposure (in accordance with all horizontal and vertical datums outlined in Sections 3.6.1 and 3.6.2).

Deviation from the plotted position of the flight line in excess of 6% of a full image may cause rejection of any or all of the flight line.

3.10.4 Environmental Conditions. Aerial imagery shall be collected when skies are clear and free from smoke, clouds, cloud shadows, haze, dust and well-defined images that cannot be resolved. The surface shall be free from snow and excessive wet ground that obscures otherwise-observable ground features, and rivers and streams shall be within their normal banks. Deciduous trees shall be sufficiently barren (i.e. "leaf-off" conditions) and spectral reflectance from water should be minimized and should not obscure shoreline features.

The aerial image collection shall be accomplished generally between the hours of 10:00 AM and 2:00 PM local time. The solar angle shall not be less than 30 degrees at the time of exposures. Contractor shall determine the optimal collection times considering the maximum solar zenith angles for latitude and time of year.

3.10.5 Overlap and Other Requirements. All side boundary areas shall be covered by a minimum 25% overlap of the photo image format.

Overlap in the direction of flight (i.e. forward or vertical overlap) shall average 60% within $\pm 5\%$. Any overlap less than 53% or more than 67% may cause rejection of any or all of the flight line.

Sidelap between overlapping parallel flight lines shall average 30%, $\pm 10\%$. Any sidelap less than 20% or greater than 40% may cause rejection of any or all of the flight line.

Any series of two or more photographs crabbed in excess of 5 degrees measured between photographs in line and between adjoining lines may cause rejection of any or all of that particular flight line.

Tilt within a single frame shall not exceed 4 degrees, nor shall the difference in tilt between two consecutive frames within a flight line exceed 6 degrees. Tilt in excess of these limits may cause rejection of any or all of the flight line.

3.10.6 Quality Assurance/Quality Control (QA/QC). Inspection of the original images to check for overlap, crab, tilt, cloud cover, snow, and solar angle must be completed by the contractor before the images are compiled for the creation of digital orthoimages. Immediately following the

data collection flights, the offeror shall review the images to determine if the camera functioned properly during the mission. If the review indicates a malfunction, the data shall be re-collected at no additional cost to the DNRC. Reflights shall be performed immediately (environmental conditions permitting) ordered for the purpose of securing replacement images for all which fail to meet the minimum standards set forth in this proposal. Inspections of aerial imagery shall be performed immediately following the flight mission. Unacceptable aerial imagery, as determined by the DNRCs sole discretion, shall be reflown by the offeror at no additional cost to the DNRC. Any such reflight coverage shall overlap accepted photography by at least two stereo models.

Table 3.3 Digital Imagery Specifications Summary

Description	Specification
Scale/Pixel Resolution	1" = 200' / ≤ 1 foot (30 cm)
Multispectral Bands	3 (Red, Green, Blue) minimum, or 4 band (CIR) preferred
Horizontal Accuracy	NSSDA 4.39 ft RMSE(r)
Digital Camera System	Sensor: 8-bit (minimum) or 12-bit (preferred) w/GPS & IMU systems
Environmental Flight Conditions: Solar Angle Capture window	Leaf-Off, Clear skies, free from Snow, Ice, etc. ≥30 degrees above Horizon 10:00 AM – 2:00 PM
Flight Execution: Altitude Flight Path	≤2% Low or 3% High of Flight Plan ≤6% Deviation from Flight Plan
Overlap & Other: Side Boundary Areas Overlap Forward/Vertical Overlap Side/Horizontal Overlap Crab Angle Tilt	≥25 % 60% average, ± 5% 30% average, ± 10% ≤5 degrees ≤4 degrees

3.11 DIGITAL ORTHOPHOTOGRAPHY SPECIFICATIONS

3.11.1 General Requirements. Orthoimages (digital orthophotos) shall be produced for all sections within the Imaged project area. The orthoimages shall be created from the digital aerial imagery. The data shall then be digitally rectified to an orthographic projection on a pixel by pixel basis.

3.11.2 Input/Output Ground Resolution. Natural color orthoimages for the 1 "=200' map scale product shall be generated to an output pixel resolution of 1 foot.

3.11.3 Output Image Tile Size. Individual orthoimages shall cover a full tile within the project boundaries.

3.11.4 Image Orthorectification. A complete differential rectification on a pixel by pixel basis shall be carried out to remove image displacement due to topographic relief and aircraft altitude. Bilinear resampling techniques shall be employed during image orthorectification.

DTM data shall be utilized as the DTM to develop the orthophotography.

