

INTERGOVERNMENTAL AGREEMENT

Agreement No. 632171934

This Agreement is between the State of Oregon acting by and through its Department of Geology and Mineral Industries (“DOGAMI”) and City of Salem (“Local Government”), each a “Party” and, together, the “Parties”.

SECTION 1: AUTHORITY

This Agreement is authorized by ORS 516.035.

Subject to OAR 632-001-0020, DOGAMI is authorized by ORS 516.035 to enter into contracts or agreements with a person, a public body as defined in ORS 174.109 or the federal government or an agency thereof, pursuant to which the department performs geoscientific surveys or analyses. **DOGAMI** is the “Authorized Purchaser” to acquire lidar data under State of Oregon Agency-Specific Price Agreement 7525 (OPA) and the manager of the Oregon LIDAR Consortium.

SECTION 2: PURPOSE

High resolution lidar data have a wide range of uses in forestry, agriculture, geology, engineering stream and watershed restoration and monitoring and a wide range of other applications. Large regional data collection projects funded by multi-DOGAMI partners provide data for multiple users and reduce costs and ensure wider coverage. DOGAMI has been supervising and coordinating the collection of large swaths of high resolution, high accuracy lidar data in the Pacific Northwest since 2006. Our first project was to organize the Portland Lidar Consortium, which brought together over two dozen local, State and Federal agencies to fund the acquisition of over 1.6 million acres (2500 square miles) of data that were acquired through the Puget Sound Lidar Consortium (PSLC), using Watershed Sciences, Inc. as the Contractor. In 2007, the success of this program led the Oregon legislature to designate DOGAMI as the lead agency for lidar acquisition in Oregon, and DOGAMI initiated a nationwide selection process for a lidar vendor through the state procurement process. After receiving multiple bids, DOGAMI selected Watershed Sciences Inc. of Corvallis, Oregon and signed an agency-specific price agreement (Exhibit A, OPA), for the purchase of lidar data that includes some of the toughest specifications in use anywhere. The price agreement data provides specifications for a standard set of products with a pre-determined unit cost to DOGAMI based on the size of the project area. With OPA DOGAMI can order the highest quality lidar data with a simple purchase order. DOGAMI actively seeks to build funding consortia for the acquisition of large swaths of lidar data in Oregon. Since developing OPA in April of 2008, DOGAMI has ordered 73 large lidar flights, totaling ~31 million acres (48,409 square miles). Funding for these projects has come from consortia organized by DOGAMI that include over 80 Federal, State and local government agencies, non-profits and public

utilities. The data quality for all projects that DOGAMI has completed under OPA has been consistently excellent, substantially exceeding the minimum specifications. All projects have been completed on schedule, and the overall record of our program is excellent. The data collected by DOGAMI is distributed to the funding partners and made available to the public. The data is used by governments at all levels for the assessment, monitoring and management of infrastructure, ecosystems, hazards and resources

SECTION 3: EFFECTIVE DATE AND DURATION

This Agreement is effective on 11/09/2018, or the date of the last signature, whichever occurs last) ("Effective Date"), and terminates on 11/09/2019, unless terminated earlier in accordance with Section 16.

SECTION 4: AUTHORIZED REPRESENTATIVES

4.1 DOGAMI's Authorized Representative is:

Jacob Edwards
800 NE Oregon St, Suite 965
Portland, OR 97232
(971) 673-1562 Fax
(971) 865-1073 Office
jacob.edwards@oregon.gov

4.2 Local Government's Authorized Representative is:

Devin Doring
City of Salem
Technical Services Supervisor
1410 20th Street SE, Building 2
503-589-2154
ddoring@cityofsalem.net

4.3 A Party may designate a new Authorized Representative by written notice to the other Party.

SECTION 5: RESPONSIBILITIES OF EACH PARTY

- 5.1 DOGAMI shall perform the work set forth on Exhibit A, attached hereto and incorporated herein by this reference.
- 5.2 Local Government shall pay DOGAMI as described in Section 6.

SECTION 6: COMPENSATION AND PAYMENT TERMS

- 6.1 Local Government agrees to pay DOGAMI an amount not to exceed **\$53,791** for performance of this agreement. The basis for this cost estimate is: 90.69 square miles X \$593.07 per square mile.
- 6.2 DOGAMI shall invoice Local Government in accordance with the payment terms of OPA 7525 that follow three project sequencing milestones, as follows:
 - 6.2.1 40% (\$21,516.40) upon DOGAMI issuing formal purchase order to Contractor and Contractor commencing data acquisition. Contractor periodic acquisition status reports will be the basis for the invoices.
 - 6.2.2 30% (\$16,137.30) upon Contractor delivering initial raw data to DOGAMI for quality control purposes.
 - 6.2.3 30% (\$16,137.30) upon DOGAMI acceptance of final deliverables as defined by OPA by Contractor.
- 6.3 Local Government shall make payment to DOGAMI within 30 days after the invoice date. Local Government agrees that such payment is necessary for DOGAMI to pay Contractor.
- 6.4 DOGAMI agrees to submit a final invoice for work completed under this agreement, not later than 45 days after the expiration date of this agreement.
- 6.5 DOGAMI agrees to submit invoices for payment to the Local Government Designate named above.

SECTION 7: REPRESENTATIONS AND WARRANTIES

Local Government represents and warrants to DOGAMI that:

- 7.1 Local Government is a city duly organized and validly existing. Local Government has the power and authority to enter into and perform this Agreement;
- 7.2 The making and performance by Local Government of this Agreement (a) have been duly authorized by Local Government, (b) do not and will not violate any provision of any applicable law, rule, regulation, or order of any court, regulatory commission, board, or other administrative DOGAMI or any provision of Local Government's charter or other

organizational document and (c) do not and will not result in the breach of, or constitute a default or require any consent under any other agreement or instrument to which Local Government is party or by which Local Government may be bound or affected. No authorization, consent, license, approval of, or filing or registration with or notification to any governmental body or regulatory or supervisory authority is required for the execution, delivery or performance by Local Government of this Agreement, other than those that have already been obtained;

- 7.3 This Agreement has been duly executed and delivered by Local Government and constitutes a legal, valid and binding obligation of Local Government enforceable in accordance with its terms;
- 7.4 Local Government has the skill and knowledge possessed by well-informed members of the industry, trade or profession most closely involved in providing the services under this Agreement, and Local Government will apply that skill and knowledge with care and diligence to perform its obligations under this Agreement in a professional manner and in accordance with the highest standards prevalent in the related industry, trade or profession; and
- 7.5 Local Government shall, at all times during the term of this Agreement, be qualified, professionally competent, and duly licensed to perform its obligations under this Agreement.

The representations and warranties set forth in this section are in addition to, and not in lieu of, any other representations or warranties provided by Local Government.

SECTION 8: GOVERNING LAW, CONSENT TO JURISDICTION

This Agreement shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law. Any claim, action, suit or proceeding (collectively "Claim") between DOGAMI or any other DOGAMI or department of the State of Oregon, or both, and Local Government that arises from or relates to this Agreement shall be brought and conducted solely and exclusively within the Circuit Court of Marion County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this Section be construed as a waiver by the State of Oregon of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the eleventh amendment to the Constitution of the United States or otherwise, to or from any Claim or from the jurisdiction of any court. LOCAL GOVERNMENT, BY EXECUTION OF THIS AGREEMENT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF SAID COURTS.

