

U.S. DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

JOINT FUNDING AGREEMENT

Customer #: 6000004785  
Agreement #: 16H5NE008  
Project #: EGS0E1C  
TIN #: 147049123308  
Fixed Cost Agreement NO

FOR

2016-2017 Lidar Acquisition for the Sandhills of Nebraska

THIS AGREEMENT is entered into as of the, 16<sup>th</sup> day of August Sept, 2016 by the U.S. GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the State of Nebraska Office of the Chief Information Officer (CIO), party of the second part.

1. The parties hereto agree that subject to availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation activities for the procurement of LiDAR data and LiDAR-derived elevation products (see attached Statement of Work) herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50; and 43 USC 50b.

2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) includes In-Kind Services in the amount of \$0.00

(a) by the party of the first part during the period

Amount	Date	to	Date
\$0.00	Date of last signature		June 30, 2018

(b) by the party of the second part during the period

Amount	Date	to	Date
\$551,830.00	Date of last signature		June 30, 2018

(c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0.00

Description of the USGS regional/national program:

(d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.

(e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.

3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.

4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.

5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.


6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

9-1366 (Continuation) Customer #: 6000004785 Agreement #: 1645NE008

- 7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.
- 8. The maps, records, or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records, or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program and, if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at costs, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records, or reports published by either party shall contain a statement of the cooperative relations between the parties.
- 9. USGS will issue billings utilizing Department of the Interior Bill for Collection (form DI-1040). Billing documents are to be rendered monthly, based on actual expenses, independent of product delivery. Payments of bills are due within 60 days after the billing date. If not paid by the due date, interest will be charged at the current Treasury rate for each 30 day period, or portion thereof, that the payment is delayed beyond the due date. (31 USC 3717; Comptroller General File B-212222, August 23, 1983).

<b>U.S. Geological Survey</b> <b>United States</b> <b>Department of the Interior</b> <u>USGS Point of Contact</u>		State of Nebraska Office of the Chief Information Officer (CIO)  <u>Customer Point of Contact</u>	
Name:	James Langtry	Name:	Nathan Watermeier, GIS Coordinator
Address:	National Map Liaison to Nebraska US Geological Survey 5231 South 19th Street Lincoln, NE 68512	Address:	Office of the Chief Information Officer 501 South 14th Street, 4th Floor P.O. Box 95045 Lincoln, NE 68509-5045
Telephone:	402-328-4128	Telephone:	402-471-3206
Email:	jlangtry@usgs.gov	Email:	nathan.watermeier@Nebraska.gov

Signatures and Date

Signature:	<b>KARI CRAUN</b>	Date:	8/26/16	Signature:		Date:	9/16/2016
Name:	Kari J. Craun	Name:	Ed Toner	Title:	Chief Information Officer		
Title:	Director USGS-NGTOC	Title:	Chief Information Officer				

Digitally signed by KARI CRAUN  
 DN: c=US, o=U.S. Government,  
 ou=Department of the Interior,  
 ou=Geological Survey, cn=KARI  
 CRAUN,  
 0.9.2342.19200300.100.1.1=14001000  
 295101  
 Date: 2016.08.26 12:03:03 -0500'

## STATEMENT OF WORK

### 2016-2017 LIDAR ACQUISITION FOR THE SANDHILLS OF NEBRASKA

AUGUST 25, 2015

#### 1) Purpose

The USGS and the State of Nebraska, Office of the Chief Information Officer (OCIO) will collaborate to acquire high-resolution digital elevation data developed from airborne LIDAR for an area of approximately 18,111 square miles in Nebraska (Appendix A). The data will be used by to generate digital elevation models and contours for use in dam safety assessments, engineering design and design reviews, conservation planning, research, delivery, floodplain mapping, and hydrologic modeling utilizing LiDAR technology. The data is to be acquired between Fall 2016 and Spring 2017. The project area will consist of high accuracy classified bare-earth LiDAR data in LAS format as well as raster Digital Elevation Models (DEMs) per project requirements. The project data will be edge-matched to current Nebraska LiDAR data.