3.11.5 Image Mosaicking. Images shall be mosaicked to derive a single seamless orthophoto for each section. Horizontal displacement of features at mosaicking shall be cause for rejection of any orthophoto. Additionally, a contrast tonal balance of the completed tile mosaic shall be accomplished to remove contrast differences across mosaic lines. Lastly, the offeror shall apply a contrast adjustment across all contiguous tiles such that the overall project appears similar in tone.

SECTION 4: OFFEROR QUALIFICATIONS/INFORMATIONAL REQUIREMENTS

4.0 STATE'S RIGHT TO INVESTIGATE AND REJECT

The State may make such investigations as deemed necessary to determine the ability of the offeror to provide the supplies and/or perform the services specified. The State reserves the right to reject any proposal if the evidence submitted by, or investigation of, the offeror fails to satisfy the State that the offeror is properly qualified to carry out the obligations of the contract. *This includes the State's ability to reject the proposal based on negative references.*

4.1 OFFEROR QUALIFICATIONS/INFORMATIONAL REQUIREMENTS

In order for the State to determine the capabilities of an offeror to provide the supplies and/or perform the services specified in Section 3 above, the offeror must respond to the following requests for information regarding its ability to meet the State's requirements. **THE RESPONSE, "(OFFEROR'S NAME) UNDERSTANDS AND WILL COMPLY," IS NOT APPROPRIATE FOR THIS SECTION.**

NOTE: Each item must be thoroughly addressed. Offerors taking exception to any requirements listed in this section may be found non-responsive or be subject to point deductions.

4.1.1 Project Team Credentials. Offeror must assemble a highly qualified professional team with appropriate background and experience to conduct the required work and produce professional products on time and within budget. The offeror must ensure enough breadth and depth in staffing to mitigate any turn over in employees during the course of the project. Offeror shall specify how long the company submitting the proposal has been in the business of providing supplies and/or services similar to those requested in this RFP and under what company name. Offeror's may assemble teams that include qualified sub-consultants, as necessary, for one or more of the required project tasks. Joint Ventures will not be permitted for this contract. Submittals must identify the firm that will serve as the prime contractor. This firm will be responsible for managing its project team members including all sub-consultants.

The project team organization along with location, roles and responsibilities shall be clearly presented, including an Organization Chart and brief written descriptions of the key team member roles and responsibilities. A project team with a demonstrated ability to successfully communicate, coordinate, and understand project objectives is highly desirable. Qualifications and experience of the Project Manager and Professional Licensed Surveyor (PLS) for the project are especially important. The project team manager must have a proven ability and track record to lead projects that require flexibility in response to possible adjustments due to project schedule or other unanticipated issues that may arise. Project managers responsible for completion of engineering work and surveying work must have, or obtain, valid Professional Engineer (P.E.) and Professional Land Surveyor (P.L.S.) licenses as required by the Montana State Board of Registration for Professional Engineers and Professional Land Surveyors.

Proposal responses to this section **shall not exceed 6 pages**. In addition, one page resumes summarizing relevant qualifications, work experience, education, skills, etc., which emphasizes

previous experience relevant to this project, should be provided for all key personnel who will be involved with any aspects of the contract.

4.1.2 Experience and Strengths of Project Team.

Key Experience/Qualification Points: Proposal responses to the following key experience and qualification points **shall not exceed 8 pages**.

- Describe extent of Prime/Subconsultant's previous experience working together on similar projects; i.e., LiDAR and Imagery acquisition and FEMA compliant data products.
- Experience in airborne data acquisition for topographic and flood hazard mapping in regions of similar geography, ground cover and physical characteristics. Specifically state previous work completed within the State of Montana.
- Extensive experience with LiDAR and digital Orthophotography acquisition, topographic mapping techniques and derivative products, data processing and management, GIS/database applications, and development Digital Elevation/Terrain models, breaklines and contours.
- Extensive experience with LiDAR and digital aerial photography topographic surveying (ground control) including accurate geodetic control. Demonstrated knowledge and experience successfully completing FEMA checkpoint surveys in accordance with FEMA Guidelines and Specifications.
- In-depth knowledge, understanding and demonstrated experience with FEMA's Map Modernization Program and *Guidelines and Specifications for Flood Hazard Mapping Partners* including accuracy and metadata criteria.
- Demonstrated ability and reliability of project team to successfully complete LiDAR/Imagery acquisition project meeting the project objectives, budget, and schedule. Offeror shall tabulate or chart current and projected workload and manpower availability for all key personnel, including subconsultants, for the project duration.
- Demonstrated record of safe operations in airborne LiDAR/Imagery acquisitions over the past 3 years.