SECTION 9: OWNERSHIP OF DATA

- 9.1** All deliverables, reports, products, data, information, findings and documents prepared by Contractor or obtained by DOGAMI under the terms of this Agreement are the property of DOGAMI.
- 9.2** All lidar data produced by DOGAMI is in the public domain. DOGAMI will not restrict the use of the data once it has been shared with City of Salem.
- 9.3** City of Salem may redistribute data they receive. DOGAMI does not track City of Salem's distribution policies and assumes no responsibilities for the data it redistributes.
- 9.4** DOGAMI will not restrict the use of or manipulation of data once it has been shared to outside entities.
- 9.5** DOGAMI will provide all project deliverables to City of Salem that are listed in OPA 7525, this includes LAS point cloud data which is considered source data. Any additional raw data such as raw outputs from the sensor or airplane can be requested but DOGAMI cannot guarantee that the Watershed Sciences, Inc. will provide them.
- 9.6** While the IGA is still effective, additional analysis may be requested from City of Salem to DOGAMI. DOGAMI will then reach out to the Watershed Sciences, Inc. to determine what additional QA/QC are needed. If the requested analysis exceeds the standard data quality analysis outlined in Exhibit C - section 2.4 of OPA 7525, then Watershed Sciences, Inc. may reject the request or request additional payment for additional services at the full cost to City of Salem. After the project has been accepted by DOGAMI and the IGA between DOGAMI and City of Salem has been fulfilled, City of Salem may communicate directly with contractor for additional services including additional analysis or additional derivative products at the sole cost to the City of Salem. This type of request would not involve DOGAMI.
- 9.7** For additional detail regarding data ownership, please see DOGAMI Lidar Data Distribution Policy # OP 2017 001 v2.0 attached to this document as Exhibit D.

SECTION 10: CONTRIBUTION

- 10.1** If any third party makes any claim or brings any action, suit or proceeding alleging a tort as now or hereafter defined in ORS 30.260 (a "Third Party Claim") against a Party (the "Notified Party") with respect to which the other Party (the "Other Party") may have liability, the Notified Party shall promptly notify the Other Party in writing of the Third Party Claim and deliver to the Other Party, along with the written notice, a copy of the claim, process and all legal pleadings with respect to the Third Party Claim that have been received by the Notified Party. Each Party is entitled to participate in the defense of a Third Party Claim, and to defend a Third Party Claim with counsel of its own choosing. Receipt by the Other Party of the notice and copies required in this Section and a meaningful opportunity for the Other Party to participate in the investigation, defense and settlement of the Third Party Claim with

counsel of its own choosing are conditions precedent to the Other Party's contribution obligation under this Section 10 with respect to the Third Party Claim.

- 10.2** With respect to a Third Party Claim for which DOGAMI is jointly liable with Local Government (or would be if joined in the Third Party Claim), DOGAMI shall contribute to the amount of expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by Local Government in such proportion as is appropriate to reflect the relative fault of DOGAMI on the one hand and of Local Government on the other hand in connection with the events that resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of DOGAMI on the one hand and of Local Government on the other hand shall be determined by reference to, among other things, the Parties' relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. DOGAMI's contribution amount in any instance is capped to the same extent it would have been capped under Oregon law if the State had sole liability in the proceeding.
- 10.3** With respect to a Third Party Claim for which Local Government is jointly liable with DOGAMI (or would be if joined in the Third Party Claim), Local Government shall contribute to the amount of expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by DOGAMI in such proportion as is appropriate to reflect the relative fault of Local Government on the one hand and of DOGAMI on the other hand in connection with the events that resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of Local Government on the one hand and of DOGAMI on the other hand shall be determined by reference to, among other things, the Parties' relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. Local Government's contribution amount in any instance is capped to the same extent it would have been capped under Oregon law if it had sole liability in the proceeding.

SECTION 11: LOCAL GOVERNMENT DEFAULT

Local Government will be in default under this Agreement upon the occurrence of any of the following events:

- 11.1** Local Government fails to perform, observe or discharge any of its covenants, agreements or obligations under this Agreement;
- 11.2** Any representation, warranty or statement made by Local Government in this Agreement or in any documents or reports relied upon by DOGAMI to measure the delivery of services, the expenditure of funds or the performance by Local Government is untrue in any material respect when made;
- 11.3** Local Government (a) applies for or consents to the appointment of, or taking of possession by, a receiver, custodian, trustee, or liquidator of itself or all of its property, (b) admits in writing its inability, or is generally unable, to pay its debts as they become due, (c) makes a general assignment for the benefit of its creditors, (d) is adjudicated a bankrupt or insolvent, (e) commences a voluntary case under the Federal Bankruptcy Code (as now or hereafter in effect), (f) files a petition seeking to take advantage of any other law relating to bankruptcy, insolvency, reorganization, winding-up, or composition or adjustment of debts, (g) fails to controvert in a timely and appropriate manner, or acquiesces in writing to, any petition filed against it in an involuntary case under the Bankruptcy Code, or (h) takes any action for the purpose of effecting any of the foregoing; or
- 11.4** A proceeding or case is commenced, without the application or consent of Local Government, in any court of competent jurisdiction, seeking (a) the liquidation, dissolution or winding-up, or the composition or readjustment of debts of Local Government, (b) the appointment of a trustee, receiver, custodian, liquidator, or the like of Local Government or of all or any substantial part of its assets, or (c) similar relief in respect to Local Government under any law relating to bankruptcy, insolvency, reorganization, winding-up, or composition or adjustment of debts, and such proceeding or case continues un-dismissed, or an order, judgment, or decree approving or ordering any of the foregoing is entered and continues unstayed and in effect for a period of sixty consecutive days, or an order for relief against Local Government is entered in an involuntary case under the Federal Bankruptcy Code (as now or hereafter in effect).

SECTION 12: DOGAMI DEFAULT

DOGAMI will be in default under this Agreement if DOGAMI fails to perform, observe or discharge any of its covenants, agreements, or obligations under this Agreement.

SECTION 13: REMEDIES

- 13.1** In the event DOGAMI is in default under Section 12, Local Government may, at its option, pursue any or all of the remedies available to it under this Agreement and at law or in equity, including, but not limited to: (a) termination of this Agreement under Section 16, (b) reducing or withholding payment for work or Work Product that DOGAMI has failed to deliver within any scheduled completion dates or has performed inadequately or defectively, (c) requiring DOGAMI to perform, at DOGAMI's expense, additional work necessary to satisfy its performance obligations or meet performance standards under this Agreement, (d)

initiation of an action or proceeding for damages, specific performance, or declaratory or injunctive relief, or (e) exercise of its right of recovery of overpayments under Section 14 of this Agreement or setoff, or both. These remedies are cumulative to the extent the remedies are not inconsistent, and Local Government may pursue any remedy or remedies singly, collectively, successively or in any order whatsoever.

