

HIGH RESOLUTION DIGITAL ELEVATION DATA ACQUISITION



REQUEST FOR PROPOSALS

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1. INTRODUCTION: The Red River Watershed Management Board (RRWMB) is seeking proposals from vendors experienced in the acquisition and processing of Light Detecting and Ranging (LiDAR) data. The RRWMB was authorized by the MN Legislature in 1976 to promote a basin-wide perspective for water management. The RRWMB operates under a joint powers agreement between seven watershed districts in the northwest (Two Rivers, Joe River, Roseau River, Middle-Snake-Tamarac Rivers, Red Lake, Wild Rice, and Bois de Sioux). The RRWMB's member watershed districts use LiDAR data and its derivatives (e.g., digital elevation models) for project planning and design, 3-D visualization, flood modeling, and various studies and analysis.

2. PROPOSED TIMELINES:

Proposal Due	April 30, 2021 5:00 p.m. Central Time
Proposal Review	May 3, 2021 – May 28, 2021
Award Contract	June 30, 2021
Data Delivery/Project Completion	June 30, 2022
Bid Alternate Delivery/Completion	November 30, 2022

3. SCOPE OF WORK: Any proposed data collection and processing methods will be considered provided the data meet the specifications outlined in: USGS LiDAR Base Specifications 2020 revision A, which can be viewed at the following website: <https://www.usgs.gov/media/files/lidar-base-specification-2020-rev-a>

The successful vendor will be responsible for all aspects of the following project including, but not limited to:

A. Project Area*:

- Core Project Area: 14,427 miles². Includes all acreage within the Two Rivers, Joe River, Roseau River, Middle-Snake-Tamarac Rivers, Red Lake, Wild Rice, and Bois de Sioux watersheds in Northwestern Minnesota (Appendix A).
- Optional Area A: 18,420 miles². Includes the Core Project Area and the additional area comprising the Buffalo Red River, Sand Hill, and Ottertail watersheds (Appendix B).
- Optional Area B: 28,908 miles². Includes Optional Area A and the remaining area of all counties abutting the Red River of the North Basin's border (Appendix C).

**Area shapefiles can be downloaded at:*

<https://drive.google.com/drive/folders/1TcLnAHNBIfUDgQaXFx8mGZ1zGE6JgXvF>

B. Ground Control: The vendor shall be responsible for establishing project ground control required to ensure the vertical and horizontal accuracy of all project deliverables.

C. Elevation Data: LiDAR data shall be collected for all portions of the project area. Data provided shall be seamless, contiguous, and free from gaps/voids between flights lines, and adjacent collection areas.

D. LiDAR Collection and Filtering: **All data collected shall meet or exceed United State Geological Survey (USGS) Quality Level 2 (QL2) specifications.** LiDAR point clouds shall be classified and delivered according to the latest ASPRS LAS Specification, currently 1.4-r15: (http://www.asprs.org/wp-content/uploads/2019/07/LAS_1_4_r15.pdf).

The vendor shall use automatic and manual filtering for bare-earth to remove artifacts, outliers, voids, systematic and random errors, noise, anomalies, man-made features, and vegetation. The resulting terrain data shall be capable of creating a minimum of 1-foot contours.

C. Tiles: A single non-overlapping, 1km by 1km tiling scheme shall be used which matches the national index of the USGS 3D Elevation Program (3DEP). Project boundaries will be extended to complete the nearest 1-km tile.

D. Required Metadata: For each dataset created under contract, the vendor shall use the information gathered in the Project Completion Report to deliver a metadata document compatible with the Federal Geographic Data Committee (FGCD) Standards for Digital Geographic Data (<https://www.fgdc.gov/resources/download-geospatial-standards>).

E. Quality Assurance/Quality Control (QA/QC): Process QA/QC is the responsibility of the vendor. QA/QC shall follow the “Data Processing and Handling” section of the USGS LiDAR Base Specification document (<https://www.usgs.gov/core-science-systems/ngp/ss/lidar-base-specification-online>).

The vendor shall engage a Registered Professional Engineer or licensed land surveyor who shall certify topographic data. Data certification by the American Society for Photogrammetry and Remote Sensing (ASPRS) Certified Photogrammetrist is also required. Prior to acceptance and payment approval, all work performed by the vendor under any contract award related to this request shall pass all independent quality assurance checks that may be conducted by the RRWMB or its agent.

F. Delivery Media: Data shall be delivered on an external hard drive (USB 3.0) provided by the vendor. The drive(s) shall become the property of the RRWMB.

4. DELIVERABLES: All deliverables shall be georeferenced to UTM 14N North American Datum of 1983 (NAD 83) using the most recent NGS-published adjustment (currently NAD 83, epoch 2010.00, realization of 2011). The vertical datum for orthometric heights shall be the North American Vertical Datum of 1988 (NAVD 88). The geoid model used to convert between ellipsoid heights and orthometric heights shall be the latest hybrid geoid model of NGS, supporting the latest realization of NAD 83 (currently [2017] Geoid12b model).