Unless otherwise stated, the USGS-NGP Lidar Base Specifications (Techniques and Methods 11-B4, Version 1.2, November 2014) for Quality Level Two (QL2) will define the technical requirements for the project area(s). The LiDAR data will be processed to produce a classified point cloud, tile-based bare earth Digital Elevation Models (DEMs), and related products. All resulting elevation products will be placed in the public domain and will be made available for viewing and download through the USGS National Map and EarthExplorer.

#### 2) Statement of Work

USGS will select a qualified vendor to perform the LiDAR collection and processing via the Bureau's Geospatial Product and Service Contract (GPSC). GPSC task orders are awarded to qualified vendors through federal government solicitation. Current solicitation 09CR14-NoSolicitation was issued March 03, 2009. Qualified consultants are selected in accordance with Public Law 92-528 (Brooks Act) and FAR 36.6 - Architect-Engineering Services, which establishes a qualifications-based selection process, in which contracts for Architectural and Engineering services are negotiated on the basis of demonstrated competence and qualification for the type of professional services required at a fair and reasonable price. Vendor selection is based on the following 6 criteria (1) Professional qualifications necessary for satisfactory performance of required services; (2) Specialized experience and technical competence in the type of work required; (3) Capacity to accomplish the work in the required time; (4) Past performance on contracts with Government agencies and private industry in terms of cost control, quality of work, and compliance with performance schedules; (5) Location in the general geographical area of the project and knowledge of the locality of the project and (6) Acceptability under other appropriate evaluation criteria. This process is aligned with the Department's consultant RFP and selection process.

USGS will administer data quality assurance and quality control (QA/QC), and manage all data deliverables. All land surveys conducted in support of this project will be performed by a qualified professional land surveyor licensed by the State of Nebraska.

The Task Order issued by USGS to the selected GPSC Contractor provides full details regarding project collection requirements and resulting deliverables.

USGS will:

- Execute an Interagency Agreement with NRCS for the NRCS Nebraska office to contribute funds in support of the total project cost.
- Prepare a Task Order for agreed upon products and services.
- Serve as Government Point of Contact during the full period of the Agreement.
- Receive and catalog all project deliverables.
- Inspect all deliverables.
- Prepare product Validation Summary Report(s) and distribute to relevant project Points of Contact.
- Return data to Contractor as needed for error correction/rework.

State of Nebraska, Office of the Chief Information Officer (OCIO) will:

- Coordinate the collection of funds from partners as shown in table 1 totaling \$551,830 for production activities associated with LiDAR collection, processing, and derivative product generation. This includes the applicable GPSC assessment fee which is calculated by USGS as 5% of the total contracted project cost.

	<b>Amount</b>
<b>Nebraska Department of Natural Resources (NDNR)</b>	<b>\$200,000.00</b>
<b>Nebraska Department of Roads (NDOR)</b>	<b>\$200,000.00</b>
<b>Nebraska Department of Environmental Quality (NDEQ)</b>	<b>\$15,000.00</b>
<b>Twin Platte Natural Resource District (TPNRD)</b>	<b>\$23,970.00</b>
<b>Upper Elkhorn Natural Resource District (UENRD)</b>	<b>\$7,990.00</b>
<b>Upper Loup Natural Resources District (ULNRD)</b>	<b>\$4,994.00</b>
<b>Upper Niobrara-White Natural Resources District (UNWNRD)</b>	<b>\$27,965.00</b>
<b>Lower Loup Natural Resources District (LLNRD)</b>	<b>\$71,911.00</b>
<b>Total Project Cost</b>	<b>\$551,830.00</b>

\* These costs include an applicable Geospatial Product and Service Contract (GPSC) assessment fee as calculated by USGS as 5% of the total contracted project cost.

Some or all of the remainder of the total cost of the project is anticipated to be covered by federal partners consisting of the NRCS and US Forest Service. These partners are processing their support funding under separate reimbursable agreements.

### 3) Expected Accomplishments and Deliverables

#### General Terms

LiDAR Data Acquisition (Fall 2016 and Spring 2017)

The horizontal datum shall be referenced to the North American Datum of 1983 (NAD 83) using the National Adjustment of 2011 (NA2011).