- 13.2** In the event Local Government is in default under Section 11 and whether or not DOGAMI elects to exercise its right to terminate this Agreement under Section 16.3.3, or in the event Local Government terminates this Agreement under Sections 16.2.1, 16.2.2, 16.2.3, or 16.2.5, DOGAMI sole monetary remedy will be (a) for work compensable at a stated rate, a claim for unpaid invoices for work completed and accepted by Local Government, for work completed and accepted by Local Government within any limits set forth in this Agreement but not yet invoiced, for authorized expenses incurred, and for interest within the limits of ORS 293.462, less any claims Local Government has against DOGAMI, and (b) for deliverable-based work, a claim for the sum designated for completing the deliverable multiplied by the percentage of work completed on the deliverable and accepted by Local Government, for authorized expenses incurred, and for interest within the limits of ORS 293.462, less previous amounts paid for the deliverable and any claims that Local Government has against DOGAMI. In no event will Local Government be liable to DOGAMI for any expenses related to termination of this Agreement or for anticipated profits. If previous amounts paid to DOGAMI exceed the amount due to DOGAMI under this Section 13.2, DOGAMI shall promptly pay any excess to Local Government.

SECTION 14: RECOVERY OF OVERPAYMENTS

If payments to DOGAMI under this Agreement, or any other agreement between Local Government and DOGAMI, exceed the amount to which DOGAMI is entitled, Local Government may, after notifying DOGAMI in writing, withhold from payments due DOGAMI under this Agreement, such amounts, over such periods of times, as are necessary to recover the amount of the overpayment.

SECTION 15: LIMITATION OF LIABILITY

EXCEPT FOR LIABILITY ARISING UNDER OR RELATED TO SECTION 10, NEITHER PARTY WILL BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, OR OTHER INDIRECT DAMAGES ARISING OUT OF OR RELATED TO THIS AGREEMENT, REGARDLESS OF WHETHER THE LIABILITY CLAIM IS BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, PRODUCT LIABILITY OR OTHERWISE. NEITHER PARTY WILL BE LIABLE FOR ANY DAMAGES OF ANY SORT ARISING SOLELY FROM THE TERMINATION OF THIS AGREEMENT IN ACCORDANCE WITH ITS TERMS.

SECTION 16: TERMINATION

16.1 This Agreement may be terminated at any time by mutual written consent of the Parties.

16.2 Local Government may terminate this Agreement as follows:

16.2.1 Upon 30 days advance written notice to DOGAMI;

16.2.2 Immediately upon written notice to DOGAMI, if Local Government fails to receive funding, or appropriations, limitations or other expenditure authority at levels sufficient in Local Government's reasonable administrative discretion, to perform its obligations under this Agreement;

16.2.3 Immediately upon written notice to DOGAMI, if federal or state laws, rules, regulations or guidelines are modified or interpreted in such a way that Local Government's performance under this Agreement is prohibited or Local Government is prohibited from paying for such performance from the planned funding source;

16.2.4 Immediately upon written notice to DOGAMI, if DOGAMI is in default under this Agreement and such default remains uncured 15 days after written notice thereof to DOGAMI; or

16.2.5 As otherwise expressly provided in this Agreement.

16.3 DOGAMI may terminate this Agreement as follows:

16.3.1 Immediately upon written notice to Local Government, if DOGAMI fails to receive funding, or appropriations, limitations or other expenditure authority at levels sufficient in DOGAMI's reasonable administrative discretion, to perform its obligations under this Agreement;

16.3.2 Immediately upon written notice to Local Government, if federal or state laws, rules, regulations or guidelines are modified or interpreted in such a way that DOGAMI's performance under this Agreement is prohibited or DOGAMI is prohibited from paying for such performance from the planned funding source;

16.3.3 Immediately upon written notice to Local Government, if Local Government is in default under this Agreement and such default remains uncured 15 days after written notice thereof to Local Government; or

16.3.4 As otherwise expressly provided in this Agreement.

16.4 Upon receiving a notice of termination of this Agreement, DOGAMI will immediately cease all activities under this Agreement, unless Local Government expressly directs otherwise in such notice. Upon termination, DOGAMI will deliver to Local Government all documents, information, works-in-progress, Work Product and other property that are or would be deliverables under the Agreement. And upon Local Government's reasonable request,

DOGAMI will surrender all documents, research or objects or other tangible things needed to complete the work that was to have been performed by DOGAMI under this Agreement.

SECTION 17: NONAPPROPRIATION

Local Government's obligation to pay any amounts and otherwise perform its duties under this Agreement is conditioned upon Local Government receiving funding, appropriations, limitations, allotments, or other expenditure authority sufficient to allow Local Government, in the exercise of its reasonable administrative discretion, to meet its obligations under this Agreement. Nothing in this Agreement may be construed as permitting any violation of Article XI, section 7 of the Oregon Constitution or any other law limiting the activities, liabilities or monetary obligations of Local Government.

SECTION 18: AMENDMENTS

The terms of this Agreement may not be altered, modified, supplemented or otherwise amended, except by written agreement of the Parties.

SECTION 19: NOTICE

Except as otherwise expressly provided in this Agreement, any notices to be given relating to this Agreement must be given in writing by facsimile, email, personal delivery, or postage prepaid mail, to a Party's Authorized Representative at the physical address, fax number or email address set forth in this Agreement, or to such other addresses as either Party may indicate pursuant to this Section 20. Any notice so addressed and mailed becomes effective five (5) days after mailing. Any notice given by personal delivery becomes effective when actually delivered. Any notice given by email becomes effective upon the sender's receipt of confirmation generated by the recipient's email system that the notice has been received by the recipient's email system. Any notice given by facsimile becomes effective upon electronic confirmation of successful transmission to the designated fax number.

SECTION 20: SURVIVAL

All rights and obligations of the Parties under this Agreement will cease upon termination of this Agreement, other than the rights and obligations arising under Sections 8, 9, 10, 14, 15 and 20 hereof and those rights and obligations that by their express terms survive termination of this Agreement; provided, however, that termination of this Agreement will not prejudice any rights or obligations accrued to the Parties under this Agreement prior to termination.

SECTION 21: SEVERABILITY

The Parties agree that if any term or provision of this Agreement is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining

terms and provisions will not be affected, and the rights and obligations of the Parties will be construed and enforced as if the Agreement did not contain the particular term or provision held to be invalid.

SECTION 22: COUNTERPARTS

This Agreement may be executed in several counterparts, all of which when taken together shall constitute one agreement, notwithstanding that all Parties are not signatories to the same counterpart. Each copy of the Agreement so executed constitutes an original.

SECTION 23: COMPLIANCE WITH LAW

In connection with their activities under this Agreement, the Parties shall comply with all applicable federal, state and local law.

SECTION 24: INDEPENDENT CONTRACTORS

The Parties agree and acknowledge that their relationship is that of independent contracting parties and that Local Government is not an officer, employee, or agent of the State of Oregon as those terms are used in ORS 30.265 or otherwise.

SECTION 25: INTENDED BENEFICIARIES

Local Government and DOGAMI are the only parties to this Agreement and are the only parties entitled to enforce its terms. Nothing in this Agreement provides, is intended to provide, or may be construed to provide any direct or indirect benefit or right to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of this Agreement.

SECTION 26: FORCE MAJEURE

Neither Party is responsible for any failure to perform nor any delay in performance of any obligations under this Agreement caused by fire, civil unrest, labor unrest, natural causes, or war, which is beyond that Party's reasonable control. Each Party shall, however, make all reasonable efforts to remove or eliminate such cause of failure to perform or delay in performance and shall, upon the cessation of the cause, diligently pursue performance of its obligations under this Agreement. Local Government may terminate this Agreement upon written notice to DOGAMI after reasonably determining that the failure or delay will likely prevent successful performance of this Agreement.