Core Deliverables:

1. A point feature class containing QA/QC ground control and check points used for this project.
2. Breakline enforced, hydro-flattened bare earth, 1-meter Digital Elevation Model (DEM) in an ESRI compatible, 32-bit floating point raster format with defined project coordinates and without overage. Bridges should be removed from the surface.

NOTE: While USGS specifications call for waterbodies with a surface area of > 2 acres and streams/rivers with a 30-meter nominal width or greater to be hydro-flattened, for this project, all waterbodies with a surface area of $\frac{3}{4}$ acres or greater and all streams/rivers with a nominal width of 30-meters shall be hydro-flattened. Depressions (sinks), whether natural or man-made, are not to be filled.

3. Hydro-enforced 3-D breaklines feature class.
4. Classified Point Cloud data in LAS format according to ASPRS LAS specifications version 1.4 R15 as Standard Point Classes (Point Data Record Formats 6-10) that include the DEM LiDAR bare-earth points and breaklines as breakpoints. Model key points, if calculated, shall be identified using the key point bit flag as defined in ASPRS.
5. Lidar Swath polygon feature class, georeferenced, representing the extent of each LiDAR swath collected, defined by the points tagged as edge or flightline. Attributes include start date and time, end date and time, lift's unique ID (as string), type of swath (as string: project, cross-tie, fill-in, calibration, other), and unique file source ID of swath (as string).
6. FGDC compliant metadata for each dataset (classified point data, bare-earth DEM, breaklines, intensity image) in XML format and a block of lidar-related metadata tags as specified by USGS.
7. A LiDAR system data report including discussion of data and processing methods used, final LiDAR pulse and scan rates, scan angle, capability multiple returns from single pulses, accuracy and precision of LiDAR data acquired, accuracy of the topographic surface products, quality control report details, and companion imagery (if any). The data processing segment should include derived product generation procedures including methodology used for breakline collection and hydro-flattening.
8. A flight report documenting aircraft make, model, tail number, mission date, wheels up/down time for each lift and lift unique ID, flight altitudes, airspeed, weather conditions, observed ground conditions, LiDAR instrumentation information and instrument anomalies, as well as other relevant information such as flight disturbances and notable head/tail/crosswinds. This report must include information about the GPS-derived flight tracks, detailed description of final flight line parameters, and GPS controls (benchmarks), and ground truth and complimentary data and a chart of the high geometric dilution of precision (GDOP) for each receiver site.
9. A ground control report that includes all pertinent base station information and mission notes, including information on GPS station monument names and stability.
10. A system calibration report.

Optional Deliverables:

1. QL1 Lidar data.
2. Drainage network/centerline.

5. PROPOSAL FORMAT: Proposal shall not exceed 10 pages (Arial 12 font) and must contain the following information:

1. A letter of interest summarizing the interest in and understanding of the project.
2. Identification of the project team including:
 - a. Project manager's contact information (phone, email, and address).
 - b. List of all team members' responsibilities.
 - c. Project organizational chart.
3. Qualifications:
 - a. Demonstration of qualifications for all principals and professional staff who will be working on the project.
 - b. Descriptions of similar projects completed by principal staff assigned to this project.
4. Project Plan to provide services outlined in Section 5 "Scope of Work" including a timeline.
5. Proposed Budget:
 - a. Include a budget for the Core Project Area (Appendix A), Optional Project Area A (Appendix B), and Optional Area B (Appendix C), and the core and optional deliverables for each area itemized by task with committed hours and fees for services from each assigned team member.
 - b. Indicate cost of any alternative, extended warranty for deliverables beyond the one-year period provided in Section 8 of the attached professional services agreement (Appendix D).
6. References (minimum 3) including a brief project description, contacts names, and phone numbers.
7. Certification regarding current history of debarment, eligibility, indictments, convictions, or civil judgments.

6. SELECTION PROCESS: The RRWMB will consider the following key areas:

1. Professional qualifications and overall strength of the project team.
2. Relevant experience and technical competence.
3. Capacity to accomplish the services on schedule and within budget.
4. Past performance.
5. Understanding of project and strength of approach.
6. Proposed budget.
 - a. Include the core project area and the optional area and note economies of scale (if any) that would be realized.
7. Quality assurance.

7. SUBMISSION DIRECTIONS: Interested vendors shall submit electronic copies (pdf format) by April 30, 2021, no later than 5:00 pm Central Time, via email with the subject “Red River Basin LiDAR Acquisition” to:

Robert L. Sip, Executive Director
Red River Watershed Management Board
rob.sip@rrwmb.org

8. TERMS AND CONDITIONS:

1. The RRWMB and its representatives hereby reserves the right to reject any and all proposals or to solicit new proposals on the original project or a modified project.
2. The RRWMB and its representatives assumes no responsibility for the costs incurred by any entity for the preparation or presentation of a proposal.
3. All submissions received after the deadline will be disqualified from consideration.
4. The RRWMB and its representatives reserves the right to request additional information or clarification of information submitted.
5. The RRWMB and its representatives reserves the right to award any contract to the next most qualified vendor if the vendor is unable for any reason to execute a contract within a reasonable time after selection of vendor.