#### LiDAR Collection Point Spacing and Density

To meet QL2 requirements, the planned resolution of the LiDAR will be a minimum of 0.71 meter Aggregate Nominal Point Spacing (ANPS). The QL2 requirements are as follows:

Quality Level (QL)	Aggregate nominal pulse spacing (ANPS) (m)	Aggregate nominal pulse density (ANPD) (pls/m <sup>2</sup> )
QL2	≤ 0.71	≥ 2.0

To prevent clustering effects and to ensure uniform densities through the dataset, a regular grid, with cell size equal to the design 2\*ANPS will be laid over the data. At least 90% of the cells in the grid shall contain at least one LiDAR point. Assessment to be made against single swath, first return data located within the geometrically usable center portion (typically ~95%) of each swath.

The vertical datum shall be referenced to the North American Vertical datum of 1988 (NAVD88). GEOID12B shall be used to convert ellipsoidal heights to orthometric heights.

The projection is appropriate UTM Zone 13 or 14 North in meters. All units will be to 1 centimeter resolution.

#### Tile scheme

The tile scheme shall be based on the National Grid which defines spatial addresses by using 3 sets of information; the UTM Zone and the hemisphere identifier value, the regional locator value, and the local address. Tile size will be 1000m x 1000m tiles and referenced to the 5000m x 5000m Nebraska tiles index. Tiles may be clipped by the project boundary.

#### Quality Assurance by USGS NGTOC

LiDAR data will be acquired by a private vendor who will be chosen by the USGS based on their qualifications and availability to do the work. Data will be acquired to specifications that comply with USGS standards and are agreeable to all Partners.

LiDAR acquisition will occur in Fall 2016 and Spring 2017. Final deliverables will be distributed once the data has been accepted by USGS, approximately 5 weeks after the final delivery of data from the LiDAR vendor.

Once the data is approved by USGS, the data is considered accepted.

LiDAR Data acquisition will meet USGS standards. Qualitative accuracy assessment of LiDAR will be

completed following the 1998 National Standard for Spatial Data Accuracy (NSSDA). Metadata for all products will be FDGC compliant.

## **Deliverable Products**

### **A. Raw Point Cloud Data:**

Fully compliant LAS v1.4, Point Record Format 6, 7, 8, 9, or 10

Proper use of the LAS withheld and overlap bits is required. Use of the overlap bit is required for marking overlap points.

LAS v1.4 deliverables with waveform data are to use external "auxiliary" files with the extension ".wdp" for the storage of waveform packet data. See the LAS v1.4 Specification for additional information.

Georeference information included in all LAS file headers (OGC WKT).

GPS times are to be recorded as Adjusted GPS Time, at a precision sufficient to allow unique timestamps for each return. In compliance with LAS specification requirements, the encoding tag in the LAS header must be properly set.

Intensity values, 16 Bit, Linear Rescaling.

Full swaths, all collected points to be delivered.

Swaths may be segmented, as described in the NGP Lidar Base Specification, at USGS discretion, if needed. Otherwise, swath data shall be one file per swath, 1 swath per file.

A report of the point cloud assessed relative vertical accuracy (smooth surface repeatability and overlap consistency). Raw swath point cloud data shall meet the required accuracy levels before point cloud classification and derivative product generation.

A report of the unclassified lidar point data assessed absolute vertical accuracy (NVA only) in accordance with the guidelines set forth in the Positional Accuracy Standards for Digital Geospatial Data (American Society for Photogrammetry and Remote Sensing, 2014) shall be provided and dated. Raw swath point cloud data shall meet the required accuracy levels before point cloud classification and derivative product generation.

### **B. Classified Point Cloud:**

Fully compliant LAS v1.4, Point Record Format 6, 7, 8, 9, or 10 including "File Source ID."

Proper use of the LAS withheld and overlap bits is required. Use of the overlap bit is required for marking overlap points.

Georeference information included in LAS header (OGC WKT).

GPS times are to be recorded as Adjusted GPS Time, at a precision sufficient to allow unique timestamps for each return. In compliance with LAS specification requirements, the encoding tag in the LAS header must be properly set.

Intensity values, 16 Bit, Linear Rescaling.