SECTION 27: ASSIGNMENT AND SUCCESSORS IN INTEREST

DOGAMI may not assign or transfer its interest in this Agreement without the prior written consent of Local Government and any attempt by DOGAMI to assign or transfer its interest in this Agreement without such consent will be void and of no force or effect. Local Government's consent to DOGAMI's assignment or transfer of its interest in this Agreement will not relieve DOGAMI of any of its duties or obligations under this Agreement. The provisions of this Agreement will be binding upon and inure to the benefit of the Parties hereto, and their respective successors and permitted assigns.

SECTION 28: SUBCONTRACTS

DOGAMI shall not, without Local Government's prior written consent, enter into any subcontracts for any of the work required of DOGAMI under this Agreement. Local Government's consent to any subcontract will not relieve DOGAMI of any of its duties or obligations under this Agreement.

SECTION 29: TIME IS OF THE ESSENCE

Time is of the essence in DOGAMI's performance of its obligations under this Agreement.

SECTION 30: MERGER, WAIVER

This Agreement and all exhibits and attachments, if any, constitute the entire agreement between the Parties on the subject matter hereof. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Agreement. No waiver or consent under this Agreement binds either Party unless in writing and signed by both Parties. Such waiver or consent, if made, is effective only in the specific instance and for the specific purpose given. EACH PARTY, BY SIGNATURE OF ITS AUTHORIZED REPRESENTATIVE, HEREBY ACKNOWLEDGES THAT IT HAS READ THIS AGREEMENT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

SECTION 31: RECORDS MAINTENANCE AND ACCESS

DOGAMI shall maintain all financial records relating to this Agreement in accordance with generally accepted accounting principles. In addition, DOGAMI shall maintain any other records, books, documents, papers, plans, records of shipments and payments and writings of DOGAMI, whether in paper, electronic or other form, that are pertinent to this Agreement in such a manner as to clearly document DOGAMI's performance. All financial records, other records, books, documents, papers, plans, records of shipments and payments and writings of DOGAMI, whether in paper, electronic or other form, that are pertinent to this Agreement, are collectively referred to as "Records." DOGAMI acknowledges and agrees that Local Government and the Oregon Secretary of State's Office and the federal government and their duly authorized representatives will have access to all Records to perform examinations and audits and make

excerpts and transcripts. DOGAMI shall retain and keep accessible all Records for a minimum of six (6) years, or such longer period as may be required by applicable law, following termination of this Agreement, or until the conclusion of any audit, controversy or litigation arising out of or related to this Agreement, whichever date is later. Subject to foregoing minimum records retention requirement, DOGAMI shall maintain Records in accordance with the records retention schedules set forth in OAR Chapter 166.

SECTION 32: HEADINGS

The headings and captions to sections of this Agreement have been inserted for identification and reference purposes only and may not be used to construe the meaning or to interpret this Agreement.

SECTION 33: ADDITIONAL REQUIREMENTS

DOGAMI shall comply with the additional requirements set forth in Exhibit C, attached hereto and incorporated herein by this reference.

SECTION 34: AGREEMENT DOCUMENTS

This Agreement consists of the following documents, which are listed in descending order of precedence: this Agreement less all exhibits, attached Exhibit A (the Statement of Work), Exhibit B (Insurance), and Exhibit C (Description and Specification of the Services).

SECTION 35: SIGNATURES

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the dates set forth below.

State of Oregon acting by and through its Department of Geology & Mineral Industries:

Approved By: Kimberly D Riddell 11/29/18 93-6001955
Name/Title Kimberly D Riddell, CFO Date Federal ID #

City of Salem

Approved By: _____
Name/Title Name, Title Date Federal ID #

EXHIBIT A

STATEMENT OF WORK

Under such authority, DOGAMI has established a multi-partner lidar collection called OLC Santiam 2019 and the City of Salem is a funding partner in that project. The extent of the project is shown in Figure 1 of this agreement, and the project area will cover at least 167 square miles. DOGAMI and **City of Salem** agree that **City of Salem** shall provide funding for approximately 90.69 square miles of the total.

Agency-Specific Oregon Price Agreement (OPA) that identifies Quantum Spatial as the lidar Contractor of DOGAMI is attached hereto as Exhibit A and by this reference made a part hereof.

The OLC Santiam 2019 project is between **150 and 200** square miles, so the Contractor price for the **City of Salem's** area of interest is set at \$455 per square mile. The OLC Santiam 2019 project will require hydro-flattened bare earth rasters which costs \$4.50 a square mile plus \$1,000. DOGAMI shall add a 15% project management and quality control services fee (**\$69** per square mile) in addition to the direct costs charged by the Contractor to acquire the lidar data and deliverables, as defined in section 2.1 of Exhibit A. This 15% fee corresponds to the current effective federally negotiated Indirect Cost rate for DOGAMI. The net unit cost to **City of Salem** is **\$593.07 per square mile**.

DOGAMI shall collaborate with **City of Salem** on a best effort basis in directing the Contractor to acquire data during leaf-off, low-water and snow-off conditions. However, given the large scope, variable terrain, unpredictable weather, and general need to acquire lidar data in an efficient manner and on a timely basis, **City of Salem** hereby agrees that DOGAMI has the sole authority to plan and authorize data acquisition by Contractor and accept or reject the final deliverables from the Contractor. **City of Salem** may communicate with the Contractor exclusively through DOGAMI.

DOGAMI shall provide **City of Salem** with regular updates, nominally on a monthly basis, regarding the project status including amounts of data collection and data processing by the Contractor and status of deliverables. As a funding partner, **City of Salem** is entitled to receive all data collected for OLC Santiam 2019. Data will be provided to **City of Salem** when it has been finalized and will be copied onto an external hard drive that **City of Salem** shall provide.