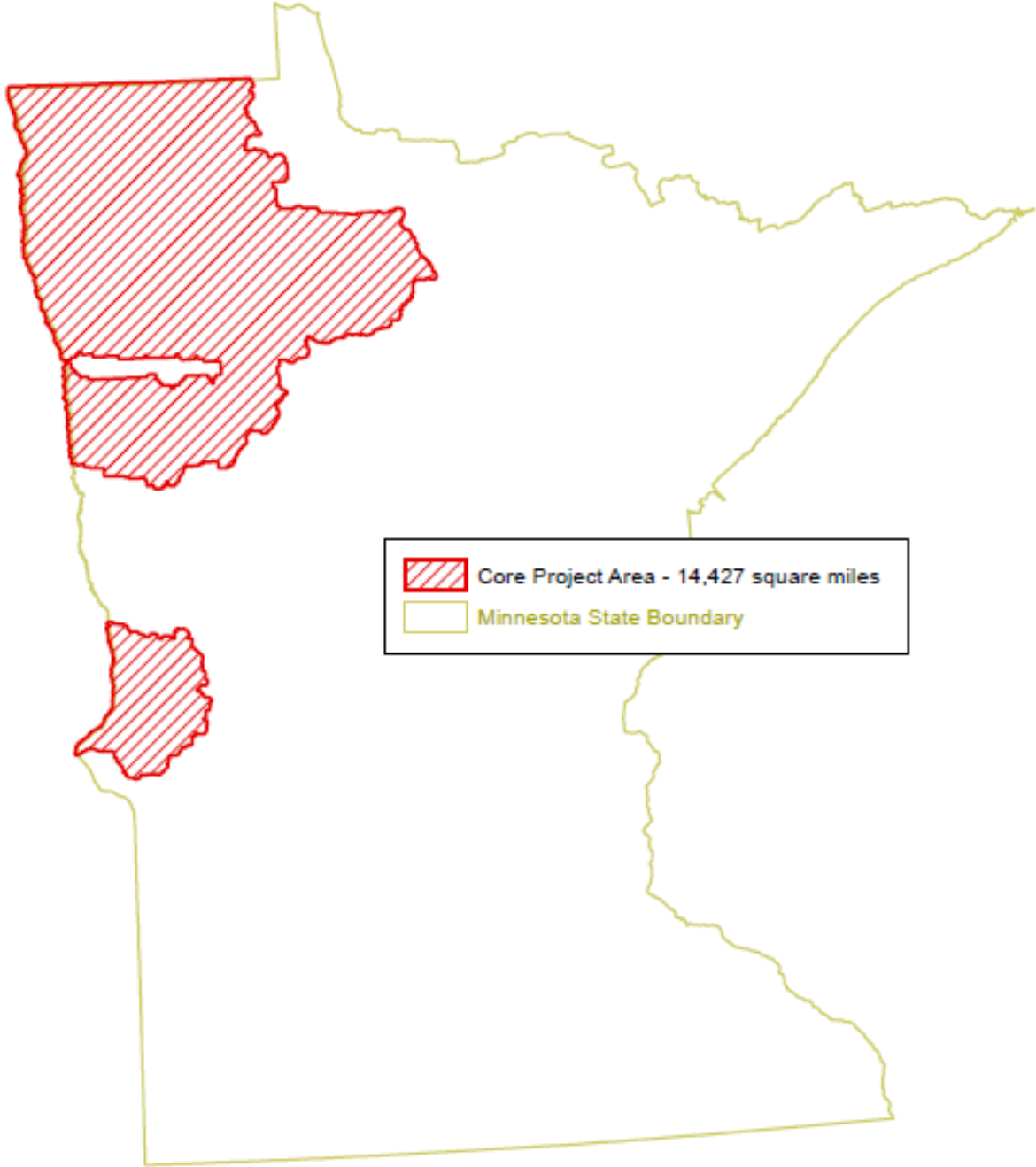
9. CONTRACT COMPENSATION:

1. The RRWMB will enter into the attached professional services agreement (Appendix D) with the selected vendor without material change except as the RRWMB in its sole discretion may elect.
2. The final dollar amount will be negotiated with the successful vendor as part of the final contract and scope of work.
3. Payments will only be made after the services have been performed and itemized billing statement has been submitted on a form approved by the RRWMB. The statement will specify the services performed.

10. AWARD: The RRWMB reserves the right to award the contract to the vendor that it deems to offer the best overall proposal. The RRWMB is not bound to accept a proposal on the basis of lowest price, and further, the RRWMB has the sole discretion and reserves the right to cancel this Request for Proposals, to reject any and all proposals, to waive any and all irregularities, or to re-advertise with either identical or revised specifications if it is deemed within the best interest of the RRWMB.

11. COMPLIANCE WITH APPLICABLE LAWS: All persons awarded or entering into contracts with the RRWMB shall be subject to, and required to comply with, all applicable State of Minnesota and federal laws, rules, and regulations.

APPENDIX A: RRWMB LiDAR Core Project Area.