Project Experience and References: Description of previous relevant LiDAR/Imagery data acquisition projects, preferably within the last 3 years, including completion date and reference contact information for each. Projects shall preferably be similar in scope and geography, services performed, and project requirements/specifications. Offeror shall provide a minimum of 3 such successfully completed project/reference examples and no more than 5. Project summaries shall be limited to 1 page each. At a minimum, the offeror shall provide the client name, project location, contact person(s), customer's telephone number, e-mail address, and a complete description of the services provided and dates. These references may be contacted to verify offeror's ability to perform the contract. The State reserves the right to use any information or additional references deemed necessary to establish the ability of the offeror to perform the conditions of the contract. Negative references may be grounds for proposal disqualification.

4.1.3 Project Approach. Offeror shall provide a work plan and the methods to be used that will convincingly demonstrate to the State what the offeror intends to do; the timeframes necessary to accomplish the work; and how the work will be accomplished to meet the contract requirements as more specifically detailed above in Section 3. Proposal responses to this section **shall not exceed 10 pages**.

Components of the work plan/project approach shall include the following information at a minimum: demonstrated understanding of the project goals/objectives; project methodology tailored to the project specifications and intended data applications; ability to meet and/or exceed the project specifications considering the project budget; equipment to be used; QA/QC procedures; technical capabilities; data processing methods and procedures along with location where the work will be performed; schedule of project tasks clearly presenting all stages of work; data acquisition plan (per 3.7.1) and preliminary pre-flight plan (per 3.7.1); and additional information as determined by the offeror to clearly state their project approach.

SECTION 5: COST PROPOSAL

The project is being funded by a combination of grant and other funds provided by the project partners as presented in Table 3.1. The total amount available for the project at this time is approximately \$425,000. Besides the services under this contract, the project budget must also cover the cost to host the new data on the NRIS website (currently estimated at 2% of the budget). A 5% contingency shall also be built into the project budget. Accordingly, the estimated available budget amounts for each task area are reflected in the table below.

DNRC shall authorize payment to the selected offeror for services performed as described in Section 3. Partial payment shall be made to the selected offeror upon receipt of the offeror's pay estimate, said estimate being proportioned to the work completed by the offeror. DNRC shall deduct fifteen percent (15%) from each monthly pay estimate to be held until the completion of the final scope of work. The final payment shall be made only after acceptance of final documents by DNRC, and determination that the scope of work has been satisfactorily completed.

Offeror shall submit an estimated progress schedule as to time and costs at the beginning of the work, and monthly progress reports thereafter until complete. The reports will include any problems, potential problems, and delays as foreseen by the Contractor. Reports will be submitted in a timely manner to permit prompt resolution of problems.

COST PROPOSAL

Description (available budget for this contract)	FBC Task Area 1 (\$274,328)	Lake County Task Area 2 (\$93,000)	City of Whitefish Task Area 3 (\$27,900)	Total Cost (\$)
Aerial Data Acquisition				
<u>Surveying/Data Verification:</u>				
Ground Control/Calibration				
QA/QC, FEMA Check pt Survey				
<u>Required Products/Deliverables:</u>				
LiDAR Products				
Breaklines				
Imagery/Orthophoto Products				
<u>Optional Products/Deliverables:</u>				
Bare-Earth DTM				
2-Foot Contours				
Infrared Imagery Products				
Total Cost (\$)				

SECTION 6: EVALUATION PROCESS

6.0 BASIS OF EVALUATION

The evaluator/evaluation committee will review and evaluate the offers according to the following criteria based on a **maximum possible value of 1000 points**. The **Project Team Credentials, Experience and Strengths of Project Team, and Project Approach** portions of the offer will be evaluated based on the following Scoring Guide while **Cost Proposal** will be evaluated based on the formula set forth below:

SCORING GUIDE

In awarding points to the evaluation criteria, the evaluator/evaluation committee will consider the following guidelines:

In awarding points to the evaluation criteria, the evaluator/evaluation committee will consider the following guidelines:

Superior Response (90-100%): A superior response is a highly comprehensive, excellent reply that meets all of the requirements of the RFP. In addition, the response may cover areas not originally addressed within the RFP and/or include additional information and recommendations that would prove both valuable and beneficial to the agency.

Good Response (75-89%): A good response meets all the requirements of the RFP and demonstrates in a clear and concise manner a thorough knowledge and understanding of the project, with no deficiencies noted.

Fair Response (60-74%): A fair response minimally meets most requirements set forth in the RFP. The offeror demonstrates some ability to comply with guidelines and requirements of the project, but knowledge of the subject matter is limited.

Failed Response (59% or less): A failed response does not meet the requirements set forth in the RFP. The offeror has not demonstrated sufficient knowledge of the subject matter.