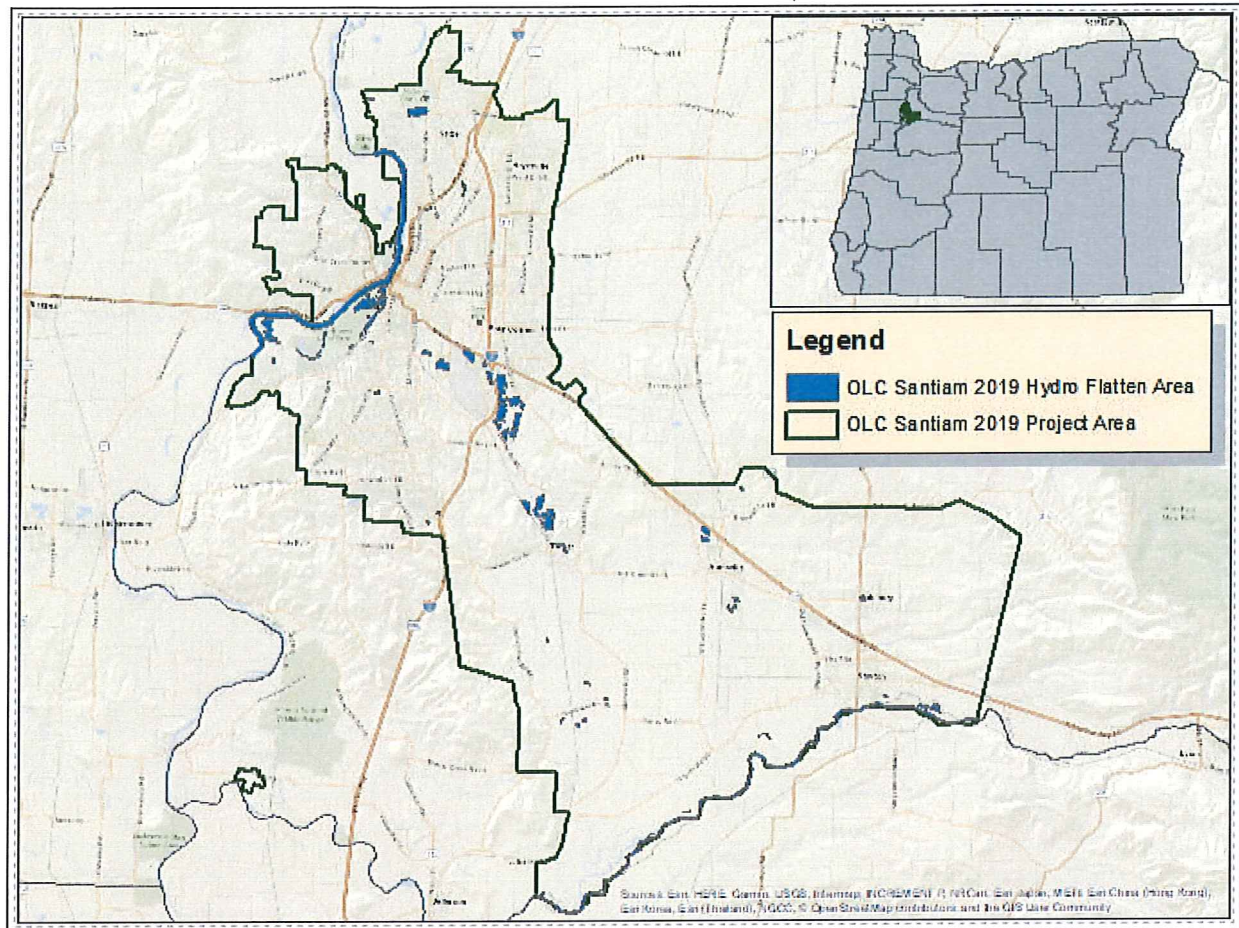


Figure 1. Approximate extents of the OLC Santiam 2019.

EXHIBIT B

INSURANCE

No required insurance

EXHIBIT C

DESCRIPTION AND SPECIFICATION OF THE SERVICES

The specifications described below provide a summary of specifications as contained in Oregon Price Agreement 7525 as amended. The complete Oregon Price Agreement 7525 as amended is available upon request.

1. Specifications of the Services.

1.1 Lidar Data

Contractor shall provide the lidar ("light radar," or airborne laser swath mapping) data services (the "Services") that meet or exceed the specifications in this Exhibit A. The Services will be provided for lidar data collection projects, which may be ordered by written or electronic Purchase Orders (POs) issued by DOGAMI.

1.2 Defined terms used but not defined in this exhibit have the meaning provided in the Agreement.

2. **Services to be provided.** Contractor's obligation to perform the Services includes providing all facilities, components, personnel, and equipment required to provide the Services, including without limitation aircraft services.

2.1 Technical specifications.

2.1(a) Lidar instrument.

Contractor's instruments used for the Services must:

- (1) Produce an on-ground laser spot diameter no less than **15 centimeters (cm)** and no greater than **40 cm** measured at 1/e. 1/e is defined as the diameter at which the beam irradiance (intensity) has fallen to 36.5 percent of its peak value.
- (2) Record a minimum of **4** returns per laser pulse, including first and last returns.
- (3) Record intensity with 16 bits as specified in the Purchase Order. If the laser power is adjustable, laser power must be recorded by Contractor. And,
- (4) Have a laser scan angle that does not exceed **30 degrees** overall (+15 to -15 degrees).

2.1(b) Lidar Data Collection Project design.

Each project area must be a contiguous area no smaller than **40 square miles and may range to in excess of 2,000 square miles**. Contractor must ensure that project areas of interest (AOIs) are

compact, without serrate margins, large internal gaps, and narrow extensions. AOI's must be at least 1.25 miles wide at their narrowest point and must not have a perimeter to area ratio greater than 2 miles per square mile. In order to maximize efficiency, survey outlines shall be finalized by DOGAMI after consultation with Contractor. The AOI must include all land area within a survey and the area of all water bodies with minimum dimension less than one-half mile. Larger water bodies, except for a 300-foot-wide seaward buffer along a shoreline, must be excluded from the calculation of the survey area, unless otherwise specified in a Purchase Order.

Contractor shall plan surveys with a minimum of **50 percent sidelap** of adjacent swaths. Surveys must be designed for 100 % double coverage at planned aircraft height above the ground. The aggregate design multi-swath pulse density must be **8.0** pulses per square meter or higher for the area of each swath with a **scan angle between 2 and 12 degrees** left or right from nadir.

2.1(c) Lidar data collection execution.

Contractor shall fully describe, in a report to DOGAMI, all steps taken to calibrate each aircraft's onboard inertial measurement unit (IMU) and sensor offsets and settings.

Lidar data collection shall be conducted in snow-free conditions, and in some cases, leaf-off and low stream flow conditions will be specified in the PO. Contractor must consult with DOGAMI if potentially adverse collection conditions such as snow, high water, or smoke exist, and may proceed only with written approval.

If data acquisition during specific tide levels, stream or reservoir levels, or dates is required, DOGAMI and Contractor may negotiate a price supplement to compensate Contractor for the additional cost arising from the specific requirements. If specific acquisition conditions are needed, Contractor will provide a written description to DOGAMI of the additional cost required to meet the conditions, and shall explain the basis for the added cost. If DOGAMI wishes to proceed, the costs will be included in the PO, and the written cost description will be attached to the PO.

2.1(d) GPS Procedures.

In the report of survey, Contractor shall fully describe Global Positioning System (GPS) procedures (including GPS instrument specifications) it uses to establish the following:

1. The spatial reference (coordinate) framework and vertical datum that will be used for the purposes of lidar data collection and survey reduction; and,
2. The collection and processing of ground control points (GCPs) for the purposes of undertaking lidar data quality control (QC) used by Contractor.

Contractor shall make all GPS measurements with dual frequency L1-L2 receivers with carrier-phase correction. All GPS measurements must be made during periods with Positional Dilution of Precision (PDOP) less than or equal to 3.0 and with at least 6 satellites in common view of both a stationary reference receiver and the roving receiver.

The horizontal datum for each survey shall be North American Datum (NAD) 83 (2011) (Epoch 2010.00) or the most current horizontal datum at the beginning of the survey, in accordance with published coordinates from the National Oceanic and Atmospheric Administration/National Geodetic Survey (NOAA/NGS) Online Positioning User Service (OPUS). The vertical datum shall be North American Vertical Datum (NAVD) 88 (Geoid 12B) or the most current Geoid model at the beginning of the survey, in accordance with the approved and released geoid model by the National Geodetic Survey (NGS).