 Core Project Area - 14,427 square miles
 Minnesota State Boundary

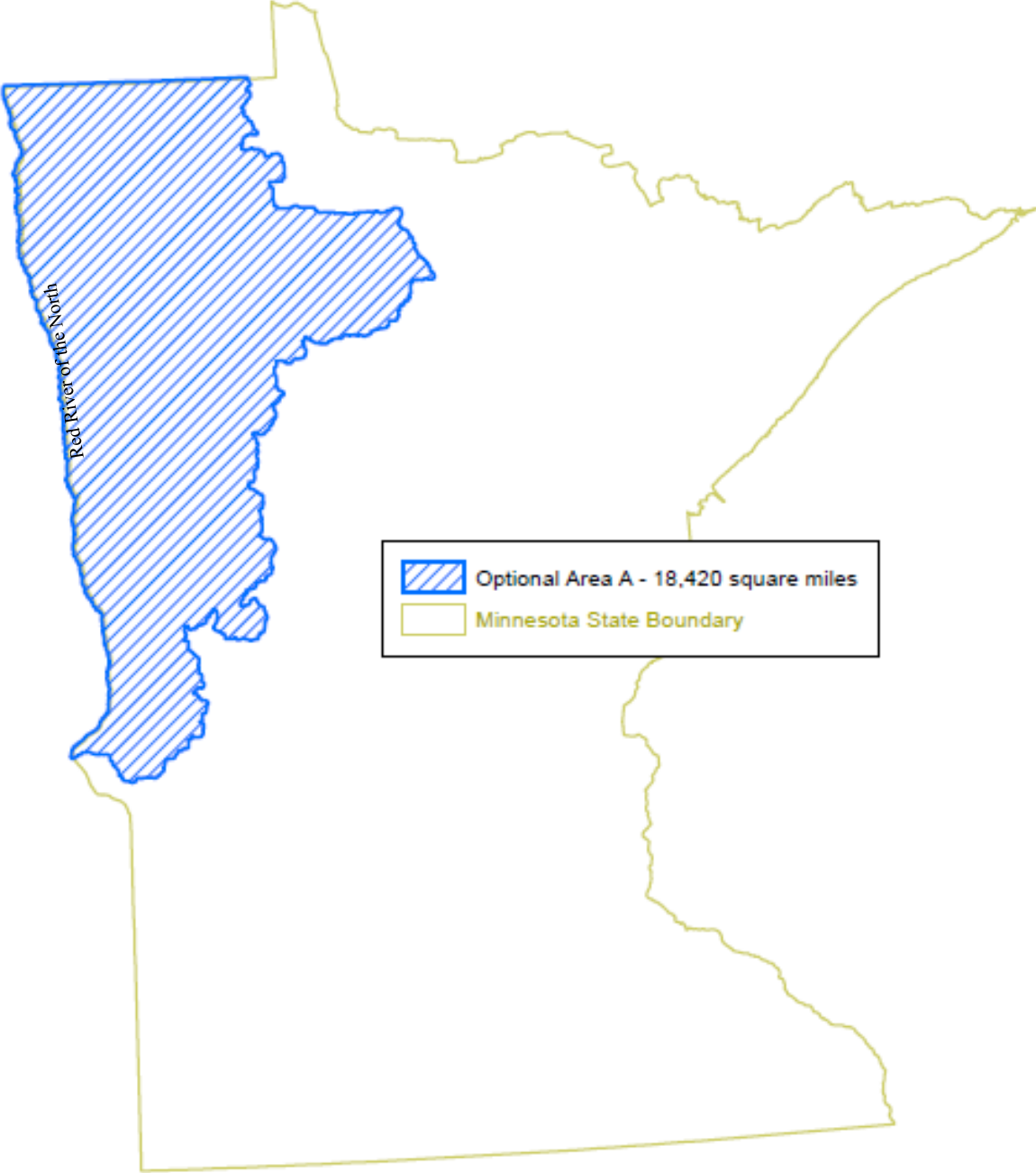


Mar 2021, IWI

NAD 1983 UTM 14N



APPENDIX B: RRWMB LiDAR Optional Area A.