6.1 EVALUATION CRITERIA

Project Team Credentials		20% of points for a possible 200 points	
Category	Section of RFP	Point Value	
A.	Qualifications of Firm/Subconsultants & Staff	4.1.1	125
B.	Clearly Defined Roles & Responsibilities	4.1.1	75
Experience & Strengths of Project Team		30% of points for a possible 300 points	
Category	Section of RFP	Point Value	
A.	Key Experience & Qualifications	4.1.2	150
B.	Applicable Project Experience & References	4.1.2	150
Project Approach		25% of points for a possible 300 points	

	Category	Section of RFP	Point Value
A.	Work Plan & Details	4.1.3	250

Cost Proposal **25% of points for a possible 250 points**

	Category	Section of RFP	Point Value
A.	Cost Proposal	5.0	250

Lowest overall cost receives the maximum allotted points. All other proposals receive a percentage of the points available based on their cost relationship to the lowest. Example: Total possible points for cost are 250. Offeror A's cost is \$20,000. Offeror B's cost is \$30,000. Offeror A would receive 250 points, Offeror B would receive 167 points: $(\$20,000/\$30,000) = 67\% \times 250 \text{ points} = 167$.

$$\frac{\text{Lowest Responsive Offer Total Cost}}{\text{This Offeror's Total Cost}} \times \text{Number of available points} = \text{Award Points}$$

APPENDIX A: STANDARD TERMS AND CONDITIONS

Standard Terms and Conditions

By submitting a response to this invitation for bid, request for proposal, limited solicitation, or acceptance of a contract, the vendor agrees to acceptance of the following Standard Terms and Conditions and any other provisions that are specific to this solicitation or contract.

ACCEPTANCE/REJECTION OF BIDS, PROPOSALS, OR LIMITED SOLICITATION RESPONSES: The State reserves the right to accept or reject any or all bids, proposals, or limited solicitation responses, wholly or in part, and to make awards in any manner deemed in the best interest of the State. Bids, proposals, and limited solicitation responses will be firm for 30 days, unless stated otherwise in the text of the invitation for bid, request for proposal, or limited solicitation.

ACCESS AND RETENTION OF RECORDS: The contractor agrees to provide the department, Legislative Auditor, or their authorized agents, access to any records necessary to determine contract compliance. (Section 18-1-118, MCA). The contractor agrees to create and retain records supporting the services rendered or supplies delivered for a period of three years after either the completion date of the contract or the conclusion of any claim, litigation, or exception relating to the contract taken by the State of Montana or third party.

ALTERATION OF SOLICITATION DOCUMENT: In the event of inconsistencies or contradictions between language contained in the State's solicitation document and a vendor's response, the language contained in the State's original solicitation document will prevail. Intentional manipulation and/or alteration of solicitation document language will result in the vendor's disqualification and possible debarment.

ASSIGNMENT, TRANSFER AND SUBCONTRACTING: The contractor shall not assign, transfer or subcontract any portion of the contract without the express written consent of the department. (Section 18-4-141, MCA.)

AUTHORITY: The attached bid, request for proposal, limited solicitation, or contract is issued under authority of Title 18, Montana Code Annotated, and the Administrative Rules of Montana, Title 2, chapter 5.

COMPLIANCE WITH LAWS: The contractor must, in performance of work under the contract, fully comply with all applicable federal, state, or local laws, rules and regulations, including the Montana Human Rights Act, the Civil Rights Act of 1964, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, and Section 504 of the Rehabilitation Act of 1973. Any subletting or subcontracting by the contractor subjects subcontractors to the same provision. In accordance with section 49-3-207, MCA, the contractor agrees that the hiring of persons to perform the contract will be made on the basis of merit and qualifications and there will be no discrimination based upon race, color, religion, creed, political ideas, sex, age, marital status, physical or mental disability, or national origin by the persons performing the contract.

CONFORMANCE WITH CONTRACT: No alteration of the terms, conditions, delivery, price, quality, quantities, or specifications of the contract shall be granted without prior written consent of the State Procurement Bureau. Supplies delivered which do not conform to the contract terms, conditions, and specifications may be rejected and returned at the contractor's expense.

DEBARMENT: The contractor certifies, by submitting this bid or proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction (contract) by any governmental department or agency. If the contractor cannot certify this statement, attach a written explanation for review by the State.

DISABILITY ACCOMMODATIONS: The State of Montana does not discriminate on the basis of disability in admission to, access to, or operations of its programs, services, or activities. Individuals who need aids, alternative document formats, or services for effective communications or other disability related accommodations in the programs and services offered are invited to make their needs and preferences known to this office. Interested parties should provide as much advance notice as possible.