Contractor's stationary reference receivers must be located at existing NGS marks or at new marks. In the case of an existing mark, its location must be verified by processing one GPS session of at least two hours duration and comparing the computed position with the position published by NGS. Each new mark must be located by tying to one or more NGS Continuously Operating Reference Stations (CORS) by static GPS methods. If the distance to the nearest CORS is less than 80 kilometers (km), Contractor must use at least two independent GPS sessions, each at least 2 hours long. If the distance to the nearest CORS is greater than 80 km, Contractor must use at least 2 sessions each at least 4 hours long.

At least two GPS reference receivers must be in operation during all lidar data collection, sampling positions at greater than or equal to 1 hertz (Hz). The roving GPS receiver in the aircraft must sample positions at greater than or equal to 2.0 Hz. Differential GPS baseline lengths shall be no longer than 30 km.

GCPs, used for both survey calibration and assessment of absolute vertical accuracy, must be established using GPS or other techniques that result in vertical and horizontal accuracies of 1.5 cm root-mean-square-error (RMSE) or better. Dependent upon terrain and accessibility GCPs must be strongly clustered, and GCP clusters must be uniformly distributed throughout the AOI. Vertical accuracy must be assessed by Contractor by calculating and averaging the distances between GCPs that are not clustered and a surface interpolated from lidar first returns. A minimum of 50 points for every 15.6 square miles of project area, shall be used for the accuracy assessment, with a minimum of 200 for smaller projects. At least 20 % of flight line swaths must contain points in this subset and the maximum distance between these GCPs must be no less than one-half the maximum distance across the AOI.

In the report of survey, Contractor must document the identity, published position, and measured position of all existing NGS marks used for reference stations. The locations of new marks must be described, along with their measured positions and the identity and published positions of CORS to which their locations were tied. The report of survey must describe the technique(s) used to establish GCPs and document the positions and residuals of all GCPs used to evaluate survey accuracy.

2.2 Project Deliverables. All data delivered to DOGAMI under this Agreement shall be in the public domain. Contractor may resell the LIDAR data provided under this Agreement only with advanced written consent by DOGAMI, and only after the data has been made available to the public.

2.2(a) Spatial Reference Framework.

Contractor shall deliver all data to DOGAMI in the Oregon Coordinate Reference System Standard, Oregon Lambert (NAD 83), international feet. Specific details on the Oregon Lambert projection are available at the following web link:

<http://www.oregon.gov/geo/pages/projections.aspx>

DOGAMI may specify the use of Universal Transverse Mercator (UTM) NAD83 (2011), epoch 2011, or the most current horizontal datum. Other projections and horizontal datums may also be requested. The spatial reference framework specification will be included in a purchase order.

The vertical datum must be NAVD88 (Z units must be identical to XY units (i.e.: international feet or meters), and the Geoid must be the most current.

Contractor shall deliver data in tiles that are rectangular in geographic coordinates, corresponding to standard USGS 7.5-minute quadrangles and divisions thereof, and are named according to the following schemes:

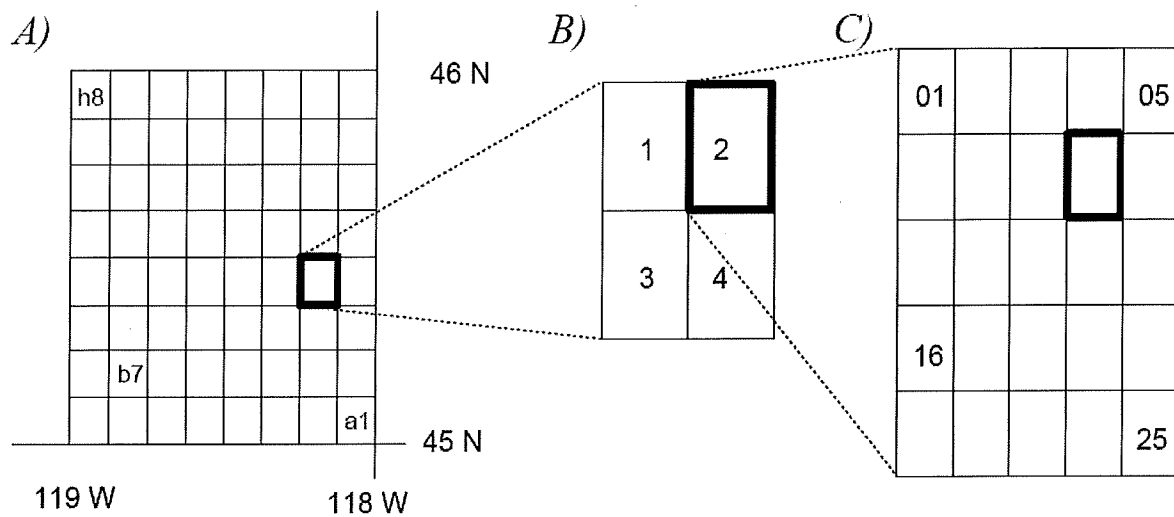
qAAOOORC	(quadrangle, 7.5 minute by 7.5 minute region)
qAAOOORCQ	(quarter-quadrangle, 3.75 minute by 3.75 minute region)
qAAOOORCQNN	(1/100 th quadrangle, 0.75 minute by 0.75 minute region)

where AA is the integer north latitude of the SE corner of the 1° by 1° region that contains the quadrangle, OOO is the integer west longitude of the SE corner of the 1° by 1° region, R is the row, labeled from a to h, south to north, and C is the column, labeled from 1 to 8, east to west. That is, in Diagram A below, for the 1° by 1° region with a southeast corner at 45N, longitude 118W, the highlighted quadrangle is q45118d2.

Q is the quadrangle quadrant, which is numbered west-to-east, north-to-south, as is shown in Diagram B below. That is, the highlighted quarter-quadrangle tile in diagram B is q45118d22.

QNN identifies the 1/100th quadrangle, which is labeled by numbering the 25 divisions of each quarter-quadrangle west-to-east, north-to-south, as shown in Diagram C below. That is, the highlighted tile in Diagram C is q45118d2209.

Diagrams A, B, and C



Contractor shall provide to DOGAMI a report of survey, aircraft trajectories, LAS 1.2 or 2.0 format all-return point files, ground (bare-earth) digital elevation model (DEM), full-feature (highest-hit) DEM, intensity image, and formal metadata.

2.2(b) Survey Report. Contractor's survey report must be a digital text report that describes lidar data collection methods and results. At a minimum, it must include:

- Project overview, including project name, location map, table - including date ordered, acquisition window, delivery date, project AOI, project Total Area Flown (TAF), specified units coordinate system and datum, list of options requested.
- Description of lidar acquisition, including map of flight lines indicating dates of collection, table of acquisition parameters including information about the aircraft, sensor, acquisition settings, flight elevation.
- Report of ground survey, including reference map and table showing monuments used, and a detailed description of GPS procedures used in establishing the reference network and control points for the project. A map showing the locations of all GCPs collected shall be included and location data for all control points shall be included in spreadsheet format as a digital appendix to the report.
- Calibration report for the system(s) used in the data acquisition.
- Specific information indicating what projection, datum, epoch of adjustment, and geoid was used for the survey.
- Contractor's assessment of accuracy, including relative (swath to swath) accuracy, absolute (with respect to GCPs) accuracy, presented both as summary statistics and in histogram form. Vertical accuracy shall be reported to meet the guidelines of the National Standard for Spatial Data Accuracy (Federal Geographic Data Committee (FGDC), 1998) and ASPRS Guidelines for Vertical Accuracy Reporting for Lidar Data V1.0 (American Society for Photogrammetry and Remote Sensing (ASPRS), 2004).