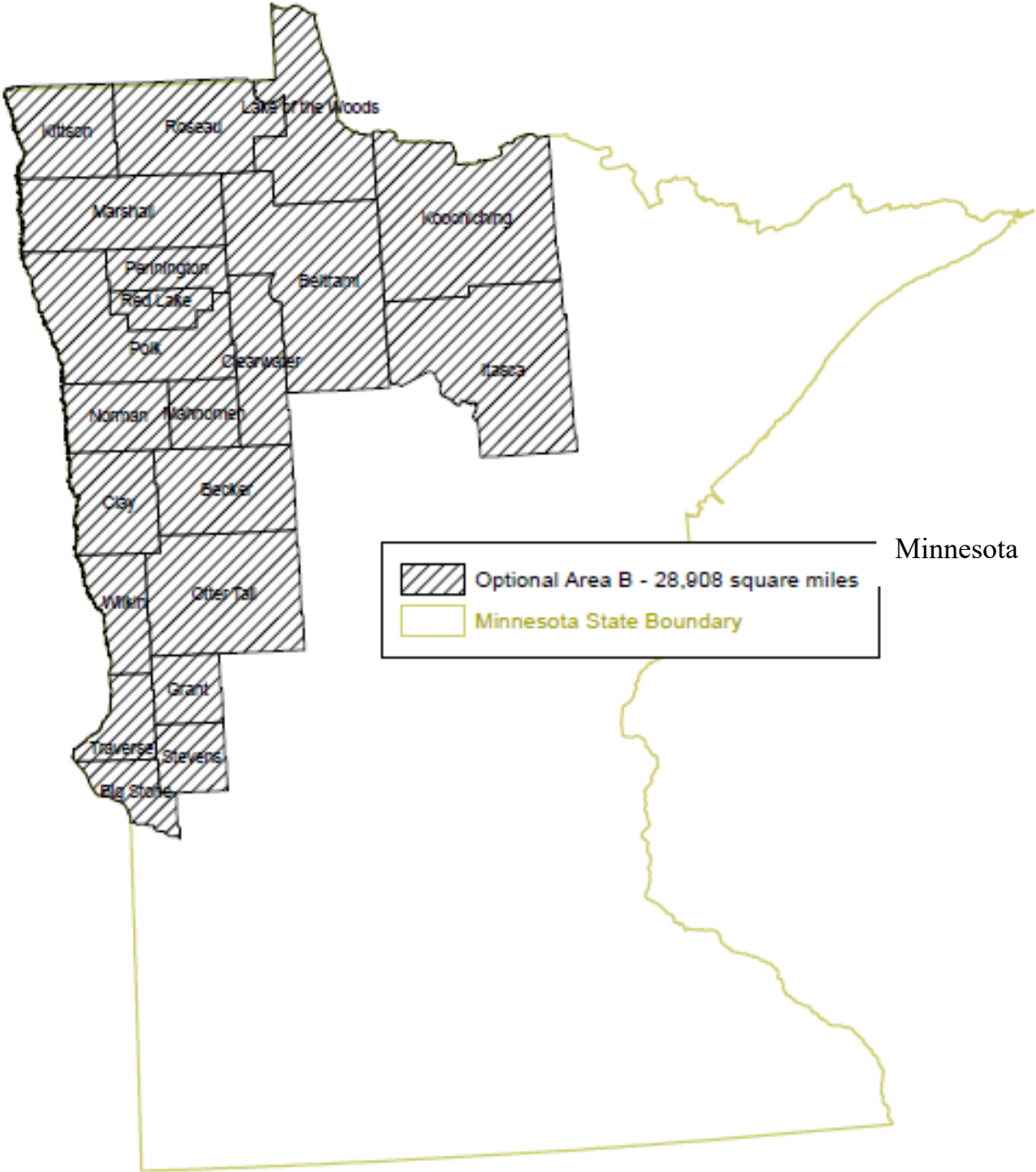


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APPENDIX C: RRWMB LiDAR Optional Project B.



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**APPENDIX D: PROFESSIONAL SERVICES AGREEMENT TEMPLATE BETWEEN
RED RIVER WATERSHED MANAGEMENT BOARD and
[CONSULTANT]**

[Project Title]

This agreement is entered into by the Red River Watershed Management Board and [CONSULTANT], a [Minnesota] corporation (CONSULTANT). In consideration of the terms and conditions set forth herein and the mutual exchange of consideration, the sufficiency of which hereby is acknowledged, RRWMB and CONSULTANT agree as follows:

1. Scope of Work

CONSULTANT will perform the work described in the [DATE] Scope of Services attached as Exhibit A (the Services). Exhibit A is incorporated into this agreement and its terms and schedules are binding on CONSULTANT as a term hereof. RRWMB, at its discretion, in writing may at any time suspend work or amend the Services to delete any task or portion thereof. Authorized work by CONSULTANT on a task deleted or modified by RRWMB will be compensated in accordance with paragraphs 5 and 6. Time is of the essence in the performance of the Services.

2. Independent Contractor

CONSULTANT is an independent contractor under this agreement. CONSULTANT will select the means, method and manner of performing the Services. Nothing herein contained is intended or is to be construed to constitute CONSULTANT as the agent, representative or employee of RRWMB in any manner. Personnel performing the Services on behalf of CONSULTANT or a subcontractor will not be considered employees of RRWMB and will not be entitled to any compensation, rights or benefits of any kind from RRWMB.

3. Subcontract and Assignment

CONSULTANT will not assign, subcontract or transfer any obligation or interest in this agreement or any of the Services without the written consent of RRWMB and pursuant to any conditions included in that consent. RRWMB consent to any subcontracting does not relieve CONSULTANT of its responsibility to perform the Services or any part thereof, nor in any respect its duty of care, insurance obligations, or duty to hold harmless, defend and indemnify under this agreement.

4. Duty of Care; Indemnification

CONSULTANT will perform the Services with due care and in accordance with national standards of professional care. CONSULTANT will defend RRWMB, its board members, employees and agents from any and all actions, costs, damages and liabilities of any nature arising from; and hold each such party harmless, and indemnify it, to the extent due to: (a) CONSULTANT's negligent or otherwise wrongful act or omission, or breach of a specific contractual duty; or (b) a subcontractor's negligent or otherwise wrongful act or omission, or breach of a specific contractual duty owed by CONSULTANT to RRWMB. For any claim subject to this paragraph by an employee of CONSULTANT or a subcontractor, the indemnification obligation is not limited by a limitation on the amount or type of damages, compensation or benefits payable by or for

CONSULTANT or a subcontractor under workers' compensation acts, disability acts or other employee benefit acts.