FACSIMILE RESPONSES: Facsimile responses will be accepted for invitations for bids, small purchases, or limited solicitations ONLY if they are completely received by the State Procurement Bureau prior to the time set for receipt. Bids, or portions thereof, received after the due time will not be considered. Facsimile responses to requests for proposals are ONLY accepted on an exception basis with prior approval of the procurement officer.

FAILURE TO HONOR BID/PROPOSAL: If a bidder/offeror to whom a contract is awarded refuses to accept the award (PO/contract) or fails to deliver in accordance with the contract terms and conditions, the department may, in its discretion, suspend the bidder/offeror for a period of time from entering into any contracts with the State of Montana.

FORCE MAJEURE: Neither party shall be responsible for failure to fulfill its obligations due to causes beyond its reasonable control, including without limitation, acts or omissions of government or military authority, acts of God, materials shortages, transportation delays, fires, floods, labor disturbances, riots, wars, terrorist acts, or any other causes, directly or indirectly beyond the reasonable control of the nonperforming party, so long as such party is using its best efforts to remedy such failure or delays.

HOLD HARMLESS/INDEMNIFICATION: The contractor agrees to protect, defend, and save the State, its elected and appointed officials, agents, and employees, while acting within the scope of their duties as such, harmless from and against all claims, demands, causes of action of any kind or character, including the cost of defense thereof, arising in favor of the contractor's employees or third parties on account of bodily or personal injuries, death, or damage to property arising out of services performed or omissions of services or in any way resulting from the acts or omissions of the contractor and/or its agents, employees, representatives, assigns, subcontractors, except the sole negligence of the State, under this agreement.

LATE BIDS AND PROPOSALS: Regardless of cause, late bids and proposals will not be accepted and will automatically be disqualified from further consideration. It shall be solely the vendor's risk to ensure delivery at the designated office by the designated time. Late bids and proposals will not be opened and may be returned to the vendor at the expense of the vendor or destroyed if requested.

PAYMENT TERM: All payment terms will be computed from the date of delivery of supplies or services OR receipt of a properly executed invoice, whichever is later. Unless otherwise noted in the solicitation document, the State is allowed 30 days to pay such invoices. All contractors will be required to provide banking information at the time of contract execution in order to facilitate State electronic funds transfer payments.

RECIPROCAL PREFERENCE: The State of Montana applies a reciprocal preference against a vendor submitting a bid from a state or country that grants a residency preference to its resident businesses. A reciprocal preference is only applied to an invitation for bid for supplies or an invitation for bid for nonconstruction services for public works as defined in section 18-2-401(9), MCA, and then only if federal funds are not involved. For a list of states that grant resident preference, see <http://gsd.mt.gov/procurement/preferences.asp>.

REDUCTION OF FUNDING: The State must terminate this contract if funds are not appropriated or otherwise made available to support the State's continuation of performance in a subsequent fiscal period. (See section 18-4-313(4), MCA.)

REFERENCE TO CONTRACT: The contract or purchase order number MUST appear on all invoices, packing lists, packages, and correspondence pertaining to the contract.

REGISTRATION WITH THE SECRETARY OF STATE: Any business intending to transact business in Montana must register with the Secretary of State. Businesses that are incorporated in another state or country, but which are conducting activity in Montana, must determine whether they are transacting business in Montana in accordance with sections 35-1-1026 and 35-8-1001, MCA. Such businesses may want to obtain the guidance of their attorney or accountant to determine whether their activity is considered transacting business.

If businesses determine that they are transacting business in Montana, they must register with the Secretary of State and obtain a certificate of authority to demonstrate that they are in good standing in Montana. To obtain registration materials, call the Office of the Secretary of State at (406) 444-3665, or visit their website at <http://sos.mt.gov>.

SEPARABILITY CLAUSE: A declaration by any court, or any other binding legal source, that any provision of the contract is illegal and void shall not affect the legality and enforceability of any other provision of the contract, unless the provisions are mutually dependent.

SHIPPING: Supplies shall be shipped prepaid, F.O.B. Destination, unless the contract specifies otherwise.

SOLICITATION DOCUMENT EXAMINATION: Vendors shall promptly notify the State of any ambiguity, inconsistency, or error which they may discover upon examination of a solicitation document.

TAX EXEMPTION: The State of Montana is exempt from Federal Excise Taxes (#81-0302402).