- Contractor's assessment of pulse density over the project area, including maps showing design pulse density by quarter-quadrangle tile and histogram of density parameters and statistics for percentage of populated cells (as described in Section 2.4 (f)).
- Summary table of deliverables, listing file formats and total number and data volume of each deliverable, and a standardized description of the data tiling scheme.

2.2(c) **Aircraft trajectory data.** Recorded aircraft trajectory data (Smoothed Best Estimate of Trajectory (SBET) files) must be American Standard Code for Information Interchange (ASCII) point files and Esri® shape files, with aircraft position (easting, northing, elevation), attitude (heading, pitch, roll) and GPS time recorded at regular intervals of 1 second or less. The data files may include additional attributes, such as temperature and humidity. Lidar flightlines shall also be provided in Esri® shapefile format, attributed with project name, Point Source ID # that is associated with LAS point header information, and date of acquisition of each flightline.

2.2(d) **All-return point cloud.** The point cloud must be delivered as laser data (LAS) 1.2 or most commonly distributed LAS format files, as specified in a Purchase Order, listing all valid returns, with all fields populated LAS attributes must include, at a minimum, class number, class name, line number, Adjusted GPS time, echo label (only, last, etc.), easting, northing, elevation, intensity, scan angle, echo number, and system gain or scanner. Red, Green, Blue (RGB) values must be attributed with co-acquired orthoimagery or latest NAIP imagery when applicable. No duplicate entries are permitted. Time must be reported to the nearest microsecond or better. Easting, northing, and elevation must be reported to nearest 0.01 meter (nearest 0.01 feet). Classification of ground returns must be as complete as is feasible and without avoidable return misclassification. Point-Cloud LAS data must be delivered in 1/100th USGS 7.5-minute quadrangle (0.75 minute by 0.75 minute) tiles or as specified in a Purchase Order.

2.2(e) **Bare-earth surface model:** Raster of ground surface, interpolated via triangulated irregular network from identified ground points. Grids must conform to the following specifications:

Esri® 32 bit pixel depth floating point grid, 3 foot (1 meter if UTM projection specified) cell size, snapped to (0,0), full USGS 7.5-minute quadrangle (7.5 minute by 7.5 minute) tiles, unless otherwise specified in a Purchase Order.

The triangulated irregular networks from which ground surface raster models are interpolated may not include break lines derived from other data sources. Surface models must not have tiling artifacts or gaps at tile boundaries, or artifacts such as pits, birds, striping or aliasing.

2.2(f) **Full-feature DEM:** Raster of first-return surface, cell heights are highest first return within that cell, cells without first returns shall be coded as NoData. Must conform to the same file and grid formats as Bare-earth DEM; full USGS 7.5-minute quadrangle (7.5 minute by 7.5 minute) tiles.

2.2(g) **Intensity image:** Raster of 1st-return intensity. Intensity shall have been normalized if the sensor or combination of sensors used on the project allow. Grids must conform to the following specifications:

Georeferenced 16-bit pixel depth grayscale GEOTIFF, 1.5 ft pixel size, Full USGS 7.5-minute quadrangle (7.5 minute by 7.5 minute) tiles.

2.2(h) **Formal metadata:** GIS-compatible data and files must be accompanied by extensible markup language (XML) format metadata that adheres to DOGAMI's lidar metadata content standard for digital geospatial data. DOGAMI has provided Contractor a standardized metadata document for 3DEP compliant and non 3DEP compliant data that include instructions for completing all required metadata fields. Contractor shall reformat and re-deliver any data that: fails to meet format specification; files with inconsistent or unreadable internal formats; or consists of GIS data with incomplete or incorrect associated projection files.

2.3 Delivery Schedule. Contractor shall provide digital data to DOGAMI on new portable hard drives at Contractor's expense. Contractor shall make final delivery no later than 110 business days from end of data acquisition. DOGAMI will include a target data acquisition time period in the PO for each project, with the understanding that there may be delays due to weather. Contractor should attempt in good faith to deliver lidar data sequentially as it becomes available rather than all at one time. DOGAMI will review and accept or reject lidar data within 30 business days of delivery.

Following a thorough quality control review by DOGAMI, data will be accepted or rejected based on specifications in this Exhibit A. Contractor shall reprocess or re-fly problem areas without additional cost to DOGAMI if it is determined that the lidar data does not meet these specifications.

2.4 Data Quality. Survey data must meet or exceed the requirements described in this Exhibit A for all data, including without limitation within-swath reproducibility, swath-to-swath reproducibility, fundamental vertical accuracy of lidar points, absolute accuracy of bare earth DEMs, completeness, and DEM surface quality. DOGAMI may reject data if the data does not meet specifications. DOGAMI may, in its discretion, either require Contractor to rework rejected data (including re-acquisition if necessary) or refuse payment. At DOGAMI's discretion, it may agree to partial payment for partially satisfactory data. Contractor shall not charge, and DOGAMI will not pay, any additional costs for any re-acquisition arising because the data does not meet these specifications.

(a) Within-swath reproducibility.

Within-swath reproducibility is defined as "longitudinal and along-track planarity of elevations for a single swath across a uniform, flat surface, and is a measure of sensor and inertial motion unit system calibration and stability." Contractor shall provide a description of system calibration during sensor installation as well as resulting average range bias, and RMSE of vertical departure

from planarity for finalized calibration as part of the report of survey. Average departure from planarity within any 10 meters by 10 meters area shall be no greater than 5 cm.

Contractor's reports must show system reproducibility within the specified range.

(b) Swath-to-swath reproducibility. Absent changes in surface elevation between successive measurements, the standard deviation (1 sigma) of vertical error as determined by Contractor using the internal reproducibility of a survey must not exceed 10 cm. Contractor shall establish this value by averaging of reproducibility determined from suitable (high resolution) near-planar ground classified areas across an entire AOI. Vertical errors may be greater on sloping surfaces, owing to physical horizontal uncertainty in the laser footprint, generating apparent vertical errors. In addition, no arbitrary 1 km by 1 km area may have estimated slope-normalized vertical RMSE less than or equal to 20 cm.

(c) Fundamental Vertical Accuracy of Lidar Point Data. Contractor shall calculate fundamental vertical accuracy of lidar point data by comparing GCPs on flat surfaces in areas where ground classified point resolution is both high, and the ground surface is open, smooth and without vegetation, to a local triangulated irregular network (TIN) surface of ground classified points. The fundamental vertical accuracy must not exceed 9.25cm RMSE.

(d) Absolute Accuracy of Bare-Earth DEMs. Bare-earth DEMs, as tested by Contractor against independent GCPs, on flat surfaces, in areas where ground control resolution is both high, and likely to truly characterize the ground surface, must have a vertical RMSE no greater than 9.25 cm. If the absolute accuracy fails to meet the specification, Contractor and DOGAMI will investigate all statistics and distribution of ground control points to assess the nature and causes of outliers influencing the overall accuracy of the data.

(e) Completeness of data.