5. Compensation

RRWMB will compensate CONSULTANT for the Services as performed and invoiced on an itemized billing statement that has been submitted on a form approved by the RRWMB, including reimbursement for direct costs in accordance with Exhibit 1 to this Agreement. Payment for undisputed work will be due within 45 days of receipt of invoice. Direct costs not specified in Exhibit 1 will not be reimbursed except with prior written approval of the RRWMB administrator. Subcontractor fees and subcontractor direct costs, as incurred by CONSULTANT, will be reimbursed by RRWMB at the rate specified in RRWMB's written approval of the subcontract.

The total payment for the Services will not exceed [\$ _____]. Total payment in each respect means all sums to be paid whatsoever, including but not limited to fees and reimbursement of direct costs and subcontract costs, whether specified in this agreement or subsequently authorized by the administrator.

CONSULTANT will maintain all records pertaining to fees or costs incurred in connection with the Services for six years from the date of completion of the Services. CONSULTANT agrees that any authorized RRWMB representative or the state auditor may have access to and the right to examine, audit and copy any such records during normal business hours.

6. Termination; Continuation of Obligations

This agreement is effective when fully executed by the parties and will remain in force until [DATE] unless earlier terminated as set forth herein.

RRWMB may terminate this agreement at its convenience, by a written termination notice stating specifically what prior authorized or additional tasks or services it requires CONSULTANT to complete. CONSULTANT will receive full compensation for all authorized work performed, except that CONSULTANT will not be compensated for any part performance of a specified task or service if such part performance does not provide proportionate value to RRWMB or if termination is due to CONSULTANT's breach of this agreement.

Insurance obligations; duty of care; obligations to defend, indemnify and hold harmless; and document-retention requirements will survive the completion of the Services and the term of this agreement.

7. No Waiver

The failure of either party to insist on the strict performance by the other party of any provision or obligation under this agreement, or to exercise any option, remedy or right herein, will not waive or relinquish such party's rights in the future to insist on strict performance of any provision, condition or obligation, all of which will remain in full force and affect. The waiver of either party on one or more occasion of any provision or obligation of this agreement will not be construed as a waiver of any subsequent breach of the same provision or obligation, and the consent or approval by either party to or of any act by the other requiring consent or approval will not render unnecessary such party's consent or approval to any subsequent similar act by the other.

Notwithstanding any other term of this agreement, RRWMB waives no immunity in tort. This agreement creates no right in and waives no immunity, defense or liability limit with respect to any third party.

8. Insurance; Performance Bond

At all times during the term of this Agreement, CONSULTANT will have and keep in force the following insurance coverages:

- A. General: \$1.5 million, each occurrence, and \$2 million aggregate for injury to persons and damage to property, combined, covering CONSULTANT's ongoing operations on an occurrence basis and including contractual liability. By separate policy if necessary, CONSULTANT will have and keep in force aviation general liability coverage that the RRWMB determines sufficient to cover perils arising in performance of the Services involving damage to damage to property, injury or death of third parties.
- B. Professional liability: \$1.5 million each claim and aggregate. Any deductible will be CONSULTANT's sole responsibility and may not exceed \$50,000. Coverage may be on a claims-made basis, in which case CONSULTANT must maintain the policy for, or obtain extended reporting period coverage extending, at least three (3) years from completion of the Services.
- C. Automobile liability: \$1.5 million combined single limit each occurrence coverage for bodily injury and property damage covering all vehicles on an occurrence basis.
- D. Workers' compensation: in accordance with legal requirements applicable to CONSULTANT or \$1 million each occurrence, whichever amount is greater.
- E. Unmanned Aircraft: \$1 million minimum, each occurrence, covering CONSULTANT's ongoing operations on an occurrence basis and including contractual liability. See Certificate of Insurance Requirements, Aerial Surveying, Unmanned Aircraft Systems, Exhibit 2.
- F. Manned Aircraft: \$5 million minimum, each occurrence, covering CONSULTANT's ongoing operations on an occurrence basis and including contractual liability. See Certificate of Insurance Requirements, Aerial Surveying, Manned Aircraft Systems, Exhibit 3.

CONSULTANT will not commence work until it has filed with RRWMB a certificate of insurance clearly evidencing the required coverages and naming RRWMB as an additional insured for general and aviation liability, along with a copy of the additional insured endorsement(s) establishing coverage for CONSULTANT's ongoing operations as primary coverage on a noncontributory basis. The certificate will name RRWMB as a holder and will state that RRWMB will receive written notice before cancellation, nonrenewal or a change in the limit of any described policy under the same terms as CONSULTANT. So that the RRWMB may confirm coverage under this section, CONSULTANT will provide insurance policy documents to the RRWMB on request.

For one year after CONSULTANT has provided all deliverables, the RRWMB may identify corrective work to be performed at CONSULTANT's expense, which corrective work will extend this period for an additional year. At all times that it is performing the Services, and until the foregoing period has elapsed, or until such earlier time as the RRWMB in its discretion may determine, CONSULTANT will supply a performance bond in a form approved by the RRWMB, and in the contract amount.