Tiled delivery, without overlap

Classification Scheme (minimum):

- Class 1 - Processed, but unclassified
- Class 2 - Bare-earth ground
- Class 7 - Low Noise (low, manually identified, if necessary)
- Class 8 - Model Key Points
- Class 9 - Water
- Class 10 - Ignored Ground (Breakline Proximity)
- Class 17 - Bridge Decks
- Class 18 - High Noise (high, manually identified, if necessary)

Note: Classes 7 and 18 are included as a convenience for the data producer. It is not required that all “noise” be assigned to those Classes.

Class 8 is included as a convenience for the data producer to identify Model Key Points, but the appropriate attribute bit flag shall be set to comply with USGS Lidar Base Specification v1.2 and LAS v1.4.

### **C. Bare Earth Surface (Raster DEM):**

Cell Size no greater than 1.0 meter, and no less than the design Aggregate Nominal Pulse Spacing (ANPS).

Delivery in an industry-standard, GIS-compatible, 32-bit floating point raster format (ERDAS Imagine “.img” preferred)

Georeference information shall be included in raster file

Tiled delivery, without overlap or gaps.

Tiles shall be suitable for creating seamless data mosaics

DEM tiles will show no edge artifacts or mismatch. A quilted appearance in the overall project DEM surface, whether caused by differences in processing quality or character between tiles, swaths, lifts, or other non-natural divisions, will be cause for rejection of the entire DEM deliverable.

Void areas (i.e., areas outside the project boundary but within the tiling scheme) shall be coded using a unique “NODATA” value. This value shall be identified in the appropriate location within the file header.

A report on the assessed absolute vertical accuracy (NVA and VVA) of the bare-earth surface in accordance with the guidelines set forth in the “Positional Accuracy Standards for Digital Geospatial Data” (American Society for Photogrammetry and Remote Sensing, 2014). Absolute vertical accuracy requirements using the ASPRS methodology for the bare-earth DEM are listed in “Absolute vertical accuracy for digital elevation models, Quality Level 0–Quality Level 3” (table 5).

Depressions (sinks), natural or man-made, are not to be filled (as in hydro-conditioning and hydro-enforcement).

Water Bodies (ponds and lakes), wide streams and rivers ("double-line"), and other non-tidal water bodies as defined in Section III are to be hydro-flattened within the DEM. Hydro-flattening shall be applied to all water impoundments, natural or man-made, that are larger than ~2 acre in area (equivalent to a round pond ~350' in diameter), to all streams that are nominally wider than 100', and to all non-tidal boundary waters bordering the project area regardless of size. The methodology used for hydro-flattening is at the discretion of the data producer.

Bridges (as defined in the USGS Lidar Base Specification V1.2) shall be removed from the DEM. Roads or other travel ways over culverts shall remain intact in the surface.

The bare earth surface below a bridge shall be a continuous logical interpolation of the apparent non-hydrographic terrain lateral to the bridge deck. Where abutments are clearly visible, the bare earth interpolation shall begin at the junction of the bridge deck and approach structure. Where this junction is not clear, the contractor shall use their best judgment to delineate the separation of below-bridge terrain from elevated bridge surface. (See USGS Lidar Base Specification v1.2, section on Digital Elevation Model Hydro-Flattening.)

No geometric change shall be made to the originally computed lidar points. Bare-earth lidar points that are near breaklines shall be classified as Ignored Ground (class value equal to 10) and shall be excluded from the DEM generation process. This process prevents unnatural surface artifacts from being created between mass points and breakline vertices. The proximity threshold for reclassification as Ignored Ground is at the discretion of the data producer, but in general shall not exceed the aggregate nominal pulse spacing (ANPS).

Streams, rivers, and water bodies meeting the criteria for hydro-flattening in the USGS Lidar Base Specification v1.2 shall be monotonically continuous where bridge decks have been removed.

Any breaklines used to enforce a logical terrain surface below a bridge shall be considered a required deliverable.

DEM shall be organized and shall be delivered project-wide (by tile) and by county.

#### **D. First Return Digital Surface Model (DSM):**

Cell size shall be no greater than 1.0 meter post, and no less than the Aggregate Nominal Pulse Spacing (ANPS).

Delivery shall be in an industry-standard, GIS-compatible, 32-bit floating point raster format (ERDAS .img preferred)

Georeference information shall be included in the raster file

Tiled delivery, without overlap



DSM tiles will show no edge artifacts or mismatch

Void areas (i.e., areas outside the project boundary but within the tiling scheme) shall be coded using a unique "NODATA" value. This value shall be identified in the appropriate location within the file header.