TECHNOLOGY ACCESS FOR BLIND OR VISUALLY IMPAIRED: Contractor acknowledges that no state funds may be expended for the purchase of information technology equipment and software for use by employees, program participants, or members of the public unless it provides blind or visually impaired individuals with access, including interactive use of the equipment and services, that is equivalent to that provided to individuals who are not blind or visually impaired. (Section 18-5-603, MCA.) Contact the State Procurement Bureau at (406) 444-2575 for more information concerning nonvisual access standards.

TERMINATION OF CONTRACT: Unless otherwise stated, the State may, by written notice to the contractor, terminate the contract in whole or in part at any time the contractor fails to perform the contract.

U.S. FUNDS: All prices and payments must be in U.S. dollars.

VENUE: This solicitation is governed by the laws of Montana. The parties agree that any litigation concerning this bid, request for proposal, limited solicitation, or subsequent contract, must be brought in the First Judicial District in and for the County of Lewis and Clark, State of Montana, and each party shall pay its own costs and attorney fees. (Section 18-1-401, MCA.)

WARRANTIES: The contractor warrants that items offered will conform to the specifications requested, to be fit and sufficient for the purpose manufactured, of good material and workmanship, and free from defect. Items offered must be new and unused and of the latest model or manufacture, unless otherwise specified by the State. They shall be equal in quality and performance to those indicated herein. Descriptions used herein are specified solely for the purpose of indicating standards of quality, performance, and/or use desired. Exceptions will be rejected.

Revised 2/09

APPENDIX B: SAMPLE CONTRACT

<i>FOR DNRC USE ONLY</i>			<p align="center">Approved</p> <p>No. <u>« 2»</u></p> <p>Amendment No. <u>« 3»</u></p> <p>Division _____</p> <p>C.S.D. _____</p> <p>Legal _____</p>
Maximum amount under this agreement: <u>« 1»</u>			
Source of Funds			
<u>Fund Name</u> « 4»	<u>Fund No.</u> « 5»		
<u>Subclass</u> « 6»	<u>Org. No.</u> « 7»	<u>Percent</u> « 8»	

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

« 10» Division Name
«11» Project name

This Agreement is between the Montana Department of Natural Resources and Conservation (DNRC), and «12» Contractors Name, (Contractor) « 13» Employer I.D. No. The parties to this Agreement, in consideration of the mutual covenants and stipulations set out herein, agree as follows:

Section 1. PURPOSE. The purpose of this Agreement is to establish mutually agreeable terms and conditions, specifications and requirements to «14». ((E.g.” hire services of the contractor to....” Or “grant funds to the project sponsor to...”))

Section 2. TERM. The effective date of this agreement is the last date of signing, or upon compliance with Section 8, Compliance with Workers’ Compensation Act, whichever is later, and shall terminate on «15» unless terminated earlier pursuant to Section 15, Termination.

Section 3. LIAISON. All communications by the Contractor to the DNRC concerning this Agreement shall be addressed to «16» DNRC Representative, Department of Natural Resources and Conservation, P.O. Box 201601, Helena, Montana 59620-1601. All communications by the DNRC to the Contractor shall be addressed to «17» Contractor’s Representative and address.

Section 4. SCOPE OF WORK. The Contractor shall administer all activities provided for in this Agreement on behalf of the DNRC.

The Contractor shall be responsible for « 18» (full description of work to be performed--may include who, what, where, by when, how, etc.)

Section 5. PAYMENT. In consideration of services rendered pursuant to this Agreement, DNRC agrees to pay the Contractor an amount not to exceed « 19» and no/100 Dollars (\$« 20»). The Contractor shall submit invoices to the DNRC for reimbursement of approved services as outlined herein. Payment will be made within thirty (30) days of delivery of services/goods OR receipt of a properly executed invoice, whichever is later.

Section 6. LEGAL REQUIREMENTS. The Contractor shall comply with all applicable federal, state, and local laws, statutes and ordinances and all applicable rules, regulations, and standards established by DNRC.

Section 7. LAW AND VENUE. Any action at law or suit in equity, or judicial proceeding for the enforcement of this Agreement or any provision thereof shall be instituted only in the courts of the State of Montana. This Agreement shall be governed by the laws of the State of Montana, both as to interpretation and performance. In the event of litigation concerning the terms of this Agreement venue shall be in the First Judicial District in and for the County of Lewis and Clark.

Section 8. COMPLIANCE WITH WORKERS' COMPENSATION ACT

The Contractor is required to supply the State with proof of compliance with the Montana Workers' Compensation Act while performing work for the State of Montana. Neither the Contractor nor its employees are employees of the State. The proof of insurance/exemption must be in the form of workers' compensation insurance, an independent contractor exemption, or documentation of corporate officer status and must be received by the DNRC Procurement Bureau, P.O. Box 201601, Helena, MT 59620-1601, and must be kept current for the entire term of the contract.