9. Compliance With Laws

CONSULTANT will comply with the laws and requirements of all federal, state, local and other governmental units in connection with performing the Services and will procure all licenses, permits and other rights necessary to perform the Services.

In performing the Services, CONSULTANT will ensure that no person is excluded from full employment rights or participation in or the benefits of any program, service or activity on the ground of race, color, creed, religion, age, sex, disability, marital status, sexual orientation, public assistance status or national origin; and no person who is protected by applicable federal or state laws, rules or regulations against discrimination otherwise will be subjected to discrimination.

10. Data and Information

To defray the cost of the Services, the RRWMB intends to reserve the right under applicable laws to make the topographical and associated data and information produced by the Services available to third parties pursuant to compensation and other terms. Accordingly, all data and information obtained or generated by CONSULTANT in performing the Services, including documents in hard and electronic copy, software, and all other forms in which the data and information are contained, documented or memorialized, are the property of RRWMB.

CONSULTANT hereby assigns and transfers to RRWMB all right, title and interest in: (a) its copyright, if any, in the materials; any registrations and copyright applications relating to the materials; and any copyright renewals and extensions; (b) all works based on, derived from or incorporating the materials; and (c) all income, royalties, damages, claims and payments now or hereafter due or payable with respect thereto, and all causes of action in law or equity for past, present or future infringement based on the copyrights. CONSULTANT agrees to execute all papers and to perform such other proper acts as RRWMB may deem necessary to secure for RRWMB or its assignee the rights herein assigned. CONSULTANT will make no claim that data or information used or generated in performing the Services constitutes instruments of service excepted from operation of this section 10, except as that claim is made before CONSULTANT commences to perform the Services and the RRWMB has concurred in writing as to the specific data or information so denominated.

RRWMB may immediately inspect, copy or take possession of any materials on written request to CONSULTANT. On termination of the agreement, CONSULTANT may maintain a copy of some or all of the materials except for materials that consist of or contain topographic surface products or imagery, materials from which topographic surface products or imagery may be formed, and any materials designated by RRWMB as confidential or non-public under applicable law.

11. Data Practices; Confidentiality

If CONSULTANT receives a request for data pursuant to the Data Practices Act, Minnesota Statutes chapter 13 (DPA), that may encompass data (as that term is defined in the DPA) CONSULTANT possesses or has created as a result of this agreement, it will inform RRWMB immediately and transmit a copy of the request. If the request is addressed to RRWMB, CONSULTANT will not provide any information or documents, but will direct the inquiry to RRWMB. If the request is addressed to CONSULTANT, CONSULTANT will be responsible to determine whether it is legally required to respond to the request and otherwise what its legal obligations are, but will not respond to the request before receiving instruction from the RRWMB as to: (a) whether the RRWMB possesses the data responsive to the request and will respond in place of CONSULTANT; and (b) the classification of the data and whether, under the DPA, the requester is entitled to the data. Nothing in the preceding sentence supersedes CONSULTANT's obligations under this agreement with respect to protection of RRWMB data, property rights in data or confidentiality. Nothing in this section constitutes a determination that CONSULTANT is performing a governmental function within the meaning of Minnesota Statutes section 13.05, subdivision 11, or otherwise expands the applicability of the DPA beyond its scope under governing law.

12. RRWMB Property

All property furnished to or for the use of CONSULTANT or a subcontractor by RRWMB and not fully used in the performance of the Services, including but not limited to equipment, supplies, materials and data, both hard copy and electronic, will remain the property of RRWMB and returned to RRWMB at the conclusion of the performance of the Services, or sooner if requested by RRWMB. CONSULTANT further agrees that any proprietary materials are the exclusive property of RRWMB and will assert no right, title or interest in the materials. CONSULTANT will not disseminate, transfer or dispose of any proprietary materials to any other person or entity unless specifically authorized in writing by RRWMB.

Any property including but not limited to materials supplied to CONSULTANT by RRWMB or deriving from RRWMB is supplied to and accepted by CONSULTANT as without representation or warranty including but not limited to a warranty of fitness, merchantability, accuracy or completeness. However, CONSULTANT's duty of professional care under paragraph 4, above, does not extend to materials provided to CONSULTANT by RRWMB or any portion of the Services that is inaccurate or incomplete as the result of CONSULTANT's reasonable reliance on those materials.

13. Notices

Any written communication required under this agreement to be provided in writing will be directed to the other party as follows:

To RRWMB:

Executive Director
Red River Watershed Management Board
11 5Th Avenue East, Suite B
Ada, MN 56510

To CONSULTANT:

[Authorized Representative
Organization
Address]

Either of the above individuals may in writing designate another individual to receive communications under this agreement.

14. Choice of Law; Venue

This agreement will be construed under and governed by the laws of the State of Minnesota. Venue for any action will lie in Norman County.

15. Whole Agreement

The entire agreement between the two parties is contained herein and this agreement supersedes all oral agreements and negotiations relating to the subject matter hereof. Any modification of this agreement is valid only when reduced to writing as an amendment to the agreement and signed by the parties hereto. RRWMB may amend this agreement only by action of the Board of Managers acting as a body.