DSM shall be organized and shall be delivered project-wide (by tile) and by county.

**E. Mosaics:**

A DEM mosaic shall be created for each county.

A DSM mosaic shall be created for each county.

Each mosaic shall be delivered in ERDAS .img format.

**F. Hillshade:**

Contractor shall produce and deliver a hillshade for each 1-m county-wide DEM deliverable in IMG format.

**G. Breaklines:**

Breaklines for all hydro-flattened areas will be delivered, regardless of technique used for hydro-flattening the DEM.

Breaklines delivered in ESRI file geodatabase formats, as PolylineZ and PolygonZ feature classes, as appropriate to the type of feature represented and the methodology used by the data producer.

Breaklines are to be developed to the limit of the project boundary area.

Breaklines in the same coordinate reference system and units (horizontal and vertical) as the lidar point delivery.

Breakline delivery may be in a single layer or in tiles, at the discretion of the data producer. In the case of tiled deliveries, all features shall edge-match exactly across tile boundaries in both the horizontal (x, y) and vertical (z) spatial dimensions. Delivered data shall be sufficient for the USGS to effectively re-create the delivered DEMs using the lidar points and breaklines without substantial editing.

**H. Intensity Image:** An Intensity Image shall be produced for each tile.

Cell size shall be 1.0 meter.

Image shall be 8-bit, 256 color gray scale and GeoTIFF format.

Images shall be tiled to match the Classified LAS and DEM files.

Intensity images shall be organized and shall be delivered project-wide (by tile) and by county.

**I. Contours:**

County-wide two-foot topographic contours shall be produced for each of the counties within the AOI from hydro-flattened bare-earth surface DEMs via automated techniques.

Data set shall consist of both intermediate and index contours.

Data set shall not include spot elevations, depression contours, or hidden contours.

No manual editing of contour data is required. Auto-smoothing is all that is required.

Contours shall be organized and shall be delivered project-wide (by tile) and by county.

Delivery in file geodatabase is preferred.

**J. Control:** Control, as defined above, shall be delivered.

**K. Metadata:** The following requirements for Metadata shall be met:

Collection Report detailing mission planning and flight logs.

Survey Report detailing the collection of control and check points used for calibration and QA/QC.

Processing Report detailing calibration, classification, and product generation procedures including methodology used.

QA/QC Reports (detailing the analysis, accuracy assessment and validation of:

The point data (absolute, within swath, and between swath)

The bare-earth surface (absolute)

Other optional deliverables as appropriate

Calibration points and any validation points: All control and check points used to calibrate, control, process, and validate the lidar point data or any derivative products are to be delivered.

Geo-referenced, digital spatial representation (shapefile) of the precise extents of each delivered dataset. This should reflect the extents of the actual lidar source or derived product data, exclusive of Triangular Irregular Network (TIN) artifacts or raster NODATA areas. A union of tile boundaries or minimum bounding rectangle is not acceptable. ESRI Polygon shapefile is preferred.

Product metadata (FGDC compliant, ISO 19115:2003 requirements, as outlined in the Nebraska Information Technology Commission (NITC) NITC 3-201 Geospatial Metadata Standards <http://nitc.ne.gov/standards/3-201.html>, XML format metadata). One file for each:

Project

Lift (note: this one per lift – not one per project)

Tiled deliverable product group (classified point data, bare-earth DEMs, etc.)

Product group metadata should contain contents unique and specific to that product group, a renamed copy of the project level metadata is not sufficient. Metadata files for individual tiles are not required.

Note that the NGP version 1.2 of the Lidar Base Specification has a modified XML metadata template to reflect other updates in the specification, careful review is advised.

**L. Project Report:**

The contractor shall deliver a production report which details:

A record of field work procedures.

Data derivation and adjustments.

Quality control procedures and results.

Any problems encountered and solutions used in resolving such problems.

Statistical report summarizing the results of the airborne GPS adjustment and the overall accuracy of the adjusted IMU data.

Production report shall be Microsoft Word, Adobe PDF format or other compatible digital format.