CONTRACTS WILL NOT BE ISSUED TO VENDORS WHO FAIL TO PROVIDE THE REQUIRED DOCUMENTATION WITHIN THE ALLOTTED TIME FRAME.

Coverage may be provided through a private carrier or through the State Compensation Insurance Fund (406) 444-6500. An exemption can be requested through the Department of Labor and Industry, Employment Relations Division (406) 444-1446. Corporate officers must provide documentation of their exempt status.

Section 9. EQUAL EMPLOYMENT. Any hiring of employees under this Agreement shall be on the basis of merit and qualifications, and there shall be no discrimination on the basis of race, color, religion, creed, sex, national origin, age, disability, marital status, or political belief. "Qualifications" mean qualifications as are generally related to competent performance of the particular occupational task.

Section 10. PUBLIC INFORMATION AND OWNERSHIP OF PRODUCTS. All information resulting from the project funded under this Agreement shall be made available to the public. Upon completion of this Agreement, all information, reports, data, records, documents, and materials pertaining to this Agreement shall be available to the public. The Contractor shall indemnify and hold harmless DNRC

from liability for injury caused by the release of any information, reports, data, records, documents, and materials provided by the Contractor.

All copyrights, patents, or other royalty rights resulting from the completion of this Agreement or the information, reports, records, data documents, materials, and end products of this Agreement shall be the sole property of the DNRC.

Section 11. INDEMNITY AND LIABILITY (Hold Harmless/Indemnification): The Contractor agrees to be financially responsible for any audit exception or other financial loss to the State of Montana which occurs due to the negligence, intentional acts, or failure by the Contractor and/or its agents, employees, subcontractor, or representative to comply with the terms of this Agreement. The Contractor agrees to indemnify the state, its officials, agents, and employees, while acting within the scope of their duties and hold harmless from and against all claims, demands, and causes of action of any kind or character, including the cost of defense, arising in favor of the Contractor's employees or third parties on account of bodily or personal injuries, death, or damage to property arising out of services performed, goods or rights to intellectual property provided or omissions of services or in any way resulting from the acts or omission of the Contractor and/or its agents, employees, subcontractors or its representatives under this Agreement, all to the extent of the Contractor's negligence.

Section 12. ASSIGNMENTS, TRANSFERS AND SUBCONTRACTS. There will be no assignment, transfer or subcontracting of this Agreement, nor any interest in this Agreement, unless agreed to by both parties in writing as provided in Section 14, Modifications. This Agreement shall be binding on all successors and assigns of the Contractor, including successors in interest.

Section 13. AUDIT. The Contractor shall maintain reasonable records of its performance under this Agreement. The Contractor agrees that DNRC, the Legislative Auditor, or the Legislative Fiscal Analyst may audit all records, reports, and other documents which the Contractor maintains under or in the course of this Agreement to insure compliance with this Agreement. Such records, reports, and other documents may be audited at any reasonable time. The Agreement may be unilaterally terminated by DNRC upon the Contractor's refusal to comply with this or any other section. In the event the Agreement is terminated for such failure to comply, the Contractor, at the option of DNRC, shall return to DNRC all funds previously awarded the Contractor and all results of the project to date.

Section 14. MODIFICATIONS. This instrument contains the entire Agreement between the parties, and no statement, promises, or inducements made by either party, or agents of either party, which are not contained in this Agreement shall be valid or binding and this Agreement may not be enlarged, modified or altered except as provided in this Agreement. No letter, telegram, or other communication passing between the parties to this Agreement, concerning any matter during the term of this Agreement shall be deemed a part of this Agreement unless it is distinctly stated in such letter, telegram, or communication that it is to constitute part of this Agreement, and such letter, telegram, or communication is attached as an appendix to this Agreement and is signed by the authorized representative of each of the parties to this Agreement. If executed properly under this section, modifications of this Agreement do not need independent consideration to be legally enforceable.

Section 15. TERMINATION. Upon breach of any of the terms and conditions of this Agreement by the Contractor, DNRC may terminate this Agreement and have any and all remedies at law or equity. In the event of such breach and termination, DNRC may further, at its option, take over the work and services and prosecute the same to completion by contract or otherwise and the Contractor shall be liable to DNRC for any excess cost occasioned to DNRC thereby. The Contractor may cancel this Agreement

upon DNRC's mutual written agreement and DNRC may postpone or cancel this Agreement if subsequent funding is not available.