1. Coverage: No voids between swaths.
2. Coverage: No voids because of cloud cover or instrument failure.
3. Swath Overlap: Less than or equal to 10% no-overlap area per project area.
4. Swath Overlap: No randomly selected 500 meter by 500 meter area with less than 50% double coverage.

(f) Aggregate first return density: Barring non-scattering areas (e.g. open water, wet asphalt) aggregate first return pulse density must meet the following requirements:

1. For every project area at least 90 % of cells with dimensions twice the area of nominal point spacing (for 8 ppsqm this equals 0.70 meter cells) shall contain at least 1 lidar point. Density is calculated by using first return points within the geometrically usable center part (typically 95%) of each individual swath. Pulses per square meter is shown as "ppsqm."

2. If a LAS delivery tile does not meet requirement #1, the delivery tile's aggregate first return density must be greater than or equal to 95% design pulse density (8 ppsqm design is 7.6). This is calculated using all first return LAS points from multiple swaths.
3. If an area of the project does not meet both requirements, the data will be returned to Contractor for re-examination, correction, and possibly re-acquisition.

(g) DEM and DSM Surface quality. There must be no tile-boundary artifacts, no voids between DEM tiles, and no avoidable misclassification of returns. DEMs must be free of other artifacts such as pits and spikes caused by anomalous high or low points and striping due to inadequate flight line calibration.

EXHIBIT D

LIDAR DATA DISTRIBUTION POLICY

DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

POLICY AND PROCEDURE

TITLE: LIDAR DATA DISTRIBUTION POLICY

NUMBER: OP 2017 001 v2.0

APPROVED BY: Ian Madin, Deputy Director

DATE: April 11, 2017

Document History

Date	Version	Author(s)	Change Log
1/4/2013	1.0	Andree Pollock	Approved Policy
3/8/2017	1.1	Jed Roberts	Collaborative Draft Version
4/6/2017	1.2	Jed Roberts	Collaborative Draft Version
4/7/2017	2.0	Jed Roberts	Approved Policy

BACKGROUND

Lidar topographic data is an indispensable tool for mapping, monitoring and managing urban infrastructure, agriculture, natural resources and natural hazards in Oregon. The Oregon Department of Geology and Mineral Industries (DOGAMI) oversees the Oregon Lidar Consortium (OLC), which was established in 2007 to develop cooperative agreements for cost-effective collection of high-quality lidar data. OLC lidar data is in the public domain, with no restrictions on use or redistribution.

The purpose of this policy is to ensure Oregon's lidar data is widely available by establishing consistent, clear and efficient procedures for distributing data to OLC funding partners and all others.

DEFINITIONS

Funding partner: A public or private entity that has entered into a service agreement that provides funds to the OLC to collect lidar for an area of interest that constitutes a partial or complete project area.

Project area: A geographic area where lidar is collected by the OLC's vendor under a purchase order. Project areas may consist of multiple funding partner areas of interest.

Area of interest (AOI): A geographic area that represents an individual funding partner's interest in an overall project area.

Tiling scheme: Due to large data file sizes, lidar project areas are divided into tiles based on the U.S. Geological Survey's national 7.5-minute quadrangle system.

DISTRIBUTION POLICY

Distribution to Oregon Lidar Consortium Funding Partners

OLC funding partners receive one-time, no-cost delivery of the data for all tiles that intersect their contracted AOI, as specified in the service agreement. Funding partners may also request the entire project area.

Funding partners receive a copy of finalized data and supporting documentation, which includes:

- Project boundary and tiling scheme shapefiles;
- Ground survey points, ground control points, monuments, quality control, trajectories, and flight lines shapefiles;
- Bare earth rasters (i.e. digital elevation models);
- Highest hit rasters (i.e. digital surface models);
- Intensity rasters;
- Classified point cloud data;
- Metadata;
- DOGAMI data acceptance report;
- Vendor survey report; and
- Optional services, if purchased, such as orthoimagery, hydro-flattened rasters, alternative tiling schemes, etc.

Finalized data has been determined by DOGAMI technical staff to meet contract specifications as outlined in the current State of Oregon price agreement with the lidar vendor. This determination is made through a rigorous quality control analysis and documented in the DOGAMI data acceptance report.

Compiled release of project area data: Project areas may cover hundreds to thousands of square miles and the vendor may deliver data to DOGAMI in separate releases spanning many months. DOGAMI reserves the right to await complete delivery of a project area before delivering AOIs to funding partners.

Redistribution of data by funding partners: Funding partners may redistribute data they receive. DOGAMI does not track the distribution policies of our funding partners and assumes no responsibility for data they redistribute.

Distribution to All Others

Distribution of raster data: After an OLC project is complete and finalized data have been delivered to funding partners, DOGAMI releases project boundary shapefiles, all raster data, metadata, the vendor survey report, and the DOGAMI data acceptance report for no-cost download via its Lidar Data Viewer web map at www.oregongeology.org/lidar/dataviewer.

Raster data are made available as quickly as possible. However, formatting the data to be accessible via the viewer requires considerable staff time. There may be a lag time of months before finalized data are available for download on the viewer.

Distribution of Point Cloud Data: Due to extremely large file sizes, point cloud data is not available via the Lidar Data Viewer. DOGAMI will make point cloud data available through a public records request. A request can be initiated at www.oregon.gov/DOGAMI/Pages/Public-Records-Requests.aspx. Oregon Public Records Law allows DOGAMI to recover costs to fulfill a request. DOGAMI may consider fee reductions or waivers as applicable under ORS 192.440 (5).

A requestor must order data in increments based on the OLC tiling scheme; the tiles should be included in the public records request. Custom areas not based on the tiling scheme will not be provided.

Point Cloud Data Distribution Procedure:

1. The requestor initiates a public records request and includes a list of tiles.
2. DOGAMI confirms the request within three business days provides an estimate of cost recovery as soon as practicable.
3. The requestor reviews the cost estimate and may direct DOGAMI to proceed with fulfilling the request.
4. DOGAMI will issue an invoice to the requestor for the agreed upon tiles and cost.
5. After the invoice has been paid, DOGAMI will deliver the data within 10 business days one of two ways: (1) via DOGAMI's file transfer protocol server, or (2) via mail or requestor pickup after receipt of a blank hard drive from the requestor that meets minimum storage

space requirements as specified by DOGAMI. The method of delivery will be determined by DOGAMI.

Distribution of Non-OLC Data

DOGAMI's holdings include lidar data collected by entities other than the OLC. Where DOGAMI has written permission to redistribute non-OLC data, it is provided through the procedures described in the *Distribution to All Others* sections. If DOGAMI does not have written permission the data will not be redistributed.

Additional Distribution of Lidar Data

To increase access to OLC data, DOGAMI provides copies at no cost to state and federal organizations for distribution, including:

- Oregon State University: DOGAMI provides copies of raster and point cloud data to OSU for distribution on their public FTP site at <ftp://lidar.engr.oregonstate.edu>
- National Oceanic and Atmospheric Administration: DOGAMI provides copies of lidar point cloud data to NOAA for distribution on their Digital Coast website at coast.noaa.gov/digitalcoast
- U.S. Geological Survey: DOGAMI provides copies of raster data to USGS for distribution through the National Map website at nationalmap.gov/elevation.html

There may be a lag time of months before completed OLC data are delivered to these organizations, and further delays between receipt of the data and posting.