IN WITNESS WHEREOF, intending to be legally bound, the parties hereto execute and deliver this agreement.

CONSULTANT

By _____ Date: _____
Its _____

Approved as to Form and Execution

RRWMB Attorney

RED RIVER WATERSHED MANAGEMENT BOARD

By _____ Date: _____
Its _____

Exhibit 1
Scope of Services

Exhibit 2

Certificate of Insurance Requirements – Aerial Surveying – Unmanned Aircraft Systems

Unmanned Aircraft Liability Insurance. This insurance shall extend to any unmanned, fixed wing or rotary wing, used in Scope of Services whether or not such aircraft is owned by, or leased or rented or loaned to, Vendor. Such insurance policy shall permit all uses required in Scope of Services, including, when required, operation under FAA waiver, whether granted or not. Vendor shall not permit operation of Unmanned Aircraft by any pilot who does not meet the requirements for currency of license, rating and experience contained in the insurance policy. Requirements will not be less than the following:

NOTICE: Please forward this document to your insurance representative. If each condition is not included on the insurance certificate it will be returned to you for revision before approval.

- Include Physical Damage for Unmanned Aircraft, Payload and Ground Equipment being used in Scope of Services.
- Physical Damage Limit will be on an Agreed Value Basis or Blanket Physical Damage Aggregate Limit will need to be greater than value of all equipment being used in Scope of Services
- Include Hull Physical Damage War Coverage.
- Include Unmanned Aircraft Systems Liability insurance for: Third Party Liability (including Bodily Injury and Property Damage), and Non-Owned Aircraft Liability in amounts equivalent to the policy limits carried for each aircraft, but in any case, not less than \$1,000,000 Combined Single Limit, Each Occurrence.
- Include War Risk Liability insurance in an amount not less than \$1,000,000 each occurrence and in the annual aggregate.
- Include Liability for Personal and Advertising Injury with a limit of \$1,000,000 each occurrence and in the annual aggregate.
- Additional Insured wording will state: “Red River Watershed Management Board, its directors, officers, employees, subsidiaries or affiliated companies”. Address: 11 5th Ave E, Ada, Minnesota, 56510.
- Provide certificate holder as an additional insured with respect to operations by or on behalf of the named insured.”
- Provide a physical damage hull waiver of subrogation in favor of “Red River Watershed Management Board, its directors, officers, employees, subsidiaries or affiliated companies”.
- Provide clause that states operator's insurance is primary and noncontributory.
- Include a severability of interest clause.
- Provide thirty (30) days' notice of cancellation, ten (10) days for non-payment of premium.
- Evidence policy includes territory of The United States of America.
- Certificates of insurance need to be issued by the insurance company except in cases where the insurance is placed with more than one insurer.
- Evidence insurance policy includes, Commercial Use.

Exhibit 3
Certificate of Insurance Requirements – Aerial Surveying – Manned Aircraft

Aircraft Hull and Liability Insurance. This insurance shall extend to any manned aircraft, fixed wing or rotary wing, used in Scope of Services, whether or not such aircraft is owned by, or leased or rented or loaned to, Vendor. Such insurance policy shall permit all uses required in Scope of Services, including, when required, operation under FAA waiver, whether granted or not. Vendor shall not permit operation of aircraft by any pilot who does not meet the requirements for currency of license, rating and experience contained in the insurance policy. Requirements will not be less than the following:

NOTICE: Please forward this document to your insurance representative. If each condition is not included on the insurance certificate it will be returned to you for revision before approval.

- Include Hull Physical Damage and Hull War coverage on an Agreed Value Basis.
- Equipment being used in Scope of Services while attached to aircraft must be included in Agreed Value
- Include Aircraft Liability insurance for: Third Party Liability (including Passenger Liability, Bodily Injury and Property Damage), and Non-Owned Aircraft Liability in amounts equivalent to the policy limits carried for each aircraft, but in any case, not less than \$5,000,000 Combined Single limit, Each Occurrence.
- Include War Risk Liability insurance in an amount not less than \$5,000,000 each occurrence and in the annual aggregate.
- Include Liability for Personal and Advertising Injury with a limit of \$5,000,000 each occurrence and in the annual aggregate.
- Additional Insured wording will state: “Red River Watershed Management Board, its directors, officers, employees, subsidiaries or affiliated companies”. Address: 11 5th Ave E, Ada, Minnesota, 56510.
- Provide certificate holder as an additional insured with respect to operations by or on behalf of the named insured.”
- Provide a physical damage hull waiver of subrogation in favor of “Red River Watershed Management Board, its directors, officers, employees, subsidiaries or affiliated companies”.
- Provide clause that states operator's insurance is primary and noncontributory.
- Include a severability of interest clause.
- Provide thirty (30) days’ notice of cancellation, ten (10) days for non-payment of premium.
- Evidence policy includes territory of The United States of America.
- Certificates of insurance need to be issued by the insurance company except in cases where the insurance is placed with more than one insurer.
- Evidence insurance policy includes, Commercial Use.