Section 16. WAIVER. A waiver of any particular provision of this Agreement by DNRC shall not be construed as a waiver of any other provision, nor shall any such waiver otherwise preclude DNRC from insisting on strict compliance with this Agreement in other circumstances.

Section 17. UNAVAILABILITY OF FUNDING. This contract is subject to the availability of legislative appropriations or funding. DNRC reserves the right, in its sole discretion, to terminate or reduce the scope of this contract should it experience any reduction in legislative appropriations".

Section 18. CONTENTS. This Agreement consists of pages 1---Also list any attachments or appendix.

Section « 21 ». REPORT(S). The report(s) shall account for « 22 » ,(may include such items as a statement of funds expended, a brief narrative of activities, copies of all information and reports, a list of speakers, etc.)

Failure to provide the report as required may cause the DNRC to terminate this Agreement or withhold payments to the contractor.

Section « 23 ». LIQUIDATED DAMAGES. The DNRC reserves the right to assess liquidated damages in the amount of « 24 » (one-half of one percent (1/2 of 1%) per calendar work day on the amount of contract price) for failure to comply with the conditions of this Agreement. This sum may be deducted from Contractor payment(s). No premium will be awarded to the Contractor for delivery/performance in advance of the specified time.

Section « 25 ». AGREEMENT RENEWAL. This Agreement may, upon mutual agreement between the parties and according to the terms of the existing contract, be extended in « 26 » () year intervals for a period not to exceed « 27 » () additional years. This extension is dependent upon legislative appropriations and may not exceed a « 28 » () period.

Section « 29 ». INSURANCE REQUIREMENTS. The contractor shall purchase and maintain Occurrence coverage with combined single limits for bodily injury, personal injury, and property damage of <<30>> per occurrence and <<31>> aggregate per year to cover such claims as may be caused by any act, omission, or negligence of the contractor or its officers, agents, representatives, assigns or subcontractors.

Additional Insured Status: The State, its officers, officials, employees, and volunteers are to be covered as additional insureds; for liability arising out of activities performed by or on behalf of the contractor, including the insured's general supervision of the contractor; products and completed operations; premises owned, leased, occupied, or used.

Primary Insurance: The contractor's insurance coverage shall be primary insurance as respect to the State, its officers, officials, employees, and volunteers and shall apply separately to each project or location. Any insurance or self-insurance maintained by the State, its officers, officials, employees or volunteers shall be excess of the contractor's insurance and shall not contribute with it.

Deductibles and Self-Insured Retentions: Any deductible or self-insured retention must be declared to and approved by the state agency. At the request of the agency either: 1) The insured shall reduce or

eliminate such deductibles or self-insured retentions as respect to the State, its officers, officials, employees, and volunteers, or; 2) The contractor shall procure a bond guaranteeing payment of losses and related investigations, claims administration, and defense expenses.

Certificate of Insurance/Endorsements: A certificate of insurance, indicating compliance with the required coverages and referencing Contract # <<32>>, must be filed with the DNRC's liaison and attached to this agreement prior to signature by the DNRC. The Contractor must notify the State immediately, of any material change in insurance coverage, such as changes in limits, coverages, change in status of policy, etc.

Section « 33 ». GROSS RECEIPTS TAX (for public construction projects). Section 15-50-206 Montana Code Annotated, requires the state agency or department for whom a construction contract over \$5,000 is being performed, to withhold one percent (1%) of all payments and to transmit such monies to the Department of Revenue. For more information or questions concerning this requirement, contact the Department of Revenue at (406) 444-3500.

Section « 34 ». NOTICE OF PREVAILING WAGE DETERMINATION (applies to contracts exceeding \$25,000). State law (Section 18-2-401, et. seq., Montana Code Annotated) requires that in all contracts let for state, county, municipal, school, heavy highway construction, services, or repair and maintenance work, the contractor must give a preference to the employment of bonafide Montana residents and must apply the prevailing rate of wages including fringe benefits for health and welfare and pension contributions, and travel allowance provisions in effect and applicable to the county or locality in which the work is being performed.

Section 18-2-406, Montana Code Annotated provides that contractors, subcontractors, and employers who are performing services under public works contracts as provided in this part shall post in a prominent and accessible site on the project or work area, not later than the first day of work, a legible statement of all wages to be paid to the employees on such site or work area.

The standard prevailing rate of wages is determined by the Montana Commissioner of Labor in accordance with Sections 18-2-401 (7) (b) and 18-2-402, Montana Code Annotated. Travel allowance, if applicable may or may not be all inclusive of "travel" and/or subsistence and travel time due employees. It is incumbent on the employer to determine the amount due for each craft employed.

Date

Contractor's Authorized Representative

Date

Department of Natural Resources and Conservation