**M. Acquisition Reports:** Contractor shall provide regular progress updates to the technical point of contact throughout the data acquisition process.

Update frequency shall be based upon the collection period, but no less than once a week.

Reports shall be delivered as shapefiles which represent the geographic extent of the acquired data

A final shapefile of all flight lines and corresponding dates flown shall be delivered upon completed acquisition.

Updates shall commence at acquisition onset and shall continue until acquisition is complete

**N. Project Pilot:**

Contractor shall deliver a Project Pilot consisting of a minimum of five (5) square miles of the UNCLASSIFIED point cloud data, classified LAS and hydro-flattened Bare-Earth DEM tiles and breaklines. Pilot delivery shall report the NVA of the UNCLASSIFIED point cloud and Bare-Earth DEM and shall also report the VVA of the Bare Earth DEM. Contractor shall also deliver sample metadata of all Project Pilot products.

**O. All hydro flattened** materials shall be delivered (chiefly, if other techniques than breaklines were used) and shall be delivered in mutually agreeable format, preferably ESRI Shapefile format.

**4) Schedule and Data Delivery**

The LiDAR collection component of this project is planned to occur from the Fall of 2016 through the Spring of 2017, or as acceptable capture conditions allow. All processed data and derived products defined in the USGS project Task Order will be sent directly to USGS National Geospatial Technical Operations Center by the GPSC Contractor for evaluation.

USGS will evaluate project deliverables within 60 days of receipt. Substandard deliverables will be returned to the Contractor for correction/rework. The Contractor will remedy all discrepancies identified and return corrected deliverables to USGS within 30 days of notification for subsequent inspection. Upon acceptance of project deliverables, the Contractor will provide one copy of all deliverables to the OCIO LiDAR project Point of Contact shown below.

**5) Other terms**

Every effort will be made to award contract(s) to complete the work as described in this SOW. However, if the total funding amount is not sufficient to complete the work as described, then adjustments will be made to either obtain additional funding, or, the project will be re-scoped to the mutual satisfaction of all stakeholders.

Data over military properties is not anticipated to be shared with partners or the public, unless clearance is provided. Should unexpected restrictions affect access to other data over military properties, then only federal funds will be applied to those areas.

If data acquisition cannot be completed during a single season due to unacceptable capture conditions, then it is possible that the remaining AOI would be acquired during the next suitable collection window which may or may not be in the same calendar year.

**6) Contacts**

<b>USGS Financial Contacts:</b>		<b>OCIO Financial Contact:</b>	
Jim Almekinder	Name	Julie Heyen	
US Geological Survey		State of Nebraska, Office of the Chief Information Officer (OCIO)	
1400 Independence Road, MS317	Address	501 South 14 <sup>th</sup> Street	
Rolla, MO 65401		Lincoln, Nebraska 68509-5045	
573-308-3549	Telephone	402-471-4135	
<a href="mailto:jalmekinder@usgs.gov">jalmekinder@usgs.gov</a>	E-Mail	<a href="mailto:Julie.Heyen@nebraska.gov">Julie.Heyen@nebraska.gov</a>	
Gail Dunn	Name		
US Geological Survey			
1400 Independence Road, MS318	Address		
Rolla, MO 65401			
573-308-3756	Telephone		
<a href="mailto:gdunn@usgs.gov">gdunn@usgs.gov</a>	E-Mail		

<b>USGS Delivery to:</b>		<b>OCIO Delivery to:</b>
James Langtry	Name	Nathan Watermeier
National Map Liaison US Geological Survey		State GIS Coordinator Office of the Chief Information Officer
5231 South 19 <sup>th</sup> Street	Address	501 South 14th Street, 4th Floor P.O. Box 95045 Lincoln, NE 68509-5045
Lincoln, NE 68512		Lincoln, NE 685
402-328-4128	Telephone	402-471-3206
<a href="mailto:jangtry@usgs.gov">jangtry@usgs.gov</a>	E-Mail	<a href="mailto:Nathan.Watermeier@Nebraska.gov">Nathan.Watermeier@Nebraska.gov</a>

# Attachment A

## 2016-2017 LIDAR ACQUISITION FOR THE SANDHILLS OF NEBRASKA Project Area

